



GENERAL INFORMATION
UNDERGRADUATE CATALOG
2015–2016

NOTICE OF NONDISCRIMINATION

Southern Methodist University will not discriminate in any employment practice, education program, education activity or admissions on the basis of race, color, religion, national origin, sex, age, disability, genetic information or veteran status. SMU's commitment to equal opportunity includes nondiscrimination on the basis of sexual orientation and gender identity and expression. The executive director for access and equity/Title IX coordinator is designated to handle inquiries regarding nondiscrimination policies, including the prohibition of sex discrimination under Title IX.* The executive director/Title IX coordinator may be reached at the Perkins Administration Building, Room 204, 6425 Boaz Lane, Dallas, TX 75205, 214-768-3601, accessequity@smu.edu. Inquiries regarding the application of Title IX may also be directed to the assistant secretary for civil rights of the U.S. Department of Education.

* Title IX of the Education Amendments of 1972, 20 U.S.C. §§ 1681–1688.

Southern Methodist University publishes a complete bulletin every year. The following catalogs constitute the General Bulletin of the University:

Undergraduate Catalog
Cox School of Business Graduate Catalog
Dedman College of Humanities and Sciences Graduate Catalog
Dedman School of Law Graduate Catalog
Hart eCenter/SMU Guildhall Graduate Catalog
Lyle School of Engineering Graduate Catalog
Meadows School of the Arts Graduate Catalog
Perkins School of Theology Graduate Catalog
Simmons School of Education and Human Development Graduate Catalog

In addition, certain locations or programs provide their own schedules:

Continuing Education	SMU-in-Plano
Jan Term	SMU-in-Taos (Fort Burgwin)
SMU Abroad	Summer Studies

Every effort has been made to include in this catalog information that, at the time of preparation for printing, most accurately represents Southern Methodist University. The provisions of the publication are not, however, to be regarded as an irrevocable contract between the student and Southern Methodist University. The University reserves the right to change, at any time and without prior notice, any provision or requirement, including, but not limited to, policies, procedures, charges, financial aid programs, refund policies and academic programs.

Catalog addenda are published online at www.smu.edu/catalogs. An addendum includes graduation, degree and transfer requirements that do not appear in a specific print or online catalog but apply in that academic year.

Additional information can be obtained by writing to the Undergraduate Office of Admission or to the appropriate school (listed above) at the following address:

Southern Methodist University
Dallas TX 75275

Information also is available at www.smu.edu.

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Southern Methodist University
Dallas TX 75275-0221
2015

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OFFICIAL UNIVERSITY CALENDAR

ACADEMIC YEAR 2015–2016

www.smu.edu/registrar/academic_calendar.asp

This calendar includes a list of religious holidays for use in requesting excused absences according to University Policy 1.9. For religious holidays not listed, students should contact the Office of the Chaplain. Graduate programs in the Cox School of Business, the Perkins School of Theology, the Dedman School of Law and the Department of Dispute Resolution and Counseling within the Simmons School of Education and Human Development have different calendars.

Fall Term 2015

April 6–24, Monday–Friday: Enrollment for fall 2015 continuing students for all undergraduates and for graduates in Dedman College, Lyle and Meadows.

May, July, August – TBA: Academic Advising, Enrollment and Orientation conferences for new first-year and transfer undergraduate students. Additional information about AARO is available from New Student Programs, Student Life Office, 214-768-4560, www.smu.edu/newstudent.

August 22, Saturday: Residence halls officially open at 9 a.m.

August 23, Sunday: Opening Convocation, McFarlin Auditorium.

August 24, Monday: First day of classes.

August 28, Friday: Last day to enroll, add courses or drop courses without a grade record. Also, last day to file for graduation in December.

September 7, Monday: Labor Day. University closed.

September 9, Wednesday: Last day to declare pass/fail, no credit or first-year repeated course-grading options. Also, last day to request an excused absence for the observance of a religious holiday.

September 25–26, Friday–Saturday: Homecoming Weekend.

September 29, Tuesday: Early intervention grades due for first-year undergraduate students.

October 7, Wednesday: Last day for continuing undergraduate students to change their majors before November enrollment.

October 12–13, Monday–Tuesday: Fall break.

October 25, Sunday: Midterm grades due for first-year and sophomore students.

October 30–31, Friday–Saturday: Family Weekend.

November 2–20, Monday–Friday: Enrollment for spring 2016 continuing students for all undergraduates and for graduates in Dedman College, Lyle and Meadows.

Fall Term 2015 (continued)

November 2, Monday: 60 percent point of the term that federal financial aid has been earned if a student officially withdraws from SMU; prior to this date, a partial calculated return to federal programs will be required.

November 6, Friday: Last day to drop a course.

November 12, Thursday: Last day for December graduation candidates to change grades of Incomplete.

November 20, Friday: Students should file for May graduation. The last day to file is January 22, 2016.

November 24, Tuesday: Last day to withdraw from the University.

November 25, Wednesday: No classes.

November 26–27, Thursday–Friday: Thanksgiving holiday. University closed.

December 2–7, Wednesday–Monday: No final examinations or unscheduled tests/papers.

December 3, Thursday: Last day for oral/written examinations for December graduate degree candidates.

December 7, Monday: Last day of classes.

December 8–9, Tuesday–Wednesday: Reading days.

December 10–16, Thursday–Wednesday: Examinations. (No examinations scheduled for Saturday or Sunday.)

December 17, Thursday: Residence halls close at 10 a.m. for winter break. (December graduates and residential students who need winter break housing should contact the Department of Residence Life and Student Housing.)

December 19, Saturday: Official close of the term and conferral of degrees. Also, December Commencement Convocation.

December 24–January 1, Thursday–Friday: University closed.

December 25, Friday: Christmas Day.

January Interterm 2016

Note: Some areas of instruction offer selected courses during the January interterm, December 17, 2015–January 13, 2016.

January 1, Friday: New Year's Day. University closed.

Dallas Jan Term

January 4, Monday: First day of classes.

January 5, Tuesday: Last day to declare pass/fail.

January 12, Tuesday: Last day to drop a course or withdraw from the University.

January 13, Wednesday: Last day of classes, including examinations. Also, official close of the term and conferral of degrees.

Jan Term at SMU-in-Taos

Note: The following dates are applicable only for SMU-in-Taos. Permission of the SMU-in-Taos program is required for all enrollments.

January 1, Friday: Wellness student travel and arrival.

January 3, Sunday: Regular session travel and arrival.

January 4, Monday: First day of classes.

January 13, Wednesday: Last day of classes, including examinations. Also, official close of the term and conferral of degrees.

January 14, Thursday: Departure of students.

Spring Term 2016

November 2–January 22, Monday–Friday: Enrollment for spring 2016 continuing students for all undergraduates and graduates in Dedman College, Lyle and Meadows.

January – TBA: Academic Advising, Enrollment and Orientation conferences for new first-year and transfer undergraduate students. Additional information about AARO is available from New Student Programs, Student Life Office, www.smu.edu/newstudent, 214-768-4560.

January 1, Friday: New Year's Day. University closed.

January 12, Tuesday: Residence halls officially open at 9 a.m.

January 15, Friday: First day of classes.

January 18, Monday: Martin Luther King, Jr. Day. University closed.

January 22, Friday: Last day to enroll, add courses or drop courses without a grade record. Also, last day to file for May graduation.

February 2, Tuesday: Last day to declare pass/fail, no credit or first-year repeated course-grading options. Also, last day to request an excused absence for the observance of a religious holiday.

February 22, Monday: Early intervention grades due for first-year undergraduate students.

March 7–13, Monday–Sunday: Spring break.

March 22, Tuesday: Midterm grades due for first-year and sophomore students.

March 25, Friday: Good Friday. University closed.

March 27, Sunday: Easter Sunday.

March 29, Tuesday: 60 percent point of the term that federal financial aid has been earned if a student officially withdraws from SMU; prior to this date, a partial calculated return to federal programs will be required.

April 4, Monday: Last day for continuing undergraduate students to change their majors before April enrollment.

April 4–22, Monday–Friday: Enrollment for summer 2016 and fall 2016 continuing students for all undergraduates and for graduates in Dedman College, Lyle and Meadows.

Spring Term 2016 (continued)

April 6, Wednesday: Last day to drop a course.

April 8, Friday: Last day for May graduation candidates to change grades of Incomplete.

April 18, Monday: Honors Convocation, 5:30 p.m.

April 14, Thursday: Students should file for August or December graduation. Last day to file for August graduation is June 3. Last day to file for December graduation is the last day to enroll for fall 2016.

April 22, Friday: Last day to withdraw from the University.

April 27–May 2, Wednesday–Monday: No final examinations or unscheduled tests or papers.

April 28, Thursday: Last day for oral/written examinations for graduate students who are May degree candidates.

May 2, Monday: Last day of classes.

May 3, Tuesday: Reading day.

May 4–10, Wednesday–Tuesday: Examinations. (No examinations scheduled for Sunday.)

May 11, Wednesday: Residence halls officially close for nongraduating students.

May 13, Friday: Baccalaureate.

May 14, Saturday: Commencement Convocation. Also, official close of the term and conferral of degrees.

May 15, Sunday: Residence halls officially close for graduating seniors.

May Interterm 2016

Note: Some areas of instruction may offer a limited number of selected courses during the May term, May 11–28. Each May term course may have unique start and end dates within the May 11–28 term to accommodate the particular needs of the course.

Dallas May Term

Classes meet 4 hours a day, Monday–Friday.

May 12, Thursday: First day of classes.

May 13, Friday: Last day to enroll or add courses. Also, last day to declare pass/fail, no credit or first-year repeated course-grading options.

May 24, Tuesday: Last day to drop a course or withdraw from the University.

May 27, Friday: Last day of classes, including examinations. Also, official close of the term and conferral of degrees.

May 30, Monday: Memorial Day. University closed.

May Term at SMU-in-Taos

Note: The following dates are applicable only for SMU-in-Taos. Permission of the SMU-in-Taos program is required for all enrollments.

May 11, Wednesday: Travel day and arrival of students, 2–6 p.m.

May 12, Thursday: First day of classes.

May 27, Friday: Last day of classes, including examinations. Also, official close of the term and conferral of degrees.

May 28, Saturday: Departure of students.

Summer Term 2016

Summer term consists of three primary sessions: first session, second session and a full summer session. Each primary session has different deadline dates. There are also shorter and longer sessions to accommodate the particular needs of the various instructional units such as SMU Abroad, SMU-in-Taos and the Perkins School of Theology.

Full Summer Session

Classes meet 2 hours, 15 minutes twice a week or 1 hour, 30 minutes three times a week.

May 30, Monday: Memorial Day. University closed.

May 31, Tuesday: First day of classes.

June 3, Friday: Last day to enroll, add courses or drop courses without a grade record. Also, last day to file for August graduation.

June 9, Thursday: Last day to declare pass/fail, no credit or first-year repeated course-grading options.

July 4, Monday: Independence Day holiday. University closed.

July 15, Friday: Last day for August graduation candidates to change grades of Incomplete.

July 22, Friday: Last day to drop a course.

July 28, Thursday: Last day to withdraw from the University.

August 3, Wednesday: Last day of classes, including examinations. Also, official close of the term and date for conferral of degrees.

First Session

Classes meet 2 hours a day, Monday–Friday.

May 30, Monday: Memorial Day. University closed.

May 31, Tuesday: First day of classes.

June 1, Wednesday: Last day to enroll, add courses or drop courses without a grade record.

June 3, Friday: Last day to declare pass/fail, no credit or first-year repeated course-grading options. Also, last day to file for August graduation.

June 22, Wednesday: Last day to drop a course.

June 23, Thursday: Last day to withdraw from the University.

June 29, Wednesday: Last day of classes, including examinations.

Summer I Session at SMU-in-Taos

Note: The following dates are applicable only for SMU-in-Taos. Permission of the SMU-in-Taos program is required for all enrollments.

June 1, Wednesday: Travel day and arrival of students, 2–6 p.m.

June 2, Thursday: First day of classes.

June 3, Friday: Last day to enroll, add courses or drop courses without a grade record. Permission of the SMU-in-Taos program is required for all enrollments.

June 29, Wednesday: Last day of classes, including examinations.

June 30, Thursday: Departure of students.

June Term at SMU-in-Taos

Note: Permission of the SMU-in-Taos program is required for all enrollments.

The June term within the Summer I Session at SMU-in-Taos is a short, intense term in which students may take up to four credit hours. Additional information is available online at www.smu.edu/taos.

Second Session

Classes meet 2 hours a day, Monday–Friday.

June 3, Friday: Last day to file for August graduation.

July 4, Monday: Independence Day holiday. University closed.

July 5, Tuesday: First day of classes.

July 6, Wednesday: Last day to enroll, add courses or drop courses without a grade record.

July 8, Friday: Last day to declare pass/fail, no credit or first-year repeated course-grading options.

July 14, Thursday: Last day for August graduation candidates to change grades of Incomplete.

July 26, Tuesday: Last day to drop a course.

July 28, Thursday: Last day to withdraw from the University.

August 3, Wednesday: Last day of classes, including examinations. Also, official close of the term and conferral of degrees.

August Term at SMU-in-Taos

Note: The following dates are applicable only for SMU-in-Taos. Permission of the SMU-in-Taos program is required for all enrollments.

August 3, Wednesday: Travel day and arrival of students, 4–6 p.m.

August 4, Thursday: First day of classes.

August 5, Friday: Last day to enroll, add courses or drop courses without a grade record.

August 19, Friday: Last day of classes, including examinations. Also, close of term and conferral of degrees.

August 20, Saturday: Departure of students.

MAJOR RELIGIOUS HOLIDAYS

(August 2015–August 2016)

The following list of religious holidays is for use in requesting excused absences according to University Policy 1.9. For religious holidays not listed, the instructor or supervisor may contact the Office of the Chaplain.

Christian

Christmas: December 25, 2015

Good Friday: March 25, 2016

Easter Sunday: March 27, 2016

Easter Sunday (Orthodox): May 1, 2016

Hindu

Janmashtami: September 5, 2015

Dasera: October 22, 2015

Diwali: November 11, 2015

*Jewish**

Rosh Hashanah: September 14–15, 2015

Yom Kippur: September 23, 2015

Sukkot/Simchat Torah: September 28/29 and October 4–6, 2015

Purim: March 24, 2016

Pesach (Passover): April 23/24 and 29/30, 2016

Shavuot: June 12–13, 2016

*Muslim**

Eid al-Adha: September 23, 2015

Islamic New Year: October 14, 2015

Ashura: October 23, 2015

Mawlid an-Nabi: December 24, 2015

Ramadan: June 7–July 27, 2016

Eid al-Fitr: July 7, 2016

* All holidays begin at sundown before the first day noted and conclude at sundown on the day(s) noted.

COURSE ABBREVIATIONS

Dedman College of Humanities and Sciences			
AERO	Aerospace Studies (ROTC)	ITAL	Italian
ANTH	Anthropology	JAPN	Japanese
ARBC	Arabic	JWST	Jewish Studies
BIOL	Biological Sciences	LAAM	Latin American Studies
CHEM	Chemistry	LATN	Latin
CHIN	Chinese	MATH	Mathematics
CLAS	Classical Studies	MDVL	Medieval Studies
DCAR	Advanced Research	PHIL	Philosophy
ECO	Economics	PHYS	Physics
ENGL	English	PLSC	Political Science
ENSC	Environmental Science	PP	Public Policy
ENST	Environmental Studies	PPIA	Public Policy and International Affairs
ESL	English as a Second Language	PSYC	Psychology
ETST	Ethnic Studies	RELI	Religious Studies
FREN	French	RUSS	Russian
GEOL	Earth Sciences	SCI	Science
GERM	German	SOCI	Sociology
HIST	History	SPAN	Spanish
HRTS	Human Rights	STAT	Statistical Science
HUM	Humanities	WGST	Women's and Gender Studies
INTL	International Studies	WL/WLAN	World Languages and Literatures
Cox School of Business			
ACCT	Accounting	INS	Insurance
BA	Business Administration	ITOM	Information Technology/ Operations Management
BL	Business Law	MKTG	Marketing
BLI	Business Leadership Institute	MNO	Management and Organizations
BUSE	Business Economics	RE	Real Estate
CISB	Caruth Institute, Business	RMI	Risk Management and Insurance
FINA	Finance	STRA	Strategy/Entrepreneurship
Hart eCenter/SMU Guildhall			
HGAM	Hart Digital Game Development		

Lyle School of Engineering

CEE	Civil and Environmental Engineering	EMIS	Engineering Management, Information and Systems
CSE	Computer Science and Engineering	ENGR	Engineering
EE	Electrical Engineering	ME	Mechanical Engineering
EETS	Telecommunications	ROTC	Army ROTC

Meadows School of the Arts

ADV	Advertising	MPED	Music Pedagogy
AMAE	Arts Management and Arts Entrepreneurship	MPSY	Music Psychology
ARHS	Art History	MREP	Music Repertoire
ASAG	Art General Studio	MSA	Meadows School of the Arts
ASCE	Ceramics	MUAC	Music Accompanying
ASDR	Drawing	MUAS	Music Arts and Skills
ASIM	Digital and Hybrid Media	MUCO	Music Conducting
ASPH	Photography	MUED	Music Education
ASPR	Printmaking	MUHI	Music, History and Literature
ASPT	Painting	MUPD	Music Piano Pedagogy
ASSC	Sculpture	MURE	Music Recitals
COMM	Communication Studies	MUTH	Music Composition and Theory
CRCP	Creative Computing	MUTY	Music Therapy
DANC	Dance	PERB	Music Class Instruction
FILM	Film and Media Arts	PERE	Music Performance Ensembles
JOUR	Journalism	THEA	Theatre

Simmons School of Education and Human Development

APSM	Applied Physiology and Sport Management	HDEV	Human Development Studies
EDU	Education	PRW	Personal Responsibility and Wellness
EPL	Education Policy and Leadership	WELL	Wellness

University Curriculum

CF, CFA, CFB	Cultural Formations	KNW	Ways of Knowing
DISC	Discernment and Discourse		

DESCRIPTION OF THE UNIVERSITY

THE VISION OF SOUTHERN METHODIST UNIVERSITY

To create and impart knowledge that will shape citizens who contribute to their communities and lead their professions in a global society.

THE MISSION OF SOUTHERN METHODIST UNIVERSITY

Southern Methodist University will create, expand and impart knowledge through teaching, research and service, while shaping individuals to contribute to their communities and excel in their professions in an emerging global society. Among its faculty, students and staff, the University will cultivate principled thought, develop intellectual skills and promote an environment emphasizing individual dignity and worth. SMU affirms its historical commitment to academic freedom and open inquiry, to moral and ethical values, and to its United Methodist heritage.

To fulfill its mission, the University strives for quality, innovation and continuous improvement as it pursues the following goals:

Goal One: To enhance the academic quality and stature of the University.

Goal Two: To improve teaching and learning.

Goal Three: To strengthen scholarly research and creative achievement.

Goal Four: To support and sustain student development and quality of life.

Goal Five: To broaden global perspectives.

SOUTHERN METHODIST UNIVERSITY

As a private, comprehensive university enriched by its United Methodist heritage and its partnership with the Dallas Metroplex, Southern Methodist University seeks to enhance the intellectual, cultural, technical, ethical and social development of a diverse student body. SMU offers undergraduate programs centered on the liberal arts; excellent graduate and continuing education programs; and abundant opportunities for access to faculty in small classes, research experience, international study, leadership development, and off-campus service and internships, with the goal of preparing students to be contributing citizens and leaders for our state, the nation and the world.

SMU comprises seven degree-granting schools: Dedman College of Humanities and Sciences, Edwin L. Cox School of Business, Dedman School of Law, Bobby B. Lyle School of Engineering, Meadows School of the Arts, Perkins School of Theology, and Annette Caldwell Simmons School of Education and Human Development.

Founded in 1911 by what is now the United Methodist Church, SMU is non-sectarian in its teaching and is committed to the values of academic freedom and open inquiry.

At its opening session in 1915, the University had two buildings, 706 students, a 35-member faculty and total assets of \$633,540.

Today, the University has more than 100 buildings, a total enrollment that has averaged more than 10,000 the past 10 years, a full-time faculty of 736 and assets of \$2.6 billion – including an endowment of \$1.5 billion (market value, May 31, 2014).

Offering only a handful of degree programs at its 1915 opening, the University presently awards baccalaureate degrees in more than 90 programs through six undergraduate schools and a wide variety of graduate degrees through those and one professional school.

Of the 11,272 students enrolled for the 2014 fall term, 6,391 were undergraduates and 4,881 were graduate students. The full-time equivalent enrollment was 6,363 for undergraduates and 3,490 for graduate students.

Nearly all the students in SMU's first class came from Dallas County, but now more than 50 percent of the University's undergraduate student body comes from outside Texas. In a typical school year, students come to SMU from every state; from more than 100 foreign countries; and from all races, religions and economic levels.

Undergraduate enrollment is 50 percent female. Graduate and professional enrollment is 45 percent female.

A majority of SMU undergraduates receive some form of financial aid. In 2014–2015, 72 percent of first-year students received some form of financial aid, and 28 percent of first-year students received need-based financial aid.

Management of the University is vested in a Board of Trustees of civic, business and religious leaders – Methodist and non-Methodist. The founders' first charge to SMU was that it become not necessarily a great *Methodist* university, but a great *university*.

ACADEMIC ACCREDITATION

Southern Methodist University is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award bachelor's, master's, professional and doctoral degrees. Students should contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Southern Methodist University. Note: The commission is to be contacted only if there is evidence that appears to support an institution's significant noncompliance with a requirement or standard.

Individual academic programs are accredited by the appropriate national professional associations.

In Dedman College, the Department of Chemistry is accredited annually by the Committee on Professional Training of the American Chemical Society, and the Psychology Department's Ph.D. program in clinical psychology is accredited by the American Psychological Association.

The Cox School of Business is accredited by AACSB International, the Association to Advance Collegiate Schools of Business (777 South Harbour Island Boulevard, Suite 750, Tampa, Florida 33602-5730; telephone number 813-769-6500). The Cox School was last reaccredited by AACSB International in 2012.

The Dedman School of Law is accredited by the American Bar Association. The ABA conducted its inspection in 2012, and the Dedman School of Law was reaccredited in 2013.

In the Linda and Mitch Hart eCenter, SMU Guildhall's Master of Interactive Technology is accredited by the National Association of Schools of Art and Design for two specializations in art creation and level design.

The Lyle School of Engineering undergraduate programs in civil engineering, computer engineering, electrical engineering, environmental engineering and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET, www.abet.org. The undergraduate computer science program that awards the

degree Bachelor of Science is accredited by the Computing Accreditation Commission of ABET. The undergraduate computer science program that awards the degree Bachelor of Arts is not accredited by a Commission of ABET. ABET does not provide accreditation for the discipline of management science.

In the Meadows School of the Arts, the art and art history programs are accredited through the National Association of Schools of Art and Design, the Dance Division is accredited by the National Association of Schools of Dance, the Music Division is accredited by the National Association of Schools of Music, the music therapy program is approved by the American Music Therapy Association, and the theatre program is accredited by the National Association of Schools of Theatre.

Perkins School of Theology is accredited by the Commission on Accrediting of the Association of Theological Schools in the United States and Canada (10 Summit Park Drive, Pittsburgh, Pennsylvania 15275-1110; phone 412-788-6505) to award M.Div., M.A.M., M.S.M., M.T.S., Th.M. and D.Min. degrees.

Accredited programs in the Simmons School of Education and Human Development include the teacher education undergraduate and graduate certificate programs, which are accredited by the State Board of Educator Certification and the Texas Education Agency. The undergraduate program is approved annually by TEA. The SBEC and the TEA also accredit the M.Ed. in educational leadership's Accelerated School Leadership Program and the M.Ed. in educational leadership with urban specialization. The M.S. in counseling program meets the licensure standards of the Licensed Professional Counselors State Board and the Licensed Marriage and Family Therapist State Board. The Learning Therapist Certificate Program is accredited by the International Multisensory Structured Language Education Council.

ADMISSION TO THE UNIVERSITY

SOUTHERN METHODIST UNIVERSITY GENERAL ADMISSIONS POLICY

Consistent with its vision and mission, SMU seeks to enroll students who have the potential for academic success and who will enrich the collegiate community. The rich variety of perspectives SMU seeks are those that result from differences in racial, ethnic, linguistic, socio-economic, geographic, educational and religious backgrounds; different life experiences, and talents in the arts or athletics. It is the policy of SMU to examine individually each prospective student's application for admission to determine the nature and extent of the applicant's potential to succeed and to enrich the community. Through financial support, SMU endeavors to ensure that cost of attendance will not be a barrier to achieving its goal of a diverse community.

All first-year students, regardless of intended major, enter the University as SMU Pre-Majors, and they are advised through the University Advising Center. Students normally qualify for entry into a major and specific degree program during their sophomore year. Admission into any undergraduate degree program requires the completion of minimum academic standards determined by the school in which the program is based. The specific requirements for admission into each of SMU's undergraduate schools are outlined in the admission section of that school's information in this catalog.

FIRST-YEAR ADMISSION CRITERIA

Selection of applicants is based on several criteria: the high school curriculum, academic performance in the classroom, grade pattern, rank in class (if available), SAT and/or ACT scores, counselor and teacher recommendations, essay, behavioral record and extracurricular activities. Although no specific cutoff is applied to any single measure, generally a student who has both accomplished a strong academic record and exhibited a variety of noteworthy and personal achievements will contribute and benefit most from the SMU experience. Matriculation to the University is contingent upon continuing academic achievement and completion of the high school diploma. The Admission Committee may rescind offers of admission for students whose academic, extracurricular or behavioral records are not consistent with information presented in the application for admission. As an independent institution, SMU has no limits on enrollment based solely on geography or distinctions in tuition, fees or other costs based on the home state of the student. The University welcomes applicants without regard to race, color, religion, national origin, sex, sexual orientation, age, disability or veteran status.

High School Curriculum

High school curricula, including curricular rigor, academic performance in the classroom, elective choices and senior-year course load, are considered in the admission review. Applicants should submit high school records with a *minimum* of 15 or more academic units. The recommended distribution for a minimum program is as follows: four units of English, three units of mathematics (algebra 1, plane geometry, algebra 2), three units of science (including two units of laboratory science), three units of social science and two units of a second language (a two-year sequence).

American Sign Language may be used to satisfy the second language requirement. Engineering applicants should have completed four years of math (including higher-level math beyond algebra 2) and a year each of chemistry and physics. **Note:** Students who are most successful in the admission process present credentials well in excess of the minimum requirements.

Home School Criteria

Home school and distance learning applicants are expected to complete the equivalent of the high school curriculum as outlined above and submit SAT and/or ACT scores. In addition, students must submit the Common Application Home School Supplement form, which demonstrates mastery of English, math and science in the home school curriculum and documents that the student has fulfilled their home state's requirements for high school graduation. A checklist of the home school requirements is available at www.smu.edu/admission/apply_home_school.asp. In addition to these requirements, three SAT subject exams (to include English, literature, math and science) are encouraged for students who have taken the majority of high school coursework at home. Home-schooled students are eligible for federal student aid for college if they have "completed a secondary school education in a home school setting that is treated as a home school or private school under State law" [Section 484(d)(3) of the Higher Education Act of 1965].

Application Timetable for First-Year Students

All prospective students must complete the application for admission and submit a \$60 nonrefundable application fee. Fee waivers are available for students who have demonstrated financial need. First-year applicants are reviewed on the admissions calendar as follows:

Application Deadline: November 1

- Early Decision 1 (binding)
- Early Action (nonbinding)
- Notification Date: By December 31

Application Deadline: January 15

- Early Decision 2 (binding)
- Regular Decision (nonbinding)
- Notification Date: By April 1

Note: The priority deadline for merit scholarship consideration is January 15. Applications for admission received after January 15 are considered if space is available. Notification will be rolling after April 1.

Required Testing

SMU requires all applicants, except foreign citizens who attend secondary schools outside the United States, to submit SAT scores and/or scores from the ACT exam. Students whose native language is not English and whose entire secondary education has not been in an English-medium school are required to submit one of the following:

- TOEFL English language proficiency exam score of at least 550 on the paper-based test or at least 80 on the Internet-based test.
- IELTS English competency test score of at least 6.5 on the academic test.
- Pearson Test of English score of at least 57.

Note: Special attention is given to the writing and reading subscores of the TOEFL.

Students can obtain additional information about the College Board and its tests (SAT, SAT subject tests, TOEFL) by contacting their high school counselors or by contacting the College Board at www.collegeboard.org. Students can request further

information about the ACT exam from their high school counselors or the ACT National Office at www.act.org.

Performing Arts Auditions/Visual Arts Consideration

In addition to meeting general University admission criteria, all first-year and transfer students who intend to major in the performing arts of dance, music or theatre must also satisfy a performance audition requirement as part of the admission process to the University. Students wishing to pursue the B.F.A. or B.A. in art must submit a portfolio of their work for faculty review to the Meadows School through the SlideRoom digital portfolio system (www.smu.slideroom.com). Information regarding audition and portfolio requirements and dates may be obtained by contacting the Office of Recruitment, Meadows School of the Arts, Southern Methodist University, Dallas TX 75275-0356; phone 214-768-3217. For students entering in the fall term, the audition and/or portfolio review is both an admission review and a review for artistic scholarships.

Students in the performing and visual arts must be admitted through the Office of Undergraduate Admission and also through the Meadows School of the Arts. Admission through the audition or portfolio review process does not guarantee admission to the University.

Performance auditions must be completed by the final published national or campus audition date, which normally is no later than March 15 prior to the entering fall term. Submission deadlines for art portfolios correspond with deadlines for SMU application submissions. Current deadlines are available on the Meadows School website at www.smu.edu/meadows. Transfer students entering degree programs within the Dance Division or Theatre Division may do so only in the fall term. Transfer students in the Division of Dance normally enter in the fall term; spring admission may be offered in exceptional cases. While music students may be considered for fall or spring, entry in the fall is encouraged as course sequencing for transfer students beginning in the spring could delay graduation.

Reserving a Place

All admitted students are required to submit a nonrefundable \$685 deposit and orientation fee. Admitted students who did not apply under a binding decision plan must submit this deposit by the May 1 deadline to reserve a place in the class. Students admitted under a binding decision plan will be notified of their deposit deadline when they are admitted. This deposit includes the nonrefundable housing deposit and matriculation and orientation fees. All first-year and second year students must live on campus unless permission is granted to live at home by the dean of Residence Life and Student Housing. To facilitate advising and enrollment, students are required to submit their final high school transcript confirming graduation prior to enrolling.

Credit by Examination

Examinations Administered in High School

SMU grants credit and placement for scores of 4 or 5 on most Advanced Placement examinations taken in high school (see table below). Credit will be awarded only for exams taken while in high school. Students may not receive credit for an AP exam, an International Baccalaureate exam and a college course covering the same subject matter; i.e., the course equivalency will only be awarded once. Credit by examination granted at SMU is considered resident credit.

An official copy of test results must be sent from the testing agency to the University Registrar's Office for credit. To facilitate advising and enrollment, students should submit their official scores no later than the first day of class.

<i>AP Examination</i>	<i>Scores</i>	<i>Credits</i>	<i>Course(s) Credited</i>
American History	4, 5	6 hrs	HIST 2311, 2312
Art	4, 5	3 hrs	ASDR/ASPH/ASPT 1300 (student's choice)
Art History	4, 5	6 hrs	ARHS 1303, 1304
Biology	4, 5	8 hrs	BIOL 1401, 1402
Chemistry	4, 5	4 hrs	CHEM 1303/1113
Computer Science A, AB	4, 5	3 hrs	CSE 1341
Economics:			
Macro	4, 5	3 hrs	ECO 1312
Micro	4, 5	3 hrs	ECO 1311/PREX 4002
English Lng/C or Lit/C	4, 5	6 hrs	DISC 1311, 1312
Environmental Science	4, 5	3 hrs	GEOL 1315
European History	4, 5	6 hrs	HIST 2365, 2366
Government:			
American	4, 5	3 hrs	PLSC 1320
Comparative	4, 5	3 hrs	PLSC 1340
Human Geography	4, 5	3 hrs	HUM 10XX (3 hours)
Languages (Lng or Lit):			
Chinese Lng/Culture	4, 5	16 hrs	CHIN 1401, 1402, 2401, 2402
French	4, 5	16 hrs	FREN 1401, 1402, 2401, 2455
German	4, 5	14 hrs	GERM 1401, 1402, 2311, 2312
Italian	4, 5	16 hrs	ITAL 1401, 1402, 2401, 2402
Japanese Lng/Culture	4, 5	16 hrs	JAPN 1401, 1402, 2401, 2402
Latin	4, 5	14 hrs	LATN 1401, 1402, 2311, 2312
Spanish	4, 5	15 hrs	SPAN 1401, 1402, 2401, 2302
Mathematics:			
Calculus AB	4, 5	3 hrs	MATH 1337
Calculus BC	3 if AB sub-score of 4	3 hrs	MATH 1337
Calculus BC	4, 5	6 hrs	MATH 1337, 1338
Music Theory	4, 5	6 hrs	FETC 10XX (6 hours)
Physics:			
Physics 1	4, 5	3 hrs	SCI 10XX (3 hours)
Physics 2	4, 5	3 hrs	SCI 10YY (3 hours)
Physics C (Mech)	4, 5	3 hrs	PHYS 1303
Physics C (E&M)	4, 5	3 hrs	PHYS 1304
Psychology	4, 5	3 hrs	PSYC 1300
Statistics	4, 5	3 hrs	STAT 2331
World History	4, 5	3 hrs	HUM 10YY (3 hours)

Notes

- Physics does not award placement credit for labs.
- Duplicate credit is not allowed toward an SMU degree. Students who enroll in classes that duplicate Advanced Placement, International Baccalaureate or other test credit awards will lose these credits after the fifth day of the term. Once credit is revoked, it may not be awarded again. Students must report any credit by exam no later than the end of their first term of enrollment.

College-Level Examination Program

SMU gives credit for CLEP subject examinations based on the specified minimum scores below:

<i>CLEP Exam</i>	<i>Score (out of 80)</i>	<i>Credits</i>	<i>Course(s) Credited</i>
American Literature	60	3 hrs	ENGL 20XX*
English Literature	60	3 hrs	ENGL 20YY*
Macro Economics	60	3 hrs	ECO 1312
Micro Economics	60	3 hrs	ECO 1311/PREX 4002

* Students may submit formal requests to the Office of the University Curriculum to have this credit satisfy the Creativity and Aesthetics Pillar, Level I requirement of the University Curriculum.

SMU Departmental Examinations

SMU also awards credit for departmental examinations offered in a variety of disciplines. Such SMU credit may not transfer automatically to other universities. Credit for examinations awarded by other institutions will not transfer to SMU.

World Languages. All students whose native language is English are required to take a language placement examination. Scores on these examinations determine the world language competency of entering students so that they may be placed in classes appropriate to their level of achievement and degree program. Students may not enroll in a course below the level of their placement. When the student has successfully completed the course with a grade of *C* or above, the student will retroactively earn up to 16 term hours of University credit for the preceding courses in the beginning and intermediate levels of the language sequence. Students must enroll in the world language courses for a letter grade (not pass/fail) for the course to serve as a basis for granting retroactive credit. Language courses taken at other institutions cannot be used as a basis for granting retroactive credit. Although students may earn retroactive credit in more than one language, the maximum aggregate credit involving more than one language allowed to count toward graduation is 16 term hours.

Physics. The Physics Department offers placement exams for PHYS 1303 and 1304. The placement exam, which must be taken in the first term that the student enrolls at SMU, is based on the final exam in the PHYS 1303 and 1304 courses. The department does not allow test credit for labs (e.g., PHYS 1105, 1106, 4211). The essential element of the lab is the hands-on experience; therefore, substitutes will not be accepted.

Mathematics. Math credit exams are offered for the courses listed below and must be taken prior to initial enrollment. Calculators are not permitted on these exams, except for MATH 1307. Students interested in credit exams for courses beyond this level may contact the Mathematics Department.

MATH 1307 (3 credits) Introduction to Mathematical Sciences

MATH 1309 (3 credits) Introduction to Calculus for Business/Social Sciences
(suggested preparation = one full year of high school calculus)

MATH 1337 (3 credits) Calculus I

(suggested preparation = one full year of high school calculus)

MATH 1338 (3 credits) Calculus II

Computer Science. The Computer Science and Engineering Department offers a credit exam for CSE 1341 Principles of Computer Science I that must be taken prior to initial enrollment.

Credit for Veterans

Students who are veterans and who have completed recruit training in the military may receive two hours of credit to satisfy the Personal Responsibility and Wellness component of the University Curriculum. The course credits awarded are as follows:

PRW 1199 (1). PRW I: Concepts of Wellness for Veterans. For military veterans who through their military service have met the student learning outcomes and requirements for PRW I.

PRW 2199 (1). PRW 2: Physical Fitness for Veterans. For military veterans who through their military service have met the student learning outcomes and requirements for PRW II.

International Certificate Programs

SMU grants credit for the successful completion of the international certificate programs listed below. In certain cases, departmental examinations may be required as a part of the evaluation process.

1. *The International Baccalaureate.* Six to eight credits will be awarded for scores of 5, 6 or 7 on International Baccalaureate higher-level exams in transferable subjects, with a maximum award of 32 credits. Students will not be awarded credit for standard-level exams.

<i>IB HL Examination</i>	<i>Scores</i>	<i>Credits</i>	<i>Course(s) Credited</i>
Biology	5, 6, 7	8 hrs	BIOL 1401, 1402
Chemistry	5, 6, 7	4 hrs	CHEM 1303/1113
Economics	5, 6, 7	6 hrs	ECO 1311, 1312/PREX 4002
Geography	5, 6, 7	6 hrs	HUMA 10XX, 10YY
History:			
Africa	5, 6, 7	6 hrs	HIST 10XX, 10YY
Americas	5, 6, 7	6 hrs	HIST 10XX, 10YY
Asia and Oceania	5, 6, 7	6 hrs	HIST 10XX, 10YY
Europe, Islamic World	5, 6, 7	6 hrs	HIST 2365, 2366
Europe, Middle East	5, 6, 7	6 hrs	HIST 10XX, 10YY

<i>IB HL Examination (cont.)</i>	<i>Scores</i>	<i>Credits</i>	<i>Course(s) Credited</i>
Language A:			
English A Literature	5, 6, 7	6 hrs	DISC 1311, 1312
All other languages	5, 6, 7	8 hrs	1401, 1402
Language B			
English B	5, 6, 7	6 hrs	LANG 10XX, 10YY
Mathematics	5, 6, 7	6 hrs	MATH 1337, STAT 2331
Music:			
History	5, 6, 7	3 hrs	MUHI 10XX
Theory	5, 6, 7	3 hrs	MUTH 10XX
Physics	5, 6, 7	6 hrs	PHYS 1303, 1304
Psychology	5, 6, 7	6 hrs	PSYC 1300, 10XX

- The General Certificate of Education A-Level (United Kingdom)*. Six to eight credits will be awarded for grades of *A* and *B* on A-level exams in transferable subjects, with a maximum award of 32 credits. Credits will not be awarded for a grade of *C*, or for O-level and AS-level exams. Credit awards for the Art and Design A, High Level exam are reviewed on a case-by-case basis by SMU's Art Division.
- The Baccalaureate (France)*. Six to eight credits will be awarded for scores of 11 or above, with a maximum award of 32 credits.
- The Abitur (Germany)*. Six to eight credits will be awarded for scores of 7 or above on each of the written exams in transferable subjects, with a maximum award of 32 credits. Credits will not be awarded for oral exams.
- The Italian Maturita (Italy)*. For the *Maturita Tecnica, Classica, Scientifica* and/or *Linguistica*, credits will be awarded for scores of 6 or above in transferable subjects, with a maximum award of 32 credits.

Notes

- The Language A exam is typically taken in the native language of the student.
- Language B is a second, third or fourth language studied by the student.
- For "all other languages" under Language A and for Language B, the course prefix will match the world language completed.
- Physics does not award IB credit for labs.
- Students enrolled in courses at SMU for which IB credit has previously been awarded will have the IB credit rescinded, and the grade in the course will count toward the student's SMU GPA. Students are responsible for knowing and reporting their IB scores to SMU to prevent duplicate enrollment.

Concurrent Dual Credit/College Programs

Students may receive credit for college courses taken prior to graduation from high school if the courses meet the criteria for transfer work outlined in the Transfer Admission Criteria section of this catalog. Official college transcripts are required for all college-level work attempted, regardless of transferability.

TRANSFER ADMISSION CRITERIA

Selection of transfer applicants is based on several criteria, including academic curriculum, performance, grade patterns, activities and experiences. For all candidates who are not entering SMU directly from high school, the Admission Committee considers the rigor of the courses attempted. In particular, transfer applicants should have completed at least one course in English composition, a lab science, a math course beyond college algebra and a course pertaining to the applicant's intended major. The committee weighs overall academic performance as well as evidence of recent improvement. For some applicants, high school performance is also a factor. Candidates with fewer than 30 hours are considered on an individual basis and are required to submit additional information, as well as SAT and/or ACT scores and high school records. Although the average GPA of successful transfer applicants is considerably higher, applicants with a GPA below 2.700 (on a 4.000 scale) are not typically successful in gaining admission. Candidates with a transferable GPA below 2.000 are not competitive for admission to the University.

Competitive applicants for admission will have completed the equivalent of one of the following math courses:

MATH 1307 Introduction to Mathematical Sciences

MATH 1309 Introduction to Calculus for Business/Social Sciences

MATH 1337 Calculus I

STAT 1301 Introduction to Statistics

STAT 2301 Statistics for Modern Business Decisions

STAT 2331 Introduction to Statistical Methods

Applicants who have not completed one of these courses must have completed college algebra or a high school sequence of algebra 1, algebra 2 and plane geometry.

Students with more than 30 transferable hours may be admitted directly to the school of their intended major if the admission requirement of that school has been met. The specific requirements for admission into each of SMU's undergraduate schools are outlined in the admission section of that school's information in this catalog.

All transfer students who intend to major in dance, music or theatre must also audition. Art majors require the submission of a portfolio for consideration. Requirements and contact information are available in the First-Year Admission Criteria section under the heading Performing Arts Auditions/Visual Arts Consideration.

Prospective transfer students must complete an Undergraduate Application for Transfer Admission and submit a \$60 nonrefundable application fee. An official academic transcript that includes the last completed term from each college or university attended must be sent to SMU Undergraduate Admission, PO Box 750181, Dallas TX 75275-0181. In addition, applicants must submit a Statement of Good Disciplinary Standing from their current college or university.

A final high school transcript or GED high school equivalency test results should be sent to the address above to confirm world language and math background. A high school transcript, including SAT or ACT scores, is required when less than 30 transferable hours have been earned. SAT or ACT exam results will not be required of students for whom five or more years have lapsed since high school or high school equivalent.

Transfer Credit

Regardless of the number of transferable credits completed elsewhere, University policy requires that of the 122 minimum required term hours required for a degree, at least 60 hours must be SMU credits. That is, they must be earned in SMU courses, SMU credits or SMU-approved international programs.

No transfer credit is given for any correspondence course or work completed at a school that is not regionally accredited. Only grades of *C-* or better in comparable courses are transferable to SMU for accepted students. Vocational-technical courses, courses below college level, credit by examination earned at another college or university, and PE activity courses in excess of two hours do not transfer. For courses not taught at SMU locations or in SMU-approved international programs, free-elective transfer credit may be awarded for appropriate courses completed with a grade of *C-* or better at regionally accredited colleges or universities that meet SMU's academic standards.

All attempted hours and earned grade points are used to calculate the transferable GPA for transferable courses, even if those courses have been repeated. For repeated courses with grades of *C-* or above, only the first attempt completed with a grade of *C-* or better are awarded credit. A grade of *W* (Withdrawn) are not used to calculate the transferable GPA. A grade of *I* (Incomplete) are calculated as *F*. A grade of *IP* (In Progress) for a current term is not calculated.

Note: For some majors requiring a subset of courses and specific GPAs for entry, the subset GPA is calculated using the first graded attempt of these courses, even if the first attempt of the course was failed or later repeated.

Official college transcripts are required for all college-level work attempted, regardless of transferability. Transcripts must be sent directly to SMU from the institution attended. A transcript issued to a student is acceptable provided it is received in a sealed, letterhead envelope with the institution's Office of the Registrar stamp. Transcripts must be dated fewer than three years prior to processing. Coursework from one institution that appears on an official transcript from another institution will not be accepted for transfer credit. An official transcript must be issued by each institution attended. Photocopies of transcripts provided by other institutions are not acceptable.

An online version of the transfer credit evaluation is available to transfer students prior to their enrollment.

International Transcript Credit

All international university transcripts must be accompanied by a professional evaluation and an official transcript, including an English translation if it is not in English, and course descriptions or syllabi. It is the student's responsibility to procure this evaluation and to assume financial responsibility for it. An exception to this requirement is an exchange agreement between SMU and an international institution that is modeled after the U.S. education system. Instituto Tecnológico y de Estudios Superiores de Monterrey is the only institution with which SMU currently has such an agreement.

Because of the importance of this information, SMU accepts evaluations only from the following agencies of proven reliability:

AACRAO

One Dupont Circle, NW, Suite 520
Washington DC 20036
Telephone: 202-293-9161
Fax: 202-872-8857
Email: info@aacrao.org
www.aacrao.org www.jsilny.com

Josef Silny & Associates Inc.

7101 SW 102 Avenue
Miami FL 33173
Telephone: 305-273-1616
Fax: 305-273-1338
Email: info@jsilny.com

**International Academic Credential
Evaluators Inc.**

PO Box 2585
Denton TX 76202-2585
Telephone: 940-383-7498
www.iacei.net

World Education Services Inc.

PO Box 745 Old Chelsea Station
New York NY 10113-0745
Telephone: 212-966-6311
Toll-free: 1-800-937-3895
Email: infor@wes.org
www.wes.org

The evaluations provided by the above agencies should include an explanation that the institution is recognized by the ministry of education in the student's home country and is generally considered to offer at least the equivalent of U.S. higher education credit. In addition, it should include an explanation of the credits, the grading system and course levels, as well as a course-by-course evaluation.

The expertise and reliability of a professional evaluation report is recognized worldwide and is likely to be accepted by other academic institutions, employers and state licensing boards. However, the report is not binding to SMU and it will be considered a recommendation for SMU's independent decision of the credit to be given. Information and applications from the agencies are available online. For more information, students should contact the Office of Admission.

Application Timetable for Transfer Students

Summer term entry: All data due no later than March 15.

Fall term entry/scholarship consideration: All data due no later than April 1.

Fall term entry: All data due no later than June 1.

Space-available applicants: All data due no later than August 1.

Spring term entry: All data due no later than November 1.

Note: The deadline for priority scholarship consideration is April 1 for fall entry and November 1 for spring entry.

It is not recommended that an application be submitted on or near the deadline. Earlier application is strongly recommended, particularly for those students applying for financial aid or University housing.

Application processing begins in early February (for the summer and fall terms) and in early October (for the spring term) upon receipt of pertinent data, including each official transcript through the last completed term.

Reserving a Place

All degree-seeking admitted transfer students wishing to enroll at SMU are required to submit a \$420 transfer orientation and matriculation deposit to reserve a place in the academic program. This \$420 deposit should be sent to the Office of Admission. Space can be guaranteed only to those students who have submitted the deposit by the deadline noted in the acceptance packet. **Note:** This \$420 deposit is nonrefundable. Students seeking financial aid should wait until they receive their financial aid award before submitting a deposit.

Note that admitted transfer students cannot enroll at SMU until their final transcript has been received and evaluated for transferability and a Good Standing Form has been received from their last institution. For this reason, transfer students entering for the fall term are discouraged from attending the second summer term at their current institution before matriculation to SMU.

Housing Deposit

Housing accommodations are offered on a space-available basis for new transfer students who are 20 or older. Transfer students who are 17–19 years old live on campus unless permission is granted to live at home by the dean of Residence Life and Student Housing. Housing links will be sent to interested transfer students once the student has been accepted and has sent a nonrefundable deposit of \$520, which includes a \$100 housing deposit, to the Office of Admission.

INTERNATIONAL STUDENT ADMISSION

International citizens and U.S. passport holders studying outside the United States who apply to SMU as first-year and transfer undergraduate students are expected to meet all requirements for admission.

For admission consideration, students for whom English is not the native language are required to submit a test score from an internationally recognized English language test as explained in the Required Testing section of this catalog.

Students who are otherwise admissible but whose scores are slightly below those mentioned above may be offered conditional admission pending successful completion of SMU's Intensive English Program prior to matriculation. Transfer students from U.S. institutions without an internationally recognized English language test score will be evaluated on the basis of college-level grades in English composition/rhetoric courses.

International transfer students who have completed college-level work at a university outside the United States are required to submit the following (in English or with an English translation):

- An official transcript.
- Course descriptions.
- Professional evaluation. (More information is found in the International Transcript Credit section of this catalog.)

The expenses to be incurred in attending the University are listed in the Financial Information section of this catalog. Additional costs that international students may expect include room and board during school holidays, travel expenses, international student health insurance, and the international student fee (foreign passport holders only). Need-based financial aid is not available for international students; however, first-year international students will be considered for academic scholar-

ships if their application is complete by the January 15 deadline. Some academic scholarships require an SAT or ACT for consideration. Transfer international applicants will be considered for all transfer scholarships for which they are eligible, provided the appropriate application deadline has been met.

When an international student has been admitted and provided adequate proof of sufficient financial funds, the International Student and Scholar Services Office will issue the I-20 Certificate of Eligibility. The student will be required to produce the I-20, acceptance letter and proof of finances when applying at the U.S. embassy or consulate for a student visa.

All international students taking one or more credit hours must enroll in the University-offered health insurance plan unless they have a special waiver granted by the SMU Memorial Health Center.

ADMISSION CRITERIA FOR VETERANS

Veterans are required to meet undergraduate admission criteria of the University as first-year or transfer applicants. Additional information is available online at www.smu.edu/registrar ("Veterans Affairs" link) and www.smu.edu/transfer ("Prospective Students" tab).

NONDEGREE STUDENTS

Nondegree-seeking students are applicants who wish to enroll in University courses for credit, but who do not intend to pursue an SMU degree program. This category of students is normally limited to those who 1) are degree-seeking students in good standing and visiting from another four-year college or university, 2) have already earned a degree, or 3) are participants in special SMU programs such as the Talented and Gifted, College Experience or concurrent enrollment programs. Nondegree students are admitted through the Division of Enrollment Services and are eligible to register – on a space available basis – in classes for which they have satisfied SMU's prerequisites. Admission as a nondegree-seeking student does not qualify a student for admission to a degree program at SMU. Applications for nondegree-seeking students are found at www.smu.edu/nondegree ("Prospective Students" tab) or may be obtained from the Division of Enrollment Services, Blanton Student Services Building, Southern Methodist University, PO Box 750181, Dallas TX 75275-0181; phone 214-768-4272.

READMISSION OF STUDENTS

If a student in good standing withdraws from SMU for one term, the student's file remains active and the student is able to register as though in continuous enrollment at the University (re-entry). Students who left on probation will return on probation. All holds must be cleared prior to enrollment. Re-entry students are responsible for meeting all financial aid, housing and advising deadlines.

After nonattendance for two or more regular (fall, spring) terms, students who formerly attended SMU, including those who have completed a degree, are required to submit an application for reinstatement or reactivation through the Division of Enrollment Services, Undergraduate Admission. The application is available at www.smu.edu/admission ("Apply" tab). Any student who has been suspended is also required to apply for reinstatement. Students who have been suspended are required to attach to their reinstatement application a statement indicating the reasons why they now are prepared to return to SMU. Although the Division of Enrollment Ser-

vices facilitates the application process, an academic dean or the Committee on Academic Appeals determines reinstatement.

A student who has already earned an undergraduate degree at SMU and is seeking an additional undergraduate degree must apply for reactivation if the student has not attended SMU for two or more regular (fall, spring) terms.

Returning students are strongly advised to apply for reactivation or reinstatement at least 60 days prior to the start of the term of re-entry. Returning students should note that separate applications exist for financial aid and residence halls and that they should contact these offices as early as possible. The deadline for filing this application and supporting materials for domestic students is five business days prior to the first day of classes of the term of re-entry. International applicants must apply at least two weeks prior to the term of re-entry; however, they are encouraged to apply at least 90 days in advance in order to facilitate the immigration process. In addition, the availability of academic advising and courses may be limited immediately prior to and at the beginning of the term.

All students who return to SMU after any period of nonenrollment must forward official transcripts from each college or university attended since last enrolled at SMU. If the last term of enrollment at SMU was prior to fall 2000, official transcripts from each college or university attended prior to SMU also must be forwarded to the Division of Enrollment Services.

Students should be aware of specific policies regarding transfer courses taken after matriculation to SMU (see Transfer Courses From Other Institutions in the Academic Records and General and Enrollment Standards section of this catalog). In addition, each college within SMU has specific policies regarding reinstatement, reactivation, transfer credit and statute of limitations, so students should refer to their school's section of this catalog for that information.

ACADEMIC FORGIVENESS

SMU's academic forgiveness policy permits a student to have academic work taken 10 or more years prior to the term of admission or readmission forgiven. Forgiven hours will not be included in the GPA nor used for actions such as the determination of admission, academic probation, suspension, honors, scholarships and graduation. Students should see the Academic Records and General and Enrollment Standards section in this catalog for details of this policy. The academic forgiveness application is available through the Division of Enrollment Services.

FINAL MATRICULATION TO THE UNIVERSITY

In addition to the nonrefundable deposit (and housing application and deposit for those seeking on-campus housing), the following items are required for final matriculation to the University:

Immunizations. All students (undergraduate, graduate, part-time and full-time, to include international and IEP/ESL students) are required to have an SMU medical history form on file in the SMU Memorial Health Center before registration. To comply with SMU policy, all students must also submit to the health center their immunization records that provide proof of immunization against measles, mumps and rubella. These MMR immunizations must be documented by a physician, public health record, military health record or school health record. Students will not be allowed to register without immunization compliance. Texas state law requires that all new students under the age of 22 must provide documentation demonstrating

they have been vaccinated against bacterial meningitis. The documentation must show evidence that a meningitis vaccine or booster was given during the five-year period preceding and at least 10 days prior to the first day of class of the student's first term. Students should provide the documentation at least 10 days before the first day of class. Students seeking exemption from this requirement due to health risk or conscience, including religious belief, should see the second page of the SMU medical history health form.

Students are encouraged to check their my.SMU account for immunization status. Immunizations are available at the health center. Health history forms are available on the health center's website.

Health Insurance. To ensure that students have appropriate health care coverage, SMU requires all domestic students taking nine or more credit hours, both undergraduate and graduate, to have health insurance through either an individual/family plan or the University-offered plan. All international students taking one or more credit hours must enroll in the University-offered plan unless they have a special waiver granted by the SMU Memorial Health Center.

FINANCIAL INFORMATION

TUITION, FEES AND LIVING EXPENSES

A catalog supplement, the *Financial Information Bulletin*, is issued each academic year. It provides the general authority and reference for SMU financial regulations and obligations, as well as detailed information concerning tuition, fees and living expenses. The supplement can be accessed at www.smu.edu/bursar ("Financial Bulletin" link).

Continuing students registering must ensure that payment for the full amount of charges is posted to their account by the payment due date showing on their bill. The due dates are also published on the Bursar website.

Billing notifications are sent to the student's SMU email address and to the designated authorized payer(s) email address when a bill is generated. The billing notification will provide instructions on how to view the bill online through SMUpay. If notification is not received two weeks prior to the due date, the student and/or designated authorized payer(s) should contact the Office of the University Bursar.

Payments made in person or mailed must be received by the Office of the University Bursar, located on the first floor of the Laura Lee Blanton Student Services Building, no later than 4 p.m. on the payment due date. Payments made online via electronic check or credit card must be posted no later than 11:59 p.m. Central Standard Time on the payment due date. Students and/or those paying on behalf of the student who pay online automatically receive an electronic confirmation of payment; students and/or designated authorized payer(s) paying through other methods can also verify receipt of payment online.

Students enrolling after the payment due date must pay at the time of enrollment. Students whose accounts are not cleared by the payment due date or at the time of enrollment are subject to a late payment fee of \$50 for balances between \$250 and \$999.99, and \$150 for balances between \$1,000 and \$5,000. Balances more than \$5,000 are charged 3 percent of the outstanding balance, not to exceed \$750. Also, after the monthly payment due date has passed, a 1.5 percent past due fee will be assessed on the unpaid student and/or miscellaneous account each month until the balance is paid. The enrollment of students whose accounts remain unpaid after the payment due date may be canceled at the discretion of the University. Students are individually responsible for their financial obligations to the University.

All refunds except federal parent PLUS loans, prepayment accounts, the SMU Monthly TuitionPay Payment Plan and international wires will be made payable to the student. A credit card payment will only be refunded to the student if federal student loans have been applied to their account. International wires will be refunded by wire to the originating wire account less a \$35 wire-processing fee. The PLUS loan borrower can request the refund to be processed to the student by submitting a Parent PLUS Release form, located on the Bursar website. If the refund is issued by check, the student may request, in writing, that the refund be sent to another party.

Any outstanding debts to the University will be deducted from the credit balance prior to issuing a refund. Any outstanding debts to the University that include Title IV funds must have an Authorization to Credit Account form and/or an Authorization to Credit Account Parent form on file in order to transfer funds to cover current award year debts. Students need to sign the ACA form and the federal parent PLUS loan borrower needs to sign the ACAP form.

Any outstanding debts to the University that do not include Title IV funds will be deducted from the credit balance prior to issuing a refund. All other debts should be paid directly by the student.

A student whose University account is overdue or who in any other manner has an unpaid financial obligation to the University will be denied the recording and certification services of the Office of the Registrar, including the issuance of a transcript or diploma, and may be denied readmission until all obligations are fulfilled. The Division of Enrollment Services may stop the registration, or may cancel the completed registration, of a student who has a delinquent account or debt, and may assess all attorney's fees and other reasonable collection costs (up to 50 percent) and charges necessary for the collection of any amount not paid when due. Matriculation in the University constitutes an agreement by the student to comply with all University rules, regulations and policies.

Arrangements for financial assistance from SMU must be made in advance of registration and in accordance with the application schedule of the Division of Enrollment Services, Financial Aid. A student should not expect such assistance to settle delinquent accounts.

During the registration process, students will be prompted to read and agree to the Student Rights and Responsibilities, which provides information regarding financial rights and obligations, SMU's Honor Code, the Code of Conduct, and the student appeals and complaints process.

REFUNDS FOR WITHDRAWAL FROM THE UNIVERSITY

Note: No refunds are made without an official withdrawal. Policies for official withdrawal, including medical and mandatory administrative withdrawal, are found under Withdrawal From the University in the Academic Records and General and Enrollment Standards section of this catalog.

Reduction of tuition and fees is determined by the effective date of the withdrawal and is based on the schedule listed in the *Financial Information Bulletin*, which can be accessed online at www.smu.edu/bursar ("Financial Bulletin" link).

Note: For students receiving financial aid (scholarships, grants or loans), when the withdrawal date qualifies for reduction of tuition and fees charges, the refund typically will be used to repay the student aid programs first and go to the student/family last. Further, government regulations may require that SMU return aid funds whether or not the University must reduce its tuition and fees (based on the *Financial Information Bulletin*); hence, a student whose account was paid in full prior to withdrawal may owe a significant amount at withdrawal due to the required return of student aid. Therefore, students who receive any financial aid should discuss, prior to withdrawal, the financial implications of the withdrawal with the Financial Aid Advising Office.

Medical withdrawals and mandatory administrative withdrawals allow a prorated refund of tuition and fees.

PAYMENT PLAN OPTIONS

SMU Monthly Payment Plan

The SMU TuitionPay Payment Plan administered by Higher One allows term charges to be paid in monthly installments. Students can enroll in a payment plan at www.tuitionpaymentplan.com/smu. Higher One consultants are available at 877-279-6092 to answer questions or help with the online enrollment process.

Annual payment plans are available in 12-month, 10-month and eight-month formats. Term payment plans are available in four-month, five-month and six-month formats. The summer payment plan is three months.

SMU Prepayment Plan

The SMU Prepayment Plan (a single payment up front for all terms) allows families to avoid the effects of tuition and fee increases by paying for two, three or four years in one single payment at the current rate of tuition and fees. Questions should be addressed to the Division of Enrollment Services, Southern Methodist University, PO Box 750181, Dallas TX 75275-0181; phone 214-768-1096.

STUDENT FINANCIAL AID

SCHOLARSHIPS, GRANTS AND OTHER AID

For many SMU students, scholarships and other aid make the cost of attending this distinguished private university no more taxing – and often less so – on their families' financial resources than attending a public university.

SMU strives to provide the financial assistance required for an undergraduate education to any student who is offered admission and who has been determined to have need for such assistance by the Division of Enrollment Services, Financial Aid.

More than 72 percent of all students receive some form of financial aid. SMU has a generous program of merit-based scholarships and grants. Students seeking to participate in federal work-study and student and parent loan programs must file the Free Application for Federal Student Aid at www.fafsa.gov.

Certain special SMU scholarship and grant programs offer awards to the following types of students:

- Entering first-year, transfer and continuing students with high academic achievement or with talent in the arts.
- National Merit finalists and certain International Baccalaureate Diploma recipients.
- Dependent children and spouses of ordained United Methodist ministers engaged in full-time, church-related vocations.
- Texas residents.

Primary consideration for merit scholarships and need-based financial aid will be given to the following:

1. Entering first-year students who

- a. Complete the Admission Application, with all supporting materials, by January 15.
- b. File the Free Application for Federal Student Aid (www.fafsa.gov) and the College Scholarship Service/PROFILE (student.collegeboard.org/profile) by February 15. (The FAFSA is required for federal need-based aid consideration; the FAFSA and CSS/PROFILE are required for consideration for University funded need-based aid.) The SMU Title IV school code is 003613 and the PROFILE school code is 6660.
- c. Complete the online SMU Application for Scholarships (which will be emailed after submission of the Admission application).

2. Transfer students who

- a. Complete the Admission Application, with all supporting materials, by June 1.
- b. File the CSS/PROFILE (student.collegeboard.org/profile) and the FAFSA (www.fafsa.gov) by June 1. (The FAFSA is required for consideration for federal need-based aid; the FAFSA and CSS/PROFILE are required for consideration for University funded need-based aid).

3. Continuing students who

- a. File the FAFSA (www.fafsa.gov) or the FAFSA Renewal and the CSS/PROFILE (student.collegeboard.org/profile) by April 15, after the parents' and students' income tax returns have been filed with the Internal Revenue Service.

Additional information is available from Division of Enrollment Services, Southern Methodist University, PO Box 750181, Dallas TX 75275-0181; 214-768-3417; enrol_serv@smu.edu; www.smu.edu/financial_aid.

SMU SATISFACTORY PROGRESS POLICY FOR FEDERAL, STATE AND INSTITUTIONAL FINANCIAL AID ELIGIBILITY

The Higher Education Act of 1965, as amended October 6, 1983, mandates that institutions of higher education establish minimum standards of “satisfactory progress” for students receiving federal financial aid. SMU updated its Satisfactory Academic Progress Policy when the U.S. Department of Education enacted regulations on program integrity in fall 2010. The standards given below are also used for state and institutional funds. Students who are enrolling for a fifth year of undergraduate studies and are seeking institutional financial assistance must provide a written appeal to the financial aid office and, as appropriate, must file financial aid applications (FAFSA and CSS/PROFILE) as well as obtain degree completion plans from their academic adviser.

Satisfactory academic progress is measured at the end of spring term until the student graduates. Qualitative measures and quantitative measures are reviewed.

Qualitative Measure. At the end of spring term, a student must be making satisfactory academic progress measured by the student’s cumulative GPA of 2.000 or better, which is the standard for graduation at SMU.

Quantitative Measure. At the end of spring term, a student must be making satisfactory academic progress measured by determining if the student has earned 75 percent of the classes he/she attempted during the academic year.

A student who is not making qualitative or quantitative satisfactory academic progress toward his or her degree goal according to this policy will have the right to appeal to the Financial Aid Appeals Committee.

VETERANS CERTIFICATION

The University Registrar’s Office certifies veterans each term for their benefits under federal programs. More information regarding the certification process is available from the University Registrar’s Office at www.smu.edu/registrar (“Veterans Affairs” link) and under Veterans in the Academic Records and General and Enrollment Standards section of this catalog.

RESIDENCE ACCOMMODATIONS

The University prides itself on offering a full living and learning experience for its resident students. The mission of the Department of Residence Life and Student Housing is to advance the goals and objectives of the University by creating residential communities that empower residents to value learning, citizenship and leadership. To this end, RLSH seeks opportunities to promote an intellectual culture in SMU's residential communities that complements an already flourishing campus social culture. RLSH is responsible for residence halls, 11 Residential Commons, approximately 40 SMU-owned apartments and 10 SMU-owned Greek chapter houses. This responsibility includes making sure that facilities are well maintained and that students have opportunities to grow personally and excel academically.

HOUSING POLICY FOR ALL STUDENTS

All incoming first-year undergraduate students are required to live on campus for two years. Exceptions may be granted on the basis of a financial, medical or personal hardship at the discretion of the dean of RLSH to those students from Dallas/Fort Worth who live with a parent or legal guardian in the primary residence of the parent or guardian. For housing purposes, the *two years* means the first two years of college. Incoming transfer students who are over the age of 16 and under the age of 20 are required to live on-campus for their first year at SMU. For 2015–2016, upper-class and graduate students are not required to live on campus but may apply on a space-available basis.

Applications for Residence

Applications for on-campus housing for new undergraduate students are accepted after a student has been admitted to the University and paid the University deposit to the Office of Undergraduate Admissions. After the deposit has been processed, new students receive an email with instructions for completing the online application and housing license agreement. The University deposit includes the matriculation fee, orientation fee and advance housing deposit. These fees are nonrefundable. Notification of assignment will be made by RLSH. The housing license agreement is for the full academic year (fall and spring terms). Room charges for the fall term will be billed and are payable in advance of the term for students who register before August 1, and room charges for the spring term will be billed and are payable in advance of that term for students who register before December 1. Students who register after these dates must pay at the time of registration. Room charges for the full academic year will be due and payable should a student move out at any time during the school year. Accommodations for shorter periods are available only by special arrangement with RLSH before acceptance of the housing license agreement. It is important that applicants become familiar with the license agreement, as it is a legally binding document.

RESIDENCE HALLS AND APARTMENTS

Residential Commons at SMU

Most undergraduate residence halls at SMU are designated as a Residential Commons. Entering students are assigned to a Residential Commons in a distributed manner so that each Commons is representational of the incoming class. Incoming students live in their RC for their first two years at SMU. All rooms are furnished

with extra-long twin size beds, dressers, desks, chairs, and closets or wardrobes for clothes. Each student is expected to furnish a pillow, bed linens, bed covers, bed-spread, towels, mattress pad and study lamp.

Upperclass, Graduate Student and Family Halls

Several residential facilities are designated for upperclass students (juniors and seniors, and sophomores on a space-available basis), graduate students and students with families (married couples with or without children, or single parents with children). Moore Hall and Daniel House feature apartment-style accommodations for upperclass students. The Service House is a small, upperclass hall with a thematic focus of community service run in conjunction with the SMU Office of Community Engagement and Leadership. Martin Hall, an efficiency apartment hall, houses a combination of graduate students and senior undergraduate students. Hawk Hall, a one-bedroom-apartment facility, houses single graduate students and married students (graduate and undergraduate) with families. Families with no more than two children may be housed in Hawk Hall.

SMU Apartments

The SMU Apartments adjoin campus and are located in the Highland Park Independent School District. All apartments are unfurnished, and tenants must be students (sophomores and above), faculty or staff. Availability is limited.

Special Housing Needs

Students having special housing needs because of a disability should contact the SMU Office of Disability Accommodations and Success Strategies in order to establish eligibility for accommodations. When applying for housing, students should also submit information to RLSH regarding a request for accommodations. DASS and RLSH will work together with the student on their specific situation to make necessary accommodations.

General Housing Information

In the Residential Commons, each room is equipped with in-room cable television service and Ethernet and wireless connections to the University's computer system. All residential facilities are air-conditioned, and rooms have individual climate control. The SMU Apartments are unfurnished, and telecommunication services (i.e., telephone, cable television, Internet connections) are not provided. Washing machines and dryers are located in all residence halls and adjacent to the SMU Apartments and Daniel House.

Undergraduate students living in traditional residence halls are required to purchase a meal plan offered by SMU Dining Services. Like the housing license agreement, the meal plan obligation is for the entire academic year and is billed and paid for on a term basis. Students living in Moore, Martin and Hawk halls as well as the Daniel House, Service House and SMU Apartments are exempt from the meal plan requirement. With the exception of Daniel House and Moore, Martin and Hawk halls, special accommodations for winter break housing must be arranged with RLSH prior to the beginning of the break. SMU Apartments are on 12-month leases and open throughout the term of the lease. For more information, students should visit www.smu.edu/housing or contact the Department of Residence Life and Student Housing, Southern Methodist University, PO Box 750215, Dallas TX 75275-0215; phone 214-768-2407; fax 214-768-4005; housing@smu.edu.

ACADEMIC RECORDS AND GENERAL AND ENROLLMENT STANDARDS

The standards herein are applicable to all students at the University and constitute the basic authority and reference for matters pertaining to University academic regulations and records management. Enrollment in the University is a declaration of acceptance of all University rules and regulations. A complete *University Policy Manual* is available at www.smu.edu/policy. Additional information regarding rules and regulations of the University can be found in this catalog. Undergraduate students must follow the Universitywide requirements that are in effect for the academic year of matriculation to SMU. The applicable requirements of majors and minors are those in effect during the academic year of matriculation to SMU or those of a subsequent academic year. Students may not follow a catalog for an academic year in effect prior to their matriculation term. Students who are not enrolled for three or more years will return to SMU under the current catalog.

GENERAL POLICIES

Confidentiality of Education Records

The Family Educational Rights and Privacy Act of 1974 is a federal law that grants students the right to inspect, obtain copies of, challenge, and, to a degree, control the release of information contained in their education records. The act and regulations are very lengthy, and for that reason, SMU has issued its own FERPA-based guidelines that are available at the University Registrar's Office FERPA website. Policy 1.18 of the *University Policy Manual* also discusses this law.

In general, no personally identifiable information from a student's education record will be disclosed to any third party without written consent from the student. Several exceptions exist, including these selected examples: 1) information defined by SMU as directory information may be released unless the student requests through my.SMU Self-Service that it be withheld, 2) information authorized by the student through my.SMU Self-Service may be released to those individuals designated by the student and 3) information may be released to a parent or guardian if the student is declared financially dependent upon the parent or guardian as set forth in the Internal Revenue Code.

Additional information is available at www.smu.edu/LegalDisclosures/FERPA.

Student File Number

The University assigns each student an eight-digit SMU identification number. The student should furnish the SMU ID number on all forms when requested, as this number is the primary means the University has to identify the student's academic records and transactions related to the records.

Name Change

A student who has a change in name must provide to the University Registrar's Office his or her Social Security card or the form issued by the Social Security Administration. A valid passport may also be used to complete a name change. Enrollment or records services for the student under a name different from the last enrollment cannot be accomplished without one of the above documents. All grade

reports, transcripts and diplomas are issued only under a person's legal name as recorded by the University Registrar's Office.

Email and Mailing Addresses, Telephone, and Emergency Contact

Each student must provide the University Registrar's Office with a current home address, telephone number and local mailing address as well as the name, address and telephone number of a designated emergency contact. Students enrolling at SMU authorize the University to notify their emergency contacts in the event of a situation affecting their health, safety, or physical or mental well-being, and to provide these contacts with information related to the situation.

Students are expected to keep current all their addresses and telephone numbers, including emergency contact details, through my.SMU, the University's Web-based self-service system. Students may be prevented from enrolling if their information is insufficient or outdated. Changes to parent information should be reported by contacting records@smu.edu, and the email should include the student's full name and SMU student ID number.

The University issues all students an email address. Students may have other email addresses, but the University-assigned email address is the official address for University electronic correspondence, including related communications with faculty members and academic units.

Official University correspondence may be sent to students' mailing addresses or SMU email addresses on file. It is the responsibility of students to keep all their addresses current and to regularly check communications sent to them since they are responsible for complying with requests, deadlines and other requirements sent to any of their mailing addresses on file or to their SMU email.

Cell Phones

The University requests that students provide cellular telephone numbers, as they are one means of communicating with students during an emergency. Cellular telephone numbers may also be used by University officials conducting routine business. Students who do not have cellular telephones or do not wish to report the numbers should provide this information to the University through my.SMU Self-Service. Students may be prevented from enrolling if their cellular telephone numbers are not on file or if they have not declared "no cell" or "prefer not to report" in my.SMU.

Ethnicity

SMU requires that a valid ethnic group category be on file for all students. SMU's policies and the Family Educational Rights and Privacy Act of 1974 protect the confidentiality and privacy of this information. A student's ethnic group category can be viewed in my.SMU, Self-Service Student Center.

U.S. Citizens or Permanent Residents. Ethnicity is self-determined. Students of multiple ethnic backgrounds may select multiple ethnic group categories. If the ethnic group value is incorrect, the student should go to the University Registrar's Office in the Laura Lee Blanton Student Services Building and complete an Ethnic/Racial Category Update Form.

International Students Living in the U.S. While Attending School. Selecting an ethnic group category is not required unless the student becomes a U.S. citizen or permanent resident.

Transcript Service

A transcript is an official document of the permanent academic record maintained by the University Registrar's Office. The permanent academic record includes all SMU courses attempted, all grades assigned, degrees received and a summary of transfer hours accepted. Official transcripts and certifications of student academic records are issued by the University Registrar's Office for all students. Copies of high school records and transfer transcripts from other schools must be requested from the institutions where the coursework was taken.

Transcripts are \$12.25 per copy. Additional copies in the same request mailed to the same address are \$3.50. Additional copies mailed to different addresses are \$12.25 a copy. PDF transcripts are \$16.00 per email address and are available only for students who attended after summer 1996.

Note: No incomplete or partial transcripts, including only certain courses or grades, are issued.

Transcripts cannot be released unless the student has satisfied all financial and other obligations to the University. Instructions for requesting a transcript to be mailed or picked up on campus are available at www.smu.edu/registrar ("Transcript Requests" link). A student may request his or her official transcript through the online my.SMU Student Center. Requests are processed through the National Student Clearinghouse. Telephone and email requests are not accepted. Students or their specified third party can pick up their transcripts at the University Registrar's Office, 101 Blanton Student Services Building. Transcripts may be delayed pending a change of grade, degree awarded or term grades.

SMU is permitted, but not required, to disclose to the parents of a student any information contained in the education records of the student if the student is a dependent as defined in the Internal Revenue Code.

Transcripts may be released to a third party as specified by the student on the Student's Consent for SMU to Release Information to Student's Specified Third Party form accessible at www.smu.edu/LegalDisclosures/FERPA/Forms.

Note: Chapter 675, S.B. 302. Acts of the 61st Texas Legislature, 1969 Regular Session, provides as follows: *Section I.* No person may buy, sell, create, duplicate, alter, give or obtain; or attempt to buy, sell, create, duplicate, alter, give or obtain a diploma, certificate, academic record, certificate of enrollment or other instrument which purports to signify merit or achievement conferred by an institution of education in this state with the intent to use fraudulently such document or to allow the fraudulent use of such document. *Section II.* A person who violates this act or who aids another in violating this act is guilty of a misdemeanor and upon conviction is punishable by a fine of not more than \$1,000 and/or confinement in the county jail for a period not to exceed one year.

Veterans

The University Registrar's Office certifies veterans each term for their benefits under federal programs, including the Yellow Ribbon Program. Most academic programs at SMU qualify for U.S. Department of Veterans Affairs benefits, making an SMU education accessible and affordable. Veterans are required to provide specific documents before they can be certified with the VA's Veterans Benefits Administration. Specific information regarding the certification process is available from the University Registrar's Office at www.smu.edu/registrar ("Veterans Affairs" link).

Final Examinations

Final course examinations shall be given in all courses where they are appropriate, must be administered as specified on the official examination schedule and shall not be administered during the last week of classes. Exceptions to the examination schedule may be made only upon written recommendation of the chair of the department sponsoring the course and with the concurrence of the dean of that school, who will allow exceptions only in accordance with guidelines from the Office of the Provost.

Academic Grievance and Appeals Procedures for Students With Disabilities

The University policy for academic grievance and appeals procedures for students with disabilities is available in the Office of Disability Accommodations and Success Strategies and the University Registrar's Office.

Classification of Students

A student's classification is determined by the number of hours earned or by the degree-seeking status of the student:

First Year	0–29 term hours earned
Sophomore	30–59 term hours earned
Junior	60–89 term hours earned
Senior	90 or more term hours earned
Nondegree	not a candidate for a degree

Term Hour Loads

The unit of measure for the valuation of courses is the *term hour*, i.e., one lecture hour or three laboratory hours per week for a term of approximately 16 weeks (including final examinations).

Usually, each lecture requires a minimum of two hours of preparation on the part of students. Most courses are valued for three term credit hours, i.e., three lecture hours per week and at least six hours of preparation.

A full-time load in the fall, spring and summer terms is 12 hours for undergraduates. Students who enroll for fewer than these minimum hours are designated part-time students. The normal undergraduate enrollment for each of the regular terms is 15 term hours. An undergraduate student enrolled in an engineering co-op course or enrolled for six hours of student teaching is considered a full-time student.

Cautionary Note: Federal financial aid agencies and some other agencies require a minimum number of hours of enrollment for full-time status and do not make exceptions for internship, co-op or student-teaching enrollments. Students on financial aid should consult a Financial Aid Office adviser regarding minimum enrollment requirements for their situation.

Minimum and Maximum Course Loads. Minimum and maximum course loads allowed are based on the school of record.

Each student should be fully aware that hours taken beyond 18 in any term will be charged to his or her student account.

SMU Pre-Majors. Students who have not yet declared a major and who wish to enroll for more than 18 hours must have the approval of their academic adviser and the University Advising Center.

Dedman College of Humanities and Sciences. Majors in Dedman College who wish to enroll for more than 18 hours must have the approval of their adviser and the Office of Records and Academic Services.

Cox School of Business. B.B.A. students may enroll for more than 18 hours per term provided their cumulative GPAs (SMU, all-college and business) are 2.000 or higher to show satisfactory progress toward completion of the degree.

Lyle School of Engineering. Students must have the approval of their academic adviser to enroll for fewer than 12 hours or more than 18 hours during a fall or spring term. Normally, a student must have a GPA of 3.000 or higher to enroll for more than 18 hours. An exception is made during the term in which a student is to graduate. Credit will not be allowed for more than 21 hours in a term.

Meadows School of the Arts. Students are not permitted to enroll during a fall or spring term for more than 18 hours unless their GPA for the preceding term is at least 3.000. During the term in which a student is to graduate, he or she may enroll for 19 hours (or nine hours for a summer session) regardless of the preceding term GPA. A student in the Meadows school cannot receive credit for more than 21 term hours in a term. A student with a GPA below 2.000 for the preceding term will not be permitted to enroll for more than 13 hours.

Simmons School of Education and Human Development. A student in the Simmons School with a declared major in applied physiology and sport management or educational studies may enroll for up to 18 hours per term. A student may petition to take up to 21 credit hours in a term provided he or she meets the following criteria:

1. The student has a cumulative GPA of 3.000 or higher and has demonstrated academic success while enrolled in 18 hours in prior terms.
2. The student needs to take the extra hour(s) in order to graduate at the end of the term in which he or she is enrolling.
3. The student has gained permission from his or her adviser.

Stop Enrollment/Administrative Withdrawal

Insufficient or improper information given by the student on any admission or enrollment form – or academic deficiencies, disciplinary actions and financial obligations to the University – can constitute cause for the student to be determined ineligible to enroll or to be administratively withdrawn.

Academic Forgiveness

A student can declare courses taken 10 or more years prior to the term of admission or readmission to be forgiven, which means the work is not included in the GPA or hours earned when determining admission, academic probation, suspension, honors and graduation. A student must request academic forgiveness at the time of admission or readmission. The student can select the term at which academic forgiveness starts. Academic forgiveness applies to all courses taken during or prior to that term, regardless of the grades earned. Academic forgiveness cannot be applied to only some courses for a term or to only selected terms within the forgiveness period. Once academic forgiveness is declared and the student has enrolled, academic forgiveness cannot be rescinded. Forgiven academic work taken at SMU remains on the permanent academic record, with a notation of “academic forgiveness” on the record. Currently enrolled students cannot request academic forgiveness. Transfer applicants must provide transcripts from all institutions attended, including those where all work may be forgiven.

Transfer Courses From Other Institutions

Credit may be awarded for college courses a student takes prior to matriculation at SMU, including courses a student takes before graduating from high school, if the courses meet the criteria for transfer work outlined in the Admission to the University, Transfer Admission Criteria section of this catalog. Credit may be denied for educational reasons. Once students have matriculated at SMU, they may transfer no more than 30 hours to SMU from accredited colleges and universities.

To ensure in advance that a course taken at another college or university will transfer and that proper credit will be awarded, the student taking the course should obtain prior approval from the chair of the department and the academic dean of the school at SMU that normally offers the course, the adviser, and the student's academic dean. Petitions for preapproval of transfer work are available in the schools' records offices. Students who fail to get prior approval for transfer work may petition later for transfer credit, but they have no assurance that credit will be awarded. In either case, permission may be denied for educational reasons.

Note: SMU schools have differing policies regarding the transferability of courses from two-year institutions, and with very few exceptions, postmatriculation transfer work must be completed at accredited, four-year institutions.

Official college transcripts are required for all college-level work attempted, regardless of transferability. Military transcripts are also required for students receiving VA benefits; more information is available at www.smu.edu/registrar ("Veterans Affairs" link). Students are responsible for making sure a transcript of all transfer work attempted is sent to the University Registrar's Office immediately following completion of the work.

Students who complete more than 30 transferable hours after matriculating can designate which of their courses apply to the 30-hour limit. Students may change the designation of the courses. Students should make these transfer-credit designations in consultation with their records offices.

ENROLLMENT POLICIES

Course Scheduling and Enrollment Cycles

When students enter their school of record and into a specific degree program, they are assigned an academic adviser. Students should consult with the adviser for course scheduling, schedule changes, petitions, degree requirements and other such academic concerns. Advisers normally will have established office hours. The school's records office monitors progress and maintains official degree plans for all students in a school. Students should schedule conferences with their academic advisers and the school's records office upon admission to a school and prior to their final term to ensure that they are meeting all University and graduation requirements.

Each fall, spring and summer term has an enrollment period during which the formal process of enrollment in the University is completed. Prior to each enrollment period, the University Registrar's Office will publish enrollment instructions.

To assist new and readmitted students in making a comfortable, satisfying transition to University academic life, programs of academic advising, enrollment and orientation are conducted prior to each term. Information concerning the programs is distributed by the Office of New Student Orientation and Student Support.

Each student is personally responsible for complying with enrollment procedures and for ensuring the accuracy of his or her enrollment. Students are expected to confirm the accuracy of their enrollment each term. Students who discover a discrepancy in their enrollment records after the close of enrollment for the term should immediately complete an Enrollment Discrepancy Petition. Petitions are to be submitted to the appropriate records office within six months of the term in which the discrepancy appeared; contact information for submission of an Enrollment Discrepancy Petition can be viewed on the University Registrar's Office website at www.smu.edu/EnrollmentDiscrepancy. Petitions submitted later than six months after the discrepancy may not be considered.

Schedule Changes

The deadline for adding courses, dropping courses without grade record and changing sections for each enrollment period is listed on the Official University Calendar (www.smu.edu/registrar). Students are encouraged to seek assistance from their advisers when considering whether to add or drop a course. A student may drop a course with a grade of *W* (Withdraw) through approximately midterm by using the my.SMU Self-Service Student Center. The specific deadline is listed on the Official University Calendar.

After the deadline date on the Official University Calendar, the student may not drop a class. All schedule changes must be processed by the deadline date specified on the Official University Calendar. **Note:** Schedule changes are not complete for official University record purposes unless finalized in the University Registrar's Office.

Student-Athletes. Students must consult with the Athletic Compliance Office prior to dropping a course. In the consultation, the student will review the effects the drop might have on his or her athletic participation and financial aid. After the consultation, the Athletic Compliance Office will update my.SMU to allow the student to process the drop, if necessary. The consultation is advisory; students are responsible for their enrollment. For assistance regarding scholarships or other aspects of being a student-athlete, students should contact the Office of the Assistant Athletic Director for Student-Athlete Development.

International Students. Students must consult with the International Center prior to dropping a course. If dropping a course will cause the student to be enrolled in fewer than 12 hours, the student's immigration status could be affected. After the consultation, the International Center will update my.SMU to allow the student to process the drop, if necessary. The consultation is advisory; students are responsible for their enrollment.

Students on Merit or Need-based Financial Aid. Students should consult with their financial aid adviser prior to dropping a course. If dropping a course will cause the student to be enrolled in fewer than 12 hours, the student's financial aid status may be affected. After the consultation, the student may drop a course through my.SMU Self-Service. The consultation is advisory; students are responsible for their enrollment. Questions regarding this procedure or financial aid should be directed to the Office of the Associate Financial Aid Director.

Withdrawal From the University

Policies on refunds for withdrawal from the University are found in the Financial Information section of this catalog and in the *Financial Information Bulletin*, which can be accessed online at www.smu.edu/bursar (“Financial Bulletin” link). Online/distance students who reside outside of Texas should visit the SMU Right to Know Web page to learn about state-specific refund policies. No refunds are made without an official withdrawal.

Students should be aware of the difference between a *drop* and a *withdrawal* and remember that they have different deadlines and separate financial policies. The deadlines for each are posted each term on the Official University Calendar at www.smu.edu/registrar. A *drop* occurs when a student removes one or more courses from his or her schedule and remains enrolled in at least one credit hour for the term. A *withdrawal* occurs when removing the course or courses will result in the student being enrolled in zero hours for the term.

If a student removes all courses from his or her schedule prior to the first day of the term, the transaction is considered a *cancellation* and does not result in financial penalty or impact the student’s transcript.

A student who wishes to withdraw (resign) from the University before the end of a term or session must initiate a Student Petition for Withdrawal form and secure approval from his/her school’s records office. The records office will then submit the form to the Office of the University Registrar. The effective date of the withdrawal is the date on which the Student Petition for Withdrawal is processed in the University Registrar’s Office. Discontinuance of class attendance or notification to the instructors of intention to withdraw does not constitute an official withdrawal.

The enrollment of students who withdraw on or before the fifth day of regular classes as listed on the Official University Calendar will be canceled. Courses and grades are not recorded for canceled enrollments; however, the student will owe a portion of his/her tuition and fees. Additional information is available in the *Financial Information Bulletin*, which can be accessed online at www.smu.edu/bursar (“Financial Bulletin” link). A student who withdraws after the fifth class day will receive the grade of *W* in each course in which he or she enrolled.

Medical withdrawals and mandatory administrative withdrawals allow a prorated refund of tuition and fees and have conditions that must be met prior to re-enrollment at SMU. Medical withdrawals can only be authorized by a licensed physician or psychologist counselor in the SMU Memorial Health Center. Mandatory administrative withdrawals can be authorized only by the vice president for student affairs. As a matter of University policy, and in compliance with federal regulations, retroactive medical withdrawals cannot be granted. The last day for a medical withdrawal is the last day of class instruction for the term from which the student is withdrawing.

Withdrawing students living in SMU housing must check out of the residence halls with the Department of Residence Life and Student Housing per established procedures.

Wisconsin Refund Policy. The following information applies only to students enrolled in distance/online courses who reside in the state of Wisconsin.

The Wisconsin Administrative Code contains provisions related to online/distance education for students residing in that state. Sections from Chapter 8 of the

Educational Approval Board are reprinted below. The complete code is available online at http://docs.legis.wisconsin.gov/code/admin_code.

EAB 8.05 Partial Refunds. A student who withdraws or is dismissed after the period of time identified under s. EAB 8.03 (1) has passed, but before completing 60 percent of the potential units of instruction in the current enrollment period, shall be entitled to a pro rata refund, as calculated below, less any amounts owed by the student for the current enrollment period, less a one-time application fee of \$100.

- (1) Pro rata refund shall be determined as the number of units remaining after the last unit completed by the student, divided by the total number of units in the enrollment period, rounded downward to the nearest 10 percent. Pro rata refund is the resulting percent applied to the total tuition and other required costs paid by the student for the current enrollment period.
- (2) All efforts will be made to refund prepaid amounts for books, supplies and other charges unless the student has consumed or used those items and they can no longer be used or sold to new students, or returned by the school to the supplier.
- (3) Refunds shall be paid within 40 days after the effective date of termination.
- (4) After the student's first period of enrollment, if a student withdraws or is dismissed in a subsequent enrollment period, the school may also retain an administrative fee of 15 percent of the total cost of a resident program, or \$400, whichever is less.
- (5) No refund is required for any student who withdraws or is dismissed after completing 60 percent of the potential units of instruction in the current enrollment period unless a student withdraws due to mitigating circumstances, which are those that directly prohibit pursuit of a program and which are beyond the student's control.

SMU Refund for Wisconsin Students. SMU online/distance education students residing in Wisconsin who cancel their enrollment will receive a full refund of all tuition and fees if they officially withdraw from the University before the withdrawal deadline listed on the Official University Calendar. The University will issue refunds within 10 business days of withdrawal.

Audit Enrollment (Course Visitor)

Individuals desiring to audit (visit) a class, including those concurrently enrolled for regular coursework, are required to process an Audit Permit form. Audit Permit forms must be completed, approved and received in the University Registrar's Office no later than the last day to enroll for the term. Forms are available at www.smu.edu/registrar ("Forms Library" link). Space must be available in the class. The following regulations are applicable:

1. Classroom recitation and participation are restricted; availability of course handouts, tests and other materials is restricted; no grade is assigned and no credit is recorded; no laboratory privileges are included.

2. The individual's name does not appear on class rosters or grade rosters.
3. Regular admission and enrollment procedures are not conducted for auditors.
4. The audit fee is nonrefundable.

Undergraduate students enrolled full time for any given term (12 hours for fall and spring, six hours per summer session, or 12 hours for the full summer term) may audit one three-hour course at no charge.

5. If credit is desired, the course must be enrolled for and repeated as a regular course, and the regular tuition must be paid.

No-Credit Enrollment

Enrollment for no credit is accomplished in the conventional manner of enrollment, with regular admission and enrollment procedures being required. The student pays the regular tuition and fees, participates in class activities, and receives the grade of *NC* upon completion of the coursework. The student must indicate in writing no later than the 12th day of classes (the fourth day of classes in summer sessions; the second day of classes in intersession terms) that he or she wishes to take a course for no credit. Permission of the instructor or department is required for this type of enrollment, and the student is listed on class rolls. This enrollment is different from audit enrollments, for which no enrollment or grade is recorded.

SMU Abroad students should also see the Grade Options for Courses Taken on SMU Abroad Programs section of this catalog.

Class Attendance

Regular class attendance is required. The instructor of each class announces at the beginning of the course policies regarding the effect of class attendance on the student's standing in the course. These policies may include dropping a student from the course for nonattendance after a certain number of absences. All reasons for absence should be submitted at once to the instructor.

The satisfactory explanation of absence may release a student from disciplinary action but does not relieve a student from responsibility for the work of the course during his or her absence. A student who misses an announced test, examination or laboratory period in a regular course of study and has the permission of the instructor may be given an opportunity to make up the work at the instructor's convenience. The instructor determines in all instances the extent to which absences and tardiness affect each student's grade.

Students may be dropped by a course instructor or academic dean for nonattendance or tardiness with a grade of *W* until the calendar deadline to drop. After the deadline, students must remain enrolled in the course.

Students may also be dropped by a course instructor for inappropriate classroom behavior. The instructor must submit the request by the University deadline to drop. After the deadline, the student must remain enrolled in the class and receive a final grade of *F*.

Students who miss two successive class meetings during the official add-drop period at the beginning of each term are subject to being dropped from the class. To avoid this possibility, students should contact the instructor or the department concerned immediately following such a series of absences.

A student who has a passing grade in a course at the time of the final examination, but who misses the examination and satisfies the dean that the absence was una-

voidable, may secure from the dean permission to take the examination at a time convenient for the instructor.

Excused Absences for University Extracurricular Activities and Religious Holidays

Students who participate in officially sanctioned, scheduled University extracurricular activities should be given an opportunity to make up class examinations or other graded assignments missed as a result of this participation or related travel. The manner in which examinations or other assignments missed because of these activities are to be made up is left to the discretion of each individual faculty member. However, students should not be penalized in any way for these excused absences and should be informed by the instructor at the beginning of the term, preferably in writing, of the instructor's makeup policy. It is the responsibility of the student to make arrangements with the instructor prior to any missed scheduled examination or other missed assignment for making up this work, and to obtain any class notes or other course material missed due to absence prior to taking any subsequent examinations or submitting any subsequent graded assignments.

This statement of University policy applies for all students. To minimize the difficulties caused for both student-athletes and their instructors by excused absences due to University-sanctioned athletic activities or related travel, the Athletic Department shall 1) make available to all student-athletes and their academic advisers prior to registration a copy of the student's activity and travel schedule for the upcoming term, so as to facilitate the student's enrollment in class sections that will minimize activity and travel conflicts; and 2) require all student-athletes to provide a copy of that term's activity and travel schedule, and a copy of this Statement of University Policy, to each of their instructors at the first class meeting of the term.

Other University colleges and departments whose students will miss classes because of their participation in officially sanctioned, scheduled University extracurricular activities or related travel are encouraged to adopt similar procedures to minimize the difficulties caused by such absences.

A list of religious holidays for use in requesting excused absences is available on the Official University Calendar. Students must notify the class instructor in writing by the 12th day of the term of any such absences that will occur during that term. Accommodations are to be made without penalty. More information can be found in the *University Policy Manual*, available at www.smu.edu/policy.

Absence Due to Illness

SMU's Memorial Health Center does not provide documentation for granting excused absences from class. If students are absent for illness, they should talk to their professors about how they might catch up with the material missed. If students are seriously ill and require hospitalization or an extended absence, students should talk to their professors and the Office of Student Life to decide how to deal with the interruption in their studies. To facilitate communication with their professors about their absence, students may submit the Absence from Class Form available at www.smu.edu/healthcenter.

Interpretation of Course Numbers

Each SMU course has a four-digit course number. The first number indicates the general level of the course.

1000–1999	First-year
2000–2999	Sophomore
3000–3999	Junior
4000–4999	Senior
5000–5999	Senior or Graduate
6000–9999	Graduate

The second digit specifies the number of credit hours; exceptions are noted below.

<i>Digit</i>	<i>Credit Hours</i>
0	0, .5 or 10–15
1	1 or 1.5

The third and fourth digits are used to make the course number unique within the department.

GRADE POLICIES

A student's grades are available to him or her through my.SMU Student Center.

Grade Scale

The grade of a student in any course is determined by the instructor of the course. The following grades are authorized for recording on the student's official undergraduate academic record maintained by the University Registrar's Office.

<i>Grades</i>	<i>Description</i>	<i>Grade Points per Term Hour</i>
A	Excellent Scholarship	4.000
A-	Excellent Scholarship	3.700
B+	Good Scholarship	3.300
B	Good Scholarship	3.000
B-	Good Scholarship	2.700
C+	Fair Scholarship	2.300
C	Fair Scholarship	2.000
C-	Fair Scholarship	1.700
D+	Poor Scholarship	1.300
D	Poor Scholarship	1.000
D-	Poor Scholarship	0.700
F	Fail	0.000
P, CR	Pass, Credit	*
I	Incomplete	*
NC	No Credit Received	*
X	No Grade Received in Registrar's Office	*
WP/W	Withdrawal Passing/Withdraw	*

Note: Asterisks denote grades not included in a student's GPA.

Grade of F, D or W

Failing is graded *F*. If the student's work is incomplete, poor quality and not acceptable, a grade of *F* will be given. After such a grade, credit may be obtained only by repeating the course.

The grade of *D* represents performance below average expectations.

Students receiving a *D* in a course that is a prerequisite to another course should consult with their advisers about repeating the course so that they will be adequately prepared for work in the following course. Courses passed with a grade of *D*, *D-* or *D+* will generally not count toward major or minor requirements.

The grade of *W* cannot be recorded unless completion of the official drop or withdrawal process has occurred by the applicable deadline *during the term of enrollment*. Only the grade of *W* may be recorded if the student has officially dropped courses from the schedule or withdrawn (resigned) from the University. The grade of *W* may not be revoked or changed to another grade because the act of officially dropping/withdrawing is irrevocable.

Grade of Incomplete

A student may temporarily receive a grade of Incomplete (*I*) if at least 50 percent of the course requirements have been completed with passing grades, but for some justifiable reason acceptable to the instructor, the student has been unable to complete the full requirements of the course.

At the time a grade of *I* is given, the instructor must stipulate in my.SMU the requirements and completion date that are to be met and the final grade that will be given if the requirements are not met by the completion date.

The maximum period of time allowed to clear the Incomplete is 12 months. If the Incomplete grade is not cleared by the date set by the instructor or by the end of the 12-month deadline, the grade of *I* will be changed to the grade provided by the instructor at the time the Incomplete was assigned or to a grade of *F* if no alternate grade was provided.

The grade of *I* is not given in lieu of a grade of *F* or *W*, or other grade, each of which is prescribed for other specific circumstances.

The grade of *I* in a course does not authorize a student to attend or enroll in the course during a later term. Graduation candidates must clear all Incompletes prior to the deadline on the Official University Calendar, which may allow less time than 12 months. Failure to do so can result in removal from the degree candidacy list and/or conversion of the grade of *I* to the grade indicated by the instructor at the time the grade of *I* was given.

Grade Options for Courses Taken on SMU Abroad Programs

Courses taken on SMU Abroad fall and spring term programs may not be taken on a no-credit or pass/fail basis. The only exception to this policy is for courses designated by SMU's academic departments with no credit or pass/fail as their only grading basis option.

Courses taken on SMU Abroad summer programs and during Jan Term (January) may not be taken for a grade of *NC* (No Credit), but students may petition for one of these courses to be graded on a pass/fail basis. Students must petition approval for the pass/fail option from the program director and the faculty member teaching the course. The deadline to complete the Undergraduate Pass/Fail Option Declaration form to petition for a course taken on an SMU Abroad summer program is the pay-

ment deadline for the program; for Jan Term classes, the deadline is no later than the second day of classes for Jan Term. Forms are available in the academic dean's office.

Grade Point Average

A student's grade point average (cumulative GPA) is computed by multiplying the term hours of each course attempted by the grade points earned in the particular course and then dividing the total number of grade points by the total number of hours attempted, excluding those hours for which grades are shown with an asterisk on the grade chart. The GPA is truncated, not rounded, at three decimal places.

Grade Changes

Changes of grades, including change of the grade of *I*, are initiated by the course instructor and authorized by the academic chair and by the academic dean of the school in which the course was offered. If a student requests a grade change, the instructor may ask the student to provide the request as a written petition, which may become an official part of any further process at the instructor's discretion. Changes of grades may be made only for the following authorized reasons: to clear a grade of *I*, to correct a processing error or to reflect a re-evaluation of the student's original work. A change of grade will not be based on additional work options beyond those originally made available to the entire class.

Changes of grades of *I* should be processed within a calendar year of the original grade assignment. Other changes of grades must be processed by the end of the next regular term. No grade will be changed after 12 months or after a student's graduation, except in cases where a grade is successfully appealed – provided that written notice of appeal is given within six months following graduation – and in extenuating circumstances authorized by the academic dean and approved by the University Registrar's Office.

Grades for Repeated Courses

First-Year Repeat

Students who enter the University directly from high school may repeat up to three courses for which grades of *D+* or lower were received, provided these courses were completed before or during a student's first two consecutive regular terms following matriculation (regardless of the student's enrollment or withdrawal). The grade from the repeated course, even if lower, will be the grade used to calculate the student's GPA. A course may be repeated only once under this policy, and it must be repeated within the next two regular terms (regardless of the student's terms of enrollment or withdrawal, but not counting a term of academic suspension) following the term in which the course was initially taken. Exceptions to the two-term restriction may be requested from the University Registrar's Office if the course is not taught again within that period.

Note: Students must repeat the exact same course originally taken to be considered a repeat; however, not every course is offered again, and thus may not be available to be repeated.

Students who are disciplinarily suspended may petition for an extension. The student must declare to his or her academic dean by the 12th day of classes which courses he or she will repeat under this policy. Only the repeated course and not the initial credit hours count toward the number needed for graduation. Both the initial and the second grades are shown on the student's permanent academic record.

Academic standing, as determined by the initial grade, stands. Students are cautioned that for some purposes, such as admission into an academic program, both grades or only the initial grade may be used.

Regular Repeat

In all other cases, students will be allowed to repeat courses according to the following rules: Both the initial and the second grades will be recorded on the student's permanent academic record. Both grades will be included in the calculation of the GPA and in the determination of academic probation, suspension, dismissal, honors and graduation. Only the repeated course and not the initial credit hours count toward the number of hours needed for graduation.

Note: Students cannot take or repeat a course that is a prerequisite for a course already satisfactorily completed.

The courses a student can repeat are determined by the school of record:

Dedman College of Humanities and Sciences. Students can repeat courses in which the original grade was *D+* or below. Other requests to repeat courses can be made by petition in consultation with the academic adviser/department through the Dedman Office of Records and Academic Services.

Cox School of Business. Students can repeat only those courses in which the original grade was a *D+* or below.

Lyle School of Engineering. Students can repeat courses in which the original grade was a *C-* or below. Such courses can be repeated only once.

Meadows School of the Arts. Students can repeat courses in which the original grade was a *C-* or below. Such courses can be repeated only once.

Simmons School of Education and Human Development. Students majoring in applied physiology and sport management can repeat a course once in which the original grade was a *D+* or below. Students in the Department of Teaching and Learning's educational studies degree program must repeat all required teacher education courses if they earn below a grade of *C*. All other undergraduate students in the Simmons School may repeat a course once if the original grade was a *C-* or below.

Pass/Fail Option

Students may take one course per term on a pass/fail basis. The maximum total credit with a grade of Pass that may count toward a degree is 12 hours. In addition to these courses, students may take up to four additional PRW2 courses beyond the courses required for their degree requirements. Only one additional PRW2 course may be taken per term. These additional PRW2 courses are graded on a pass/fail basis only and do not count toward the minimum hours for a student's degree requirements or toward the one pass/fail course per term limitation.

A student must indicate intention to take a course pass/fail no later than the 12th day of classes (the fourth day of classes in summer sessions; the second day of classes in intersession terms) by filing a form available in the school's records office. Students participating in SMU Study Abroad should review the deadlines under Grade Options for Courses Taken on SMU Abroad Programs. After the declaration of intent, students may not change their pass/fail declaration back to a letter grade. If a department grades a course pass/fail for all students by departmental policy, a declaration by the student is not required. A failed course cannot be repeated on a pass/fail basis, except for those courses designated as pass/fail-only courses.

Students should consult with their advisers before declaring the pass/fail option for any course, as some courses may not be taken pass/fail. In general, elective courses may be taken on a pass/fail basis. With the exception of courses only offered on a pass/fail basis, courses required to fulfill the University Curriculum may not be taken pass/fail. Courses in the academic majors and minors also are excluded; however, in some programs, courses may be taken pass/fail after the minimum program requirements have been met. SMU schools may have different pass/fail policies for major and minor courses; students should see the academic requirements in each school's section of this catalog for information on pass/fail grading. There may also be other courses required to meet certain professional accreditation standards or entrance requirements, such as teacher preparation and preprofessional studies, that may not be taken pass/fail by a particular student. The departments or advisers concerned with these requirements will make these exclusions known to the students.

Under the pass/fail option, pass (*P*) grades are *A*, *B* and *C* (including *C*-); failing (*F*) grades are *D*+, *D*, *D*- and *F*. A student who declares pass/fail is not entitled to know the regular letter grade, and a pass/fail grade cannot be changed to a regular letter grade (or vice versa) after the pass/fail grade has been assigned. The grade of *P* is not calculated in the GPA, although the credit hours are included in the total number of hours earned. The grade of *F* is calculated in the GPA. No courses in the Simmons School's educational studies degree program may be taken on a pass/fail basis.

Grade Appeals

A student who feels that an assigned grade is other than the grade earned must first discuss the matter with the course instructor to determine if the discrepancy is caused by error or misunderstanding. At the time of the initial discussion, the student may be asked to provide a written petition requesting the change of grade.

A student who is not satisfied by the instructor's decision on a request for a grade change, and who maintains that the original grade was capriciously or unfairly determined, may appeal to the chair of the department in which the course was offered (or, in the case of a nondepartmental course, to a faculty agent designated by the dean of the school offering the course). After discussing the matter with the student, and bearing in mind that the final authority in matters of academic judgment in the determination of a grade rests with the course instructor, the chair (or faculty agent) will consult with the course instructor, who will subsequently report to the student the disposition of the appeal.

A student who is not satisfied by the disposition of the appeal may appeal the decision to the dean of the school offering the course. The dean will take action as he or she deems appropriate. A student may appeal the dean's decision to the provost. In their actions, the dean and the provost must respect the principle that the determination of a grade rests with the course instructor.

Grade Forgiveness

SMU's policy for omitting courses from a student's GPA is found under Academic Forgiveness in the General Policies section of this catalog.

ACADEMIC ADVISING AND SATISFACTORY PROGRESS POLICIES

Academic Advising

Academic advising is an important process for each undergraduate student at SMU. Each student must meet with his or her assigned academic adviser prior to enrolling for an academic term. At this meeting, the adviser will assist the student in planning majors and minors and a program of study, understanding the Degree Progress Report, and scheduling courses that will count toward graduation requirements. After the initial required advising session, the student is encouraged to seek assistance from the adviser when considering whether to add or drop courses.

For an effective advising relationship, the student must be prepared when meeting with the adviser. The student must initiate the advising appointment. Prior to the meeting, the student should obtain through my.SMU a Degree Progress Report that provides detailed information concerning completion of degree requirements. The student should also be familiar with different academic programs of interest. The adviser will give assistance to the student, but the student has the final responsibility for the accuracy of the enrollment, the applicability of courses toward the degree requirements, and his or her academic performance.

Students are assigned an academic adviser by their academic dean's office or records office. A student who enrolls without first meeting with his or her assigned academic adviser may be subject to sanctions including, but not limited to, cancellation of the term enrollment and restriction from the self-service enrollment functions.

Mandatory Declaration of Major

Students officially declare their major when they have made a firm choice and when they have met the specific program entrance requirements for their intended school and department. For most students, the declaration of the major occurs in the sophomore year. Students are expected to qualify for and to declare a major no later than upon completion of 75 term hours, including credits by examination and transfer credits, in order to continue their studies at SMU. Students in the Simmons School's educational studies degree program must declare a second major as well; they cannot graduate with an educational studies degree alone.

Change of Academic Program

Undergraduate students who desire to change their academic program – that is, transfer from one school to another within the University, change their degree objective, change their major or change their minor – should first notify the records office of the school in which they are currently enrolled. Students can change their academic program at any time during a term. The program change is effective on the date received, approved and processed. However, changes should be made at least one week prior to enrollment for a term for the change to be effective for that enrollment.

A nondegree, visiting student who wishes to be admitted to an undergraduate program offered by a school of the University must meet all standard University admission requirements.

Concurrent Degree Programs

Students can simultaneously earn two degrees from two schools of the University with approval of the records offices of each school. The requirements for each degree must be met. Students should meet with advisers in both schools at an early date to prepare a proposed plan of study and to complete the processing of all necessary forms.

Leave of Absence

A leave of absence is a temporary leave from the University – a kind of “timeout” – that may be necessary during an academic career. Students may elect to take leaves of absence for a variety of reasons, including 1) medical reasons due to accident or illness, 2) family crises or other personal situation that requires an extended absence from school, 3) financial issues that may take time to resolve, and 4) academic difficulties that may best be handled by taking time to refocus on college work.

Typically, a leave of absence is for one term or one academic year. A student may extend a leave of absence by contacting his or her academic department representative. The process to return to SMU after a leave-of-absence period can be an easy one, especially if the student has gone through the steps to file for a leave of absence and planned ahead for the return. Following SMU’s leave-of-absence guidelines helps 1) assure that the degree requirements per the catalog of record when the student initially matriculated at SMU still apply upon return, 2) assist with financial aid processing, and 3) provide the support needed to return to SMU and successfully finish the degree.

The SMU Leave of Absence Policy provides students with a formal process to “stop out” of SMU for either voluntary or involuntary reasons. Typically, a *leave of absence* is for a temporary departure from the institution; however, *intended permanent withdrawals* from SMU will also be processed under the Leave of Absence Policy.

In addition, students who are participating in study-away programs that do not fall under the auspices of SMU should complete the Leave of Absence Form. The completion of this process will assist all respective offices at SMU to create and monitor a formal, centralized record of the status for all students who are not enrolled. The Leave of Absence Form and Leave of Absence Policy are available at www.smu.edu/registrar (“Forms Library” link). The *University Policy Manual* is available at www.smu.edu/policy.

The first step to effect a leave of absence is for the student to arrange an appointment to meet with his or her academic adviser, who will then assist the student with the process.

Academic Progress

The University sets the goal and expects that all undergraduate students will make regular and satisfactory progress toward their degrees. There are three categories that may apply when an undergraduate student is not making satisfactory academic progress: 1) academic probation, 2) academic suspension or 3) academic dismissal. This policy sets out the standards and procedures for each of these categories. In addition, a student who has been suspended may seek academic reinstatement under the standards set out in this policy.

Definitions: Academic Probation, Academic Suspension, Academic Reinstatement and Academic Dismissal

Academic Probation. Academic probation is a serious warning that the student is not making satisfactory academic progress. A student on academic probation is still eligible to enroll and is considered in good standing for enrolling in classes and for certification purposes. Academic probation is not noted on the permanent academic record; however, a student on academic probation may be subject to certain conditions during the period of probation and will be subject to academic suspension if he or she does not clear academic probation. For academic probation periods and guidelines, students should see the Academic Probation sections below under the appropriate school of record.

Academic Suspension. Academic suspension is an involuntary separation of the student from SMU. Academic suspension is for at least one regular term. The term of suspension might be for a longer period depending on the policy of the school of record or the terms of the individual student's suspension.

The status of academic suspension is recorded on a student's permanent academic record. While on academic suspension, a student is not in good academic standing for certification purposes and is not eligible to enroll at SMU. Students who have served their suspension and who are eligible to return may not enroll for any intersession terms.

Credits earned at another college or university during a term of suspension may not be applied toward an SMU degree. A grade point deficiency must be made up through enrollment at SMU.

Academic Reinstatement. A student who has been on academic suspension once may apply for reinstatement to SMU. If reinstated, the student may enroll in classes, and he or she is considered in good academic standing for purposes of certification. A student who is reinstated remains on academic probation until the conditions of academic probation are satisfied.

Academic Dismissal. A second suspension results in an academic dismissal from the University. Academic dismissal is final, with no possibility of reinstatement or readmission to the University. Academic dismissal is recorded on the student's permanent academic record.

Universitywide Requirements

Academic Probation. For all undergraduate students, a student will be placed on academic probation if he or she fails to meet the following:

1. For a student who enters SMU directly from high school or a student who enters SMU with fewer than 15 transfer hours, when the student fails to complete the Discernment and Discourse sequence and/or the Quantitative Foundation requirements of the University Curriculum after the completion of 60 units earned as SMU credit.
2. For a part-time student or a student who enters SMU with at least 15 transfer hours, when the student fails to complete the Discernment and Discourse sequence and/or the Quantitative Foundation requirements of the University Curriculum after completion of 30 units through enrollment at SMU.

Academic Suspension. For all undergraduate students, a student will be placed on academic suspension if he or she fails to meet the following:

1. For a student who enters SMU directly from high school or a student who enters SMU with fewer than 15 transfer hours, when the student fails to complete the Discernment and Discourse sequence and/or the Quantitative Foundation requirements of the University Curriculum after the completion of 75 units earned as SMU credit.
2. For a part-time student or a student transferring more than 15 hours, when the student fails to complete the Discernment and Discourse sequence and/or the Quantitative Foundation requirements of the University Curriculum after completion of 45 units earned as SMU credit.

SMU Pre-Majors

Academic Probation. For SMU Pre-Majors, once a student's cumulative SMU GPA falls below 2.000, the student is placed on academic probation at the beginning of the next enrolled term (fall, spring or summer). The student has the next two enrolled regular terms (fall, and spring) and the first summer term following the probation start date to raise his or her cumulative SMU GPA to at least a 2.000. A student has the opportunity to enroll only for one summer term while on academic probation. The summer term must be at SMU. A student on academic probation cannot enroll in any intersession terms: Jan Term (January), May term or August term.

When the student is placed on academic probation because his or her cumulative SMU GPA is below 2.000, then the student will be assigned to a designated probation counselor. Before beginning his or her next term at SMU, the student will be required to complete a self-assessment and share this self-assessment with the probation counselor, who will then work with each student to determine the appropriate academic interventions. These academic interventions can include, but are not limited to, the following:

1. Re-evaluation of course enrollments and pre-major objectives.
2. Biweekly academic counseling sessions with the probation counselor (or his or her designee).
3. Enrollment in courses, such as HDEV 1110 O.R.A.C.L.E. or HDEV 1111 Success Strategies, aimed at improving academic performance.
4. Evaluation of medical and/or psychological needs such as the need for drug or alcohol education.
5. Participation in tutoring and/or study skills workshops.

The student will sign a contract that stipulates the agreed-upon academic interventions.

Academic Suspension. If a student does not achieve a cumulative SMU GPA of at least a 2.000 according to the stipulations stated above, then he/she will be placed on academic suspension. A student is suspended effective the first day of the next term (fall, spring or summer), and the suspension period includes a minimum of one regular term (fall or spring). Credits earned at another college or university during a term of suspension may not be applied toward an SMU degree. A grade point deficiency must be made up at SMU.

A student may petition to the University Committee on Academic Petitions for an additional, consecutive probationary term if the term GPA during the student's probationary period indicates academic improvement and if the student has undergone all academic recovery efforts agreed upon in the contract with the probation counselor.

As soon as possible after the student is placed on academic suspension, the student should contact the probation counselor if he/she has any desire or intent to seek reinstatement after the period of academic suspension. The probation counselor will work with the student to determine appropriate conditions that the student should satisfy to be eligible for reinstatement. These conditions might include the completion of coursework with a certain minimum GPA; however, reinstatement is not guaranteed.

Academic Reinstatement. A student who has been academically suspended once may apply for academic reinstatement to the University. Reinstatement to the University is not guaranteed. A student is not eligible to request reinstatement until the end of the time period of academic suspension. The request for reinstatement should be submitted to the University Committee on Academic Petitions, which will make a decision on the request. Ordinarily, the decision whether to grant reinstatement will be based primarily on whether the student has satisfied the conditions set out for the period of academic suspension.

A student who is reinstated after academic suspension has two regular enrolled terms (fall and spring) in which to earn a cumulative SMU GPA of at least a 2.000. A student will return on academic probation and may not be reinstated for a summer term. Students who do not earn a cumulative SMU GPA of at least a 2.000 within two regular terms (fall and spring) after having been academically suspended will be permanently dismissed.

Academic Dismissal. A second suspension is final, resulting in dismissal from the University with no possibility of readmission.

Declared Majors

Dedman College of Humanities and Sciences

Academic Probation. Students who have a declared major in Dedman College and whose cumulative SMU GPA falls below 2.000 are placed on academic probation. Academic probation is for a minimum of one regular term (excluding interterms and summer sessions). The dean may impose special conditions in exceptional probationary situations. Students are removed from academic probation status when they achieve a cumulative GPA of 2.000 or higher.

Academic Suspension. Declared Dedman students whose cumulative GPA remains below 2.000 in any regular term following a term of academic probation will be suspended. Suspension is for a minimum of one term, not counting interterms or summer sessions. Credits earned at another college or university during a term of suspension may not be applied toward an SMU degree. A grade point deficiency must be made up through enrollment at SMU.

Students who have been suspended from another school on campus are also subject to suspension from Dedman College.

Reinstatement on Probation Following Suspension. Students who have been suspended once may apply for reinstatement to the University, but reinstatement is not guaranteed. In certain cases, prescribed conditions, including the completion of

coursework elsewhere, must be met before a student will be approved for reinstatement. Students who have been reinstated to the University following suspension remain on probation and are normally allowed two regular terms within which to make up their academic deficiencies and return to good standing. However, special conditions for the first term may be set in individual cases.

Academic Dismissal. A second suspension is final, resulting in dismissal from the University with no possibility of readmission.

Cox School of Business

Academic Probation. A student will be placed on academic probation for one regular term following the term in which the SMU term, cumulative or business GPA falls below 2.000. The business GPA is effective at nine business credits earned. A student on probation must enroll for a minimum of nine hours and a maximum of 12 hours in the term of probation, will not be allowed to enroll for an internship or directed study, and must meet with the director of academic advising for the B.B.A. program or a designee at appropriate intervals during the term, to be determined by the director. Coursework taken in intersession or summer terms will not affect probationary status. Students who do not meet all requirements of probation will not be removed from probation even if the GPA rises to 2.000 or higher.

Academic Suspension. A student on academic probation who fails to maintain an SMU term, cumulative or business GPA of 2.000, or who fails to complete successfully a minimum of nine credit hours in the term of probation, will be suspended. A student who has been suspended must petition the director of the B.B.A. program for reinstatement, but this petition will not be considered until the student has been suspended for at least one full term (summer sessions excluded). For example, a student suspended at the end of the spring term may petition for reinstatement for the beginning of the next spring term, but no sooner.

Reinstatement on Probation Following Suspension. Petitions for reinstatement must set forth clearly the reasons for the previous unsatisfactory academic record and must delineate the new conditions that have been created to prevent the recurrence of such performance. Each petition is considered individually on its own merits. After consideration of the petition and perhaps after a personal interview, the student may be reinstated on academic probation if the suspension was the student's first. Reinstated students must meet all requirements of academic probation.

Academic Dismissal. A second suspension is final, resulting in dismissal from the University with no possibility of readmission.

Failure at Other Colleges. Students who are on academic probation or academic suspension from other colleges will not be admitted to the Cox School of Business until they are no longer on probation or suspension with their home school. Students who have received academic suspension twice from any college or university will not be admitted to the Cox School. Failure to disclose any such suspensions will be grounds for dismissal from the Cox School.

Lyle School of Engineering

Academic Probation. A declared Lyle student whose SMU term or cumulative GPA falls below 2.000 may be placed on academic probation. The minimum period of probation is one term. The student remains on probation until the overall GPA is 2.000 or higher or until he or she is suspended. A student on probation may enroll in a maximum of 13 credit hours per fall or spring term and a maximum of eight

credit hours per summer term during the term(s) of probation. The student is not allowed to serve as an officer of any organization representing either the Lyle School of Engineering or SMU. The student on probation may not participate in any extracurricular activities that might interfere with or detract from academic efforts.

Academic Suspension and Reinstatement on Probation Following Suspension. A student on probation who fails to maintain a GPA of at least 2.000 during an academic term will be suspended. A student who has been suspended may petition the dean for reinstatement, but this petition will not be considered until the student has been suspended for at least one full term. For example, a student suspended at the end of the spring term may petition for reinstatement for the beginning of the next spring term, but not sooner. Petitions for reinstatement must set forth clearly the reasons for the previous unsatisfactory academic record and must delineate the new conditions that have been created to prevent the recurrence of such performance. Each petition is considered individually on its own merits. After consideration of the petition and perhaps after a personal interview, the student may be reinstated on academic probation if the suspension was the student's first.

Academic Dismissal. A second suspension is final, resulting in dismissal from the University with no possibility of readmission.

Meadows School of the Arts

Academic Probation. A declared Meadows student who fails to maintain an SMU cumulative or term GPA of 2.000 in a regular term will be placed on academic probation for the following regular academic term. A student on academic probation may enroll for a maximum of 13 term hours and must achieve a term and cumulative 2.000 GPA at the end of the term.

Note: A student who fails to meet divisional artistic standards may be placed on artistic probation at any time.

Academic Suspension and Reinstatement on Probation Following Suspension. A student who fails to meet the terms of academic probation will be suspended for one regular academic term, after which the student may apply for reinstatement. A student may petition the senior associate dean for reconsideration, and the student may be reinstated on academic probation.

A student who fails to meet divisional artistic standards may be suspended from the division at any time.

Academic Dismissal. A second suspension is final, resulting in dismissal from the University with no possibility of readmission.

Simmons School of Education and Human Development

Academic Probation. Declared Simmons School students in the applied physiology and sport management major whose cumulative SMU GPA falls below 2.000 are placed on academic probation. Academic probation is for a minimum of one regular term (excluding intersessions and summer sessions). The dean may impose special conditions in exceptional probationary situations. Students are removed from academic probation status when they achieve a cumulative GPA of 2.000 or higher.

Declared Simmons School students in the educational studies degree whose cumulative SMU GPA falls below 2.500 and whose SMU education courses GPA fall below 3.000 are placed on academic probation. Academic probation is for a minimum of one regular term (excluding intersessions and summer sessions). The dean may impose special conditions in exceptional probationary situations. Students are

removed from academic probation status when they achieve a cumulative GPA of 2.500 or higher and an education courses GPA of 3.000 or higher.

Academic Suspension. Declared Simmons School students in the applied physiology and sport management major whose cumulative GPA remains below 2.000 in any regular term following a term of academic probation will be suspended. Declared Simmons School students in the educational studies degree program whose cumulative GPA remains below 2.500 in any regular term following a term of academic probation will not be permitted to continue in the educational studies degree program. While not suspended from the University, these students are not permitted to pursue an educational studies degree. Suspension is for a minimum of one term, not counting intersessions or summer sessions. Credits earned at another college or university during a term of suspension may not be applied toward an SMU degree. A grade point deficiency must be made up through enrollment at SMU. Students who have been suspended from another school on campus are also subject to suspension from the Simmons School.

Reinstatement on Probation Following Suspension. Students who have been suspended once may apply for reinstatement to the University, but reinstatement is not guaranteed. In certain cases, prescribed conditions, including the completion of coursework elsewhere, must be met before a student will be approved for reinstatement. Students who have been reinstated to the University following suspension remain on probation, and they are normally allowed two regular terms within which they can make up their academic deficiencies and return to good standing. However, special conditions for the first term may be set in individual cases.

Academic Dismissal. A second suspension is final, resulting in dismissal from the University with no possibility of readmission.

Academic Petitions and Waivers

Petitions and/or requests for waivers concerning University requirements, graduation requirements and the evaluation of transfer work should be submitted to the dean's office or records office of the student's school of record. Additional information is found under Grade Appeals in the Grade Policies section of this catalog. Petitions and/or requests for waivers concerning a major or a minor should be submitted to the appropriate department chair or program coordinator/director for consideration.

SMU Credit Requirement

University policy requires that of the 122 minimum required term hours for an undergraduate degree, at least 60 hours must be earned as SMU credit. In other words, 60 hours must be completed through enrollment at SMU's Dallas campus, SMU-in-Plano, SMU-in-Taos, SMU Abroad programs and/or in SMU-approved international programs, and/or by test and other credits awarded by SMU departments as SMU courses. Credit hours earned in venues not listed above that are applied toward the 122 minimum will be recorded as transfer credits. Therefore, regardless of the number of transferable credits completed elsewhere, to receive an SMU undergraduate degree, students must earn 60 credit hours through enrollment at SMU. Of the 122 minimum required term hours for an undergraduate degree, only two hours may be Personal Responsibility and Wellness courses. For further degree requirements, students should refer to the individual school sections of this catalog.

Transfer Coursework

Policies for transfer coursework are found under Transfer Courses From Other Institutions in the General Policies section of this catalog.

GRADUATION POLICIES

Apply to Graduate

Students must file an Application for Candidacy to Graduate with their school's records office no later than the last day of the first week of the term in which they will complete all degree requirements. Applications are filed through my.SMU Self-Service Student Center by the deadline date on the Official University Calendar.

Students who file an application after the published deadline may be required to pay a nonrefundable late fee. Late applications may be denied after the start of the next term, and the Application for Candidacy to Graduate applied to the next conferral date. Students taking coursework at another institution and transferring the course(s) back to SMU are responsible for ensuring that the University Registrar's Office receives their official transcript in order for their degree to be conferred for the anticipated graduation term.

SMU has three degree conferral periods for most programs: fall (December), spring (May) and summer (August). In addition, students who complete their degree requirements during a Jan Term (January), May term or August term will have their degrees conferred at the conclusion of the intersessions.

Commencement Participation

An All-University Commencement Convocation is held in May for students on schedule and enrolled to complete degree requirements during the spring term. Students on schedule and enrolled to complete all degree requirements during the following summer session may also participate in the University Commencement Convocation, although their degrees will not be conferred until August. Students may also participate in departmental or school ceremonies following the University commencement according to the policies of the departments or schools.

An All-University December Commencement Convocation is held each year for students completing degree requirements during the fall term. Students who completed degree requirements during the previous summer session may also participate. Students on schedule and enrolled to complete all degree requirements during the following Jan Term (January) intersession may also participate in the December ceremony, although their degrees will be conferred in January.

A student may participate once in either the All-University Commencement Convocation in May or the All-University December Commencement Convocation for a given degree, but not both.

To participate in a ceremony, a student must apply online and file with their school's records office an Application for Candidacy to Graduate or Intent to Participate Form.

Degree Honors

There are three classes of graduation honors: summa cum laude, magna cum laude and cum laude. The awarding of graduation honors will be determined by minimum GPAs announced at the beginning of each academic year for each of the five undergraduate schools – Dedman, Cox, Lyle, Meadows and Simmons. The minimum GPAs generally will represent the top 5 percent, 10 percent and 15 percent of gradu-

ates in the school. Students earning a degree with majors in two or more schools will receive the highest degree honors for which they are eligible.

The minimum GPAs for each school will be determined by pooling all graduates in the school from the previous three academic years and determining the GPAs in each school that represent the top fifth, 10th and 15th percentiles. The GPA used is the lower of the student's SMU cumulative GPA and all-college GPA (this includes transfer work) and includes undergraduate coursework only.

The minimum graduation honors GPAs for students graduating during the 2015–2016 academic year will be announced in October 2016. Students may obtain information about minimum GPAs required in past years from their academic schools or online at www.smu.edu/registrar (“Academic Records” link).

Separate from earning graduation honors, students who have completed the requirements of the University Honors Program may earn honors in the liberal arts. Departmental distinction may also be awarded in Dedman College of Humanities and Sciences, Lyle School of Engineering, Meadows School of the Arts, and Simmons School of Education and Human Development; the Cox School of Business awards the honors in business distinction to students who have successfully completed the requirements for the Cox B.B.A. Honors Program. These honors require completion of requirements prescribed by the department or school. Further information may be obtained from the individual departments and schools.

Statute of Limitations for Degree Plans

A student who has been readmitted to the University following an absence of more than three years will be expected to meet all current requirements for graduation.

UNIVERSITYWIDE REQUIREMENTS

In keeping with the University's educational mission, all undergraduates are required to complete a program of study that emphasizes the values of what historically has been known as a liberal education – namely, learning to read, write and think critically and acquiring a basic understanding of human society in all its dimensions. The courses and experiences included in this program of study provide a solid and broad education that will equip students to compete and adapt to the rapidly changing contemporary world and complement more focused study in the major.

The University Curriculum is the vehicle through which SMU ensures that all undergraduates meet the general education requirements stipulated by the Southern Association of Colleges and Schools, specifically, "Through general education, students encounter the basic content and methodology of the principle areas of knowledge: humanities and fine arts, social and behavioral sciences, and natural sciences and mathematics. Courses in each of these specific areas introduce a breadth of knowledge and reinforce cognitive skills and effective learning opportunities for each student. Therefore, it is important that courses selected by students do not focus on skills, techniques and procedures specific to that student's occupation or profession. Such courses may also include interdisciplinary courses" (2.7.3, SACSCOC). The list of all UC courses available each term can be accessed online at www.smu.edu/registrar.

THE UNIVERSITY CURRICULUM

The motto of Southern Methodist University, *Veritas Liberabit Vos* ("the truth shall set you free"), epitomizes the ideals of an SMU education and is the fundamental principle for the University Curriculum. The wisdom to acquire and critically reflect on existing knowledge and the insight and capacity to create new knowledge – the hallmarks of an educated person – exemplify the characteristics SMU seeks to instill in its students.

The University Curriculum consists of two main coursework components (**Foundations** and **Pillars**) combined with cocurricular **Proficiencies and Experiences**. UC requirements can be met through any part of the student's undergraduate career, including work in the major or minor, elective courses, or approved activities.

The number of courses and/or credit hours required to complete the University Curriculum will vary according to the individual student's academic background, preparation, major and curricular choices. The list of UC courses will vary by term, especially with respect to identified and approved UC Proficiencies and Experiences courses, and will be listed on the Office of the Registrar Web page. Each student has access to a regularly updated and individualized Degree Progress Report that charts the student's progress and identifies all of the courses the student can use to meet the various requirements. Students are advised to work closely with divisional/departmental and University advisers in navigating the UC requirements and planning their coursework each term.

SUMMARY OF UNIVERSITY CURRICULUM REQUIREMENTS

University Curriculum Foundations

In today's rapidly changing world, a university education must provide students in all majors with the tools to embark on a lifetime of learning. UC Foundations courses assure that students read and write critically, possess basic quantitative reasoning skills, understand the concepts of lifelong personal responsibility and wellness, and explore how different academic disciplines define and create knowledge. Because these skills are essential for a successful college experience, Foundations courses should be completed within a student's first four terms of enrollment.

Discernment and Discourse

The University Curriculum foregrounds academic reading, writing and oral expression in the Discernment and Discourse sequence. The Discernment and Discourse sequence introduces students to academic thought and communication in seminars that allow students to work closely with faculty in small classes. All seminars share the goal of assisting students in the development of critical reading, expository and analytical writing, oral communication, and research protocols.

Most students will satisfy this requirement by taking DISC 1312 in the fall and DISC 1313 in the spring. Students scoring lower than a 500 on the SAT Critical Reading section or lower than 21 on the ACT English section will begin in DISC 1311. Students scoring at or above 500 (SAT Critical Reading) or at or above 21 (ACT English) will begin in DISC 1312. Students scoring a 4 or 5 on the Advanced Placement Test and students scoring 5, 6 or 7 on the IB exam will place out of DISC 1312 and begin with DISC 1313. Students participating in the University Honors Program satisfy this requirement with DISC 2305 and 2306 in the fall and spring of their first year. Each term, students must be enrolled in and may not drop Discourse and Discernment until they have completed the requirement. A minimum grade of C- is required to pass each course.

DISC 1311 (3). FOUNDATIONS OF WRITTEN AND ORAL DISCOURSE. This class gives students practice in the reading, writing, and analytical skills necessary for the successful completion of DISC 1312 and 1313. Students approach writing as a process of drafting, revising, and editing, and they work on sentence-level and paragraph-level writing skills as they build toward essay-length writing projects.

DISC 1312 (3). INTRODUCTION TO ACADEMIC DISCOURSE. This course introduces students to a variety of discipline-based modes of inquiry and expression. The texts students read and create employ and exemplify the principles of academic discernment and discourse. Students must earn a C- or better. *Prerequisite:* DISC 1311 or one of the following test scores: 500 on the SAT Critical Reading or 21 on the ACT English section.

DISC 1313 (3). INQUIRY SEMINAR. This course is a topic-based seminar through which students continue to develop their critical reading and writing skills, employing analysis, evaluation, synthesis, and/or integration, while learning to employ research protocols for the various discipline or disciplines represented in the course. Students must earn a C- or better. *Prerequisite:* C- or better in DISC 1312 or ENGL 1301.

DISC 2305 (3). HONORS HUMANITIES SEMINAR I. Insights from literature, linguistics, philosophy, psychology, and science that became major modes of interpreting the world in the 20th century and that define what constitutes knowledge in the 21st century. Open only to students in the University Honors Program.

DISC 2306 (3). HONORS HUMANITIES SEMINAR II. A study of ethical questions derived from history, literature, psychology, and philosophy that focuses on what constitutes a meaningful life. The course also explores historical challenges to the bases of ethics. *Prerequisite:* DISC 2305.

Quantitative Foundation

Quantitative reasoning refers to the ability to understand, evaluate and use quantitative information. Quantitative information takes many forms, and quantitative reasoning skills span a vast spectrum from basic numerical manipulations to advanced statistics and mathematics. One three-credit course is required to ensure that students possess these necessary skills. Students scoring a 4 or 5 on the Calculus AB, Calculus BC or Statistics Advanced Placement tests will place out of this requirement. Math placement testing is also available through SMU's Mathematics Department examinations. The list of UC Quantitative Foundation courses offered each term can be accessed at www.smu.edu/registrar.

Personal Responsibility and Wellness

All students complete this requirement by completing two one-credit courses. Taken during the first year, PRW1 introduces students to the University and explores three sets of issues: 1) the role of personal responsibility in coping with college and life's other transitional periods; 2) challenges and opportunities such as managing time and stress, benefiting from diversity and autonomy, dealing with pitfalls related to alcohol and drugs, and exploring resources and activities on campus; and 3) personal finance decisions while at SMU and later in life, including managing money, using credit cards and making major purchases.

In PRW2 (physical fitness courses), students work with instructors to establish personal goals and fitness plans for the term. A variety of individual and group fitness courses will be available, with each course containing core objectives and student-learning outcomes based on health-related fitness components. Grades will be given based on attendance, understanding of training/health principles and satisfactory improvement toward the goals that students set for themselves. The list of PRW courses available each term can be accessed at www.smu.edu/registrar.

Ways of Knowing and Cultural Formations

KNW and CF courses are interdisciplinary courses that explore how natural scientists, social scientists, humanists, artists, engineers and professionals in business and education address important issues. Sometimes taught collaboratively by faculty members from different departments and organized around a major topic or "big question," KNW, CF, CFA and CFB courses develop students' understanding of the multiple approaches whereby different disciplines define, acquire and create knowledge, including the ethical considerations involved. Students are required to complete either one KNW, CF, CFA or CFB course. The list of courses available each term can be accessed at www.smu.edu/registrar.

University Curriculum Pillars

The UC Pillars component is a set of five two-course sequences that introduce students to the primary ways in which intellectual traditions have organized and constructed knowledge. Each UC Pillar, except for the Pure and Applied Science Pillar, requires an introductory course that covers origins, critical analysis and important issues, and then a second course that, typically, will be of a more focused or advanced nature. Courses may satisfy requirements of more than one UC Pillar, and courses taken to satisfy UC Pillar requirements may also count toward the student's major. Any UC Pillars course may also be designated as satisfying one of more of the required UC Proficiencies and Experiences. The list of UC Pillars courses available each term can be accessed at www.smu.edu/registrar.

Creativity and Aesthetics

To develop an understanding of and appreciation for the creative impulse in a variety of artistic, cultural and historical contexts, graduates of SMU will be able to identify, explore and explain concepts fundamental to the visual, literary and performing arts through critical analysis, performance or the act of personal creation. This Pillar also seeks to expose students to the fundamental role that creativity plays in maintaining a robust, adaptive and prosperous society. To this end, students take two courses from the Creativity and Aesthetics Pillar. Courses in this Pillar come primarily from the humanities and fine arts, especially at level one of the Pillar.

Historical Contexts

To understand societies in the contemporary world and the forces that have shaped them, graduates of SMU will be able to identify and analyze problems, events, and documents or artifacts from the past and know how to situate them in their appropriate social, political, economic and cultural contexts. To this end, students take two courses from the Historical Contexts Pillar. Courses in this Pillar come primarily from the humanities, fine arts, and social and behavioral sciences.

Individuals, Institutions and Cultures

To understand complex social systems, graduates of SMU will have explored contemporary efforts to document and analyze the interaction of individuals, cultures and institutions that shape economic, political and social experiences. To this end, students take two courses from the Institutions and Cultures Pillar. Courses in this Pillar reflect the broad range of the human experience, with most coming from the social and behavioral sciences.

Philosophical and Religious Inquiry and Ethics

To explore the human condition, graduates of SMU will have engaged in probing inquiry of philosophical, religious or ethical issues and questions. This inquiry also serves as the basis for thoughtful choice and action. To this end, students take two courses from the Philosophical and Religious Inquiry and Ethics Pillar. Courses in this Pillar come primarily from the humanities, especially at level one of the Pillar.

Pure and Applied Sciences

To be active, engaged citizens in a global society, graduates of SMU will be able to participate in scholarly discourse in science and engineering and to understand the implications of these disciplines. Students should be aware of the meaning and methods of science and engineering, and of the ways that both disciplines have shaped and continue to shape the world. To achieve this goal, students must take two courses in the Pure and Applied Science Pillar: either two introductory courses with laboratory experiences, or one introductory course with a laboratory experience and one more advanced course. Courses in level one of this Pillar come primarily from the natural sciences.

Proficiencies and Experiences

To prepare SMU graduates for both career development and lifelong learning, the University Curriculum requires all undergraduates to develop and refine writing, quantitative reasoning, oral communication and information literacy skills beyond the introductory level provided through Foundations courses. The University Curriculum also encourages all undergraduates to apply curricular knowledge to the

diverse, global communities in which they will live and work. The following UC Proficiencies and Experiences, required of all undergraduate students, may be met through credit-bearing coursework or approved, noncredit activities that have been identified as meeting that requirement.

A list of courses offering opportunities available each term for fulfilling UC Proficiencies and Experiences requirements can be accessed at www.smu.edu/registrar. Students should see their adviser or the Office of the University Curriculum for approved noncredit activities that satisfy proficiencies.

Writing

In addition to Discernment and Discourse coursework, all students will take two WRIT courses in which they compose coherent, well-supported and carefully edited essays and reports suitable for a range of different audiences and purposes.

Quantitative Reasoning

In addition to Quantitative Foundations coursework, all students will take one quantitative reasoning course in which quantitative reasoning skills are central to course content, delivery and evaluation.

Information Literacy

All students will take two information literacy courses in which they learn how to select and use the appropriate research methods and search tools for needed information and how to evaluate sources for quality of information for the given information need.

Oral Communication

All students will learn how to select and use appropriate forms of evidence in a public presentation, design verbal messages to suit particular audiences and purposes, and use visual cues to enhance a public presentation. Students can use both coursework and sustained, reflected-upon activities to fulfill the University Curriculum's two oral communication requirements.

Community Engagement

All students will learn how to demonstrate the analytical and practical skills necessary for engaged, informed citizenship by applying academic learning to address specific needs in a community. Students can use both coursework and sustained, reflected-upon activities to fulfill the University Curriculum's one community engagement requirement.

Human Diversity

All students will be able to demonstrate an understanding of the historical, cultural, social or political conditions of identity formation and function in human society, with respect to race, ethnicity, gender or societies in the developing world. Students can use both coursework and sustained, reflected-upon activities to fulfill the University Curriculum's one human diversity requirement.

Global Engagement

All students will engage with other societies and cultures, demonstrating an understanding of the material culture, underlying values, beliefs or practices that are central to the culture(s) being visited or studied. Students can use both coursework and sustained, reflected-upon activities to fulfill the University Curriculum's one global engagement requirement.

Second Language

All students who matriculate with less than the equivalent of four terms' college-level, second language proficiency will improve their second language proficiency by at least the equivalent of two terms' college-level instruction. (Students who come in with three terms' proficiency will be required to complete only one additional term.) Students can continue a language they have previously studied or complete two terms in a new language. Students' initial course placement and eventual proficiency assessment will be determined by language-specific exams designed and/or approved by SMU faculty. Students may fulfill the second language proficiency through coursework or through such means as 1) being literate in a native language other than English; 2) matriculating with AP scores of 4 or 5, or higher-level IB scores of 5, 6, or 7 on a language exam; 3) developing the necessary incremental proficiency through using the language in research, community service or internships abroad; and 4) studying the language online, ideally using recommended learning materials.

University Curriculum Protocols

1. Credit earned by examination may be used to fulfill requirements in the Foundations, Pillars (level one) and second language proficiency categories.
2. With the exception of courses that are offered only with pass/fail grading, courses taken to fulfill UC requirements may not be taken pass/fail.
3. Following SMU matriculation, students must meet UC Foundations requirements through SMU coursework.
4. PRW1 should be completed during the first 30 hours of undergraduate work.
5. A minimum grade of *C-* is required in all DISC-sequence courses, and students must be enrolled in and may not drop Discourse and Discernment until they have completed the DISC requirement.
6. Students may petition for an individual exception to a UC requirement, typically by requesting consideration of a course transferred from another regionally accredited institution. All UC student petitions for substitution must include concrete assessment evidence that the proposed alternative course or experience satisfies the specific Student Learning Outcomes associated with the requirement. The petition is then vetted by the student's academic adviser and reviewed by SMU departments where appropriate before it is submitted to the associate dean for general education or the assistant dean for the University Curriculum for approval consideration. Appeals may be made to the Committee on Academic Petitions.
7. Probation and suspension rules related to the Foundations components of the University Curriculum are found under Academic Progress: Universitywide Requirements in the Academic Records and General and Enrollment Standards section of this catalog.

EDUCATIONAL FACILITIES

ALTSHULER LEARNING ENHANCEMENT CENTER

The A-LEC is devoted to helping students become more independent, self-confident and efficient learners. In addition, its mission is to help students respond effectively to specific academic challenges, to articulate and attain their own educational goals, and to succeed at any level of the undergraduate curriculum. Each year, approximately 32–35 percent of SMU's undergraduate students participate in A-LEC programs, courses and services, including 61 percent of all first-year students and 52 percent of all first- and second-year students. All A-LEC services are available at no cost to full-time undergraduate students. Some services are available by appointment; others are available on a drop-in basis. Students may be referred to the A-LEC by their advisers, faculty or resident assistant, but most students choose to come on their own. More information is available at www.smu.edu/alec.

Tutoring Services. The A-LEC offers subject-specific tutoring in most first- and second-year courses. Tutorials are offered in individual, small-group and review session formats. The tutoring schedule changes regularly, and updates can be found on the A-LEC website.

Writing Center. English department faculty members assist undergraduate students at any stage of the writing process, from planning a draft to learning from previously graded papers.

Workshops. Each fall, the A-LEC offers approximately 40 study strategy workshops; in spring, approximately 20 are offered. Among the topics covered are note taking, time management, test-taking strategies and textbook study and reading.

HDEV 1110: Reading and Learning Strategies. (Previously O.R.A.C.L.E. – Optimal Reading, Attention, Comprehension and Learning Efficiency). Each academic year, hundreds of SMU students take HDEV 1110 to develop their advanced reading and learning skills. Students can register for HDEV 1110 at the same time they register for their other courses. Every fall, some sections are reserved for pre-med students, transfer students and students with documented learning differences.

HDEV 1211: Success Strategies. This two-credit course helps students develop strategies for creating success in their academic, professional and personal lives. Students engage in ongoing self-assessment and journal writing, learn study skills, and explore campus resources. The course is designed for students on academic probation and for those who are dissatisfied with their grades. Students can register for HDEV 1211 at the same time they register for their other courses.

Academic Counseling. Full-time staff members are available to work individually with students on study strategies. Some specialize in working with students with learning differences or students on academic probation.

Disability Accommodations and Success Strategies. DASS offers any SMU student with a disability comprehensive support services such as classroom accommodations for qualified students with a learning disability and/or attention deficit hyperactivity disorder. DASS also assists with physical accessibility and accommodations for other conditions such as physical, visual or hearing disabilities and medical or psychiatric disorders. For undergraduate students, academic coaching with DASS learning specialists is available in the areas of transitioning, learning strategies, educational planning and self-advocacy. More information on the accommodations process and DASS resources is available online at www.smu.edu/alec/dass.

SMU LIBRARIES

www.smu.edu/libraries

Service to Southern Methodist University students, faculty and staff is the primary goal of all libraries at SMU. The libraries of the University contain more than four million volumes. The Web-based library catalog system provides access to bibliographic records of materials housed in all SMU libraries and hypertext links to other databases, digitized collections and relevant websites. All SMU libraries offer wireless Internet access.

SMU libraries are one of the greatest assets of the University. The SMU libraries comprise the largest private research library in Texas and rank third in the state in total volumes. The University's library system is divided into a number of different units:

1. Central University Libraries.
2. Underwood Law Library.
3. Bridwell Library.
4. Business Library.

Central University Libraries

www.smu.edu/cul

The largest of the SMU library units is Central University Libraries, with holdings of more than three million volumes, including 98,000 e-books across all SMU libraries. CUL comprises the Fondren Library Center, the Hamon Arts Library, the DeGolyer Library and the University Archives, the Emily C. Norwick Center for Digital Services, and the Fort Burgwin Library at SMU-in-Taos. CUL also supports SMU programs at the SMU-in-Plano campus.

Fondren Library Center, with nearly two million volumes of books, government publications and bound journals, serves students and faculty in the areas of humanities, social sciences, business, education, science, and engineering. Its Information Commons provides a single location within the library where students can use print and online resources, as well as the latest computer software and technology. The Information Commons also offers staff and resources to assist students with media-intensive products as well as the latest in touch computing technology. Fondren Library is a selective depository for government information resources and has large electronic collections of retrospective periodicals and special collections in the humanities, sciences and social sciences. It houses the Foscue Map Library, the University's map collection, which includes more than 260,000 topographic and geologic maps and aerial photographs.

Strengths of the Fondren Library include, but are not limited to, classical studies, late 18th- and early 19th-century English literature, American history, Texas history, contemporary biography and literature, anthropology, political science, economics, and other social sciences. Fondren Library also provides reading materials placed on reserve by classroom faculty and access to holdings from other libraries nationwide via interlibrary loan, as well as a collection of nearly 20,000 current and classic DVDs.

The **Hamon Arts Library**, adjoining the south side of the Owen Arts Center of the Meadows School of the Arts, provides resources for the study of art history, communications, dance, film, music, theatre and visual art. With more than 200,000 volumes of books, sound recordings and video recordings, the library's collections

support the Meadows curriculum and are particularly strong in European and American arts. The library also provides conference room facilities; group audio-visual study and presentation rooms; and public computers for research, study and arts-specific software projects. Two special collections units are administered by Hamon Arts Library:

The **Jerry Bywaters Special Collections** focus on the cultural history of the American Southwest. Visual arts holdings include archival materials and works of art on paper documenting the careers of artists such as Jerry Bywaters, Otis and Velma Davis Dozier, E.G. Eisenlohr, Octavio Medellin, Olin Travis, and Janet Turner as well as correspondence of 19th-century French painter Rosa Bonheur. Performing arts holdings include two Japanese *gigaku* masks dating from the seventh to the 10th centuries, the papers of Oscar-winning actress Greer Garson, and materials documenting the careers of longtime SMU music faculty members Paul van Katwijk and Lloyd Pfautsch.

The **G. William Jones Film and Video Collection**, founded in 1970, holds more than 10,000 films and videos on a wide array of subjects and in all formats. The Jones Collection is best known for its Tyler, Texas, Black Film Collection and for the Sulphur Springs Collection of prenickelodeon films.

DeGolyer Library is a noncirculating special collections branch of CUL that contains more than 150,000 volumes. In addition to rare books, it holds nearly 2,500 separate manuscript collections, more than 900,000 photographs and negatives, 2,000 newspaper and periodical titles, 3,000 maps, and an extensive collection of ephemera that includes the largest collection of Texas bank notes in the country. The DeGolyer Library is open to all students and faculty. Great strengths of the DeGolyer Library include early voyages and travels, especially those accounts bearing on the European discovery and exploration of the New World. The collection of Western Americana is among the finest in the country and includes the Lawrence T. Jones III Texas Photography Collection, an unrivalled source of more than 5,000 early images of the land and people of the state from the 1840s to the 1920s. The library also has exceptionally well-developed collections in the fields of business history, such as the JCPenney archives, the Stanley Marcus Collection and the Belo archives (parent company of the *Dallas Morning News* and other media outlets). Transportation history, in particular the history of railroads, is another great strength of the library. DeGolyer's holdings in the history of science and technology, which include the Texas Instruments archives, also have much to offer the researcher. Literary collections cover a respectable range of English and American authors and literary genres, from a 16th-century edition of Chaucer's *Canterbury Tales* to dime novels and comic books. Literary manuscripts include the papers of playwright Horton Foote and the archives of the *Southwest Review*, SMU's literary quarterly. DeGolyer collections also afford numerous opportunities for interdisciplinary research in such fields as American studies, Southwestern studies, women's studies, popular culture, the history of photography, and the history of the book.

The **University Archives**, part of the DeGolyer Library, are the official repository for SMU administrative and historical records of the University. The archives contain manuscripts, photographs, publications, records, and artifacts documenting the establishment and growth of the University. SMU administrators, faculty, local historians and media representatives are its principal users, but students and visiting scholars often use its materials for a variety of research projects.

The **Norwick Center for Digital Services**, located in the staff-access-only area of the Fondren Library Center, focuses on digitizing library collections for increased access via the digitalcollections.smu.edu website. The center also supports the SMU Digital Repository (digitalrepository.smu.edu) and provides a variety of customer-specific digital services to the SMU campus at large.

The **Fort Burgwin Library**, located in SMU-in-Taos, serves students and faculty in the SMU-in-Taos program. It is focused on the history, literature, cultures and environment of New Mexico and the Southwest. The library contains approximately 9,000 books and a small collection of journals and maps, and it houses the Fred Wendorf Information Commons, a computer facility and library constructed in 2004.

Underwood Law Library

library.law.smu.edu

Underwood Law Library, one of the 30 largest law libraries in the country and the largest private law library in the Southwest, houses more than 650,000 volumes and primarily serves the faculty and students of the Dedman School of Law. The collection includes state and federal legislative, judicial and administrative materials; law periodicals; law treatises; U.S., international and foreign documents; and U.S. government documents relating to the legal profession. Strengths of the collection are in taxation, securities, corporate law, labor law, air and space law, commercial and banking law, constitutional law, and law and medicine. The Kay and Ray Hutchison Legal Resource Learning Center in the Underwood Law Library is a computer-learning lab located on the third floor.

Bridwell Library

www.smu.edu/bridwell

Bridwell Library, primarily serving the faculty and students of the Perkins School of Theology, is the University's principal research resource for the fields of theology and religious studies. It offers a print collection of more than 380,000 volumes and 1,100 current periodical titles, and it provides access to a wide array of digital books, journals and databases. Among the library's special collections are significant holdings in early printing, English and American Methodism, theology, religion, and the book arts. The interpretation of these collections is accomplished through class instruction, lectures, publications and exhibitions. Reference librarians are available to help students discover and use the many resources of Bridwell Library.

Business Library

www.cox.smu.edu/bic

The Business Library of the Cox School of Business is located in room 150 of the Maguire Building. This library is open to all students regardless of major. The mission of the library is to provide the SMU community with authoritative business information, regardless of format; support the integration of information and technology into the curriculum; and act as a center for research and development for state-of-the-art information technology applications in the business education field. In support of this mission, students, faculty and staff have access to course-specific in-class instruction sessions, open enrollment research workshops and reference assistance from dedicated business librarians to enhance their use of current business news and financial, industry and market data from premier providers. The

Business Library includes the Kitt Investing and Trading Center, quiet and group study areas, 70 computer workstations in individual and group areas, a multimedia studio, a group presentation practice room, a periodicals area, facilitywide wireless access, more than 400 electronic resources, and a variety of print resources, including the Hillcrest Foundation International Resource Library, the Edwin L. Cox Business Leadership Center Resource Collection, the Maguire Energy Institute Resource Collection and the Cox Career Services Collection. Librarians are available all hours that the business library is open, providing research assistance in person and virtually via email and telephone.

SCHOLARS' DEN

The Scholars' Den is a gathering space for members of the various scholar groups at SMU. Its mission is to foster scholarship and community among its member groups by providing a hospitable place to study and hold scholarly events. Located in Clements Hall, the Scholars' Den features group-meeting space, study areas, a kitchen/dining area and an informal lounge where students can gather to collaborate on academic and extracurricular projects.

LABORATORIES AND RESEARCH FACILITIES

The University provides laboratories and equipment for courses in accounting, advertising, anthropology, art, biology, chemistry, chemistry, communication studies, creative computation, languages, Earth sciences, film and media studies, journalism, psychology, physics, health and physical education, dance, music, theatre, and statistics, as well as civil, computer, electrical, environmental and mechanical engineering. The University is also home to a number of centers and institutes that are detailed in each of the school sections of this catalog. University facilities not listed below are described in sections for the individual schools.

ManeFrame. SMU has one of the top supercomputers in the nation, ManeFrame, which is capable of more than 120 trillion mathematical operations per second. Housed in the data center, ManeFrame is available for faculty and student research in subjects ranging from particle physics to human behavior, water quality and drug discovery.

SMU-in-Taos. SMU-in-Taos, Fort Burgwin, is located 10 miles south of Taos, New Mexico. The facility includes classrooms, laboratories, offices, a computer center and a library, as well as living accommodations for students and faculty. The Fort Burgwin archaeology curation facility houses more than 1 million archaeological specimens from research projects conducted by SMU faculty and students. Northern New Mexico offers a multiplicity of research opportunities for both natural and social scientists. Pot Creek Pueblo, located on the fort's property, is one of the largest prehistoric archaeological sites in the Taos region.

MUSEUM

The **Meadows Museum**, founded by the late philanthropist Algur H. Meadows and located at 5900 Bishop Boulevard, houses one of the finest and most comprehensive collections of Spanish art in the world, as well as selected masterpieces of modern European sculpture, from Rodin and Maillol to David Smith and Claes Oldenburg. The permanent collection of more than 670 objects includes paintings, sculpture, decorative arts and works on paper from the Middle Ages to the present. Artists represented include El Greco, Velázquez, Ribera, Zurbarán, Murillo, Goya, Picasso

and Miró. The Meadows Museum hosts a regular program of loan exhibitions each year in its temporary exhibition galleries and sponsors an active program of public lectures, tours, films, concerts and symposia, as well as children's art programs and family days throughout the year. Museum collections are often used by SMU faculty in their courses. The museum membership program includes exhibition previews, tours of private collections and opportunities for travel. Docent tours of the collection are available to school, University and adult groups. The Meadows Museum, in addition to its collection, houses a museum store and special event rooms. Additional information is available at www.meadowsmuseumdallas.org.

OFFICE OF INFORMATION TECHNOLOGY

The Office of Information Technology is responsible for providing computing and communications services to support academic and administrative needs of students, faculty, staff, alumni and patrons of the University. These services include an SMU email account, access to enrollment and financial data online, Internet access, telephone services, Web-based services, technical support, and a variety of software and hardware discounts.

SMU offers high-speed network connections throughout campus. Students can take advantage of both wired and wireless connections throughout all areas of the residence halls. Wireless coverage also extends throughout the campus in most classrooms, libraries, common areas and several outdoor locations. In addition to on-campus Internet connections, OIT provides off-campus access to resources via a virtual private network connection.

All students receive an SMU email account, which remains active after graduation. The email account may be accessed online via Office 365 (office365.smu.edu). In addition, students have access to a variety of Web-based services, e.g., my.SMU, personal Web space, unlimited network storage space (OneDrive) and academic applications such as the Blackboard Course Management System (Courses.SMU). All academic information, including grade history, financial information, transcripts and class registration, is available through the my.SMU system.

The IT Help Desk, located in Fondren Library West, provides technical support for most computing issues Monday through Friday 8 a.m.–9 p.m., Saturday 9 a.m.–6 p.m. and Sunday 9 a.m.–9 p.m. Evening or weekend support is available from student staff via walk up or chat. Phone or in-house support is available for on- and off-campus connectivity issues. The Help Desk also offers phone support for the Microsoft Office Suite and other common applications. In addition, the OIT website (www.smu.edu/oit) provides information, step-by-step instructions and answers to many frequently asked questions.

Although most students have their own computers, there are a number of public computer labs available for use. Almost all of the labs contain both Mac and PC workstations and support a variety of programs. There is also 24-hour computer access available in the Hughes-Trigg Student Center.

OIT also provides on-campus telephone and voice mail services for on-campus residents. Discounts on technology purchases are available throughout the year. More information can be found on the OIT website.

For additional information on services provided by IT, students should visit www.smu.edu/help or call the Help Desk (214-768-HELP or 214-768-4357). Technology news and updates are available on Twitter (@smuoit) and the IT Connect blog (blog.smu.edu/itconnect).

ACADEMIC PROGRAMS

SMU offers degrees in five undergraduate and graduate schools and three graduate professional schools: the Dedman College of Humanities and Sciences, the Edwin L. Cox School of Business, the Dedman School of Law, the Linda and Mitch Hart eCenter, the Bobby B. Lyle School of Engineering, the Algur H. Meadows School of the Arts, the Joe and Lois Perkins School of Theology, and the Annette Caldwell Simmons School of Education and Human Development. The University offers a range of distinguished graduate and professional programs, and since its beginnings in 1915, SMU has remained committed to the concept of a rigorous and relevant liberal arts undergraduate education. All SMU undergraduate degree programs reflect this commitment by encouraging students to combine broad, interdisciplinary inquiry with in-depth study in a particular field of interest.

PREFACE TO THE CURRICULUM

SMU's philosophical basis for the undergraduate curriculum is the steadfast belief that the liberal arts found and inform all the goals of higher education. The Master Plan of 1963 articulates the University's educational commitment as follows: "The essence of the educational philosophy which undergirds the Master Plan is that professional studies must rise from the solid foundation of a basic liberal education. The aim of this University, in other words, is to educate its students as worthy human beings and as citizens, first, and as teachers, lawyers, ministers, research scientists, businessmen, engineers, and so on, second. These two aims – basic and professional education, general and special, cultural and vocational (in the best sense) – will not be separated in the program of this University. It is this University's belief that they should not be, for the well-educated person is indeed a whole human being. His or her intelligence and practical interests interact in all of his or her major activities. The courses and teaching of Southern Methodist University will be so designed that these general and special aims are carried out concurrently and in relation to each other. In this way, it is SMU's aim that every graduate be truly a well-educated person."

SMU undergraduate students choose from among 105 degrees in 91 fields offered by the five undergraduate schools. In addition, recognizing the increasingly fluid nature of knowledge, SMU requires students to take courses in both disciplinary and inter- or multi-disciplinary studies.

The undergraduate curriculum at SMU seeks to accomplish two interrelated goals: to provide a carefully constructed educational experience to be shared and valued by all undergraduates, and to offer students the opportunity to explore a wide variety of frontiers and vistas that will challenge and encourage further intellectual investigation not only during their years on campus but also for the rest of their lives. With these goals in mind, SMU has developed an undergraduate curriculum to reflect the depth and breadth of its educational objectives.

BACCALAUREATE DEGREE PROGRAMS

Dedman College of Humanities and Sciences

Bachelor of Arts

Bachelor of Humanities

Bachelor of Science

Bachelor of Social Sciences

Cox School of Business

Bachelor of Business Administration

Lyle School of Engineering

Bachelor of Science

Bachelor of Science in Civil Engineering

Bachelor of Science in Computer Engineering

Bachelor of Science in Electrical Engineering

Bachelor of Science in Environmental Engineering

Bachelor of Science in Mechanical Engineering

Meadows School of the Arts

Bachelor of Arts

Bachelor of Fine Arts

Bachelor of Music

Simmons School of Education and Human Development

Bachelor of Science

(emphasis in applied physiology and enterprise *or* emphasis in sport management)

For the degrees available in specific fields of study, students should consult the appropriate school's section in this catalog.

HONORS PROGRAMS

www.smu.edu/univhonors

The University offers a variety of honors and distinction programs to encourage scholastic achievement and creativity among its very best students.

The University Honors Program, the largest of these programs, is open to students in all majors and designed to prepare honors students to meet the challenges of rapid change and take advantage of the possibilities this dynamic world presents. To this end, the program emphasizes the values of a liberal arts education, namely, the ability to read, write and think critically, and the acquisition of a basic understanding of human society in all its dimensions. Along with these time-honored objectives, the program provides exceptional opportunities for international study and the exploration of topics across disciplines.

The University Honors Program focuses on University Curriculum courses taken over the course of a student's career at SMU. Students begin with a two-term, first-year honors humanities seminar that explores and encourages critical reflection about several major concepts and works of literature that have shaped the modern world. Classes are small (15 or fewer students), with students in these small honors sections occasionally meeting together as a larger group. Designed to be broad and introductory, and drawing on material from the past and present, the course offerings explore the way different disciplines raise questions and construct knowledge about the human experience.

In addition to the first-year honors humanities sequence of DISC 2305 and DISC 2306, students also take at least four honors seminars (Pillars courses or interdisciplinary Ways of Knowing courses, or a one-credit sophomore seminar that introduces research methods and opportunities) from among the honors offerings.

The final requirement is for the Senior Culminating Project – designed to draw the student out of the classroom and into the larger society – applying the knowledge learned to the outside world. There are many possibilities for this project, including the senior thesis in the major (see below), a Richter, Engaged Learning or other research fellowship, as well as certain internships.

The University Honors Program creates an intellectual community of students and faculty that extends beyond the classroom. Beginning with several orientation activities designed specifically for honors students, special events throughout the year provide additional occasions for coming together. Honors students and faculty are encouraged to attend dinners, programs, seminars and book discussions that may be organized around scholars, artists or other distinguished visitors to the campus. Honors students benefit, too, from the sense of solidarity and community found in a campus venue dedicated especially to bringing together students in all University honor and scholar programs, the Scholars' Den. The program also takes advantage of the Dallas/Fort Worth Metroplex. Visits to museums, studios, theatres and live-music venues allow students to experience the myriad opportunities for learning that only a large urban center can provide. At the same time, the University Honors Program at SMU is not segregated from the larger world of the campus. Honors students interact with their fellow students in nonhonors classes; in the student center; on the playing fields; and in the numerous student governing, social, preprofessional, political, cultural and social organizations that enhance student life at SMU.

Entrance to the University Honors Program is by invitation prior to matriculation or by application after at least one term of coursework at SMU. At the end of their undergraduate years, students who maintain a 3.000 GPA in their honors courses and at least a 3.300 overall GPA receive a diploma inscribed with the designation "Honors in the Liberal Arts." More information about the University Honors Program is available on the website (www.smu.edu/univhonors) or from the director, Dr. David D. Doyle, Jr. (ddoyle@smu.edu).

The Richter Research Fellowship Program provides funding for undergraduates to travel and conduct independent research under a faculty adviser's supervision. All honors students who have completed their second year are eligible to apply. Often this research work is connected to a student's senior honors capstone or distinction project, although that is not a requirement to apply for the fellowship. Richter projects have included researching literacy in Ghana, education for non-native English speaking children in rural California, environment–government correlation in Fiji and women's reproductive health in Ethiopia. The Richter Fellowships are available only to those students who are members of the University Honors Program.

Department and Division Honors. In addition to the University Honors Program, individual schools, departments and divisions of the University offer honors or distinction programs to exceptional students in their upperclass years. The strongest SMU students are encouraged to participate in honors programs at both the University level (the University Honors Program) and the departmental level. Depending on the major, students take a series of honors courses and seminars in their departments or divisions. Many departments and divisions also offer internships and re-

search programs to upperclass students majoring in their fields. Such activities provide practical experience and specialized training within the major. Students completing honors or distinction programs within their departments or divisions graduate with an “Honors in” designation specific to their department or division. More information on these programs can be found under the individual department and division listings in this catalog.

The following is a list of schools with honors programs and departments that offer honors within the major, with a general overview of the programs:

Dedman College	
Anthropology	Significant independent research paper.
Biochemistry	Independent reading, research and a senior thesis.
Biological Sciences	Independent reading, research and a senior thesis.
Chemistry	Independent research project and a senior thesis.
Economics	Rigorous independent project directed by faculty sponsor.
English	ENGL 5310, followed by either an independent study in which the student writes a senior thesis or a graduate seminar, and a minimum of 36 hours in the major.
History	Major research project and thesis, and an oral defense before a faculty committee.
International and Area Studies	Senior thesis and an oral exam on the topic of the thesis.
Markets and Culture	SOCI 4396, distinction thesis and oral exam by faculty.
Medieval Studies	Distinction paper (with original research), an oral exam or a review by a distinction committee.
Philosophy	Substantial writing project under the guidance of a department faculty member.
Physics	Independent reading, research and a senior thesis (under the direction of a department faculty member) that will be presented to a faculty committee.
Political Science	Distinction thesis, oral exam and two advanced courses related to the topic of the thesis.
Psychology	Distinction courses and an independent research study (under the direction of a faculty mentor) submitted for conference presentation or publication.
Religious Studies	Directed research tutorial followed by an independent studies course and a senior thesis.
Sociology	Original research (based on a topic covered in a 3000- or 4000-level course) and a journal-length article written under the supervision of a departmental faculty member, who then determines if distinction is to be awarded.
World Languages	Two extra courses beyond the major requirements; at least one must include a major research paper.

Cox School of Business

B.B.A. Honors Program	18 hours of business honors courses (12 hours at the junior/senior level) with a 3.500 business honors GPA.
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Lyle School of Engineering

Computer Science and Engineering	Successful completion of a senior thesis course, independent research project approved by the academic adviser, defense of the thesis through a public presentation and oral examination before a faculty committee, and a 3.500 major GPA.
Electrical Engineering	

Meadows School of the Arts

Art History	Individual research project, defended before a committee.
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Communication Studies	Honors thesis and 6 hours of COMM honors courses.
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Film and Media Arts	Thesis project.
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Journalism	Honors thesis and 6 hours of honors journalism courses.
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Simmons School of Education and Human Development

Applied Physiology, Sport Management and Wellness	Departmental distinction program.
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ENGAGED LEARNING

www.smu.edu/engagedlearning

SMU recognizes that students enhance their academic experiences when they actively engage in research, service, internships and other creative, entrepreneurial activities related to their studies. Through Engaged Learning, students learn beyond the classroom as they bring their disciplinary training and intellectual capital to bear on issues in real-world settings and cultivate professional skills related to their chosen fields.

Students can either develop their own independent learning projects or participate in engaged learning activities offered by departments, offices and programs throughout the University. Students who are working on capstone-level projects have the opportunity to also submit them as Engaged Learning projects. Such projects are student-driven, linked to students' education and go beyond regular classroom work. SMU supports Engaged Learning projects through a grants program and notes project titles on students' transcripts under the heading "Engaged Learning, SMU's most prestigious undergraduate engagement program."

Projects typically span two academic years. Students apply during the annual November 15–February 15 application cycle or during the senior cycle August 15–September 30. Students, with input from their mentors, work on projects through the summer and fall, present their findings at the Engaged Learning Symposium held in the graduation term and submit project reports, suitable for publication, by April 15 for May graduates or November 30 for December graduates. The Office of Engaged Learning provides structure and guidance throughout.

More information about Engaged Learning is available on the website or from the Engaged Learning staff (engagedlearning@smu.edu).

ACADEMIC ADVISING FOR SMU PRE-MAJORS

Through the University Advising Center, every student entering SMU as a first-year or pre-major transfer student collaborates with a professional academic adviser. Advisers help students acquire the skills to plan their majors and minors, schedule courses, and resolve academic problems that may arise. Computerized Degree Progress Reports provide students with detailed information concerning completion of degree requirements. The Advising Center, which is located on the fourth floor of the Blanton Student Services Building, has received national recognition for its innovative programs and outstanding staff.

ACADEMIC ADVISING FOR MAJORS

After completing 24 term hours and meeting other program admission requirements, students may be eligible to transfer their records to an adviser in the school that houses their major field of study. Those who elect study in the humanities, sciences or social sciences enter Dedman College of Humanities and Sciences. Others, depending on their qualifications and interests, may enter the Cox School of Business, Lyle School of Engineering, Meadows School of the Arts, or Simmons School of Education and Human Development. The University requires students to qualify for and declare a major upon completion of 75 term hours, including credit by examination and transfer work. Upon declaration of a major in one of the schools, students work with a major adviser in that school.

ENGLISH AS A SECOND LANGUAGE PROGRAM

www.smu.edu/esl

Students whose first language is not English may encounter special challenges as they strive to function efficiently in the unfamiliar culture of an American university setting. Dedman College offers the following ESL resources to students from all schools and departments of SMU. Students may apply on the ESL website.

More information about the ESL Program is available on the website or from the director, John E. Wheeler (jwheeler@smu.edu).

The Courses (ESL)

ESL 1001 (O). ESL COMMUNICATION SKILLS. The goal of this course is to improve ESL students' oral and aural interactive skills in speaking, giving presentations, pronunciation, listening, and American idiomatic usage so that they may become more participatory in their classes and integrate more readily with their native English-speaking peers. It is designed to meet the needs of undergraduate and graduate students who may be fully competent in their field of study yet require specialized training to effectively communicate in an American classroom setting. The course is free of charge, noncredit bearing, and transcribed as pass or fail. *Prerequisite:* ESL Program approval required.

ESL 1002 (O). ESL COMMUNICATION SKILLS II. Building on skills developed in ESL 1001, students make use of their knowledge and practice to explore various aspects of American studies. In addition to speaking and presentation skills, reading and writing are also exploited as a means for students to gain a deeper understanding of American culture, customs, attitudes, and idiomatic use of the language. The course is noncredit and no-fee, and is transcribed as pass or fail. ESL 1001 is recommended as a precursor but is not a prerequisite. *Prerequisite:* ESL Program approval required.

ESL 20XX (O). INTENSIVE ENGLISH PROGRAM. All 2000-level ESL courses are exclusive to the Intensive English Program. This multilevel, yearlong program is designed to prepare students and professionals for academic success at the university level. The course of study consists of English for academic purposes, TOEFL-related skills, and American culture. It is open to currently enrolled and newly incoming students, as well as to those not affiliated with SMU. On-

campus housing and meals are available during the 6-week summer term. This is a noncredit, nontranscribed program, and separate tuition fees are charged. *Prerequisite:* ESL Program approval required.

ESL 3001 (0). ADVANCED GRAMMAR FOR WRITERS. This course helps students develop their grammar and writing skills within the context of academic readings. Problem areas of English grammar and style are explored through periodic assignments, research documentation methods, and a final research project. The course is free of charge, noncredit bearing, and transcribed as pass or fail. *Prerequisite:* ESL Program approval required.

ESL 3002 (0). ADVANCED ACADEMIC WRITING. Building on principles of grammar and style covered in ESL 3001, this course helps students further improve the writing skills needed for their particular academic careers, using academic texts as a basis for out-of-class writing assignments and a final research project. The course is free of charge, noncredit bearing, and transcribed as pass or fail. *Prerequisite:* ESL Program approval required.

ESL 4001 (0). ESL PRONUNCIATION SKILLS. Students improve their pronunciation by focusing on sentence stress, rhythm, intonation, and body language while learning to mimic American speech patterns. With the instructor's assistance and extensive individual feedback, students develop personal strategies and exercises to become more aware of their own weaknesses. The course is free of charge, noncredit bearing, and transcribed as pass or fail. *Prerequisite:* ESL Program approval required.

DISC 1311 (3), 1312 (3), 1313 (3). ESL DISCERNMENT AND DISCOURSE. The ESL sequence of Discernment and Discourse aims to provide students with the tools they need to successfully complete writing assignments required of them during their University coursework. The ultimate goal is to bring students' analytical reading and writing skills in line with the standards expected of their native English-speaking peers. Explores the principles of effective writing that are taught in regular rhetoric classes and also gives students extra practice in vocabulary development, grammar skills, standard American English pronunciation, and conversational fluency. The DISC 1313 courses are specially designed around themes that are pertinent to the realities and experiences of non-native speakers of English. ESL sections of D&D grant students the same amount of credit as do regular D&D classes, and "ESL" will not appear on the transcript. *Prerequisite:* ESL Program approval required.

Conversation Buddy Program

At the beginning of each term, all students are notified via campus email of the opportunity to practice their language skills in an informal, one-on-one setting outside the classroom for one to two hours a week.

ESL Self-Study Lab

A collection of materials is available for self-study use at the Fondren Library Information Commons. Students will find materials to help them improve their pronunciation, listening, vocabulary and grammar skills.

SMU ABROAD

www.smu.edu/abroad

Global experience is an integral part of an undergraduate education at SMU. The SMU Abroad Office serves the University by developing and coordinating its international undergraduate programs, and by providing support services during and after the experience abroad. SMU Abroad programs are comprised of faculty-led summer programs and SMU-approved programs offered during the academic year. SMU Abroad programs offer opportunities for students to encounter diverse global communities and intellectual traditions through SMU's international partnerships and global initiatives. SMU Abroad courses also enhance and enrich the University's curriculum with experiential learning experiences around the world.

Students must be in good academic and disciplinary standing at SMU to participate in SMU Abroad programs. SMU summer programs require a 2.500 cumulative GPA; many programs require 3.000 or higher. For SMU-approved term abroad programs, a minimum cumulative GPA of 2.700 is required, although the most competitive programs require a GPA as high as 3.500 or 3.700.

Eligibility and Application Process

Students may study abroad as soon as the first summer of their undergraduate career. Rising sophomores, juniors and seniors may apply for summer or term programs abroad. Study abroad in the final senior term is not recommended. Transfer students normally must complete one term at SMU in order to apply for study abroad, as the student's SMU GPA will be considered in the application process.

Students must apply to study abroad by the deadlines published on the SMU Abroad website: October 1 for spring term, March 1 for fall term and February 1 for summer.

Earning Credit

Students will remain enrolled at SMU during the period of study abroad, and credits earned abroad count as courses earned in residence. SMU Abroad students are eligible for all institutional and federal financial aid, provided the student remains enrolled in six credits in an SMU summer program and at least 12 credits during an SMU-approved term abroad program. Grades earned abroad will be posted to the SMU transcript and will be calculated in the student's GPA.

Students may fulfill major or minor requirements, University Curriculum requirements, and electives and language requirements through academic coursework completed on SMU Abroad programs. Specific information about procedures and policies for earning credit is provided on the SMU Abroad website. Students are urged to seek guidance on how to integrate study abroad coursework into their four-year plan of study through their undergraduate advisers. All SMU Abroad programs offer courses eligible for SMU credit.

While it is not recommended, students may study abroad on nonapproved summer or term programs for transfer credit. Students should work with their SMU academic advisers to apply for transfer credit for courses taken on nonapproved programs. Students may not apply for transfer credit for courses offered through programs or universities approved by SMU; enrollment in these programs and universities must be through the SMU Abroad application and enrollment process.

Programs and Courses

A complete list of SMU Abroad programs is available on the website. Individual courses approved in the last several years are listed at www.smu.edu/abroad in the SMU Abroad course database. All new abroad courses must be petitioned for approval before the period of study abroad begins. Information on the course petitioning process is available on the SMU Abroad website. Students may also request UC credit for courses taught by non-SMU faculty on term and summer programs through SMU Abroad; more information can be found on the SMU Abroad website. Students who wish to take courses on a no-credit or pass/fail basis should review the Grade Options for Courses Taken on SMU Abroad Programs and the Pass/Fail Option sections found under Grade Policies in this catalog.

SMU Abroad students will be charged SMU tuition at the SMU tuition rate on campus, as well as miscellaneous fees and a fee for mandatory international health

insurance. Students will be billed by SMU at the usual time. SMU in turn will pay the academic costs of the abroad program. Details on SMU Abroad costs and billing procedures are available on the SMU Abroad website.

Summer Programs

Most summer programs are led by SMU faculty, and the programs and courses offered vary from year to year. In summer 2015, SMU Abroad students participated in faculty-led and internship programs in Australia, China, Costa Rica, France, Germany, Indonesia, Italy, Morocco, Spain and the United Kingdom. Summer 2016 programs and courses abroad are listed at www.smu.edu/abroad.

SMU-Approved Programs

SMU partners with well-established study abroad program providers to offer a diverse array of study abroad opportunities around the world. Term program options include study at universities, study abroad programs on specific disciplinary subjects, language immersion programs and programs with field study and internship components taught in English in non-English-speaking countries. More than 150 programs are preapproved for SMU students, with courses available in all disciplines.

Students applying to study abroad on SMU-approved term programs apply to the study abroad program directly for admission according to the program's own deadlines. They also apply to SMU Abroad to study abroad. All courses are preapproved, and students are registered at SMU during their time abroad. The dual application ensures that students are properly registered at SMU and registered as a participant on the study abroad program, as well.

Students should consult the study abroad program Web pages for specific information on individual study abroad programs and deadlines. Each applicant for an SMU-approved term program will be assigned an SMU study abroad adviser who will offer guidance throughout the program application process.

INTERNATIONAL STUDENT AND SCHOLAR SERVICES

www.smu.edu/international/iss

The International Student and Scholar Services Office provides immigration services to students, scholars and professors from around the globe who are engaged in academic studies or cultural exchange projects at SMU. ISSS coordinates pre-arrival information, ensures compliance with current federal guidelines and provides cultural and educational programming opportunities to SMU's international community. ISSS is located in the Laura Lee Blanton Student Services Building in the International Center, which supports students and faculty who are not U.S. citizens or permanent residents, as well as their families.

SMU-IN-PLANO

www.smu.edu/plano

SMU's campus in Plano's Legacy Business Park extends SMU's resources to meet the educational needs of residents in Collin County and beyond, and makes enrollment in graduate-level programs more convenient for working professionals in North Texas. The campus collaborates with area businesses by offering programs to serve the training needs of their employees and by providing corporate meeting space.

Conveniently located about 1 mile south of the intersection of state Highway 121 and the Dallas North Toll Road, SMU-in-Plano features 16 landscaped acres and four buildings with nearly 200,000 square feet of classroom space, with an additional 9 acres adjacent to the facility.

SMU-in-Plano serves more than 800 adult students each year through several full-time, evening and weekend programs leading to master's degrees and/or professional certificates in counseling, dispute resolution and video game technology (SMU Guildhall). In addition, numerous noncredit certificates and professional development programs are offered in Plano, including paralegal studies, certified financial planner, social media and digital communications, best practices in supervision, and project management.

During the summer, nearly 2,000 children participate in a variety of programs designed to enhance their academic skills. The campus also provides important outreach services to the surrounding Collin County communities; these services include the Mediation and Arbitration Center and the Center for Family Counseling.

More information is available online or through the SMU-in-Plano office: 5236 Tennyson Parkway, Building 4, Plano, TX 75024, 972-473-3400.

SMU-IN-TAOS

www.smu.edu/taos

General Information

The University maintains an academic campus at Fort Burgwin, located 10 miles southeast of Taos, New Mexico. Academic terms are regularly offered at the SMU-in-Taos campus in January and during the summer.

The campus is home to historic Fort Burgwin, originally established in 1852. The fort served many purposes, chief among them to protect area settlers, prior to its abandonment in 1860 just before the Civil War. Reconstructed, the fort now serves as office and classroom space for campus academic programs. Pot Creek Pueblo, one of the largest prehistoric sites in the northern Rio Grande Valley, is also located on the property. This site is one of the ancestral homes of modern-day Taos and Picuris pueblos, and was occupied from A.D. 1250 to 1320.

SMU-in-Taos is open for summer and Jan Term (January) study, offering courses in the humanities, natural and social sciences, business, performing and studio arts, and archaeological research. May, June, August and January have short intensive terms in which students may take up to four credit hours. A longer, more traditional summer term in June allows students to take up to seven hours of coursework. Course offerings vary each year, and courses are designed to be relevant to the Southwest. Courses are heavily field trip oriented to take advantage of the campus' proximity to important northern New Mexico cultural sites.

Program participants are housed in small residences called casitas. Each casita has shared dorm rooms, bathrooms and a large study area with fireplace. Laundry facilities are located on campus, as well as a campus center, chapel, dining hall, library, computer lab and an auditorium. Campus recreational facilities include a sand volleyball court, tennis and basketball courts, a workout facility, and hiking trails. Additional information on the campus and its programs is available online or by contacting the SMU-in-Taos Office, Southern Methodist University, PO Box 750145, Dallas TX 75275; phone 214-768-3657. Course descriptions and additional information can also be found online or obtained via email (smutaos@smu.edu).

Student Appeals and Complaints

Southern Methodist University operates with integrity in all issues and is dedicated to preserving the rights of all members of the University community. Categories for which students may wish to reach out for advice and assistance and/or to submit an appeal or register a complaint are as follows: academics, code of conduct, discrimination, financial issues, honor code and privacy issues. An overview of the roles, responsibilities and procedures for complainants and the University is outlined in each of the areas below.

- Academic Appeals and Petitions
www.smu.edu/Provost/Pages/Resources/Appeals
- Student Code of Conduct
www.smu.edu/StudentAffairs/StudentLife/StudentHandbook/StudentAppealsComplaints
- Office of Institutional Access and Equity
www.smu.edu/IAE
- Financial Responsibility and Confidentiality
www.smu.edu/LegalDisclosures/FinancialAndConfidentiality
- Honor Code
www.smu.edu/StudentAffairs/StudentLife/StudentHandbook/HonorCode

In addition to the right to use internal University complaint procedures, every student has the right under federal law to use complaint processes provided by the state in which his or her campus is located.

For complaints regarding programs in Texas, students should contact the Texas Higher Education Coordinating Board, Office of General Counsel, PO Box 12788, Austin TX 78711-2788; email: studentcomplaints@thehb.state.tx.us.

Additional information about the Texas student complaints process may be found at www.thehb.state.tx.us (“College Readiness and Success” link).

For complaints regarding programs in New Mexico, students should contact the New Mexico Higher Education Department, 2048 Galisteo Street, Santa Fe NM 85705-2300; telephone 505-476-8400.

Additional information about the New Mexico student complaints process may be found at www.hed.state.nm.us/students/complaints.aspx.

RESERVE OFFICERS' TRAINING CORPS

ROTC courses are not offered on the SMU campus; however, students who wish to participate in the ROTC may earn SMU-approved elective credit through area programs off-campus. Additional information about the Air Force ROTC program is available in the Dedman College section of this catalog, and the Army ROTC program is found in the Lyle School of Engineering section.

CONTINUING AND PROFESSIONAL EDUCATION

The Office of Continuing and Professional Education provides noncredit courses that address different cultural, scholarly, personal and professional topics for the community, a practice that has been part of the SMU tradition since 1957. CAPE offers a selection of courses for open enrollment each fall, spring and summer term. Additional information is available at www.smu.edu/cape.

Personal Enrichment. CAPE classes – historically, *Informal Courses for Adults* – are generally short sessions on topics for enjoyment and reflection. Courses offered for personal enrichment include several major areas of exploration: personal finance and life planning, communication and workplace skills, history, literature and film, culture and travel, and the fine arts (e.g., studio art, music, architecture, photography and art history). CAPE also offers noncredit language conversation courses, including Spanish, French, Italian, Mandarin Chinese and American Sign Language.

Test Preparation. Study courses for the SAT, ACT, GRE, GMAT and LSAT are offered throughout the year. Information is available at www.smu.edu/testprep.

Professional Development. For those who are seeking professional achievement or a new career direction but who are not interested in a traditional undergraduate or graduate degree-granting program, CAPE offers noncredit courses to enhance workplace skills and noncredit certificate programs, including special certificates offered in partnership with Meadows School of the Arts, the National Criminal Justice Training Center and the Center for Nonprofit Management.

Students complete certificates by taking a series of classes over weeks or months, depending on the specialization and the student's schedule. Cohort and independent options are available, with some classes being offered online. Upon completion of the series, students receive a noncredit transcript documenting completion from Continuing and Professional Education at SMU.

Additional information and a full listing of current opportunities are available at www.smu.edu/cape/professionaldevelopment.

SMU's **Summer Youth Program** offers one-week, special-interest enrichment workshops throughout the summer for those entering grades K–12. More information is available at www.smu.edu/SummerYouth.

Online Learning. CAPE partners with national leaders in online teaching and learning to offer self-paced, practical, career-enhancing courses. Additional information is available at www.smu.edu/capeonline.

STUDENT AFFAIRS

The mission of the Division of Student Affairs (www.smu.edu/studentaffairs) is to develop, with others in the University, opportunities for students to become productive citizens through the creation of challenging environments that contribute to students' intellectual, spiritual, physical, social, cultural, moral and emotional growth, and, in so doing, engage them with the widest range of persons within the University and beyond. The vice president for student affairs oversees programs, services and activities that complement students' academic pursuits and promote their development, success and cocurricular learning. The Division of Student Affairs includes programs and services in the areas of student transitions, student life and well-being, and values and community, as well as resources, operations and initiatives.

Concern for and realization of the full development of each student in and out of the classroom constitutes one of the major goals of the University. Consequently, the division's programs are designed to support and supplement SMU's formal academic work. Many departments exist to provide services for the benefit and convenience of SMU students. The Division of Student Affairs encompasses a broad range of programs and services dealing with housing and residential matters, physical and mental wellness, personal and career counseling and testing, recreational sports and intramurals, religious affairs, multicultural student programs, as well as student conduct and community standard matters, new student orientation, leadership programs, volunteer opportunities and women's programs.

STUDENT TRANSITIONS

The Office of Student Transitions & Orientation provides on-going programs and services that support students and families in transition to SMU and throughout the collegiate experience. The office supports a welcoming and inclusive atmosphere, connects students to University resources and people, acquaints new students with institutional expectations and values, promotes learning and discovery inside and outside of the classroom, and fosters pride in the SMU community.

Student Transitions and Orientation

www.smu.edu/newstudent

Academic Advising, Registration and Orientation events for all incoming students take place in July, August and January. As part of the AARO sessions, students meet one-on-one with an academic adviser and register for classes. An extended orientation experience, Mustang Corral, is coordinated by the Office of Student Transitions & Orientation during August each year.

Academic Integrity and Code of Conduct

The Honor Code of Southern Methodist University

Intellectual integrity and academic honesty are fundamental to the processes of learning and of evaluating academic performance, and maintaining them is the responsibility of all members of an educational institution. The inculcation of personal standards of honesty and integrity is a goal of education in all the disciplines of the University.

The faculty has the responsibility of encouraging and maintaining an atmosphere of academic honesty by being certain that students are aware of the value of it, understand the regulations defining it and know the penalties for departing from it. The faculty should, as far as is reasonably possible, assist students in avoiding the temptation to cheat. Faculty members must be aware that permitting dishonesty is not open to personal choice. A professor or instructor who is unwilling to act upon offenses is an accessory with the student offender in deteriorating the integrity of the University.

Students must share the responsibility for creating and maintaining an atmosphere of honesty and integrity. Students should be aware that personal experience in completing assigned work is essential to learning. Permitting others to prepare their work, using published or unpublished summaries as a substitute for studying required material, or giving or receiving unauthorized assistance in the preparation of work to be submitted are directly contrary to the honest process of learning. Students who are aware that others in a course are cheating or otherwise acting dishonestly have the responsibility to inform the professor and/or bring an accusation to the Honor Council.

Students and faculty members must share the knowledge that any dishonest practices permitted will make it more difficult for the honest students to be evaluated and graded fairly and will damage the integrity of the whole University. Students should recognize that their own interests and their integrity as individuals would suffer if they condone dishonesty in others.

The Honor System

All SMU undergraduate students and graduate students enrolled in the Dedman College of Humanities and Sciences, Lyle School of Engineering and Meadows School of the Arts are subject to the jurisdiction of the Honor Code and as such are required to demonstrate an understanding of and to uphold the Honor Code. Honor codes for the Cox School of Business, Dedman School of Law, Perkins School of Theology and Simmons School of Education and Human Development are explained in their graduate catalogs.

In support of the Honor Code, the Honor Council has the responsibility to maintain and promote academic integrity. The Honor Council is composed of a minimum of 27 members selected through an application and interview process organized by the Honor Council Executive Board. Five faculty members, nominated by the Faculty Senate, also serve on the Honor Council.

Academic dishonesty includes plagiarism, cheating, academic sabotage, facilitating academic dishonesty and fabrication. Plagiarism is prohibited in all papers, projects, take-home exams or any other assignments in which the student submits another's work as being his or her own. Cheating is defined as intentionally using or attempting to use unauthorized materials, information or study aids in any academic exercise. Academic sabotage is defined as intentionally taking any action that negatively affects the academic work of another student. Facilitating academic dishonesty is defined as intentionally or knowingly helping or attempting to help another to violate any provision of the Honor Code. Fabrication is defined as intentional and unauthorized falsification or invention of any information or citation in an academic exercise.

Suspected cases of academic dishonesty may be handled administratively by the appropriate faculty member in whose class the alleged infraction occurred or

referred to the Honor Council for resolution. Suspected violations reported to the Honor Council by a student or by an instructor will be investigated and, if the evidence warrants, a hearing will be held by a board composed of a quorum of four members of the Honor Council.

Any appeal of an action taken by the Honor Council shall be submitted to the University Conduct Council in writing no later than four calendar days (excluding school holidays) after notification of the Honor Council's decision.

Code of Conduct

The following are University procedures and standards with which every student must become familiar. The University considers matriculation at SMU an implicit covenant and a declaration of acceptance on the part of the student of all University regulations. The Student Conduct & Community Standards Office, website www.smu.edu/studentconduct, promotes community, scholarship and civility by holding students accountable to the Student Code of Conduct and the Honor Code.

Standards of conduct are established through faculty, student and administrative efforts and are under continuous evaluation by the entire University community in order to assure reasonable and fair limits. At SMU, the student is assumed to have a high degree of loyalty and responsibility to the University and its well-being, as well as to himself or herself in personal, social and intellectual pursuits; the student's behavior both on and off campus is evidence of this.

Students at SMU will discover that they are encouraged to exercise a great amount of personal freedom as well as accompanying responsibilities. Through their personal capacities for intelligent thought and action, mature students understand that there are situations in which certain behavior must be modified for the benefit of others. The University stands firm in its commitments to the rights and freedoms of students, expecting in return the same respect and concern.

Due respect for the entire University community, faculty, staff and one's fellow students is always expected. The University expects all students to be responsible citizens and to abide by all federal, state and local laws. The University Code of Conduct applies to students both on and off campus. It is the University's expectation that students will avoid behaviors such as, but not limited to, the misuse of drugs and alcohol, dishonesty, gambling, hazing, or behavior that endangers or threatens to endanger the health and safety of any person.

Students are required to identify themselves when asked by a properly identified faculty or staff member, or by another student serving as a University staff member. Persons who are not members of the University community and without business on campus may be asked to leave.

Conduct Review Process

Clear disciplinary procedures are an important part of the mission of SMU as an educational institution. The intent of the system of due process at SMU is to be educational and not merely punitive for students. The goal continues to be to produce quality citizens. The purpose of the conduct review process is to encourage personal responsibility.

Depending on the degree of misconduct, a student may be subject to sanctions ranging from an informal warning to expulsion from the University. In addition, a student may be assigned educational sanctions designed to promote personal growth and development. Should a student be asked to leave the University, he or she

should do so in an expeditious and peaceful manner. The student should remain off campus until he or she receives written permission from the Office of Student Conduct & Community Standards to return to campus. In the event of such separation, a student is still responsible for University financial obligations.

To ensure fairness and due process for all students in the conduct process, the student is granted an impartial hearing and the right to appeal to the University Student Council. A student who is appealing a sanction may remain in school until the decision and penalty are reviewed, unless considered harmful to the University, to any individual or to himself or herself. All actions related to the conduct review process are subject to presidential review.

Having voluntarily enrolled as students at Southern Methodist University and assumed a place in the University community, all students are presumed to be knowledgeable of, and have agreed to abide by, the rules and regulations set forth in the Student Code of Conduct, as outlined in the *SMU Student Handbook*, which is available online at www.smu.edu/StudentAffairs/StudentLife/StudentHandbook.

Housing

The Department of Residence Life and Student Housing supports the goals of the University by creating residential communities that empower residents to value learning, citizenship and leadership in comfortable, well-maintained facilities. The department is responsible for the campus residential community, including all residence halls, SMU-owned apartments and SMU-owned Greek chapter houses. This responsibility includes maintaining facilities that are well cared for and that enhance opportunities for students to grow personally and excel academically.

Hegi Family Career Development Center

www.smu.edu/career

The Hegi Family Career Development Center guides and encourages students and alumni in the development of skills necessary for lifelong career management. The center provides a comprehensive set of services to assist each individual in the development of career plans and specific strategies leading to the desired employment goal.

Career Counseling. SMU students and alumni can schedule career-counseling appointments to investigate different career paths. By exploring their interests, values and personality through the use of assessments, students can increase their self-awareness and make better-informed career decisions. Counselors are available to help students develop an individualized career action plan.

On-Demand Advising. The Career Center offers 15-minute sessions to drop-in visitors on a first-come, first-served basis. On-call counselors are available to introduce students to the Career Center's services and to address any time-sensitive career needs. Office hours are 11 a.m.–noon and 1–3 p.m. weekdays.

MustangTrak. The Career Center manages MustangTrak, a job-posting service that offers thousands of opportunities for the SMU student population. The online database includes full-time jobs, part-time jobs, volunteer opportunities and internships for all majors. MustangTrak is also used to manage on-campus recruiting interviews.

Career Fair. The Career Center hosts two Career and Internship fairs featuring more than 90 employers and more than 700 student participants. Employer participants include representatives from sectors such as business, technology, education,

government and nonprofit. Students and alumni from all majors are welcome to attend.

SMU Connection. SMU Connection, which is a partnership between SMU's Office of Alumni Relations and Engagement and the Hegi Family Career Development Center, helps students to have a firm understanding of today's competitive, ever-changing job market, and it offers opportunities for students to develop an industry network before they graduate. SMU Connection also hosts OneDay Externship, a program that provides SMU undergraduate students with the foundation for a successful career development and major choice.

Career Events and Workshops. Specialized recruitment and networking events take place throughout the year. Events include Speed Networking, Résumania, industry-specific panels and career-related training. These events offer an opportunity to network with employers and alumni and to learn the skills necessary to be successful in the workplace.

Career Development Ambassadors. CDA is a group of students, chosen by Career Center staff, who help educate peers about resources available at the Hegi Family Career Development Center. CDAs receive specialized training that equips them to represent and promote the center.

STUDENT LIFE AND WELL-BEING

The Office of the Dean of Student Life & Well-Being (www.smu.edu/studentlife) educates students and the SMU community by providing purposeful opportunities for learning, progressing in personal growth, clarifying values, and developing decision-making and other skills that promote responsible citizenship and well-being. Located in the Hughes-Trigg Student Center, the office is a resource for students to consult when they need general information and assistance. The dean serves as a primary liaison for students and parents who have concerns about any aspect of their SMU experience.

Student Activities

www.smu.edu/orgs

The mission of the Department of Student Activities is to advise and support student organizations and to encourage student development through involvement. Involvement outside the classroom is a tradition at SMU. Research shows that students who get involved outside the classroom tend to be more successful during their college experience. The department supports more than 180 extracurricular opportunities for SMU students through 32 academic and professional associations, four campus programming councils, nine community service coalitions, 31 fraternities and sororities, 10 governing boards, nine honor societies, 15 multicultural organizations, two political clubs, 23 club sports, 29 religious organizations and 17 special-interest groups. Higher-education professionals advise and support specific areas of involvement, including diversity, programming and governance, and are available to answer student's day-to-day questions about getting involved.

The Student Activities Office, located on the third floor of the Hughes-Trigg Student Center, Suite 300, is the hub of activity for SMU student organizations. Many out-of-class programs planned and implemented by students are considered cocurricular in that they are designed to complement a student's educational experience. These student groups and their committees provide many opportunities for students to become involved as leaders or participants.

Additional information is available online, including organization interests or type, membership requirements, contact information and event calendars. The department can also assist students in forming a new organization.

Eligibility Requirements. Campus activities and organizations are an integral part of the developmental experience for SMU students. Leadership skills and interpersonal, social and cultural enhancement are but some of the benefits associated with out-of-class participation. Accordingly, students who hold office in a student organization or represent the University as a member of a sponsored campus group (Mustang Band, University Choir, etc.) must be matriculated in a University degree-granting program and may not be on academic probation.

Student Government

Through SMU's system of representative governance, students participate with faculty and administration in the University's decision-making process. The primary voice of students in this process is the student-elected Student Senate. The Student Code of Conduct in the *SMU Student Handbook* is reviewed and updated annually in conjunction with the Student Senate and contains the student code of rights and responsibilities.

Fraternity and Sorority Life

Fraternities and sororities exist to develop an individual's potential through leadership opportunities and group effort. These groups are a social network for students at SMU. Fraternities and sororities were among the first organizations at SMU and are one of SMU's longest standing traditions. There are 17 national fraternities and 14 national sororities on campus. The governing bodies for these groups are the Interfraternity Council, the Multicultural Greek Council, the National Pan-Hellenic Council and the SMU Panhellenic Council. Students must meet the requirements as indicated in the *SMU Student Handbook* (Policies Pertaining to Social Fraternities and Sororities, section 1.02(b), and/or other council and fraternity and sorority life requirements) to join a fraternity or sorority. More details on fraternity and sorority programming and recruitment are available from the Student Activities or Multicultural Student Affairs offices or their websites.

Student Center

www.smu.edu/htrigg

Hughes-Trigg Student Center is the hub of student life at SMU, bringing together members of the University community with emphasis on the pursuit of educational programs, student activities and services. The center is fully accessible and features important services and resources to meet the daily needs of students, faculty, staff and visitors. These include a 500-seat theatre, a multipurpose ballroom, a 100-seat forum, 18 meeting rooms and the offices of various organizations and departments. In addition, the facility houses an art gallery, a 24-hour computer lab, the Veteran's Center, a commuter lounge, and several restaurants and stores. Students may study in comfortable public lounge areas, snack or dine in the Mane Course, conduct small or large meetings, send faxes, practice the piano or get the latest information on special events. Open from early morning until late evening, the center provides cultural, social and educational programs and resources to foster personal growth and enrich cultural, social, educational and recreational experiences. More than a building, Hughes-Trigg is "the living room of the campus."

Student Media

The student media experience at SMU is one that offers aspiring media professionals the opportunity to work and learn in a fully converged news operation that combines print, online and broadcast platforms. Editors, writers and photographers of the *Daily Campus*, SMU's independent newspaper, work together with directors and videographers of SMU-TV, the student-run broadcast journalism program, to share content and produce timely and compelling packages for a shared news website at www.smudailycampus.com. SMU student media opportunities also include the student yearbook, *Rotunda* (www.smurotunda.com), which has chronicled the life and times on The Hilltop since 1915.

Veterans Services

The Division of Student Affairs provides a coordinator of veteran support and services through the Office of the Dean of Student Life & Well-Being. The coordinator helps veterans navigate the campus community and connect with available resources on campus and in the greater Dallas community. A chartered student organization, U.S. Military Veterans of SMU (SMU MilVets), meets regularly to provide support to fellow veterans and to participate in fundraisers, care package drives, tailgating on the Boulevard during football games and other activities during the school year. The Veterans Center, in Hughes-Trigg Student Center, Suite 323, provides coffee, a refrigerator and microwave, printing, meeting and study space, and a relaxed setting for interacting with fellow veterans. The University Registrar's Office certifies veterans each term for their benefits under federal programs and the Office of Financial Aid works to provide individual aid packages. More information regarding services and benefits for veterans is available at www.smu.edu/veterans.

Women and LGBT Center

www.smu.edu/womenandlgbtcenter

The Women & LGBT Center empowers students within the University to increase awareness and understanding of gender equity issues by eliminating barriers, diminishing prejudices and creating a supportive climate and space for all. Through advocacy, information, referral services and leadership experiences, the center provides a safe haven for students struggling with issues of injustice and oppression. Student organizations advised here include the Women's Interest Network; Campus YWCA; Women in Science and Engineering; and Spectrum, the lesbian, gay, bisexual, transgender and ally organization. Also housed in the center is the SMU Women's Symposium (www.smu.edu/womsym), which is part of the Education of Women for Social and Political Leadership series, established in 1966. The center provides an informal, homelike atmosphere where members of the SMU community can meet.

Health Services

www.smu.edu/healthcenter

SMU Memorial Health Center, the University's health facility, is temporarily located at 3014 Daniel Avenue. Services include an outpatient primary care clinic, pharmacy and lab, and counseling services are located on the second floor. The Health Center is accredited by the Accreditation Association for Ambulatory Health Care Inc.

Outpatient Medical Services. SMU provides a convenient, economical medical clinic for diagnosis and treatment of illness and injury, as well as for immunizations

and continuation of treatment such as allergy injections. The clinic is staffed by physicians, registered nurses, medical assistants and lab technologists. Physicians are available by appointment 8:30 a.m.–4:30 p.m., Monday through Friday. For appointments and health information, students should call 214-768-2141.

Patient Observation. When ordered by a staff physician, a student may be held in observation between 8:30 a.m. and 5 p.m., Monday through Friday. Observation is available for most types of nonmajor medical treatment. When necessary, students are referred to medical or surgical specialists in Dallas. The patient will be responsible for the costs of these services.

Acute/After Hours Care. For emergency care after clinic hours, it is recommended that students call 911 or go to a hospital emergency room. Students should refer to the Health Center website (www.smu.edu/healthcenter) for hospital information and location of an urgent care facility.

Costs. Undergraduate and graduate students pay a mandatory health center fee and receive fully covered primary care physician services at the Health Center for that term, as well as counseling services and access to health education programs. Any lab work, pharmacy items and medical supplies are charged at reasonable rates.

Mandatory Health Insurance Policy. To ensure that students have appropriate health care coverage, SMU requires all domestic students, both undergraduate and graduate, taking nine or more credit hours to have health insurance through either an individual/family plan or the University-offered plan. All international students taking one or more credit hours must enroll in the University-offered plan unless they have a special waiver personally granted by the Health Center staff.

SMU's mandatory policy requires those students with the enrollment status mentioned above to provide documentation of current insurance coverage or to enroll in the Student Health Insurance Plan by the drop/add date each term. Students can enroll in SHIP, after they have enrolled for classes, by selecting the "Health Insurance" button on the "Student Center" component of my.SMU. A domestic student who already has private health insurance coverage must waive SHIP coverage to avoid automatic enrollment into the plan and thereby have the semiannual premium charge applied to his or her University account. Waivers will not be accepted nor will changes be made after the deadline each term. For more information and instructions on how to WAIVE or ELECT coverage, students should visit the website www.smu.edu/healthinsurance. Students who elect SHIP for the fall term will automatically be reenrolled in mid-December unless the insurance office receives notification of the desire to waive for spring. **Note:** Health insurance is separate from the student Health Center fees and is paid for separately.

Pharmacy. A complete pharmacy with registered pharmacists is open from 8:30 a.m. to 5 p.m., Monday through Friday. Many prescription plans are accepted, and the pharmacy will transmit pharmacy claims to a student's insurance company if provided with the student's pharmacy benefits information.

Laboratory Services. Laboratory tests are available for nominal fees.

Immunizations. All students (undergraduate, graduate, part-time and full-time, to include international and IEP/ESL students) are required to have an SMU medical history form on file in the SMU Health Center before registration. To comply with SMU policy, all students must also submit to the Health Center immunization records that provide proof of immunization against measles, mumps and rubella. These MMR immunizations must be documented by a physician, public health rec-

ord, military health record or school health record. Students will not be allowed to register without immunization compliance.

Effective January 1, 2012, Texas state law requires that all new students under the age of 30 must provide documentation demonstrating they have been vaccinated against bacterial meningitis. The documentation must show evidence that a meningitis vaccine or booster was given during the five-year period preceding and at least 10 days prior to the first day of class of the student's first term. Students should provide the documentation at least 10 days before the first day of class. Students seeking exemption from this requirement due to health risk or conscience, including religious belief, should see the second page of the SMU medical history health form. More information is found under Final Matriculation to the University in the Admission to the University section of this catalog.

Students are encouraged to check their my.SMU account for immunization status. Immunizations are available at the Health Center. Health history forms are available on the Health Center's website (www.smu.edu/healthcenter).

Class Absence Due to Illness. Students should schedule appointments with physicians at times when they do not have classes. The Health Center does not issue excuses from classes for illness. Students should refer to the Health Center website (www.smu.edu/healthcenter) for the Class Absence Policy.

Notification of Parents. Students are encouraged to call one or both parents when ill. Parents or guardians will be notified in cases of life-threatening illnesses. The Health Center staff may not speak to parents without the student's permission.

Health Service Records. All health service records are confidential. A copy of medical records may be released to a physician only with a written release by the student. Records are not made available to parents, SMU administrators, faculty or staff without the student's written consent.

Office of Health Education and Promotion. This office serves as a resource for health information on campus. It promotes programs and activities that focus attention on health-related issues affecting college students. Students can get involved with health education on campus through the Peer Advising Network. More information is available from the Health Center (telephone: 214-768-2393; website: www.smu.edu/healthcenter/healtheducation).

Counseling and Psychiatric Services. CAPS provides psychiatric evaluation, crisis intervention and group/individual/couples psychotherapy for students. All interviews are conducted on a voluntary and confidential basis. There is no charge to students who have paid the University health fee. Students can seek confidential help for concerns such as anxiety, depression, relationship issues, career/life planning, sexual identity, eating/body image concerns and sexual assault/sexual harassment matters. Alcohol and drug prevention is a free and confidential source of help and information to the SMU community, covering issues related to substance abuse and addiction. Any laboratory tests or pharmaceuticals ordered will be charged to the student. For more information regarding scheduling appointments, students should call 214-768-2277 between 8:30 a.m. and 5 p.m., Monday through Friday, or visit www.smu.edu/counseling.

Testing Services. Testing Services offers testing to the Dallas-area community. These services include on-campus administration of national testing programs such as the SAT, LSAT, GRE Subject and PRAXIS. Other testing offered includes CLEP tests and correspondence examinations for other universities. For additional information, students should call the center at 214-768-2269.

Child Care

SMU provides a licensed child care center for children ages 1 month to 5 years on a space-available basis. More information is available at www.smu.edu/childcare or from the director of the center at SMU Preschool and Child Care Center, Southern Methodist University, PO Box 215, Dallas TX 75275-0215; phone 214-768-2278.

Recreational Sports

www.smu.edu/recsports

Dedman Center for Lifetime Sports is a facility designed for recreational sports and wellness. The center provides racquetball courts, aerobic studios, an indoor running track, basketball courts, volleyball courts (indoor and outdoor), a climbing wall, a bouldering wall, a 25-meter recreational pool with five lanes, 15,000 square feet of fitness and weight equipment, and a café next to the lobby area. These facilities are open to SMU students, faculty, staff and members.

A variety of services and programs are available, including fitness classes, intramural sports, sport clubs, the Outdoor Adventure program, personal training, personal assessments, massage therapy, swimming lessons and camps.

Fitness. SMU Fitness offers group exercise classes, personal training sessions and massage therapy. Group X exercise classes are offered throughout the day to accommodate a variety of schedules. Different types of cardio, strength and flexibility classes are available. Experienced and knowledgeable trainers offer sessions to train members of the University community, either one-on-one or in groups, to meet their personal fitness goals. Licensed massage therapists offer chair or full-body massages. All SMU Fitness programs have a fee for participation.

Intramural Sports. Many opportunities for team and individual competition are available through intramural sports such as bowling, golf, racquetball, tennis, track and swimming. The five major sports are flag football, volleyball, basketball, soccer and softball. Leagues provide year-round opportunities to participate in a wide variety of sports and activities. Additional leadership opportunities are available for those interested in officiating or supervising various activities.

Club Sports. Club sports offer an opportunity for students interested in concentrated training and participation in a sport. These student-sanctioned clubs, funded by the Student Senate, offer competition with other university/college club teams in baseball, badminton, cricket, crew, cycling, ice hockey, men's and women's lacrosse, martial arts, polo, rugby, running, sailing, men's and women's soccer, triathlon, ultimate Frisbee, volleyball, wakeboarding and water polo.

Aquatics. SMU Aquatics features a five-lane, indoor recreational pool and an outdoor, zero-depth entry fountain pool known as "The Falls." Students have opportunities to participate year-round in recreational swimming, sunbathing and water sports such as water basketball, volleyball and polo. Classes offered include water fitness, adult and child swimming lessons, children's group lessons, and American Red Cross lifeguard training.

Outdoor Adventures. SMU Outdoor Adventures is the campus source for outdoor recreation and adventure, offering fun and challenging recreational adventure activities, community-building programs, and student leadership and personal growth opportunities. The Outdoor Adventure Center, located on the bottom floor of the Dedman Center for Lifetime Sports, is the place to rent outdoor recreation and picnic equipment. Students can sign up for SMU OA trips offering traditional and non-

traditional outdoor adventure pursuits such as backpacking, rock climbing, sky-diving and canoeing. SMU OA also manages the SMU Climbing Center, the indoor climbing and bouldering facility, and the Portable Challenge and Team Development course.

Mustang Band. Founded in 1917, the Mustang Band was named the “Best College Marching Band” in Texas in Kirk Dooley’s *Book of Texas Bests*. Long known as “the hub of SMU spirit,” the band represents the University at football and basketball games, produces the *Pigskin Revue* during Homecoming and performs at special University- and community-related events. Membership is open to all SMU students by audition, regardless of major, and scholarships based on need and ability are available.

Spirit Squads. The Mustang Cheerleaders, Mustang Pom Squad and Peruna mascot are integral parts of SMU’s spirit tradition and are national award winners, having participated in the NCA/NDA Collegiate National Championships. Along with the Mustang Band, they make SMU’s spirit contingent an outstanding one.

Intercollegiate Athletics. SMU is a member of the National Collegiate Athletic Association (Division I-A). Men and women student-athletes compete in basketball, cross-country/track and field (women only), swimming and diving, golf, soccer, tennis, volleyball (women only), crew (women only), equestrian (women only), and football (men only).

VALUES AND COMMUNITY

Office of the Chaplain and Religious Life

www.smu.edu/chaplain

The Office of the Chaplain and Religious Life offers resources of pastoral care and theological reflection that nurture spiritual development and the moral and ethical vision and character of students, faculty and staff. Dr. Stephen W. Rankin is the chaplain and minister to the University community. Chaplain Rankin leads and preaches at Underground, an ecumenically Christian, all-University service of worship, in Hughes-Trigg Theater each Wednesday during the term. Students, faculty and staff are invited to participate in this service through music, scripture readings or other expressions of worship. Other services, including the University Service of Memory, Ash Wednesday Service and memorial services as needed, are also planned and implemented by the Office of the Chaplain.

Presently, there are more than 30 religious life organizations. Alongside the Christian groups aligned with denominations, local Dallas-area congregations or national parachurch ministries, SMU also has an active Hillel chapter for Jewish students, a bustling Muslim Student Association and other faith groups of various traditions. A large number of undergraduate, graduate and professional students, as well as many of SMU’s faculty, staff and administrators, participate in these dynamic religious communities.

In cooperation with the Department of Residence Life and Student Housing, the Office of the Chaplain places in each residential commons a residential community chaplain who provides a pastoral presence and help for students navigating the sometimes confusing concerns of life.

Additionally, the Office of the Chaplain partners with faculty members across campus to direct the Faith and Learning Scholars, an initiative involving a cohort of upperclass students who want the experience of integrating their faith with their

academic pursuits. Similarly, the Civil Rights Pilgrimage, founded in 2004, is an eight-day spring break journey through the South whereby students encounter shrines of freedom and meet heroes of the civil rights movement. This collaboration with Dedman College offers students a transformative opportunity while earning academic credit.

Chaplains are available for personal counseling and spiritual direction with students, faculty and staff during office hours. The Office of the Chaplain is located in the Hughes-Trigg Student Center, Suite 316. Adjacent to this office is the Quiet Place, a setting for meditation, prayer and reflection for all faiths. The Quiet Place is open daily and available with no prior reservation needed.

Community Engagement and Leadership

www.smu.edu/cel

The Community Engagement and Leadership Center, a department in the Division of Student Affairs, develops student leaders through educational and transformational experiences that equip them to impact positive social change. CEL advises and fully supports two student-run, service-based organizations, Alternative Breaks and Mustang Heroes, whereby students participate in service trips throughout the U.S. and internationally and in ongoing service opportunities in Dallas. CEL also hosts the annual Stampede of Service and MLK Day of Service.

The leadership programs available to students include the Emerging Leaders First-Year Leadership Development Program, the Crain Leadership Conference, the Mustang Intersections Leadership Retreat for Diversity and Social Change, and LeaderShape. CEL also supports student leadership development through the Caswell Undergraduate Leadership Fellows Program, a grant opportunity for a group of selected students to develop projects focused on sustainability leadership, faith-based leadership, nonprofit leadership, educational leadership, or international and cross-cultural leadership.

Multicultural Student Affairs

The Office of Multicultural Student Affairs works collaboratively with the campus community to provide support for students of color and to create an environment that fosters inclusivity and a deeper understanding of diversity. The office focuses on holistic development, advocacy and comprehensive student success. In addition, the office sponsors diversity and social justice education programs such as InterSECTIONS and Real Talk to provide opportunities for the exchange of ideas and experiences that enhance student perspectives, and offers various leadership opportunities through culturally based student organizations, peer dialogue leader positions and the CONNECT Mentoring and Retention Program.

RIGHT TO KNOW

Southern Methodist University is pleased to provide information regarding academic programs, enrollment, financial aid, public safety, athletics and services for persons with disabilities. Students also may obtain paper copies of this information by contacting the appropriate office listed below. Disclosure of this information is pursuant to requirements of the Higher Education Act and the Campus Security Act. More information is available at www.smu.edu/srk.

1. Academic Programs

Provost Office, Perkins Administration Building, Room 219
214-768-3219

- a. Current degree programs and other educational and training programs.
- b. Instructional, laboratory and other physical facilities relating to the academic program.
- c. Faculty and other instructional personnel.
- d. Names of associations, agencies or governmental bodies that accredit, approve or license the institution and its programs and the procedures by which documents describing that activity may be reviewed.

2. Enrollment

Registrar, Blanton Student Services Building, Room 101
214-768-3417

- a. *Graduation Rates.* The completion or graduation rate of the institution's certificate-seeking or degree-seeking, full-time undergraduate students and students who receive athletically related financial aid.
- b. *Privacy of Student Education Records.* The Family Educational Rights and Privacy Act governs SMU's maintenance and disclosure of a student's education records. FERPA provides students the right to inspect and review their education records and to seek amendment of those records that they believe to be inaccurate, misleading or otherwise in violation of their privacy rights. Further, FERPA prevents SMU from disclosing personally identifiable information about a student to outside third parties, except under specific circumstances outlined in SMU's Policy Manual.
- c. *Withdrawal.* Requirements and procedures for officially withdrawing from the institution.

Wisconsin Refund Policy. The following information applies only to students enrolled in distance/online courses who reside in the state of Wisconsin. The Wisconsin Administrative Code contains provisions related to online/distance education for students residing in that state. Sections from Chapter 8 of the Educational Approval Board are reprinted below. The complete code is available online at http://docs.legis.wisconsin.gov/code/admin_code.

EAB 8.05 Partial Refunds. A student who withdraws or is dismissed after the period of time identified under s. EAB 8.03 (1) has passed, but before completing 60 percent of the potential units of instruction in the current enrollment period, shall be entitled to a pro rata refund, as calculated below, less any

amounts owed by the student for the current enrollment period, less a one-time application fee of \$100.

- (1) Pro rata refund shall be determined as the number of units remaining after the last unit completed by the student, divided by the total number of units in the enrollment period, rounded downward to the nearest 10 percent. Pro rata refund is the resulting percent applied to the total tuition and other required costs paid by the student for the current enrollment period.
- (2) All efforts will be made to refund prepaid amounts for books, supplies and other charges unless the student has consumed or used those items and they can no longer be used or sold to new students, or returned by the school to the supplier.
- (3) Refunds shall be paid within 40 days after the effective date of termination.
- (4) After the student's first period of enrollment, if a student withdraws or is dismissed in a subsequent enrollment period, the school may also retain an administrative fee of 15 percent of the total cost of a resident program, or \$400, whichever is less.
- (5) No refund is required for any student who withdraws or is dismissed after completing 60 percent of the potential units of instruction in the current enrollment period unless a student withdraws due to mitigating circumstances, which are those that directly prohibit pursuit of a program and which are beyond the student's control.

SMU Refund for Wisconsin Students. SMU online/distance education students residing in Wisconsin who cancel their enrollment will receive a full refund of all tuition and fees if they officially withdraw from the University before the withdrawal deadline listed on the Official University Calendar. The University will issue refunds within 10 business days of withdrawal.

3. Financial Aid

Director of Financial Aid, Blanton Student Services Building, Room 212
214-768-3417

- a. Financial assistance available to students enrolled in the institution.
- b. Cost of attending the institution, including tuition and fees charged to full- and part-time students; estimates of costs for necessary books and supplies; estimates of typical charges for room and board; estimates of transportation costs for students; and any additional cost of a program in which a student is enrolled or expresses a specific interest.
- c. Terms and conditions under which students receiving Federal Direct Loan or Federal Direct Perkins Loan assistance may obtain deferral of the repayment of the principal and interest of the loan for
 - (1) Service under the Peace Corps Act;
 - (2) Service under the Domestic Volunteer Service Act of 1973; or
 - (3) Comparable service as a volunteer for a tax-exempt organization of demonstrated effectiveness in the field of community service.

- (4) The requirements for return of Title IV grant or loan assistance.
- (5) Enrollment status of students participating in SMU study abroad programs, for the purpose of applying for federal financial aid.

4. Student Financials/Bursar

University Bursar, Blanton Student Services Building, Room 212
214-768-3417

- a. Tuition and fees.
- b. Living on campus.
- c. Optional and course fees.
- d. Financial policies.
- e. Administrative fees and deposits.
- f. Payment options.
- g. Any refund policy with which the institution is required to comply for the return of unearned tuition and fees or other refundable portions of costs paid to the institution.

5. DASS

Disability Accommodations and Success Strategies
Altschuler Learning Enhancement Center
214-768-1470

- a. Description of the process for establishing eligibility for services and documentation guidelines.
- b. Listings of the various on- and off-campus resources.
- c. Discussions of transitioning to postsecondary education.
- d. Tips for faculty on teaching and making accommodations.

6. Athletics

Associate Athletic Director for Student-Athlete Services, 316 Loyd Center
214-768-1650

- a. Athletic program participation rates and financial aid support.
- b. Graduation or completion rates of student athletes.
- c. Athletic program operating expenses and revenues.
- d. Coaching staffs.

7. Campus Police

SMU Police Department, Patterson Hall
214-768-1582

Southern Methodist University's Annual Security Report includes statistics for the previous three years concerning reported crimes that occurred on campus, in certain off-campus buildings or property owned or controlled by SMU, and on public property within or immediately adjacent to/accessible from the campus. The report also includes institutional policies concerning campus security, such as policies concerning alcohol and drug use, crime prevention, the reporting of crimes, sexual assault, and other related matters.

8. Student Appeals and Complaints

Southern Methodist University operates with integrity in all issues and is dedicated to preserving the rights of all members of the University community. Categories for which students may wish to reach out for advice and assistance and/or to submit an appeal or register a complaint are as follows: academics, code of conduct, discrimination, financial issues, honor code and privacy issues. An overview of the roles, responsibilities and procedures for complainants and the University is outlined in each of the areas below.

a. Academic Appeals and Petitions

www.smu.edu/Provost/Pages/Resources/Appeals

b. Student Code of Conduct

www.smu.edu/StudentAffairs/StudentLife/StudentHandbook/StudentAppealsComplaints

c. Office of Institutional Access and Equity

www.smu.edu/IAE

d. Financial Responsibility and Confidentiality

www.smu.edu/LegalDisclosures/FinancialAndConfidentiality

e. Honor Code

www.smu.edu/StudentAffairs/StudentLife/StudentHandbook/HonorCode

In addition to the right to use internal University complaint procedures, every student has the right under federal law to use complaint processes provided by the state in which his or her campus is located.

9. State-Specific Information for Appeals and Complaints

Texas. For complaints regarding programs in Texas, students should contact the Texas Higher Education Coordinating Board, Office of General Counsel, PO Box 12788, Austin TX 78711-2788; email: studentcomplaints@thehb.state.tx.us. Additional information about the Texas student complaints process may be found at www.thehb.state.tx.us ("College Readiness and Success" link).

New Mexico. For complaints regarding programs in New Mexico, students should contact the New Mexico Higher Education Department, 2048 Galisteo Street, Santa Fe NM 85705-2300; telephone 505-476-8400. Additional information about the New Mexico student complaints process may be found online at www.hed.state.nm.us/students/complaints.aspx.

DEDMAN COLLEGE

GENERAL INFORMATION

Dedman College is the heart of SMU. It is home to the humanities, social and behavioral sciences, mathematics, and natural sciences – disciplines central to the traditions of higher education.

In 1915 when SMU opened the doors of Dallas Hall to welcome the first class of students, those students matriculated into the College of Arts and Sciences, the academic unit that would eventually become Dedman College. In 1963, with the formulation of the Master Plan, the college became the School of Humanities and Sciences in recognition of its role in the specialized education of students in the liberal arts. From 1963 until 1980, the basic liberal arts education for all SMU students was provided by University College, an independent, nondegree-granting academic unit.

The School of Humanities and Sciences was merged in 1980 with University College to create a new entity central to the enterprise of undergraduate education. This college would provide the basic foundations in liberal arts education to all SMU students and also serve as a center for the integration of specialized education in the humanities, social sciences and natural sciences. As an indication of its centrality to the educational process, the name was changed from school to college, emphasizing that it is a community of students and teachers, whose life together, no matter how diversified and specialized, is unified by the implicit and explicit values derived from a liberal arts education. In 1981, the newly formed college was endowed by the late Robert H. Dedman, Sr., and his wife, Nancy McMillan Dedman, and was renamed Dedman College.

In addition to being the oldest academic unit at SMU, Dedman College is also the largest. In 2012, some 1,400 undergraduate students majored in Dedman College programs, and the school enrolled just under 350 graduate students. More than 270 full-time faculty members are based in the college's 16 academic departments. Undergraduate students in Dedman College may major and minor in more than 50 programs. Dedman College offers 18 graduate programs leading to a master's degree and 13 programs leading to a Ph.D. degree.

Academic Programs of Study

Majors in Dedman College include the following:

Anthropology	Environmental Sciences	Public Policy
Health and Society	Environmental Studies	Religious Studies
Biochemistry	(Ethnic Studies)	Sociology
Biological Sciences	African/African-Amer Studies	Markets and Culture
Chemistry	Mexican-American Studies	Statistical Science
(Earth Sciences)	History	World Lang/Literatures
Geology	Human Rights	World Languages: French
Geophysics	Individualized Studies	World Languages: German
Resource Geology	in the Liberal Arts	World Languages: Italian
Economics	International Studies	World Languages: Spanish
Financial Applications	Mathematics	French
Mgmt Info Applications	Medieval Studies	German
Mgmt Info Systems	Philosophy	Spanish
English	Physics	
English With Creative	Political Science	
Writing	Psychology	

Minors available include the following:

Anthropology	English	Psychology
Archaeological	(Ethnic Studies)	Religious Studies
Biomedical	African-American Studies	Sociology
Cultural	Mexican-American Studies	Statistical Science
Biological Sciences	History	Women's and Gender Studies
Chemistry	Human Rights	World Lang/Literatures
Classical Studies	International Studies	Arabic
(Earth Sciences)	Asian Studies	Chinese
Geology	European Studies	French
Environmental Earth	Latin Amer/Iberian Studies	German
Sciences	Middle Eastern/African Studies	Italian
Economics	Mathematics	Italian Area Studies
Econometrics	Medieval Studies	Japanese
Economic Growth/Devlp	Natural Sciences	Latin
Economics of	Philosophy	Russian Area Studies
Decision-Making	Ethics	Spanish
Economics of Industrial	Physics	
Organization	Political Science	
International Economics	American Politics	
Labor Economics	Comparative Politics	
Monetary Economics	International Relations	
Public Economics	Law and Legal Reasoning	

Specific degree requirements and additional information for these programs are found in the departmental sections of this catalog.

Dedman College students may also complete second majors and minors in other schools on campus, including the Cox School of Business, the Lyle School of Engineering, the Meadows School of the Arts, and the Simmons School of Education and Human Development.

Honors Programs

During their first and second years at SMU, students may participate in the University Honors Program, described in the Academic Programs section of this catalog, and subsequently graduate with "Honors in the Liberal Arts." Students participating in the University Honors Program are encouraged to join a departmental distinction program (described in the Academic Programs section and under General Information in the Dedman College section) to earn the designation "honors in the liberal arts, departmental distinction" on their transcripts.

Programs for Preprofessional Students

Preprofessional students should become familiar with the entrance requirements of the particular professional school that the student intends to enter. Requirements differ to some extent even within the same profession, and the student will find that some schools require that specific courses be included in the preprofessional curriculum.

Prelaw

To be a prelaw student at SMU does not require a particular major or academic program. Prelaw seniors who go to law school may have majors in any undergraduate schools. Success in law school requires skills in critical analysis, logical reasoning, and written and oral expression. Students should keep in mind that the spoken and written word are the principal tools of the legal profession. Students who

intend to study law must develop an excellent knowledge and grasp of the English language as well as a clear and concise style of expression.

A sound liberal arts education is valuable for prelaw students. Courses in political science, history, economics, statistics and anthropology help a student understand the structure of society and the problems of social ordering with which the law is concerned.

The study of philosophy, literature, fine arts, world languages and other cultures imparts familiarity with traditions of universal thought and trends that have influenced legal developments nationally and internationally. The examination of human behavior in sociology and psychology will aid the prospective law student in understanding the types and effects of human behavior with which law is involved.

The systematic ordering of abstractions and ideas acquired by studying logic and the sciences contributes much to a prelaw student's capacity to analyze, understand and rationally organize his or her thoughts. In some fields of law practice, a knowledge of technology, engineering, computers and accounting is useful.

Admission to Law Schools. Candidates for admission to an American Bar Association-approved school of law must take the Law School Admission Test administered by the national Law School Admission Council. Candidates are urged to take the test on the June, October or December testing dates of the fall term in which they apply to law school. Except in very rare circumstances, all approved law schools require that an applicant for admission has been granted a bachelor's degree from an accredited college or university. For additional prelaw information, as well as assistance in the application process, undergraduate students may consult the prelaw services in the University Advising Center.

Admission to Dedman School of Law. Admission to Dedman School of Law is by selection based upon the academic record of the applicant, the applicant's Law School Admission Test score and other available data. More information is available from the Admissions Office, Dedman School of Law, PO Box 750110, Dallas TX 75275-0110; www.law.smu.edu/Prospective-Students.

Premedical/Dental

Medical and dental schools seek students who have demonstrated strength in their major – any major of the student's choosing – and in the sciences. There is no preferred major but a number of prerequisite courses. Honors work is appropriate.

Most medical and dental schools require the following coursework for entry. These courses should be completed by the end of the junior year: English, six hours; mathematics (including calculus), six hours; biology, eight to 14 hours (14 for Texas medical schools); chemistry, 16 hours; and physics, eight hours. In addition, some schools require biochemistry. This coursework may be done as part of a major or minor in the sciences or as electives in a nonscience major or minor. Some courses will apply toward the Universitywide requirements.

Candidates for admission to medical school must take the Medical College Admission Test; the test should be taken in the spring of the junior year. Candidates for dental school should take the Dental Admission Test, also in the spring of the junior year. All students intending to apply to medical or dental schools should contact the Office of Pre-Health Advising.

Undergraduate Internship Program

The Dedman College Undergraduate Internship Program helps students begin to prepare for employment. Internship credit is designed to demonstrate and reinforce the valuable and highly marketable skills that our students develop. The following guidelines apply:

- Credit-bearing internships are supervised by faculty, department or program. **Note:** Noncredit-bearing internships are those without faculty, department or program supervision. Internship orientation is strongly suggested for noncredit-bearing internships. Students may be asked to sign a Release of Liability for some internships.
- Dedman Internship Program Orientation and Standardized University Release of Liability for Education Internship are required for credit-bearing internships.
- Internship credit and grades are based on a written learning contract signed by the student and faculty supervisor and approved by the department chair or director of undergraduate studies. In addition, students and site supervisors will complete evaluations of the experience. These evaluations are not considered in determination of the grade.
- If a student has obtained an internship that qualifies toward possible credit in Dedman College and also qualifies toward possible credit in another SMU school, and if the student chooses to earn internship credit in that school, the student will not be allowed to use the same internship experienced toward credit in Dedman College.
- Internship credit requires a written component based on and reflective of the experiential dimension.
- Internship credit is available only through approved internship courses.
- Internship credit may range from one to three hours.
- The maximum total internship credit that may be applied toward a degree is three hours.

Teacher Education

The University offers teacher education through the Simmons School of Education and Human Development and recommends candidates for certification by the State Board of Educator Certification. The recommendation is based on a candidate's successful completion of 24 hours in education (EDU) courses and six hours of student teaching. In addition, candidates must pass the Texas Examinations of Educator Standards. Prospective secondary teachers must have majors in appropriate teaching fields; students who wish to teach in a science or humanities discipline at the secondary level should combine a Dedman major in that area with the appropriate education (EDU) coursework through the Simmons School. More information is available from the Department of Teaching and Learning at 214-768-2780. For a general description of the program in teacher education, students should see the Simmons School of Education and Human Development section of this catalog.

Multiple Majors and Minors

Students are encouraged to broaden their education by taking full advantage of the University's diverse undergraduate programs. Although only one major is required for graduation, with careful planning students may complete two or more majors and/or multiple minors within the prescribed total hours.

Students may also qualify for baccalaureate degrees from two schools in the University. Some characteristic pairings are English or political science in Dedman College and journalism in Meadows School of the Arts; physics or mathematics in Dedman College and electrical engineering in the Lyle School of Engineering; and world language in Dedman College and a major or minor in the Cox School of Business. Since all requirements for both degrees must be met, students should confer with advisers in both schools at an early date to prepare a plan of study.

Students are individually responsible for knowing and complying with all regulations and requirements that may apply to their respective programs.

Courses Taken in SMU Abroad Programs

Up to 30 term credit hours taken in approved SMU Abroad Programs may be counted toward the degree requirements in Dedman College. Additional term credit hours may be allowed through petition. Students should check individual departments within Dedman College for additional limitations.

Transfer Courses From Other Institutions

Once matriculated at SMU, students wishing to enroll for and transfer courses offered at other institutions in subject areas within the Dedman College curriculum must receive prior approval from their adviser, the chair of the SMU department that normally offers the course, and the Dedman College Office of Records and Academic Services. A maximum of 30 credit hours of postmatriculation transfer work may be approved. Approval may be denied for educational reasons. Postmatriculation transfer work must be completed at accredited, four-year institutions. Postmatriculation transfer work from nonaccredited or two-year institutions will not be approved.

ADMISSION

All incoming first-year students to the University are admitted as SMU Pre-Majors. Students should see the Admission to the University section of this catalog for admission requirements. Students wishing to pursue majors in the humanities, in the social or natural sciences, or in various multidisciplinary programs will declare a major in Dedman College for their undergraduate education. Specific degree requirements and additional information for any of these programs can be found in the departmental sections of this catalog. Admission into academic departments within Dedman College requires the completion of 24 hours of coursework with a cumulative GPA of 2.000 or higher. Additional entry/admission requirements may exist within specific departments.

Admission From Other Schools Within SMU

An individual enrolled in another school of the University may apply to their current school for permission to transfer into a degree-granting program in Dedman College. A student who has achieved a cumulative GPA of 2.000 on all SMU work attempted will normally be admitted to candidacy for a degree in Dedman College. Some academic programs may have additional requirements. Students should consult the catalog section and/or the department for more information.

Readmission of Former Students

If three or more years have elapsed since the last enrollment at SMU, the student must meet any new requirements and is subject to any new regulations that have been instituted in the interval.

DEGREE REQUIREMENTS

Dedman College offers B.A. and B.S. degrees. Students should consult the individual programs of study outlined in the following sections of this catalog for the degree available in a specific area of study.

The Major

A candidate for a degree must complete the requirements for a major in one of the departments or interdisciplinary programs of the college as well as the University-wide requirements. The major requirements of each department and program are stated at the beginning of the section describing the courses offered in that department or area. The applicable requirements of the major are those in effect during the academic year of matriculation. Coursework counting toward a major must include at least 18 advanced hours in approved SMU credit courses completed at SMU. All advanced courses required for the major must be passed with a grade of C- or better and may not be taken pass/fail. In addition, Dedman College requires a cumulative GPA of 2.000 for all courses attempted for completion of a major or minor. All courses attempted that could count toward the major/minor are included in determining the major/minor GPA. Majors must be officially declared (or changed) through the Dedman College Office of Records and Academic Services.

The Minor

A candidate for a degree may also complete the requirements of a minor, either in Dedman College or in one of the other undergraduate schools of the University. Advisers in the minor programs assist students in selecting a minimum of 15 hours, including at least nine at the advanced level, suitable for meeting requirements for a minor. Coursework counting toward a minor may not be taken pass/fail. All advanced courses required for the minor must be passed with a grade of C- or better. At least half of the advanced hours required by Dedman minors must be completed in approved SMU credit courses and may not be transferred or taken pass/fail. In addition, Dedman College requires a cumulative GPA of 2.000 for all courses attempted for completion of a major or minor. All courses attempted that could count toward the major/minor are included in determining the major/minor GPA. Minors must be officially declared (or changed) through the Dedman College Office of Records and Academic Services.

General Requirements

Student Responsibility for Completion of Degree Plan

Students are individually responsible for knowing and complying with all regulations and requirements that may apply to their respective programs.

Application for a Degree

Students must submit to the Dedman College Office of Records and Academic Services a formal application for graduation by the deadlines listed in the University Calendar within this catalog.

Credits

A candidate for a degree in Dedman College must have

- A minimum total of 122 term hours of credit, including the Universitywide requirements and the requirements for a major. Within this 122 hours are the following:
 - A minimum total of 42 advanced hours (3000 level or above).
 - Two hours of Personal Responsibility and Wellness.
 - A maximum total of three hours of internship credit.

Grades

A candidate for a degree in Dedman College must attain

- A minimum cumulative GPA of 2.000 on all work attempted through enrollment at SMU.
- A minimum cumulative GPA of 2.000 including all equivalent transfer work attempted elsewhere, if any.
- A minimum grade of *C-* on any advanced course offered in fulfillment of major or minor requirements.
- A minimum cumulative GPA of 2.000 for all work attempted for completion of major or minor requirements.
- No more than 12 hours with a grade of *P* (Pass). This is in addition to any courses taken that are offered only as pass/fail.

Credit Requirement

As minimum requirements, a candidate for a degree in Dedman College must take the following hours as SMU credit through SMU courses or SMU-approved international programs:

- A total of 60 hours.
- A total of 18 hours of advanced work in the major.
- A total that is equivalent to at least 50 percent of the advanced work required in any minor program selected. Departmental requirements may exceed this minimum.

Requirements for Obtaining Two Degrees Simultaneously

A student who selects two majors in Dedman College may receive both degrees simultaneously by completing all requirements in each major, along with general requirements for a degree in Dedman College and Universitywide requirements. However, a student may not pursue multiple programs in the same department without permission from that department and the Dedman College Office of Records and Academic Services.

A student may pursue a program of study leading to a degree from Dedman College along with a degree from the Cox School of Business, Lyle School of Engineering, Meadows School of the Arts, or Simmons School of Education and Human Development. The student must obtain approval for the proposed program of study from the records offices of the schools involved.

Graduation Honors

There are three classes of graduation honors: summa cum laude, magna cum laude and cum laude. Eligibility for graduation honors will be based upon a student's total academic program. All academic work attempted at other colleges or universities that is equivalent to SMU work will be included in the calculation of the GPA. For students who have transferred to SMU, two grade point averages will be calculated: for all work attempted and for work completed through enrollment at SMU. Honors will be based on the lower of the two averages.

Departmental Distinction

During their junior and senior years, students may participate in the honors courses and seminars offered within their major departments. A variety of internships and research programs are also offered in some departments to provide practical exposure and experience within the disciplines. By successfully completing a special program of study in the major department, a student may be awarded departmental distinction regardless of eligibility for graduation honors. This award is conferred by the major department on the basis of criteria prescribed by the department, but all programs include the minimum requirements of independent reading and research beyond the regular departmental requirements for a degree and the completion of a senior paper or research report. Further information can be obtained from the individual departments in the Courses of Study in Dedman College section of this catalog or from www.smu.edu/dedman.

RESEARCH FACILITIES

The teaching laboratories of the departments of Biological Sciences, Chemistry, Earth Sciences and Physics are housed in the **Fondren Science Building** and in the **Dedman Life Sciences Building**. Virtually all teaching laboratories and support facilities in the buildings have been remodeled and updated. Students have access to a wide array of specialized instrumentation and laboratory equipment fundamental to studies in the natural sciences, including spectrophotometers, high-performance liquid chromatographs, scintillation counter, fluorescence-activated cell sorter, scanning laser confocal microscope, electron resonance spectrometer, X-ray diffractometers, mass spectrometers and an atomic absorption spectrometer. Advanced undergraduate research is also supported by tissue culture and animal care facilities, as well as through several departmental computer laboratories.

The **N.L. Heroy Science Hall** houses the departments of Anthropology, Earth Sciences and Statistical Sciences, as well as the Institute for the Study of Earth and Man. The **Institute for the Study of Earth and Man** was created in 1966 by a gift from W.B. Heroy, Sr. Its purpose is to support research at the interface of humans, Earth and the environment.

The **Department of Anthropology** operates the following research laboratories:

The **Geoarchaeology Laboratory** processes and analyzes soil and sediment samples as part of interdisciplinary archaeological research projects. Work in the lab follows two major threads: 1) paleofire and paleoenvironmental research using terrestrial sedimentary archives associated with archaeological landscapes and 2) behavioral geoarchaeology projects that use anthrosol chemistry and soil micromorphology to reconstruct activity areas or the life histories of domestic and public spaces. Specialized equipment includes a large-volume drying oven,

large-volume muffle furnace, benchtop centrifuge, orbital shaker, portable phosphate colorimeter and benchtop magnetic susceptibility meter. Projects also benefit from partnerships with the SMU Roy M. Huffington Department of Earth Sciences and their facilities.

The **Southwestern Archeology Laboratory** processes artifact collections and conducts data entry for artifacts collected from archeological sites in the American Southwest. In addition, the laboratory conducts experimental research with clays, temper and ceramics. It contains one muffle furnace and a drying oven.

The **Laboratory of Traditional Technology** is used for carrying out systematic technological and performance analyses of clays and ceramics from archeological sites to better understand variability in regional assemblages. On-site special equipment includes binocular microscopes and muffle furnaces.

The **Mesoamerican Archaeology Laboratory** utilizes portable X-ray fluorescence technology to chemically source obsidian (volcanic glass) stone tools and ceramic artifacts to determine changes in trade routes and production activities correlated to major political and economic changes during the Maya Preclassic Period (900 B.C.–A.D. 150). Ceramic petrographic analysis further helps to identify sources and distinct paste recipes for ancient Maya potters and reveals economic choices made by those potters. Microwear analysis of stone tools examines microscopic traces of wear patterns left on artifacts for clues to ancient activities. The primary objective of this research is to demonstrate how households and everyday life are connected to broader political and economic change.

The **Medical Anthropology Laboratory**, funded by the National Institutes of Mental Health, includes data storage and computers installed with NVivo 10 and Atlas.ti software.

The **Zooarchaeology Laboratory** houses a large collection of comparative mammalian and avian skeletal remains. The collections also include several unique experimental and one of the largest ethnoarchaeological faunal assemblages in the country.

Geospatial Laboratory computers have software used in GIS analysis.

The **QUEST Archaeological Program** maintains laboratories to analyze archeological materials (artifacts, faunal remains and sediments) collected in the course of fieldwork (primarily excavations). Equipment for analyzing sediments includes special ovens and related laboratory tools. In addition, the lab houses extensive comparative collections used for research and teaching. The lab computers also have some GIS capabilities and tools for quantitative analyses.

The **Department of Earth Sciences** operates several unique laboratories, including the following:

The **Dallas Seismological Observatory**, established by the Dallas Geophysical Society and maintained and operated by the University, monitors remote seismic and infrasound stations in the western United States. The Lajitas array in Southwest Texas is used to test technology designed to detect small earthquakes from great distances. SMU operates seismic and infrasound arrays in Nevada and overseas locations. Data collected by the observatory are available to the faculty and advanced students who wish to undertake basic research in seismology, tectonics or infrasound.

The **Ellis W. Shuler Museum of Paleontology** houses research and teaching collections of fossil vertebrates, invertebrates and plants. The museum supports opportunities for advanced study of fossil faunas and floras and their evolutionary, climatic and paleoecologic significance. The collection, which specializes in vertebrate paleontology and paleobotany, includes more than 150,000 fossils. The research perspective is global, with particular strengths in advanced imaging techniques and interdisciplinary studies. Students participate in research on the collections, and many are employed in the museum's fully equipped preparation laboratories.

The **Pollen Analysis Laboratory** serves SMU research projects focused on the reconstruction of past vegetation, past climate and paleoecology at localities around the world. The facility includes two fume hoods, glassware, centrifuges, scales, a convection oven, and storage space necessary for the dry and wet processing of sediment samples for their pollen content. The laboratory is also used for the processing of fossil plant cuticle. Microscopic analysis of the resulting pollen-sample residues and cuticle slides takes place in a separate laboratory housing transmitted light and epifluorescence microscopes, a comparative collection of modern pollen, and a small paleobotany and palynology research library. Work in this laboratory is often supplemented by facilities in the Scanning Electron Microscope laboratory (described below).

The **Geothermal Laboratory** is the focus of an extensive, worldwide program of research in the thermal field of the Earth. Special topics of concentration include characterization and location of geothermal energy resources in sedimentary basins related to oil and gas wells, resource evaluation of enhanced geothermal systems and research on methane hydrates. Mapping of the temperatures and heat flow of the crust has been completed for North America and is part of the website www.google.org/egs. Specialized equipment for the measurement of thermal conductivity of rocks and for the measurement of accurate, precise temperature logs in deep wells is available for research purposes. Services are provided to other institutions and research centers on a contractual basis.

The **Hydrothermal Laboratory** contains equipment to reproduce the pressures and temperatures existing to midcrustal depths. It contains two extraction-quench sampling bombs that permit withdrawal of solution during the progress of a run to pressures of 3 kbar and temperatures of 750 degrees Celsius. There are also 10 cold-seal reaction vessels. In addition, 1-atm furnaces are available that can be used to temperatures of 1400 degrees Celsius.

The **Stable Isotope Laboratory** is a general research facility available to support both academic and student research at the University and in other research centers. The laboratory contains three automated gas-source, magnetic-sector isotope ratio mass spectrometers as well as vacuum extraction lines for converting natural materials (solids, liquids) into gases suitable for measuring the isotope ratios of hydrogen, carbon, nitrogen and oxygen at natural abundance.

The **Variable Pressure Scanning Electron Microscope Laboratory** contains a Zeiss SMT 1450 VPSE SEM used for generating electron photomicrographs with 5-nm resolution. The SEM is open to researchers and students from the departments of Earth Sciences, Environmental Sciences, Anthropology, Engineering and Chemistry. The facility is also equipped with an Edax energy dispersive

X-ray system for quantitative determination of elemental compositions of the imaged materials.

The **X-ray Diffraction Laboratory** houses a Rigaku Ultima III diffractometer for the X-ray identification of materials with a crystalline structure and is open to researchers and students from the departments of Anthropology, Chemistry, Earth Sciences, Environmental Sciences and Engineering.

The **X-ray Fluorescence Laboratory** houses a Thermo Scientific ARL PERFORM'X X-ray fluorescence spectrometer. XRF analysis is a widely used analytical technique to determine the elemental composition from 10 ppm to 100 percent of a wide range of samples, both solids and liquids, with easy sample preparation and nondestructive analysis. The lab and its sample preparation tools are available to researchers and students working in Earth sciences, environmental sciences, anthropology, engineering and chemistry.

The **Transmission Electron Microscope Microscopy Laboratory**, located in the Department of Chemistry, houses a Leo 906 transmission electron microscope, which was donated to SMU by the Texas Scottish Rite Hospital for Children in Dallas. The TEM is also equipped with an Olympus KeenView digital camera.

The **Nuclear Magnetic Resonance Spectrometer Laboratory**, located in the Department of Chemistry, houses a 500 MHz JEOL NMR spectrometer and a 400 MHz Bruker NMR spectrometer, which are available to students and researchers. These instruments are the research progenitors of medical MRI scanners, capable of scanning ^1H , ^{13}C , ^{31}P and many other nuclei.

AEROSPACE STUDIES: AIR FORCE ROTC

General Information

Air Force Reserve Officers' Training Corps courses are not offered on the SMU campus; however, students at SMU who wish to earn appointments as commissioned officers in the U.S. Air Force may participate in the Air Force general military course and professional officer course through the University of North Texas in Denton. The Air Force ROTC program develops skills and provides education vital to the career officer. Active-duty Air Force personnel provide all instruction and program administration. Students who participate in the UNT Air Force ROTC program are responsible for their own travel and other physical arrangements.

The program is open to all students. First-year students may enroll in the four-year program, and students with at least three undergraduate or graduate academic years remaining may apply for the two- or three-year program. Scholarships, available to qualified students, provide full tuition, fees, textbook allowance and a monthly tax-free subsistence allowance ranging from \$300 to \$500. National scholarship competitions are based on SAT or ACT test results, Air Force Officer Qualifying Test results or college academic records, and extracurricular and athletic activities. Uniforms and textbooks for Air Force ROTC courses are issued at no cost to cadets.

Students register for the aerospace studies courses at the same time and in the same manner as they register for other SMU courses. The Air Force ROTC courses may be taken as electives in most academic majors. Successful completion of degree requirements and the Air Force ROTC program can lead to a commission as a second lieutenant in the United States Air Force. Students with at least six months of active military service may be granted waivers on a portion of the general military course.

For more information, students should contact Air Force ROTC, University of North Texas, PO Box 305400, Denton TX 76203; 940-565-2074; det835@unt.edu; www.unt.edu/afrotc.

The Courses (AERO)

AERO 1103 (1). FOUNDATIONS OF THE UNITED STATES AIR FORCE. Introduces the USAF and the AFROTC. Topics include mission and organization of the USAF, officership and professionalism, military customs and courtesies, USAF officer opportunities, and communication skills.

AERO 1104 (1). FOUNDATIONS OF THE UNITED STATES AIR FORCE. Introduces the USAF and the AFROTC. Topics include mission and organization of the USAF, officership and professionalism, military customs and courtesies, USAF officer opportunities, and communication skills.

AERO 2100 (1). COOPERATIVE EDUCATION IN AEROSPACE STUDIES. Supervised work in a job directly related to the student's major, professional field of study, or career objective, 1–3 hours each week. *Prerequisites:* Permission of division chair; student must meet employer's requirements. May be repeated for credit.

AERO 2103 (1). THE EVOLUTION OF USAF AIR AND SPACE POWER. Examines general aspects of air and space power from the first balloons and dirigibles to the space-age global positioning systems of the Persian Gulf War. Extrapolates the development of Air Force capabilities (competencies) and missions (functions), and demonstrates the evolution of USAF air and space power. Students develop their communication skills and discuss the importance of the Air Force core values using operational examples and historical Air Force leaders.

AERO 2104 (1). THE EVOLUTION OF USAF AIR AND SPACE POWER. Examines general aspects of air and space power from the first balloons and dirigibles to the space-age global positioning systems of the Persian Gulf War. Extrapolates the development of Air Force capabil-

ities (competencies) and missions (functions), and demonstrates the evolution of USAF air and space power. Students develop their communication skills and discuss the importance of the Air Force core values using operational examples and historical Air Force leaders.

AERO 2200 (2). COOPERATIVE EDUCATION IN AEROSPACE STUDIES. Supervised work in a job directly related to the student's major, professional field of study, or career objective, 1–3 hours each week. *Prerequisites:* Permission of division chair; student must meet employer's requirements. May be repeated for credit.

AERO 2300 (3). COOPERATIVE EDUCATION IN AEROSPACE STUDIES. Supervised work in a job directly related to the student's major, professional field of study, or career objective, 1–3 hours each week. *Prerequisites:* Permission of division chair; student must meet employer's requirements. May be repeated for credit.

AERO 2400 (4). COOPERATIVE EDUCATION IN AEROSPACE STUDIES. Supervised work in a job directly related to the student's major, professional field of study, or career objective, 1–3 hours each week. *Prerequisites:* Permission of division chair; student must meet employer's requirements. May be repeated for credit.

AERO 3431 (4). AIR FORCE LEADERSHIP. A study of leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and communication skills required of an Air Force junior officer. Uses case studies to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied.

AERO 3432 (4). AIR FORCE LEADERSHIP. A study of leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and communication skills required of an Air Force junior officer. Uses case studies to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied.

AERO 4100 (1). COOPERATIVE EDUCATION IN AEROSPACE STUDIES. Supervised work in a job directly related to the student's major, professional field of study, or career objective, 1–3 hours each week. *Prerequisites:* 12 hours of credit in aerospace studies; permission of division chair. Student must meet employer's requirements. May be repeated for credit.

AERO 4200 (2). COOPERATIVE EDUCATION IN AEROSPACE STUDIES. Supervised work in a job directly related to the student's major, professional field of study, or career objective, 1–3 hours each week. *Prerequisites:* 12 hours of credit in aerospace studies; permission of division chair. Student must meet employer's requirements. May be repeated for credit.

AERO 4300 (3). COOPERATIVE EDUCATION IN AEROSPACE STUDIES. Supervised work in a job directly related to the student's major, professional field of study, or career objective, 1–3 hours each week. *Prerequisites:* 12 hours of credit in aerospace studies; permission of division chair. Student must meet employer's requirements. May be repeated for credit.

AERO 4400 (4). COOPERATIVE EDUCATION IN AEROSPACE STUDIES. Supervised work in a job directly related to the student's major, professional field of study, or career objective, 1–3 hours each week. *Prerequisites:* 12 hours of credit in aerospace studies; permission of division chair. Student must meet employer's requirements. May be repeated for credit.

AERO 4431 (4). NATIONAL SECURITY FORCES IN CONTEMPORARY AMERICAN SOCIETY AND PREPARATION FOR ACTIVE DUTY. Examines the national security process, regional studies, advanced leadership ethics, and Air Force doctrine. Focuses on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty, current issues affecting military professionalism, and communication skills.

AERO 4432 (4). NATIONAL SECURITY FORCES IN CONTEMPORARY AMERICAN SOCIETY AND PREPARATION FOR ACTIVE DUTY. Examines the national security process, regional studies, advanced leadership ethics, and Air Force doctrine. Focuses on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty, current issues affecting military professionalism, and communication skills.

ANTHROPOLOGY

www.smu.edu/anthro

Professor Karen Lupo, Department Chair

Professors: Eric G. Bing, Caroline Brettell, Karen Lupo, David Meltzer, Ronald Wetherington. **Associate Professors:** Michael Adler, Sunday Eiselt, Victoria Lockwood, Mark McCoy, Nia Parson, Christopher Roos, Carolyn Smith-Morris. **Assistant Professors:** Kacy Hollenback, Neely Myers, Nicolas Sternsdorff-Cisterna. **Research Assistant Professor:** Faith Nibbs.

Anthropology is the study of humanity in its broadest context. Anthropology encompasses four subdisciplines within its approach: archaeology, biological anthropology, linguistic anthropology and sociocultural anthropology. In addition to providing the basis for careers in these subdisciplines, anthropology provides a background for professional careers in teaching, research, international affairs, medicine, business or law. The department offers B.A. and B.S. degrees with a major in anthropology and B.A. and B.S. degrees with a major in health and society. A grade of C- or better must be earned in all courses taken in fulfillment of the requirements for the major. Students must maintain a minimum 2.000 GPA in their major and should consult their departmental adviser periodically to review their progress.

Bachelor of Arts With a Major in Anthropology

The B.A. program is designed to provide students with a strong foundation in the diversity of human biology and culture over time. Students are able to shape their particular specialty within anthropology while developing research skills for life after graduation. The B.A. degree works well as a stand-alone major or when paired with another major for students pursuing diverse careers. Of the required 36 term hours of anthropology, at least three term hours must be at the 4000 level or higher. **Note:** ANTH 1321 is a preferred elective.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Core Courses	12
ANTH 2301, 2315, 2363, 4399	
Regional Courses (two from the following)	6
ANTH 3304, 3311–18, 3323, 3334, 3346, 3353, 3354, 3355, 3358, 3359, 3374, 3399	
Methods and Analysis Courses	6
ANTH 5681 or one from ANTH 3345, SOCI 3311 and one from ANTH 3351, 4325, 4333, 4391 (data analysis topic), 5310, SOCI 3312	
Anthropology Electives (at least 3 credit hours at the 4000 level or higher)	12
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Bachelor of Science With a Major in Anthropology

The B.S. program is designed for students who are particularly interested in careers in medicine, public health or research in anthropological or archaeological sciences. Of the 48 term hours of anthropology and other related courses required, at least three term hours must at the 4000 level or higher.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Core Courses	18
ANTH 2301, 2315, 2363, 4399, 5334 or 5335 STAT 2331	
Regional Courses (two from the following)	6
ANTH 3304, 3311–18, 3323, 3334, 3346, 3353, 3354, 3355, 3358, 3359, 3374, 3399	
Methods and Analysis Courses	6
ANTH 5681 or one from ANTH 3345, SOCI 3311 (B.S. students may take ANTH 5344) and one from ANTH 3351, 4325, 4333, 4391 (data analysis topic), 5310, SOCI 3312	
Advanced Statistics or Data Analysis Course (select one)	3
STAT 3312, 3380, 4385 SOCI 3312	
Advanced Social or Natural Science Courses (must be at the 3000 level or above)	6
6 credit hours from BIOL, CHEM, GEOL, or PHYS courses or 6 credit hours from ECON, PLSC, PSYC, or SOCI courses	
Anthropology Electives	9
(at least 3 credit hours at the 4000 level or higher)	
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Bachelor of Arts or Bachelor of Science With a Major in Health and Society

The health and society major is intended to promote a broad understanding of health and its determinants for students planning careers in the health professions. The program offers B.A. and B.S. scholars with knowledge spanning the sciences, social sciences, humanities and behavioral sciences through intensive collaboration and cross-disciplinary communication among students and faculty involved in the major.

Two concentrations are offered. Track 1, with physiological emphasis (B.S.), is a bench science track oriented to students pursuing graduate study in medicine, nursing, pharmacy, dentistry and other clinical fields. Track 2, with social and cultural emphasis (B.A. or B.S.), is a behavioral and social science track oriented to students pursuing allied health-related careers, research and graduate study in the allied health professions, including public health, health care administration, psychology, and medical anthropology or sociology.

Admission to this program is by competitive application to the department. Applications are accepted twice annually in September and February. Applicants must have completed at least 24 credit hours and the laboratory science courses

required for their specific program track. Additional information is available on the department's Web page.

Note: This program of study does not satisfy requirements for the Medical College Admission Test or medical school applications. Students preparing for admission to health-related graduate school must consult with the prehealth professions adviser for further information and course requirements.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Foundation and Capstone Courses	15–16
ANTH 2301, <i>or</i> PSYC 1300, <i>or</i> SOCI 1300 ANTH/SOCI 3301 <i>or</i> PHIL 3376 <i>or</i> RELI 3309 ANTH 3306 ANTH 4343 <i>or</i> 5336 (or another capstone course approved by the department chair, professor, and health and society director) <i>Track 1:</i> BIOL 1401 <i>or</i> CHEM 1303 (with lab CHEM 1113) <i>Track 2:</i> BIOL 1303 <i>or</i> 1401, <i>or</i> CHEM 1301 <i>or</i> 1303 (with lab CHEM 1113)	
Concentration Courses	20–29
<i>Track 1: Physiological Emphasis (28 credit hours)</i> MATH 1337 <i>or</i> STAT 2331 PSYC 3332 Elective courses (22 hours) chosen from the following (no more than 12 hours from any single department; at least 15 hours at the 3000 level or higher): ANTH 2315, 3350, 3351, 4307, 4343, 5310, 5336 APSM 2441, 2442, 4349 BIOL 1402, 3304, 3350 CHEM 1304/1114, 3371/3117 PSYC 2351, 3360, 4320, 4321 WGST 3380 <i>Track 2: Social and Cultural Emphasis (20–29 credit hours)</i> ANTH 3345 <i>or</i> PSYC 3382 <i>or</i> SOCI 3311 APSM 2441 Elective courses (13 hours for the B.A., 21 for the B.S.) chosen from the following (no more than 12 hours from any single department; at least 9 hours at the 3000 level or higher): ANTH 3328, 3345, 3348, 3350, 4303, 4307, 4343, 5336 APSM 2442, 4349 ENGL 3379 PHIL 3364, 3376 PSYC 3341, 3360, 4320, 4321 RELI 3309 SOCI/ANTH 3301 STAT 2331 WGST 3310, 3380, 3382	

Departmental Distinction

This program is open to junior and senior anthropology majors and health and society majors with outstanding academic records. Graduation with departmental distinction is designated on the diploma of those who successfully complete the program. To earn departmental distinction, a student must

1. Complete the usual coursework for a B.A. or B.S. degree with at least a 3.500 GPA in their major and with at least a 3.000 GPA overall.
2. With a grade of *B* or higher: For anthropology majors, pass ANTH 5334 and 5335 or complete a substantial independent reading program (for three term hours credit that replaces one of these) on the history, conceptual foundations or methodological problems of the discipline. For health and society majors, pass ANTH 4343 or 5336.
3. With a grade of *A* or *A-*, conduct a research project (for three term hours credit in ANTH 4391 or 4392) and complete a significant research paper that is a minimum of 20 pages of text, includes a bibliography, and is written in appropriate sub-disciplinary professional style and format.
4. Pass an oral examination of one hour in length (with at least three full-time departmental faculty members), covering the results of the research project and general issues and concepts in anthropology according to the subfield specialty.

Minor in Anthropology

A 15-hour minor is offered in three tracks: archaeology, cultural anthropology or general anthropology; an 18-hour track may be taken in biomedical anthropology. A grade of *C-* or better must be earned in all advanced courses taken in fulfillment of the requirements for an anthropology minor. Students must take nine credit hours of advanced coursework. Students may choose to take a topics course (ANTH 3330, 3331, 4191, 4192, 4291, 4292, 4350, 4351, 4352, 4381, 4390, 4391, 4392) in one of the subfields to count toward the minor. Students pursuing a major in anthropology may not also pursue the minor.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
Core Course	3
ANTH 2301	
Anthropology Tracks	12–15
<i>Archaeology (12 credit hours)</i>	
One from ANTH 2302, 2363, 2380	
Three from ANTH 3304, 3312–19, 3323, 3334, 3351, 3353, 3358, 3365, 3374, 3384, 3388, 3390, 3399, 4300, 4325, 4333, 4346, 4385, 4386, 5310, 5381, 5382, 5681	
<i>Biomedical Anthropology (15 credit hours)</i>	
ANTH 3306 or 5336	
Four from ANTH 3301, 3303, 3306, 3328, 3348, 3350, 3351, 4303, 4307, 4343, 4344, 5310, 5336	
or three ANTH courses listed above and one from PHIL 3376, PSYC 3360, RELI 3366, WGST 2380	

Anthropology Tracks (continued)**Cultural Anthropology (12 credit hours)**

Two from ANTH 3301, 3303, 3306, 3310, 3319, 3328,
3329, 3333, 3336, 3344, 3345, 3348, 3350, 3361, 3366,
3368, 3385, 3388, 4303, 4304, 4305, 4307, 4309,
4343, 4344, 4346, 4384, 5336, 5344

Two from ANTH 3304, 3311, 3312, 3313, 3314, 3315, 3316,
3317, 3318, 3323, 3334, 3346, 3353, 3354, 3355, 3358,
3359, 3374, 3399

General Anthropology (12 credit hours)

ANTH 3361

One course from the archaeology track (above)

One course from the cultural anthropology track (above)

One course from ANTH 2315, 3302, 3350, 3351, 4336,
4377, 5310

15–18

The Courses (ANTH)

Note: All 2000-level and 3000-level anthropology courses are open to first-year students. Undergraduate and graduate students may take 4000-level and 5000-level courses; however, undergraduate students must have introductory coursework in the appropriate subfield or permission of the department. Anthropology courses are grouped into subfields as follows.

General	ANTH 1321, 4399, 5334, 5335
Archaeology	ANTH 2302, 2363, 2380, 3304, 3312–19, 3323, 3334, 3351, 3353, 3358, 3365, 3374, 3384, 3388, 3390, 3399, 4300, 4325, 4333, 4346, 4385, 4386, 5310, 5381, 5382, 5681
Cultural/Social Anthropology	ANTH 2301, 3301, 3303, 3304, 3306, 3310–19, 3323, 3328, 3329, 3333, 3334, 3336, 3344, 3345, 3346, 3348, 3350, 3353, 3354, 3355, 3358, 3359, 3361, 3366, 3368, 3374, 3385, 3388, 3399, 4303, 4304, 4305, 4307, 4309, 4343, 4344, 4346, 4384, 5336, 5344
Anthropological Linguistics	ANTH 3361
Physical Anthropology	ANTH 2315, 3302, 3350, 3351, 4336, 4377, 5310

ANTH 1321 (3). FIRST-YEAR SEMINAR IN ANTHROPOLOGY. Writing- and reading-intensive course that offers beginning students an opportunity for in-depth pursuit of a specific anthropological topic in a small-class setting.

ANTH 2301 (3). INTRODUCTORY CULTURAL ANTHROPOLOGY. Basic theories and methods of cultural anthropology. Explores variations in cultural values, social practices, religion, rules of law, etc., in different cultures around the world. Focuses on understanding the forces that shape cultures and societies, and how they adapt to a rapidly changing world.

ANTH 2302 (3). PEOPLE OF THE EARTH: THE FIRST FIVE MILLION YEARS. Human biological and cultural evolution, from the appearance of ancestral humans in Africa, to agricultural origins and the rise of the world's great civilizations.

ANTH 2315 (3). HUMAN EVOLUTION: BIOLOGICAL AND SOCIAL BEGINNINGS OF HUMANKIND. Topics include mutation, natural selection, primate origins, and the human fossil record. Also, ethical and moral issues of cloning, eugenics, and creationism.

ANTH 2363 (3). THE SCIENCE OF OUR PAST: AN INTRODUCTION TO ARCHAEOLOGY. Covers how and why archaeologists study evidence of past human behavior. Required labs emphasize hands-on analyses of artifacts and other archaeological materials.

ANTH 2380 (3). CONTEMPORARY ARCHAEOLOGY: CONTROVERSIES AND ETHICS. Introduces students to the social and political contexts of archaeological research in heritage and human rights arenas with emphasis on ethics and the law.

ANTH 3301 (3). HEALTH, HEALING, AND ETHICS: CROSS-CULTURAL PERSPECTIVES ON SICKNESS AND SOCIETY. A cross-cultural exploration of cultures and organization of medical systems, economic development and the global exportation of biomedicine, and ethical dilemmas associated with medical technologies and global disparities in health.

ANTH 3302 (3). MONKEYS AND APES: THE NONHUMAN PRIMATES. Introduces the study of nonhuman primates, from prosimians to the great apes. Explores questions of taxonomy, aspects of social behavior, and patterns of communication.

ANTH 3303 (3). PSYCHOLOGICAL ANTHROPOLOGY. Examines the interplay of culture and personality in various Western and non-Western societies. Perception, cognition, dreams, altered states of consciousness, and psychological terrorism are analyzed in cross-cultural perspective.

ANTH 3304 (3). NORTH AMERICAN ARCHAEOLOGY. North America's human past, from the earliest colonization by ice age peoples and their descendants who colonized the continent, to the clash of cultures that followed the arrival of Europeans in 1492.

ANTH 3306 (3). INTRODUCTION TO MEDICAL ANTHROPOLOGY. Provides an overview of methods and topics in medical anthropology, which is an interdisciplinary field that explores health, illness, and systems of healing through holistic and cross-cultural study. Case studies from a diversity of human societies and cultures around the globe are used to challenge assumptions of student understandings. Introduces major theoretical paradigms and professional issues within the field.

ANTH 3310 (3). GENDER AND SEX ROLES: A CROSS-CULTURAL PERSPECTIVE. Cross-cultural and historical comparison of the life experiences of women and men in the areas of family, marriage and kinship, economic and political participation, sexuality, reproduction, ritual, and religion.

ANTH 3311 (3). MEXICO: FROM CONQUEST TO CANCUN. Introduces the unity and diversity of Mexican society as it has developed through encounters with other cultures, from 16th-century conquistadores to 21st-century tourists and emigrants.

ANTH 3312 (3). MESOAMERICAN ARCHAEOLOGY. Examines development of civilizations from village life to the great empires of Mexico. How civilizations begin, grow, change, and collapse.

ANTH 3313 (3). SOUTH AMERICAN INDIANS OF THE PAST AND PRESENT. A survey of the archaeology and ethnology of indigenous South Americans, from c. 13,000 years ago to recent times, focusing on environments, subsistence, and related levels of sociopolitical integration from Tierra del Fuego to the Amazon basin and the Andes.

ANTH 3314 (3). PEOPLES OF AFRICA. A contemporary study of the cultures and social structures of sub-Saharan African peoples and an examination of the dynamics of contemporary African societies.

ANTH 3315 (3). ORIGINS OF CIVILIZATION. Considers those cultural and historic factors that led to the development of agriculture and the first urban states in Egypt and Mesopotamia.

ANTH 3316 (3). CULTURES OF THE PACIFIC ISLANDS. Survey of the Pacific Islands' social systems, focusing on Melanesia, Micronesia, and Polynesia. Explores the nature of precontact societies and the ways colonial and missionary influences transformed island cultures. Examines how contemporary Pacific Islanders are responding to forces of globalization.

ANTH 3317 (3). PEOPLES OF SOUTHEAST ASIA. A comparative study of insular and mainland cultures of Southeast Asia, their history and development, and their social and economic structures.

ANTH 3318 (3). LIFE IN THE ANCIENT SOUTHWEST. Explores the evidence of thousands of years of human cultural change that archaeologists have uncovered across the American Southwest. Ranges in time from the first appearance of humans to the time of Pueblo civilization.

ANTH 3319 (3). HUMAN ECOLOGY. Examines interactions between human populations and their environments. Explores relationships among population size, technology, climate, and behavior in various living societies.

ANTH 3321 (3). ANCIENT HAWAII. Covers the origins of traditional Hawaiian society as known through archaeology, historical documents, and oral history, as well the history of Hawaii from European contact to statehood.

ANTH 3323 (3). EAST ASIA: CULTURAL TRADITIONS AND TRANSFORMATIONS. Anthropological examination of East Asia, focusing on China, Korea, and Japan. Topics include mainstream philosophical traditions, the individual and society, ethnicity and nationalism, and gender. *Prerequisite:* ANTH 2301 or instructor permission.

ANTH 3328 (3). GENDER VIOLENCE: ANTHROPOLOGICAL PERSPECTIVES. Examines how gender-based violence shapes individual subjective and collective experiences, material realities, and psychological states, as well as the impacts of interventions on intimate, interpersonal, local, and global scales.

ANTH 3329 (3). CONTESTING DEVELOPMENT: GLOBAL AND LOCAL IMPACTS AND HUMAN RIGHTS. Examines the highly variable impacts of economic development on lives and communities around the world, with a focus on human rights issues.

ANTH 3330 (3). SPECIAL TOPICS IN ANTHROPOLOGY. An in-depth look at particular problems and issues in contemporary anthropology. Topics vary. This course is repeatable under different topics.

ANTH 3331 (3). SPECIAL TOPICS IN ANTHROPOLOGY. An in-depth look at particular problems and issues in contemporary anthropology. Topics vary. This course is repeatable under different topics.

ANTH 3333 (3). THE IMMIGRANT EXPERIENCE. Explores the historical, social, cultural, and political dimensions of the U.S. immigrant experience and Americans' attitudes toward immigrants. Examines issues such as bilingual education and illegal immigration.

ANTH 3334 (3). FANTASTIC ARCHAEOLOGY AND PSEUDOSCIENCE: LOST TRIBES, SUNKEN CONTINENTS, AND ANCIENT ASTRONAUTS. This course investigates various claims (e.g., ancient astronauts have visited Earth, archaeologists are not revealing secrets about the Mayan calendar, and creation theory is a scientific alternative to the theory of human evolution) and how archaeologists respond to them.

ANTH 3336 (3). GENDER AND GLOBALIZATION: CULTURAL AND ETHICAL ISSUES. An analysis of the impact of globalizing forces on women's lives and identities, as well as on patterns of gender relations and ideology in various cultures around the world.

ANTH 3344 (3). CULTURAL ASPECTS OF BUSINESS. Explores the cultural aspects of business and entrepreneurship at home and abroad. Also, addresses the relationship between anthropology and business, examining business in a holistic context.

ANTH 3345 (3). INTRODUCTION TO ETHNOGRAPHIC METHODS. Introduces the methodological tools and approaches of ethnography. Relevant for students from a variety of disciplines. Topics include the conceptual work behind research, field site setup, research methods, data archiving and management, and ethnographic sampling. Course format includes lecture, projects, and exams.

ANTH 3346 (3). CULTURE AND DIVERSITY IN AMERICAN LIFE. An overview of contemporary U.S. culture, with an emphasis on how diversity (e.g., ethnicity, class, religion, and gender) is expressed in communities, in regions, and in the nation.

ANTH 3348 (3). HEALTH AS A HUMAN RIGHT. Examines the concept of human rights critically, with an eye for cross-cultural variation and a particular focus on rights that are health-related.

ANTH 3350 (3). GOOD EATS AND FORBIDDEN FLESH: CULTURE, FOOD, AND THE GLOBAL GROCERY MARKET. A cultural perspective on food that blends biological and medical information about human nutrition and development with an exploration of the global market of eating. *Prerequisites:* Advanced standing and ANTH 2301, or permission of instructor.

ANTH 3351 (3). FORENSIC ANTHROPOLOGY: LESSONS TAUGHT BY BONES. Introduces the identification of human remains, including conditions of preservation and decay. Estimating sex, stature, age, and ethnicity. Identifying pathology, trauma, and other causes of death.

ANTH 3353 (3). INDIANS OF NORTH AMERICA. A survey of American-Indian and Eskimo life, past and present, with emphasis on the interaction of Indians and whites since 1492 and on contemporary American-Indian problems and enterprises: reservation and urban life, gambling, health care, and legal rights.

ANTH 3354 (3). LATIN AMERICA: PEOPLES, PLACES, AND POWER. Examines the development of Latin America in the context of global transformations since the 16th century. Special attention is given to the interaction of local communities with regional, national, and international systems of power.

ANTH 3355 (3). SOCIETY AND CULTURE IN CONTEMPORARY EUROPE. Anthropological survey of social and cultural dimensions of contemporary European society. Explores unity and diversity within the region, and the role of gender, religion, class, ethnicity, and nationalism in structuring the lives of Europeans.

ANTH 3358 (3). INDIANS OF THE SOUTHWEST FROM THE 16TH CENTURY TO THE PRESENT. An introduction to the non-Pueblo and Pueblo peoples of the Greater Southwest, with a focus on Indian-Indian and Indian-Euroamerican relations and the resultant transformations. Topics include the clash of cultures, tourism, gambling, legal rights, and urbanism.

ANTH 3359 (3). PEOPLES AND CULTURES OF THE MIDDLE EAST. This course employs the lens of cultural anthropology to explore the social, cultural, familial, religious, and political lives of Middle Easterners from a wide variety of countries and backgrounds.

ANTH 3361 (3). LANGUAGE IN CULTURE AND SOCIETY. An investigation of social and cultural factors affecting the use of language. Topics include linguistic variation, black English, women's language, and body language.

ANTH 3365 (3). THE RISE AND FALL OF SUPERPOWERS: THE DYNAMICS AND ETHICS OF EMPIRE. A comparative introduction to the institutions and organizational dynamics of three ancient empires (Roman, Chinese, Incan), with discussions of the lessons that these civilizations can teach Americans about their society.

ANTH 3366 (3). MAGIC, MYTH, AND RELIGION ACROSS CULTURES. A cross-cultural and comparative exploration of religion, ritual, magic, and supernatural belief systems. Examines how religion permeates other aspects of society and culture.

ANTH 3368 (3). URBAN LIFE: A CROSS-CULTURAL PERSPECTIVE. An introduction to urban life and culture around the world, including how to study cities, who inhabits cities, and the special features of city places and spaces.

ANTH 3374 (3). CULTURES AND ENVIRONMENTS OF THE SOUTHWEST. Patterns of land and resource use in prehistoric and early historic times in the Southwest. The focus is on the mutual influence of cultures and resources in the northern Rio Grande region.

ANTH 3384 (3). PARADISE LOST? THE ARCHAEOLOGY AND ETHICS OF HUMAN ENVIRONMENTAL IMPACTS. Interdisciplinary archaeological, anthropological, and historical examination of human impacts on the environment around the world during the last 50,000 years.

ANTH 3385 (3). SUSTAINABLE LIVING. This course focuses on environmental challenges facing society and strategies for achieving a more sustainable existence.

ANTH 3388 (3). WARFARE AND VIOLENCE: THE ANTHROPOLOGY AND ETHICS OF HUMAN CONFLICT. An examination of the origins and development of human aggression, violence, and warfare using interdisciplinary data and theories from prehistory, ethnology, history, and political science.

ANTH 3390 (3). THE PLUNDERED PAST: ARCHAEOLOGY'S CHALLENGES IN THE MODERN WORLD. This course will provide an interdisciplinary understanding of the importance societies place on knowing, preserving, and altering evidence of the past. Special emphasis is placed on archaeology's role in understanding and preserving the past.

ANTH 3399 (3). IN SEARCH OF ICE AGE AMERICANS. The peopling of America during the Ice Age, reconstructed by various disciplines (e.g., archaeology, linguistics, and molecular biology), and what that reconstruction reveals about how people adapted to a truly new world.

ANTH 4191 (1). INDEPENDENT STUDY AND RESEARCH. For advanced undergraduates. *Prerequisite:* Approval of the director of undergraduate studies and a faculty sponsor.

ANTH 4192 (1). INDEPENDENT STUDY AND RESEARCH. For advanced undergraduates. *Prerequisite:* Approval of the director of undergraduate studies and a faculty sponsor.

ANTH 4291 (2). INDEPENDENT STUDY AND RESEARCH. For advanced undergraduates. *Prerequisite:* Approval of the director of undergraduate studies and a faculty sponsor.

ANTH 4292 (2). INDEPENDENT STUDY AND RESEARCH. For advanced undergraduates. *Prerequisite:* Approval of the director of undergraduate studies and a faculty sponsor.

ANTH 4300 (3). WORLD ARCHAEOLOGY. An archaeological overview of the human trajectory and sociocultural development over time, beginning with the origins of modern humans and then looking at human interactions with specific environments.

ANTH 4303 (3). POLITICAL ECONOMY OF HEALTH. Explores topics in health and healing from a political economy perspective. Addresses social and economic factors influencing culture change, health, and healing practices within a society. Examines health inequities around the globe. *Prerequisites:* ANTH 2301, 3301 or approval of instructor.

ANTH 4304 (3). MIGRATION, ETHNICITY, AND NATIONALISM. Examines three inter-related topics: migration, ethnicity, and nationalism. Focuses on major theoretical positions and on specific ethnographic cases. *Prerequisite:* 18 hours of anthropology or permission of the instructor for nonanthropology majors.

ANTH 4305 (3). APPLIED ANTHROPOLOGY. The application of anthropological theories and methods to problems in contemporary societies, including global business, community development, health care issues, agricultural and environmental programs, urban planning, tourism projects, and education policy. *Prerequisites:* Advanced standing and ANTH 2301 (or permission of instructor for nonanthropology majors).

ANTH 4307 (3). GLOBAL AND PUBLIC HEALTH. Provides an overview of issues in international health, with a focus on contributions of anthropology and anthropologists to international public health issues. *Prerequisites:* Advanced standing and ANTH 2301 (or permission of instructor for nonanthropology majors).

ANTH 4309 (3). HUMAN RIGHTS, INDIGENOUS PEOPLES, AND NATION STATES. An examination of human rights issues among contemporary indigenous peoples, especially the impact on their cultures and societies from governmental and nongovernmental organizations, large-scale development programs, and global tourism.

ANTH 4325 (3). ZOOARCHAEOLOGY. A lecture and laboratory course focused on the methods, techniques, and implications of the analysis of animal remains from archaeological sites. *Prerequisite:* ANTH 2302 or 2363, or permission of instructor.

ANTH 4333 (3). LABORATORY METHODS IN ARCHAEOLOGY. Classification and analysis of archaeological materials (various topics). *Prerequisites:* Advanced standing and ANTH 5381 or 5382 or permission of instructor.

ANTH 4336 (3). CONCEPTS OF EVOLUTION: A HISTORY. Using original writings, interpretive texts, and biographies, this course examines the rise of evolutionary ideas from ancient times through the 20th century.

ANTH 4343 (3). BIOMEDICINE, CULTURE, AND POWER. Examines the epistemology and history of biomedicine, medical bureaucracy, professionalism, medical education, alternative and popular medicine, economics, and health care.

ANTH 4344 (3). GLOBAL POPULATION PROCESSES: ANTHROPOLOGICAL PERSPECTIVES. Focuses on an anthropological understanding of population processes (nuptiality, fertility, mortality, migration) and examines them within historical and cross-cultural frameworks. *Prerequisite:* 18 hours of anthropology (or permission of instructor for nonanthropology majors).

ANTH 4346 (3). ENVIRONMENTAL ANTHROPOLOGY AND DEVELOPMENT. Analyzes the processes of globalization from the perspective of environmental anthropology and development. *Prerequisite:* ANTH 2301.

ANTH 4350 (3), 4351 (3), 4352 (3). SPECIAL TOPICS IN ANTHROPOLOGY. An in-depth look at particular problems and issues in contemporary anthropology. Topics will vary.

ANTH 4377 (3). THE HUMAN FOSSIL RECORD. An examination of morphology, classification, and evolutionary relationships in the human fossil record. Covers the Pliocene through the emergence of modern *Homo sapiens*. Comparisons using the departmental fossil collection. *Prerequisite:* ANTH 2315 or permission of instructor.

ANTH 4381 (3). INTERNSHIP IN ANTHROPOLOGY. Offers experience in varied organizations and agencies where anthropological applications are relevant (e.g., contract archaeology firms, natural history museums, zoos, health clinics, marketing or public relations firms, and corporations involved in international business). *Prerequisite:* Approval of the director of undergraduate studies and a faculty sponsor.

ANTH 4384 (3). GLOBAL ISSUES AND DEVELOPMENT: AN OVERVIEW. An introduction to the major forces driving globalization and economic development today, analyzing how these forces impact the lives, cultures, and identities of peoples around the world (with an emphasis on the developing world). *Prerequisites:* Advanced standing and ANTH 2301 (or permission of instructor for nonanthropology majors).

ANTH 4385 (3). PACIFIC ISLAND ARCHAEOLOGY. Seminar on the use of coastlines, oceans, rivers, marshes, lakes, and islands throughout human history. *Prerequisite:* ANTH 2302 or 2363, or permission of instructor.

ANTH 4386 (3). THE ARCHAEOLOGY OF GENDER AND SEXUALITY. This course explores how and why archaeologists study gender and sexual identities of the past and how they detect the diversity in these institutions across cultures through time.

ANTH 4390 (3). CURRENT ISSUES IN ANTHROPOLOGY. Seminar on selected anthropological topics.

ANTH 4391 (3). INDEPENDENT STUDY AND RESEARCH. For advanced undergraduates. The department also offers 1- and 2-hour alternatives. *Prerequisite:* Approval of the director of undergraduate studies and a faculty sponsor.

ANTH 4392 (3). INDEPENDENT STUDY AND RESEARCH. For advanced undergraduates. The department also offers 1- and 2-hour alternatives. *Prerequisite:* Approval of the director of undergraduate studies and a faculty sponsor.

ANTH 4399 (3). INTEGRATED THEMES IN ANTHROPOLOGY. Integrates the different domains in anthropology for an in-depth examination of central problems or theoretical perspectives in anthropology. This is the capstone course in anthropology and is recommended for juniors and seniors in the major.

ANTH 5310 (3). HUMAN OSTEOLOGY: BIOLOGY OF THE HUMAN SKELETON. Analysis of the human musculoskeletal system in both forensic and ancient contexts. In this laboratory course, students will learn the measurement and assessment of sex, age, race and stature.

ANTH 5334 (3). HISTORY OF ANTHROPOLOGY, PART ONE. Analytical history of anthropology from the Classical period to the 20th century. Explains the content and development of theory, method, and interpretation.

ANTH 5335 (3). HISTORY OF ANTHROPOLOGY, PART TWO. Traces the theoretical developments in ethnology and archaeology from 1960 to the present, with intense readings and a focus on the potential utility of theoretical coherence in the discipline.

ANTH 5336 (3). HEALTH IN CROSS-CULTURAL PERSPECTIVE. Cross-cultural study of the cultural construction and social organization of medical systems in preindustrial and industrialized societies, including the political economy of health, ethnomedicine, international health, ethnopharmacology, and bioethics. *Prerequisite:* ANTH 2301 or 3301, or instructor permission.

ANTH 5344 (3). RESEARCH METHODS IN ETHNOLOGY. Examination of methodologies and techniques appropriate for different types of ethnological research.

ANTH 5381 (3), 5382 (3). FIELD METHODS IN ARCHAEOLOGY. Methods of excavation, recording, and interpretation used in archaeological research. Students may petition to have this course fulfill the lab science requirement. (Fort Burgwin Research Center)

ANTH 5681 (6), ANTH 5981 (9). FIELD METHODS IN ARCHAEOLOGY. Participants are engaged in all aspects of archaeological field and laboratory research, including excavation, recording of finds, survey mapping of sites, laboratory analyses of archaeological materials, and interpretation of intact archaeological contexts. (Fort Burgwin Research Center)

BIOLOGICAL SCIENCES

www.smu.edu/biology

Professor Santosh R. D'Mello, Department Chair

Professors: Santosh R. D'Mello, Richard Jones, Paul Ludden, William Orr, Steven Vik, Pia Vogel. **Associate Professors:** Robert Harrod, John Wise. **Assistant Professors:** Johannes Bauer, A. Phillip West. **Senior Lecturers:** Eva Oberdörster, Teresa Strecker. **Lecturer:** Laura Ciacia West. **Research Associate Professor:** Svetlana Radyuk.

Bachelor of Science With a Major in Biological Sciences

This degree program is designed for students who plan careers in the biological sciences or further study in graduate or professional schools. Although statistics is used extensively in biological research, preprofessional students should be aware that certain medical schools also require a full year of calculus.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Biological Sciences (minimum of 10 courses)	34
BIOL 1401, 1402 BIOL 3304, 3350 At least 20 hours of advanced BIOL courses, with at least two courses with labs and at least one course at the 4000 or 5000 level	
Chemistry	16
General Chemistry 1 and 2 with labs Organic Chemistry 1 and 2 with labs	
Mathematics	6
MATH 1337 MATH 1338 or STAT 2331 or 5371	
Physics	8
General Physics 1 and 2 with labs	
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Bachelor of Science With a Major in Biological Sciences and Master of Science in Molecular and Cell Biology

The primary goal of the combined B.S.-M.S. degree is to encourage and better prepare undergraduates for careers in biological research. The accelerated program permits students to complete the requirements for the B.S. degree in biological sciences and the requirements for the M.S. degree in molecular and cell biology in a total of five years. Students need to complete most corequisites and University Curriculum requirements in a timely fashion, preferably by the end of their junior year. The calculus and/or statistics corequirement should be completed by the end of the sophomore year. All chemistry and physics corequirements should be completed by the end of the junior year. Most advanced biology electives, including the biological chemistry course BIOL 5310, also should be completed by the end of the junior year because the senior year will be largely filled with 6000-level biology classes. In addition, students are expected to be engaged in full-time research in the lab of a faculty

member during summers following their sophomore, junior and senior years, and to continue their research throughout the academic year. During the academic year, students may receive course credit for their research (BIOL 2101, 2102 Introductory Research I, II and/or BIOL 3398, 3399 Undergraduate Research I, II. Requirements for the M.S. portion of the B.S.-M.S. degree will be the same as for the standard M.S. degree in molecular and cellular biology.

During the fifth year, students will continue taking graduate courses and complete the research portion of the M.S. degree. By the end of the fifth year, students will write a monograph describing their research and give an oral presentation to the department.

Admission. In coordination with a faculty member, students should apply to the Biology Graduate Committee for admission into the B.S.-M.S. program in the spring of their sophomore year. Later admission to the program may be considered, but students must be on track to complete course requirements, as described above. A research mentor must be identified, and a minimum 3.200 GPA in science courses is required. To remain in the program, students will need to maintain a minimum 3.000 GPA in science courses and exhibit satisfactory progress in their lab work.

Bachelor of Arts With a Major in Biological Sciences

This degree program is designed for students who wish to couple training in the biological sciences with a broad liberal arts program. Students who are preparing for medical or dental school should consult with the prehealth adviser about additional science requirements.

B.A. Degree With Teacher Certification. Students interested in the B.A. degree program with teacher certification in secondary education should confer with the teacher certification representative in the department to plan a specific program of study.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Biological Sciences (minimum of eight courses)	26
BIOL 1401, 1402	
BIOL 3304, 3350	
At least 12 hours of advanced BIOL courses, with at least two courses with labs and at least one course at the 4000 or 5000 level	
Chemistry	12
General Chemistry 1 and 2 with labs	
Organic Chemistry 1 with lab	
	38

Departmental Distinction

A biological sciences major with sufficiently high academic standing may graduate with departmental distinction by successfully completing a special program of study that includes advanced coursework, research and a senior thesis under the direction of a member of the departmental faculty. To graduate with departmental distinction, a student must be working toward a B.S. degree and must submit an application to the Undergraduate Studies Committee of the department. At the time of the application, the student must have begun a research project with a departmental faculty

member, and must have completed at least 14 hours of biological sciences, including at least six advanced hours, with a GPA in these courses of at least 3.500 and an overall GPA of at least 3.500. For students who have transferred to SMU, two grade point averages will be calculated: one for all work attempted and one for work completed through enrollment at SMU. Admission to the program will be based on the lower of the two averages. With departmental approval, the student will enroll for BIOL 4398, and continue to work on the distinction research project. Upon completion of this course with a grade of *B+* or better, the student has the option to enroll in BIOL 4399 (pass/fail). On the basis of this research project, an oral presentation will be made to the faculty, and a senior thesis or review article will be written. In addition, three 4000- or 5000-level courses must be completed: one from BIOL 4319, 4331, 4370, 4460 and at least two from BIOL 5304, 5305, 5310, 5311, 5312, 5325. Completion of these requirements and maintenance of a 3.500 GPA for all biological sciences courses attempted will determine if the B.S. degree will be awarded with departmental distinction.

Minor in Biological Sciences

Students majoring in other departments may obtain a minor in biological sciences. All advanced courses must be completed through enrollment at SMU. A student may not earn minors in both biology and the natural sciences, or a minor or a major in both biology and environmental science.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
Biological Sciences	17
BIOL 1401, 1402	
BIOL 3304, 3350	
At least 3 hours of advanced BIOL courses, including an advanced lab course	
Chemistry	8
General Chemistry 1 and 2 with labs	
	25

The Courses (BIOL)

Courses for Nonscience Majors. BIOL 1303, 1305, 1308 and 1310 are designed to satisfy the Universitywide requirements of nonscience students. BIOL 1303 is not open to students who have earned prior credit in BIOL 1401, and BIOL 1305, 1308, 1310 are not open to students who have earned prior credit in BIOL 1402. Non-science majors should note that BIOL 1401, 1402 may also be taken to satisfy Universitywide requirements.

Courses for Biology Majors. Students who wish to earn the B.A. or B.S. degree in biology are encouraged to complete BIOL 1401, 1402 and CHEM 1303, 1304 (with labs) in their freshman year. However, with the approval of an academic adviser, a student may postpone BIOL 1401, 1402 for one or two terms. The introductory biology courses are the minimum prerequisite for all advanced biology courses. The general chemistry courses are a prerequisite for most advanced biology courses.

Special Courses. BIOL 2101, 2102, 3395, 3398, 3399, 4398 and 4399 are research courses. BIOL 3343, 3347 and 5359 are SMU-in-Taos courses.

BIOL 1303 (3). ESSENTIALS OF BIOLOGY. An introduction to the major concepts of biological thought for the nonscience major. Includes one laboratory session each week. BIOL 1303 is not open to students who have earned prior credit in BIOL 1401.

BIOL 1305 (3). THE NATURAL ENVIRONMENT. An introduction to major environments and their resident populations for the nonscience major. Includes the equivalent of one laboratory session each week. BIOL 1305 is not open to students with prior credit in BIOL 1402. (SMU-in-Taos)

BIOL 1308 (3). PLANT BIOLOGY. An introduction to the economic, social, and industrial aspects of plant substances and material for the nonscience major. Includes the equivalent of one laboratory session each week. BIOL 1308 is not open to students who have prior credit in BIOL 1402. (SMU-in-Taos)

BIOL 1310 (3). AQUATIC BIOLOGY. For the nonscience major. Introduces the biology of the lakes and streams of the Southern Rocky Mountains. Lectures and labs are conducted at Fort Burgwin, New Mexico. BIOL 1310 is not open to students who have prior credit in BIOL 1402. (SMU-in-Taos)

BIOL 1401 (4). INTRODUCTORY BIOLOGY. Introduces the study of living organisms: ecology, evolution, diversity, and physiology. Includes 3 hours of lecture and one 3-hour laboratory each week. BIOL 1401, 1402 are prerequisites for all advanced courses in biological sciences.

BIOL 1402 (4). INTRODUCTORY BIOLOGY. Introduces the study of living organisms: ecology, evolution, diversity, and physiology. Includes 3 hours of lecture and one 3-hour laboratory each week. BIOL 1401, 1402 are prerequisites for all advanced courses in biological sciences.

BIOL 2099 (0). INTERNSHIP. Laboratory or fieldwork in biology at an on- or off-campus location. Pass/fail only. No tuition. *Prerequisite:* Departmental approval required.

BIOL 2101 (1). INTRODUCTORY RESEARCH I. A minimum of 5 hours per week doing supervised laboratory research. Offered on a pass/fail basis only. *Prerequisites:* At least sophomore standing, BIOL 1401 and 1402, and consent of instructor.

BIOL 2102 (1). INTRODUCTORY RESEARCH II. A minimum of 5 hours per week doing supervised laboratory research. Offered on a pass/fail basis only. *Prerequisites:* BIOL 2101 and consent of instructor.

BIOL 3100 (1). SPECIAL TOPICS ABROAD. Courses offered in SMU-approved international programs. May be repeated for credit under a different subtitle. A maximum of 6 hours of special topics abroad may be applied toward the B.A. or B.S. degree in biology. May not be applied toward the minor in biology. *Prerequisite:* Departmental approval.

BIOL 3200 (2). SPECIAL TOPICS ABROAD. Courses offered in SMU-approved international programs. May be repeated for credit under a different subtitle. A maximum of 6 hours of special topics abroad may be applied toward the B.A. or B.S. degree in biology. May not be applied toward the minor in biology. *Prerequisite:* Departmental approval.

BIOL 3222 (2). MOLECULAR GENETICS LABORATORY. Students gain experience in investigative methods used in modern medical research, molecular biology, genetics, bioinformatics, forensic science, and the pharmaceutical and biotechnology industries. *Prerequisite:* C- or better in BIOL 3304.

BIOL 3300 (3). SPECIAL TOPICS ABROAD. Courses offered in SMU-approved international programs. May be repeated for credit under a different subtitle. A maximum of 6 hours of special topics abroad may be applied toward the B.A. or B.S. degree in biology. May not be applied toward the minor in biology. *Prerequisite:* Departmental approval.

BIOL 3303 (3). EVOLUTION. A study of the principles of biological evolution. Includes natural selection, adaptation, molecular evolution, the formation of new species, the fossil record, biogeography, and principles of classification. Includes 3 hours of lecture each week. *Prerequisites:* BIOL 1401 and C- or better in BIOL 3304.

BIOL 3304 (3). GENETICS. An introduction to the structure, function, and transmission of the hereditary material. Includes 3 hours of lecture each week. *Prerequisites:* BIOL 1401 and CHEM 1304.

BIOL 3305 (3). LIMNOLOGY: AQUATIC BIOLOGY. The study of inland waters, integrating chemistry, physics, and biology. Emphasis is on identifying organisms and studying their interactions with the environment. Includes 2 hours of lecture and one 3-hour laboratory each week. *Prerequisites:* BIOL 1401, 1402; CHEM 1303.

- BIOL 3306 (3). PHYSIOLOGY.** Homeostatic control mechanisms in vertebrates. Includes 3 hours of lecture each week. *Prerequisites:* C- or better in BIOL 3304, 3350.
- BIOL 3307 (3). ECOLOGY.** Basic principles and concepts of ecology, with emphasis on population and community interactions. Includes 3 hours of lecture each week. *Prerequisites:* BIOL 1401, 1402.
- BIOL 3308 (3). BIOLOGY OF MARINE MAMMALS.** A comparative study of marine mammal anatomy, morphology, physiology, life history and behavior, and adaptation to marine existence. Includes study of the effect of human activities on marine mammals, with special reference to northern European waters. *Prerequisites:* BIOL 1401, 1402; CHEM 1303, 1113. (SMU-in-Copenhagen only)
- BIOL 3309 (3). MARINE BIOLOGY OF EUROPEAN COASTAL WATERS.** Special emphasis on animals and plants living in European coastal waters. Chemical and physical parameters and their effect on community structure, morphology, anatomy, and physiology. Functions, survival strategies, and survival adaptations of the most important organisms. *Prerequisites:* BIOL 1401, 1402; CHEM 1303, 1113. (SMU-in-Copenhagen only)
- BIOL 3310 (3). ECOLOGY AND HUMAN IMPACT IN THE NORTH AND BALTIC SEAS.** Marine ecosystems and communities, and their distribution and function in the North and Baltic seas. Problems related to human activities, e.g., fisheries, habitat deterioration, eutrophication, and pollution. Ecosystem approach, sustainability, and precautionary principle in management. *Prerequisites:* BIOL 1401, 1402; CHEM 1303, 1113. (SMU-in-Copenhagen only)
- BIOL 3311 (3). TROPICAL ECOLOGY AND SUSTAINABLE DEVELOPMENT.** Examines the ecological impact of human activity, especially agriculture, in a tropical country. Topics include water pollution, waste management, and climate change. *Prerequisites:* BIOL 3307 and at least one college-level course in Spanish. (SMU-in-Costa Rica only)
- BIOL 3312 (3). WILDLIFE ECOLOGY.** Ecological principles of the East Africa savanna ecosystem. Examines factors underlying distributions, population biology, and behavioral ecology, along with competition and predation, using African examples. *Prerequisite:* BIOL 3307. (SMU-in-Kenya only)
- BIOL 3323 (3). BIOLOGY OF THE BRAIN.** Reviews the basic functioning of the brain and provides a deeper understanding of how people interact with their surrounding environment. *Prerequisites:* BIOL 1401, 1402. *Recommended:* BIOL 3222.
- BIOL 3342 (3). PLANT KINGDOM.** A survey of the plant kingdom emphasizing life histories and developmental morphology. Includes 2 hours of lecture and one 3-hour laboratory each week. *Prerequisites:* BIOL 1401, 1402.
- BIOL 3343 (3). FIELD BOTANY.** Identification of vascular plants, with emphasis on ecological indicators. Lectures and laboratories conducted at Fort Burgwin, New Mexico, site of SMU-in-Taos. *Prerequisites:* BIOL 1401, 1402.
- BIOL 3347 (3). SYSTEMATIC BOTANY.** An introduction to the history, nomenclature, family characteristics, identification, and biosystematics of the flowering plants. Lecture and laboratory work conducted at Fort Burgwin, New Mexico. *Prerequisites:* BIOL 1401, 1402.
- BIOL 3350 (3). CELL BIOLOGY.** The structure and function of cells. Includes 3 hours of lecture each week. *Prerequisites:* BIOL 1401, 1402. *Prerequisite or corequisite:* CHEM 1304.
- BIOL 3354 (3). PARASITOLOGY.** Comparative study of protozoa and helminthic parasitic organisms, and their role in diseases. Includes 2 hours of lecture and one 3-hour laboratory each week. *Prerequisites:* BIOL 1401, 1402.
- BIOL 3357 (3). BIOLOGY OF INVERTEBRATES.** A general survey of the invertebrates, with emphasis on identification of local species, morphological adaptations, systematics, and ecology. Includes 2 hours of lecture and one 3-hour laboratory each week. *Prerequisites:* BIOL 1401, 1402.
- BIOL 3365 (3). CANCER BIOLOGY.** Emphasis on the molecular features of oncogenesis and human cancers, including carcinogenesis, metastasis, and roles of genetic mutations and chromosomal aberrations during neoplasia. *Prerequisite:* C- or better in BIOL 3350.
- BIOL 3369 (3). PALEOBIOLOGY.** A survey of biological diversity, phylogenetic analysis, rates of evolution, extinction, biogeography, taphonomy, and paleoecology. *Prerequisites:* BIOL 1401, 1402 or one 1300-level course in Earth sciences.

BIOL 3395 (3). INTERNSHIP IN BIOLOGY. Biological research at an institution other than SMU. Credit does not apply toward the degree requirement for two laboratory classes. A student may not take both BIOL 3395 and 3398 for a letter grade. Prior departmental approval required. *Prerequisites:* BIOL 3304, 3350.

BIOL 3398 (3). UNDERGRADUATE RESEARCH I. A minimum of 9 hours per week doing research in the laboratory of a faculty member. Credit for this course does not apply toward the degree requirement for two laboratory courses. A student may not earn credit in both BIOL 3395 and 3398. *Prerequisites:* Junior standing, and approval of faculty sponsor and the Undergraduate Studies Committee of the department.

BIOL 3399 (3). UNDERGRADUATE RESEARCH II. Pass/fail only. Cannot be applied toward the requirements for the major in biological sciences. *Prerequisites:* BIOL 3398 and approval by the faculty sponsor and the Undergraduate Studies Committee of the department.

BIOL 3403 (4). MICROBIOLOGY. The biology of microorganisms, with an emphasis on diversity, disease, and the environment. Includes 3 hours of lecture and one 3-hour laboratory each week. *Recommended:* CHEM 3371, 3117. *Prerequisites:* BIOL 1401, 1402 and C- or better in BIOL 3304.

BIOL 4119 (1). IMMUNOBIOLOGY LABORATORY. Provides experience in experimental techniques and strategies used in immunobiology labs, including cell culture, quantitative plate-based assays, and fluorescence-activated cell sorting. *Prerequisites:* BIOL 3304, 3350.

BIOL 4132 (1). SENIOR SEMINAR. Discussion of current problems of biological interest, 1 hour each week. *Prerequisites:* Senior standing; major in biology.

BIOL 4160 (1). TOXICOLOGY LABORATORY. Modern biochemical and molecular techniques are used to assess the impact of environmental contaminants on liver biomarkers in fish. One 3-hour laboratory each week. *Prerequisite:* C- or better in BIOL 3350. *Prerequisite or corequisite:* BIOL 4360.

BIOL 4306 (3). HUMAN PHYSIOLOGY. Explores human physiology, with an emphasis on cellular mechanisms that influence organ system functions. Also covers abnormal physiology (pathology), where appropriate, as part of clinical case study presentations. *Prerequisites:* BIOL 3304, 3350; CHEM 1113, 1114, 1303, 1304.

BIOL 4319 (3). IMMUNOBIOLOGY. Introduction to fundamental concepts of the immune system. *Prerequisites:* BIOL 3304, 3350.

BIOL 4322 (3). MOLECULAR BIOLOGY OF EUKARYOTES. Structure and function of eukaryotic chromosomes as mediators of gene expression during growth, differentiation, and oncogenesis. A student cannot have previously completed BIOL 5304. *Prerequisites:* BIOL 3304, CHEM 3372, and junior standing.

BIOL 4325 (3). THE BIOLOGY OF AGING. Explores the current understanding of the mechanisms of aging and the ways these insights are used in efforts to extend life and combat diseases associated with old age. *Prerequisites:* BIOL 3304, 3350 and consent of instructor.

BIOL 4331 (3). DEVELOPMENTAL BIOLOGY. Developmental processes in animals. Includes 3 hours of lecture each week. *Prerequisites:* BIOL 1401, 1402 and C- or better in BIOL 3304.

BIOL 4360 (3). ENVIRONMENTAL AND HUMAN TOXICOLOGY. Introduction to environmental toxicology, focusing on the fate and transport, biotransformation, and biochemical and physiological impacts of pollutants on humans and wildlife. Includes 3 hours of lecture per week. *Prerequisites:* C- or better in BIOL 3304, 3350; CHEM 3371, 3372.

BIOL 4370 (3). BIOTECHNOLOGY AND NANOTECHNOLOGY. Introduction to current techniques and emerging applications of biotechnology and nanobiotechnology in medicine, agriculture, forensic and aquatic sciences, and bioremediation. *Prerequisites:* CHEM 3371 and C- or better in BIOL 3304.

BIOL 4390 (3). CURRENT TOPICS IN BIOLOGY. Explores the current understanding of the mechanisms of aging and the ways these insights are used in efforts to extend life span and to combat diseases associated with old age. Includes lectures and presentations on the biology of aging that are based on the primary and secondary literature. *Prerequisites:* Junior standing, strong background in genetics and cell biology, and permission of instructor.

BIOL 4398 (3). HONORS RESEARCH I. For students in the departmental distinction program. *Prerequisites:* BIOL 1401, 1402; admission to departmental distinction program.

BIOL 4399 (3). HONORS RESEARCH II. For students in the departmental distinction program. *Prerequisite:* B+ or better in BIOL 4398.

BIOL 4460 (4). ENVIRONMENTAL AND HUMAN TOXICOLOGY WITH LAB. Introduction to environmental toxicology, with a focus on fate, biotransformation, and the biochemical and physiological impacts of pollutants on humans and wildlife. Includes 3 hours of lecture and one 3-hour laboratory per week. *Prerequisites:* C- or better in BIOL 3304, 3350; CHEM 3371, 3372.

BIOL 5102 (1). STRUCTURAL BIOLOGY SEMINAR. Readings and discussions of the period 1933–1963 when structural molecular biology emerged. Readings include original research articles and historical reviews. *Prerequisite:* BIOL/CHEM 5310 or consent of instructor.

BIOL 5110 (1). BIOLOGICAL CHEMISTRY LABORATORY. One 3-hour laboratory each week. *Prerequisites:* BIOL 1401, 1402. *Prerequisite or corequisite:* BIOL/CHEM 5310. If CHEM 5110 is counted toward a chemistry major or minor, it cannot be counted toward a biological sciences major or minor.

BIOL 5166 (1). VERTEBRATE ANATOMY LABORATORY. A laboratory course to accompany BIOL/GEOL 5366. Exercises include basic anatomy, dissections, and examinations of fossil skeletons. *Corequisite:* BIOL/GEOL 5366.

BIOL 5304 (3). MOLECULAR BIOLOGY: CONTROL AND EXPRESSION OF GENETIC INFORMATION. DNA structure and replication, control of transcription and translation, and techniques in molecular genetics and recombinant DNA technology. *Prerequisites:* CHEM 3372 and C- or better in BIOL 3304.

BIOL 5305 (3). GENOMICS AND BIOINFORMATICS. Impact of completely sequenced genomes on current experimental and computational approaches to biomedical research. Introduction to the technology, biology, and software exploited by molecular biology, genealogy, and medical diagnostic labs. *Prerequisites:* C- or better in BIOL 3304 and junior standing.

BIOL 5310 (3). BIOLOGICAL CHEMISTRY: MACROMOLECULAR STRUCTURE AND FUNCTION. Introduction to the structure and function of macromolecules of biological importance. Emphasis on nucleic acid and protein structure, enzyme kinetics, and carbohydrate and lipid chemistry. Includes 3 hours of lecture each week. *Prerequisites:* BIOL 1401, 1402; CHEM 3371, 3372. The accompanying laboratory (BIOL 5110) is strongly recommended for biology majors. If CHEM 5310 is counted toward a chemistry major or minor, it cannot be counted toward a biological sciences major or minor.

BIOL 5311 (3). BIOLOGICAL CHEMISTRY: METABOLISM. Introduction to the pathways and regulatory events in the metabolism of carbohydrates, lipids, amino acids, and nucleotides. Includes 3 hours of lecture each week. *Prerequisites:* CHEM 3371, 3372. If CHEM 5311 is counted toward a chemistry major or minor, it cannot be counted toward a biological sciences major or minor.

BIOL 5312 (3). PHYSICAL BIOCHEMISTRY. Physical chemistry of macromolecules and biological membranes, with an emphasis on the thermodynamics of solutions. *Prerequisites:* BIOL 1401, 1402; MATH 1338 or the equivalent; CHEM 3372; CHEM/BIOL 5310. *Recommended:* CHEM 5381 or 5383. If CHEM 5312 is counted toward a chemistry major or minor, it cannot be counted toward a biological sciences major or minor.

BIOL 5325 (3). GENERAL AND MOLECULAR VIROLOGY. Emphasis on molecular aspects of viral replication and pathogenesis, and the roles of viruses in emerging human infectious diseases, cancer, and bioterrorism. *Prerequisites:* C- or better in BIOL 3304 and junior standing.

BIOL 5358 (3). ECOLOGY OF PARASITISM. The biotic and abiotic factors influencing parasite communities. Emphasis on the free-living stages of parasites. Includes 2 hours of lecture and one 3-hour laboratory each week. *Prerequisite:* BIOL 3354.

BIOL 5359 (3). HOST-PARASITE RELATIONSHIPS. Analysis of host-parasite relations from an evolutionary and ecological viewpoint. Lectures and laboratories conducted at Fort Burgwin in New Mexico. *Prerequisite:* BIOL 3354. (SMU-in-Taos)

BIOL 5366 (3). VERTEBRATE ANATOMY AND ORIGINS. An introduction to vertebrate anatomy with emphasis on structure and function. Additionally, the course examines processes that have affected the diversity of vertebrate organisms, including origination, biogeography, and adaptation. The accompanying laboratory is a corequisite for biology majors and strongly recommended for all other students. *Prerequisites:* BIOL 1401, 1402 or GEOL 1308. *Corequisite:* BIOL 5166.

CHEMISTRY

www.smu.edu/chemistry

Professor Elfi Kraka, Department Chair

Professors: Edward Biehl, John Buynak, Dieter Crèmer, Werner Horsthemke, Elfi Kraka, Michael Lattman, Mark Schell, David Son, Patty Wisian-Neilson. **Assistant Professors:** Isaac Garcia-Bosch, Alexander Lippert, Peng Tao, Nicolay Tsarevsky, Brian Zoltowski. **Professor of Practice:** Jennifer O'Brien. **Senior Lecturers:** Andrea Adams, Helen Babbili.

General Information

Chemistry plays a key role in solving economic, environmental and societal problems that are intimately connected with the basic question of how to guarantee the sustainability of the earth. The Department of Chemistry prepares students to meet the increasing demand for a scientifically trained workforce. Students planning careers in industry, medicine or academia benefit from the comprehensive curriculum of the B.S. and B.A. programs in chemistry. Undergraduate majors are heavily involved in research, working in teams with faculty, postdoctoral fellows and graduate students. Graduates have been accepted into the leading graduate and professional schools in the nation. On average, two-thirds of chemistry graduates seek advanced degrees; other graduates choose employment in industry and research.

Bachelor of Science With a Major in Chemistry

The B.S. degree requires the completion of a minimum of 44 hours in the department. This degree is certified by the American Chemical Society for professional training in chemistry.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Core Courses	41
CHEM 1303/1113, 1304/1114, 3351, 3371/3117, 3372/3118, 4397, 5185, 5188, 5310, 5383, 5384, 5392/5192, 5486	
Mathematics and Physics	17
MATH 1337, 1338, 2339 PHYS 1105, 1106, 1303 or 1307, 1304 or 1308	
Advanced Chemistry Elective (chosen with adviser's approval)	3
CHEM 53XX	
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Bachelor of Arts With a Major in Chemistry

The B.A. degree requires the completion of a minimum of 26 hours in the department. This degree is not certified by the American Chemical Society. **Note:** Organic chemistry courses taken elsewhere generally do not count as advanced hours toward the degree.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Core Courses	19
CHEM 1303/1113, 1304/1114, 3371/3117, 3372/3118, 5381 or 5383	
Mathematics and Physics	14
MATH 1337 MATH 1338 or STAT 2301 or 2331 PHYS 1105, 1106, 1303 or 1307, 1304 or 1308	
Advanced Chemistry Electives (chosen with adviser's approval)	7
CHEM 3351, 53XX, 53YY, 51ZZ	
	40

Departmental Distinction

A chemistry major pursuing a B.S. degree may elect to graduate with departmental distinction. The student must apply to the department for this designation during the junior year, after at least 22 hours of chemistry have been completed with a minimum GPA of 3.500 in those courses. The student will enroll in CHEM 4397 and undertake an independent research project under the supervision of a departmental faculty member. During the senior year, a senior thesis will be written and presented to the department. Upon completion of all degree requirements, approval of the departmental faculty at the completion of these requirements, and provided the student maintains a minimum 3.500 GPA in all chemistry courses, the student will graduate with departmental distinction in chemistry.

Minor in Chemistry

Students majoring in other departments may obtain a minor in chemistry. At least two of the advanced courses must be taken at SMU.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
Core Courses	8
CHEM 1303/1113, 1304/1114	
Advanced Chemistry Electives (chosen with adviser's approval)	9–12
Three advanced 3- or 4-hour CHEM courses	
	17–20

The Courses (CHEM)

CHEM 1113 (1). GENERAL CHEMISTRY LABORATORY. One 3-hour laboratory period each week. *Prerequisite or corequisite:* CHEM 1303. Withdrawal from CHEM 1113 requires withdrawal from CHEM 1303.

CHEM 1114 (1). GENERAL CHEMISTRY LABORATORY. One 3-hour laboratory period each week. *Prerequisite:* CHEM 1113. *Prerequisite or corequisite:* CHEM 1304.

CHEM 1301 (3). CHEMISTRY FOR LIBERAL ARTS. Designed for students with weak backgrounds in chemistry and for liberal arts students.

CHEM 1302 (3). PREPARATORY CHEMISTRY. For students desiring to strengthen their background in chemistry prior to enrolling in the general chemistry course CHEM 1303. Does not fulfill the pure and applied science requirement of the University Curriculum.

CHEM 1303 (3). GENERAL CHEMISTRY. Primarily for science majors, premed students, and engineering students. Introduces the fundamental principles and theories of chemistry, including stoichiometry, the structure of matter, energy relationships involved in the transformation of matter, the dynamics of such transformations, and some descriptive chemistry of the important elements. Prerequisite to all advanced courses in the department. Withdrawal from CHEM 1303, 1304 requires withdrawal from corresponding labs.

CHEM 1304 (3). GENERAL CHEMISTRY. Primarily for science majors, premed students, and engineering students. Introduces the fundamental principles and theories of chemistry, including stoichiometry, the structure of matter, energy relationships involved in the transformation of matter, the dynamics of such transformations, and some descriptive chemistry of the important elements. Prerequisite to all advanced courses in the department. Withdrawal from CHEM 1303, 1304 requires withdrawal from corresponding labs.

CHEM 3117 (1). ORGANIC CHEMISTRY LABORATORY. One 3-hour laboratory period each week. *Prerequisite or corequisite:* CHEM 3371.

CHEM 3118 (1). ORGANIC CHEMISTRY LABORATORY. One 3-hour laboratory period each week. *Prerequisite or corequisite:* CHEM 3372. *Prerequisite:* CHEM 3117.

CHEM 3351 (3). QUANTITATIVE ANALYSIS. Involves the theory and practice of quantitative analytical chemistry techniques, including gravimetric, volumetric, electrochemical, and spectroscopic analyses. Includes 3 hours of lecture and two 4-hour laboratory periods per week for one-half term. *Prerequisites:* CHEM 1303, 1304, 1113, 1114.

CHEM 3371 (3). ORGANIC CHEMISTRY. Designed to satisfy the requirements of the chemistry major and health-related professions student. The first term deals primarily with aliphatic chemistry, with special emphasis on stereochemistry. The second term emphasizes aromatic substances and the chemistry of biologically relevant molecules. *Prerequisites:* CHEM 1303, 1304, 1113, 1114.

CHEM 3372 (3). ORGANIC CHEMISTRY. For chemistry majors and students interested in health-related professions. Emphasizes spectroscopy and the chemistry of functional groups. *Prerequisites:* C- or higher in CHEM 3371, 3117. *Corequisite:* CHEM 3118.

CHEM 4000 (0). RESEARCH. For students who hold research fellowships but are not enrolled in any credit hour courses. No tuition.

CHEM 4397 (3). UNDERGRADUATE RESEARCH. *Prerequisites:* Junior or senior classification and permission of the instructor.

CHEM 5110 (1). BIOLOGICAL CHEMISTRY LABORATORY. One 3-hour laboratory period each week. *Corequisite:* CHEM 5310. If CHEM 5110 is counted toward a chemistry major or minor, it cannot be counted toward a biological sciences major or minor.

CHEM 5185 (1). LABORATORY METHODS IN PHYSICAL CHEMISTRY. Laboratory experiments with emphasis on thermodynamics, chemical kinetics, and physical biochemistry. Includes a half-hour of lecture and 5-hour laboratory period each week for 5 weeks. *Prerequisite:* CHEM 5381 or 5383.

CHEM 5188 (1). ADVANCED PHYSICAL CHEMISTRY LABORATORY. Laboratory experiments with emphasis on chemical kinetics and molecular spectroscopy. Includes a half-hour of lecture and 5-hour laboratory period each week for 5 weeks. *Prerequisite:* CHEM 5185. *Corequisite:* CHEM 5384 or permission of instructor.

CHEM 5192 (1). INORGANIC SYNTHESIS LABORATORY. Introduces advanced techniques and methods used in the synthesis of inorganic compounds. *Prerequisite or corequisite:* CHEM 5392.

CHEM 5306 (3). INTRODUCTION TO COMPUTATIONAL CHEMISTRY. Besides the normal lab experiments, modern chemists and biochemists perform "experiments" on the computer by calculating the outcome of chemical and/or biochemical reactions. Introduces this new field in a hands-on fashion, and uses major quantum chemical packages. *Prerequisites:* CHEM 1303, 1304 or permission of instructor. Note: Class assignments and projects are completed in the computer lab outside of the regularly scheduled class times.

CHEM 5308 (3). SPECIAL TOPICS IN CHEMISTRY. Presentation of advanced special topics in chemistry that are at the forefront of current chemical interest. Content varies from term to term.

CHEM 5310 (3). BIOLOGICAL CHEMISTRY: MACROMOLECULAR STRUCTURE AND FUNCTION. Introduction to the structure and function of macromolecules of biological importance. Emphasis on nucleic acid and protein structure, enzyme kinetics, and carbohydrate and lipid chemistry. Includes 3 hours of lecture per week. *Prerequisites:* CHEM 3371, 3372. If CHEM 5310 is counted toward a chemistry major or minor, it cannot be counted toward a biological sciences major or minor.

CHEM 5311 (3). BIOLOGICAL CHEMISTRY: METABOLISM. Introduction to the pathways and regulatory events in the metabolism of carbohydrates, lipids, amino acids, and nucleotides. Includes 3 hours of lecture per week. *Prerequisites:* CHEM 3371, 3372.

CHEM 5312 (3). PHYSICAL BIOCHEMISTRY. Physical chemistry of macromolecules and biological membranes, with an emphasis on the thermodynamics of solutions. *Prerequisites:* MATH 1338; CHEM 3372, 5310. (CHEM 5381 or 5383 is recommended.)

CHEM 5317 (3). INTRODUCTION TO MOLECULAR MODELING AND COMPUTER-ASSISTED DRUG DESIGN. Presents a thorough and in-depth overview of methods and techniques in computer-assisted drug design. Topics include drug discovery and drug design, molecular recognition and docking, ligand-receptor interactions, pharmacophore searching, virtual screening, de novo design, molecular graphics, and chemometrics. *Prerequisites:* CHEM 1303, 1304 or permission of instructor. Note: Class assignments and projects are completed in the computer lab outside of the regularly scheduled class times.

CHEM 5321 (3). UNDERSTANDING CHEMISTRY. Focuses on a general understanding of chemistry in terms of models and concepts that describe structure, stability, reactivity, and other properties of molecules in a simple, yet very effective way. *Prerequisites:* CHEM 1303, 1304 or permission of instructor.

CHEM 5322 (3). INTRODUCTION TO NANOTECHNOLOGY. Introduces nanotechnology, which is expected to change lives and society more than computer technology and electricity have done together. Discusses nanomaterials and their applications. *Prerequisites:* CHEM 1303, 1304 or permission of instructor.

CHEM 5333 (3). INTRODUCTION TO POLYMER CHEMISTRY. The basics of synthesis, physical properties, and solution properties of high molecular weight molecules. Plastics, manufacturing, and fabrication of polymers are discussed. *Prerequisites:* CHEM 3371, 3372.

CHEM 5344 (3). PHYSICAL CHEMISTRY OF PROTEINS. Graduate-level course on the fundamental aspects of techniques used to interrogate the thermodynamics and kinetics of protein conformational changes, with emphasis on atomic resolution structural techniques. *Prerequisites:* CHEM 5383 and 5384, knowledge of basic biochemistry, and instructor approval.

CHEM 5383 (3). PHYSICAL CHEMISTRY I. Gas laws; kinetic molecular theory; introduction to thermodynamics, with applications to phase transitions and chemical equilibrium; chemical kinetics. *Prerequisites:* CHEM 1114 and 1304, PHYS 1105 and 1304 or 1308, and MATH 1337, or permission of instructor.

CHEM 5384 (3). PHYSICAL CHEMISTRY II. Elements of quantum mechanics and its description of many-electron atoms, bonding, and spectroscopy; intermolecular forces; structure of solids; and transport properties of fluids. *Prerequisite:* CHEM 5383.

CHEM 5392 (3). ADVANCED INORGANIC CHEMISTRY. Survey of the bonding, structure, and reactivity of inorganic compounds. Also, coordination, organometallic, and main group element chemistry. Includes 3 hours of lecture each week. *Recommended:* CHEM 5384.

CHEM 5393 (3). ADVANCED ORGANIC CHEMISTRY. Includes 3 hours of lecture each week. *Prerequisite:* CHEM 3372.

CHEM 5396 (3). ADVANCED PHYSICAL CHEMISTRY. Includes 3 hours of lecture each week. *Prerequisite:* Permission of instructor.

CHEM 5398 (3). MEDICINAL CHEMISTRY. Highlights the close relationships of organic chemistry and biochemistry with the field of medicine. Relies on the departmental computational laboratory to permit three-dimensional visualization of molecular interactions. Includes 3 hours of lecture each week. *Prerequisites:* CHEM 3371, 3372.

CHEM 5486 (4). INSTRUMENTAL ANALYSIS. A course involving the theory, operation, and application of instrumentation used in the modern chemical laboratory. Includes 2 hours of lecture and two 3-hour laboratory periods each week. *Prerequisite:* CHEM 3351 or permission of instructor.

EARTH SCIENCES

www.smu.edu/earthsciences

Professor Robert T. Gregory, Department Chair

Professors: Robert T. Gregory, Bonnie Jacobs, Louis Jacobs, Zhong Lu, Jim Quick, Brian Stump, Neil Tabor, John Walther, Crayton Yapp. **Associate Professors:** Heather DeShon, Matthew Hornbach, Maria Beatrice Magnani. **Assistant Professor:** Rita Economos. **Research Assistant Professors:** Alanna Lester, Lee Perren, Brian Quinn, Christopher P. Simpson.

General Information

The Roy M. Huffington Department of Earth Sciences provides ways of understanding and appreciating dynamic Earth processes, the physical environment, and the place of humanity in the long and complex history of the planet and solar system. They also provide the background for rewarding careers in industry, government and academia. The faculty offers exceptional learning and research opportunities in geology, geochemistry, geophysics, resource geology, planetary geology, paleontology, and natural resource and energy management.

Earth science is an interdisciplinary, applied science that integrates well with other fields. It attracts students with broad interests in geology, chemistry, biology, environmental science, archaeology, astronomy, oceanography, engineering, applied mathematics or physics. The department strongly encourages combined majors. In addition to combinations with the above fields, many undergraduate Earth science majors have double majors or minors in business (especially finance, real estate or marketing), economics, prelaw, computer science, archaeology, world languages, English, history, journalism and premed.

Academic programs are tailored to the educational and career objectives of each student. Because of the heavily funded active research programs within the department and close ties with the Dallas geological community, students often receive excellent pre- and post-graduation employment opportunities. The department also has some financial aid available for undergraduate majors, including department scholarships and support for off-campus field programs.

The department offers four different majors in Earth sciences: geology B.A. and B.S., geophysics B.S., and resource geology B.S. A minor in geology or environmental Earth science that can be combined with virtually any other degree program on campus is available. The department also offers a minor, which is available to students who are not majoring in geology. The department is also the home of the environmental science and environmental studies programs.

Bachelor of Arts or Bachelor of Science With a Major in Geology

The B.A. or B.S. degree in geology consists of a core sequence that provides a basic background in plate tectonics, earth materials (mineralogy and igneous, metamorphic and sedimentary rocks) and field methods. Beyond the core sequence, all students are encouraged to include sedimentology and structural geology (required for the B.S.) in their programs. Students, in consultation with a faculty adviser, are encouraged to pursue concentrations in paleontology, geochemistry or resource geology that integrate classroom learning with field and laboratory experience. Participation in a recognized geology summer field camp is strongly recommended for

all majors (B.A. and B.S.). Most Earth science graduate programs in the United States require that a field course be completed.

Requirements for the B.A. Degree. A minimum of 28 hours in Earth sciences and a minimum of nine hours of support courses, selected from the following:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
GEOL Courses	14
One from GEOL 1301, 1305, 1307, 1308, 1313, 1315 GEOL 3340, 3451, 3452	
Earth Science Electives	12
(at the 3000 level or above)	
Geology Field Studies	2–3
GEOL 3243 <i>or</i> 3343	
Required Support Courses	9–12
CHEM 1301 <i>or</i> 1303 PHYS 1301 and 1303 (recommended), <i>or</i> 1313 MATH 1337	
	37–41

Requirements for the B.S. Degree. A minimum of 36 hours in Earth sciences and a minimum of 17 hours of support courses, selected from the following:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
GEOL Courses	18
One from GEOL 1301, 1305, 1307, 1308, 1313, 1315 GEOL 3340, 3451, 3452, 3454	
Earth Science Electives	12
(at the 3000 level or above)	
Geology Field Studies and Research	6–9
GEOL 3243 <i>or</i> 3343 GEOL 4296 and 4298, <i>or</i> 4657	
Required Support Courses	17
CHEM 1303/1113, 1304/1114 PHYS 1303 MATH 1337, 1338	
	36–39

Notes

- Experience with a modern scientific computing language is essential and can be gained in a course such as **GEOL 3359** Computer Methods in the Earth Sciences.
- The requirements for the geology major are considered minimal. Students planning careers in the Earth sciences should take additional coursework according to the geoscience emphasis that best fits their goals. Students should consult a faculty adviser for suggestions.

Minor in Geology

Requirements for the Minor. A minimum of 17 hours in Earth sciences, selected from the following:

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
GEOL Courses	3
One from GEOL 1301, 1305, 1307, 1308, 1313, 1315	
Earth Science Electives	12
(at the 3000 level or above)	
Geology Field Studies	
GEOL 3243 or 3343	2–3
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	17–18

Bachelor of Science With a Major in Geophysics

Geophysical techniques are used to understand the physical behavior of Earth, including plate-tectonic processes, earthquake mechanisms and nuclear test-ban verification. The B.S. degree in geophysics provides a strong quantitative background in seismology, geothermics and digital signal processing.

Requirements for the B.S. Degree. A minimum of 33 hours in Earth sciences and a minimum of 30 hours of support courses, selected from the following:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
GEOL Courses	24
One from GEOL 1301, 1305, 1307, 1313, 1315	
GEOL 3340, 3451, 3452	
GEOL 3454, 5320, 5392	
Earth Science Electives	9
(at the 3000 level or above; with at least 3 credit hours in geophysics)	
Required Support Courses	30
CHEM 1303/1113	
PHYS 1303/1105, 1304/1106	
MATH 1337, 1338, 2339, 2343, 3337, 3353	
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Notes

- Participation in a recognized geology or geophysics summer field camp is strongly recommended for all geophysics majors.
- Experience with a modern scientific computing language is essential and can be gained in a course such as **GEOL 3359** Computer Methods in Earth Sciences.
- The requirements for the geophysics major are considered minimal. Students should consult a faculty adviser for recommendations on additional coursework that best fits their goals.

Bachelor of Science With a Major in Resource Geology

Resource and environmental issues are central to the important challenges facing the world today. As a result, resource and environmental problems are being addressed by a growing number of disciplines, including the sciences, engineering, the legal profession, economics, journalism and ethics. Yet, most of these problems are rooted in geological processes. The B.S. degree in resource geology is intended to

provide students with a quantitative understanding of the chemical and physical processes involved in the formation and production of a particular resource and the environmental consequences. The degree is preparation for the practice of geology in the public sector. Because of the multidisciplinary scope of most resource problems, students are strongly encouraged to take appropriate courses in other departments.

Requirements for the B.S. Degree. A minimum of 33 hours in Earth science and a minimum of 23 hours of support courses, selected from the following:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
GEOL Courses	33–37
One from GEOL 1301 (recommended), 1305, 1307, 1308, 1313, 1315 GEOL 3340, 3451, 3452 GEOL 3330, 5384, 5386 Two from GEOL 3343, 3353, 3374, 3454, 3472, 4390, 5459 GEOL 4296 and 4298, or 4657	
Required Support Courses	23
CHEM 1303/1113, 1304/1114 PHYS 1303 MATH 1337, 1338, 2339, 2343	
	56–60

Notes

- Experience with a modern scientific computing language is essential and can be gained in a course such as **GEOL 3359** Computer Methods in Earth Sciences.
- The requirements for the resource geology major are considered minimal. Students should consult a faculty adviser for recommendations on additional coursework that best fits their goals.

Minor in Environmental Earth Sciences

The minor in environmental Earth sciences is designed with a two-course geology core as background to an interdisciplinary course of study. The minor is freestanding and is not intended to lead to a major. The minor is not available to students majoring in environmental Earth sciences. Instead, it should provide an excellent and substantive background for students heading into the environmental field from other disciplines. The minor is not suitable for a student majoring or minoring in the Earth sciences. The Roy M. Huffington Department of Earth Sciences is responsible for administration of this minor.

Requirements for the Minor. A minimum of 17 hours, to be selected from the following, with at least nine hours at the 3000 level or above:

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
One from GEOL 1301, 1305, 1307, 1308, 1313, 1315	3
One from GEOL 3330, 3340, 3353, 3363, 3366	3
Any four from the following: GEOL 1315, 3243, 3307, 3330, 3340, 3343, 3353, 3363, 3366, 5384, 5386 (if not taken for the requirements above) BIOL 1305, 3307, 3342 CEE 5311	11–12
	17–18

The Courses (GEOL)

GEOL 1100 (1). EARTH SCIENCES ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitles.

GEOL 1200 (2). EARTH SCIENCES ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitles.

GEOL 1300 (3). EARTH SCIENCES ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitles.

GEOL 1301 (3). EARTH SYSTEMS. Examines geologic change within the earth as governed by physical, chemical, and biological processes, as well as interactions among the solid earth, oceans, atmosphere, and biosphere. Includes 3 hours of lecture and one 2-hour laboratory each week. Recommended for all geology tracks.

GEOL 1305 (3). OCEANOGRAPHY. A study of the physical (geological), biological, and chemical processes responsible for the ocean, as it exists today. Examines the impact of man on the oceans and oceanography's role in resource development, climatic and environmental modification, and other human concerns. Includes 3 hours of lecture and one 2-hour laboratory each week.

GEOL 1307 (3). THE SOLAR SYSTEM. A study of the formation and evolution of the solar system. Discussion of solar system materials, nebular processes, meteorites, the formation and evolution of the planets and their satellites, the origin of stars, and the evidence for the standard model of cosmology. Includes 3 hours of lecture and one 2-hour laboratory each week.

GEOL 1308 (3). EARTH AND LIFE. Covers the evolution of Earth from the origin of the universe, the evolution of life since its origin, and the relationships between the two, including issues of societal relevance such as energy resources and climate change. Unifying concepts are time and change on astronomical to human scales. Meets once per week at the Perot Museum, supplemented by a field trip to several locations of interest in the Dallas area. Students are responsible for their own transportation to and from the Perot Museum for each class.

GEOL 1313 (3). EARTHQUAKES AND VOLCANOES. Seismic and volcanic activity are two important manifestations of plate tectonics on the earth. They are also two major natural hazards affecting humankind. This course emphasizes the geologic insights provided by earthquakes and volcanoes, and their impact on society.

GEOL 1315 (3). INTRODUCTION TO ENVIRONMENTAL SCIENCE. Uses the fundamental principles of ecology, hydrology, geology, population dynamics, land-use management, and related fields as the basis for understanding many of the major environmental issues that face the planet: greenhouse climate changes, soil and water pollution, acid rain and related atmospheric pollution problems, habitat destruction and species extinctions, waste disposal, land-use management, energy resource development, geologic hazards, and others. Includes 3 hours of lecture and one 2-hour laboratory each week. Field trips take the place of some laboratory classes.

GEOL 2320 (3). SOUTHWESTERN ENVIRONMENTS: A GEOLOGICAL APPROACH. An investigation of the processes affecting geologic and environmental change in the southwestern United States. Can fulfill a 1300-level GEOL course requirement for a major or minor in geology. (SMU-in-Taos)

GEOL 2321 (3). SOUTHWESTERN ENVIRONMENTS: A GEOLOGICAL APPROACH. An investigation of the processes affecting geologic and environmental change in the southwestern United States. Can fulfill a 1300-level GEOL course requirement for a major or minor in geology. (SMU-in-Taos)

GEOL 3100 (1). EARTH SCIENCES ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitles.

GEOL 3107 (1). DEPARTMENTAL SEMINARS. Students attend and critically evaluate departmental seminars given by visiting scientists, visiting engineers, faculty, and graduate students. *Prerequisite:* Major in geology, geophysics, or environmental geology.

GEOL 3200 (2). EARTH SCIENCES ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitles.

GEOL 3243 (2). GEOLOGY FIELD STUDIES. Project- and mapping-oriented, 2 week field trips to classical geological localities inside or outside of the U.S. Trips are normally conducted during the May interterm or between terms. Examples of planned trips include the Caribbean, Hawaii, the Grand Canyon, Lake Superior in Canada, New Mexico, or Colorado. *Prerequisites:* One 1300-level course in Earth sciences and permission of instructor.

GEOL 3300 (3). EARTH SCIENCES ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitles.

GEOL 3307 (3). ECOLOGY. Basic principles and concepts of ecology, with emphasis on population and community interactions. Includes 3 hours of lecture each week. *Prerequisites:* BIOL 1401, 1402 or permission of instructor.

GEOL 3330 (3). RESOURCES AND THE ENVIRONMENT. A study of Earth's materials and processes and the effects they have on resource conservation planning and the pollution problems that arise from humankind's intense use of the Earth's resources. *Prerequisites:* Permission of instructor or high school algebra, CHEM 1301 or 1303, and one 1300-level course in Earth sciences.

GEOL 3340 (3). FACE OF THE EARTH. Students study the theory of plate tectonics in order to understand earthquake, volcano, and mountain-belt formations. Specific application of the theory helps to illustrate North American regional geology features such as coastal areas and the San Andreas Fault. *Prerequisite:* One 1300-level course in Earth sciences or permission of instructor.

GEOL 3343 (3). GEOLOGY FIELD STUDIES. Project- and mapping-oriented, 2 week field trips to classical geological localities inside or outside of the U.S. Trips are normally conducted during the May interterm or between terms. Examples of planned trips include the Caribbean, Hawaii, the Grand Canyon, Lake Superior in Canada, New Mexico, or Colorado. *Prerequisites:* One 1300-level course in Earth sciences and permission of instructor.

GEOL 3353 (3). MODERN AND ANCIENT CLIMATES. Science of the modern atmosphere, modern climate, and evidence of historical climatic change. Geological evidence for atmospheric and climatic changes throughout Earth's history. *Prerequisite:* One 1300-level course in Earth sciences or permission of instructor.

GEOL 3359 (3). COMPUTER METHODS IN EARTH SCIENCES. Solutions to geological, geochemical, and geophysical problems unique to Earth sciences using computer methods. Focuses on computer application to geologic mapping, modeling, and data analysis. *Prerequisite:* Permission of instructor.

GEOL 3360 (3). PROCESS GEOMORPHOLOGY. Analysis of geological processes and other factors that influence or control the origin and development of Earth's landforms. Includes laboratory exercises and field trips. *Prerequisite:* One 1300-level course in Earth sciences or permission of instructor.

GEOL 3361 (3). ENVIRONMENTAL GEOLOGY SEMINAR. Focuses on timely geoscience-based environmental problems and addresses scientific, environmental, political, economic, legal, and social aspects of potential solutions through selected readings, seminars, guest speakers, and research projects. *Prerequisite:* One 1300-level Earth sciences course or permission of instructor.

GEOL 3363 (3). ENVIRONMENTAL GEOLOGY SEMINAR. Focuses on timely geoscience-based environmental problems and addresses scientific, environmental, political, economic, legal, and social aspects of potential solutions through selected readings, seminars, guest speakers, and research projects. *Prerequisite:* One 1300-level Earth sciences course or permission of instructor.

GEOL 3369 (3). PALEOBIOLOGY. A survey of biological diversity, phylogenetic analysis, rates of evolution, extinction, biogeography, taphonomy, and paleoecology. *Prerequisite:* One 1300-level course in Earth sciences or permission of instructor; BIOL 1401 is also a suitable prerequisite.

GEOL 3374 (3). INTRODUCTION TO PETROLEUM GEOLOGY. An introduction to stratigraphy, sedimentation, and petroleum geology. *Prerequisite:* One 1300-level course in Earth sciences or permission of instructor.

GEOL 3380 (3). INTRODUCTION TO GEOPHYSICS. Survey of geophysical techniques used to understand the structure and dynamics of the solid earth, including seismology, geodesy, gravity, heat flow, and magnetism. *Prerequisites:* One 1300-level course in Earth sciences and GEOL 3340.

GEOL 3451 (4). EARTH MATERIALS I: MINERALOGY. The study of minerals and rocks: elementary crystallography; crystal chemistry; mineral structures and physical properties; rock classification and identification of rocks and minerals in hand specimen; principles of mineral optics; identification of minerals in thin section; and introduction to relationships among rock textures, origins, and rock-forming processes. *Prerequisite:* One 1300-level course in Earth sciences. *Prerequisite or corequisite:* CHEM 1301 or 1303.

GEOL 3452 (4). EARTH MATERIALS II: PETROLOGY. The study of minerals and rocks: elementary crystallography; crystal chemistry; mineral structures and physical properties; rock classification and identification of rocks and minerals in hand specimen; principles of mineral optics; identification of minerals in thin section; and introduction to relationships among rock textures, origins, and rock-forming processes. *Prerequisite:* One 1300-level course in Earth sciences. *Prerequisite or corequisite:* GEOL 3340.

GEOL 3454 (4). STRUCTURAL GEOLOGY. Introduction to the stress-strain relations of rocks, the origin of faults, the brittle-to-ductile transition, and the mechanics of thrusting and folding. Also, laboratory problems in structure contouring, fault solutions, stereonet manipulation, and analysis of folded terrains. *Prerequisite or corequisite:* GEOL 3452 or permission of instructor.

GEOL 3472 (4). PRINCIPLES OF SEDIMENTATION. A study of the origin and post-depositional modification of sediments, sedimentary structures, and sedimentary rocks. Application to the recognition and interpretation of ancient marine and nonmarine sedimentary depositional sequences. Required weekend field trips. *Prerequisite or corequisite:* GEOL 3451 or permission of instructor.

GEOL 4199 (1). INTEGRATIVE RESEARCH. Faculty-supervised independent geoscience research project designed to acquaint the student with current scientific techniques in data gathering (in field and/or laboratory and/or library), data processing, and presentation of results. *Prerequisite:* Permission of faculty adviser.

GEOL 4296 (2). SENIOR THESIS RESEARCH PROJECT. This is a significant scientific project. GEOL 4296, 4298 are taken during the student's senior year as a 1-year sequence.

GEOL 4298 (2). SENIOR THESIS RESEARCH PROJECT. This is a significant scientific project. GEOL 4296, 4298 are taken during the student's senior year as a 1-year sequence.

GEOL 4299 (2). INTEGRATIVE RESEARCH. Faculty-supervised independent geoscience research project designed to acquaint the student with current scientific techniques in data gathering (in field and/or laboratory and/or library), data processing, and presentation of results. *Prerequisite:* Permission of faculty adviser.

GEOL 4321 (3). INTERNSHIP IN GEOSCIENCE. Direct experience using applied geoscience techniques in a work environment, including resource recovery companies; environmental companies; law firms; nonprofit organizations; educational institutions; and municipal, state, or federal agencies. *Prerequisites:* Junior or senior standing in a geoscience major; overall GPA of at least 3.000; GEOL 3452; and sponsorship of a professor and approved organization, agency, or company.

GEOL 4390 (3). INTRODUCTION TO GEOPHYSICAL PROSPECTING. Introduction to geophysical exploration techniques. Lecture and laboratory. *Prerequisite:* MATH 1338 or permission of instructor.

GEOL 4399 (3). INTEGRATIVE RESEARCH. Faculty-supervised independent geoscience research project designed to acquaint the student with current scientific techniques in data gathering (in field and/or laboratory and/or library), data processing, and presentation of results. *Prerequisite:* Permission of faculty adviser.

GEOL 4657 (6). FIELD GEOLOGY. Geologic mapping and field trips in a summer field-camp setting. *Prerequisites:* GEOL 3454, 3472 or permission of instructor.

GEOL 5110 (1). INDEPENDENT STUDY IN GEOSCIENCE. Independent study of a selected topic in geoscience. Individual study under direction of a faculty member allowed for GEOL 5110 or 5210; group projects allowed for GEOL 5310.

GEOL 5166 (1). VERTEBRATE ANATOMY LABORATORY. A laboratory course to accompany BIOL/GEOL 5366. Exercises include basic anatomy, dissections, and examinations of fossil skeletons. *Corequisite:* GEOL/BIOL 5366.

GEOL 5199 (1). SPECIAL TOPICS IN EARTH SCIENCES. Topics of special interest not covered by the regular curriculum, taught by visiting scientists and those with temporary appointments at SMU. Can be cotaught together with faculty of the department. *Prerequisite:* GEOL 3340 or permission of instructor.

GEOL 5210 (2). INDEPENDENT STUDY IN GEOSCIENCE. Independent study of a selected topic in geoscience. Individual study under direction of a faculty member allowed for GEOL 5110 or 5210; group projects allowed for GEOL 5310.

GEOL 5299 (2). SPECIAL TOPICS IN EARTH SCIENCES. Topics of special interest not covered by the regular curriculum, taught by visiting scientists and those with temporary appointments at SMU. Can be cotaught together with faculty of the department. *Prerequisite:* GEOL 3340 or permission of instructor.

GEOL 5310 (3). INDEPENDENT STUDY IN GEOSCIENCE. Independent study of a selected topic in geoscience. Individual study under direction of a faculty member allowed for GEOL 5110 or 5210; group projects allowed for GEOL 5310.

GEOL 5320 (3). DYNAMIC EARTH I. Covers the physical and chemical structure of the Earth and its evolution through geologic time; dynamic processes in the mantle and crust; the development of the theory of plate tectonics as a unifying mechanism for large-scale geologic processes; and the implications of plate tectonics and contemporary applications to geological and geophysical problems. *Prerequisite:* Permission of instructor.

GEOL 5360 (3). ELECTRON MICROPROBE ANALYSIS. Design and operation of the instrument. Correction procedures and computer automation. Analytical techniques and mineral chemistry.

GEOL 5366 (3). VERTEBRATE ANATOMY AND ORIGINS. Introduces vertebrate anatomy, with emphasis on structure and function. Examines processes that have affected the diversity of vertebrate organisms, including origination, biogeography, and adaptation. *Prerequisites:* BIOL 1401, 1402 and GEOL 1308, or permission of instructor. The accompanying laboratory, BIOL 5166, is strongly recommended.

GEOL 5368 (3). PALEOECOLOGY. Interactions between the living world and the Earth's changing environments through geologic time. *Prerequisite:* GEOL 3369 or permission of instructor.

GEOL 5372 (3). PRINCIPLES OF SEDIMENTATION. Study of the origin and evolution of sedimentary rocks in terms of interpretation of marine and non-marine sedimentary record.

GEOL 5374 (3). PETROLEUM GEOLOGY. Application of geologic principles to the location and recovery of hydrocarbon resources in the crust of the earth. *Prerequisite:* Permission of the instructor.

GEOL 5380 (3). PRINCIPLES OF STRATIGRAPHY. Evolution and application of modern stratigraphic concepts, and the development of stratigraphic nomenclature. Emphasis on the integration of physical, biological and chemical parameters in interpretation of the rock record. *Prerequisites:* GEOL 3340 and CHEM 1304, or permission of instructor.

GEOL 5384 (3). HYDROGEOLOGY. Introduces the chemical and physical behavior of natural waters and the role of fluids in geologic processes. Includes the application of thermodynamics, kinetics, and fluid mechanics to understand such geologic processes as ore formation, sediment diagenesis, isograd formation, acid rain, global warming, and groundwater contamination. *Prerequisites:* MATH 1338 and CHEM 1304, or permission of instructor.

GEOL 5386 (3). GEOCHEMISTRY. A survey of geochemical processes within the Earth and at its surface, emphasizing mineral-water interactions and application of the principles of chemical equilibrium to the solution of geochemical problems. *Prerequisite:* GEOL 3452 or permission of instructor.

GEOL 5389 (3). THEORY OF DIGITAL DATA PROCESSING IN GEOPHYSICS. Covers linear transform theory, convolution, correlation, linear systems, Shannon sampling theorem, discrete

Fourier transform, fast Fourier transform, Z-transform, inverse filtering, recursive filtering, optimum filtering, deconvolution, and power spectrum analysis. *Prerequisite:* MATH 2343 or permission of instructor.

GEOL 5391 (3). POTENTIAL FIELD METHODS IN GEOPHYSICAL EXPLORATION. Introduction to potential theory in geophysics. The emphasis is on gravity and magnetic techniques with a brief introduction to heat flow and electrical methods. Basic concepts and their application to hard and soft rock exploration are covered.

GEOL 5392 (3). INTRODUCTION TO SEISMOLOGY. Basic principles of seismology. *Prerequisites:* MATH 2343 and permission of instructor.

GEOL 5394 (3). GEOPHYSICAL PROBLEM-SOLVING. Covers approaches to problem-solving in geophysics, back-of-the-envelope approximations and dimensional analysis, analytical solutions and numerical techniques on the computer, inverse theory and error propagation, and use of models in the real world. Students complete a term project. *Prerequisites:* MATH 2343, 5353; knowledge of a programming language.

GEOL 5399 (3). SPECIAL TOPICS IN EARTH SCIENCES. Topics of special interest not covered by the regular curriculum, taught by visiting scientists and those with temporary appointments at SMU. Can be cotaught together with faculty of the department. *Prerequisite:* GEOL 3340 or permission of instructor.

GEOL 5459 (4). SOILS AND PALEOSOLS. This is a lecture, lab, and field-based course about modern and ancient (paleosol) soil description, classification, and genesis. The course emphasizes environmental controls on soil formation and distribution across Earth's landscapes. *Recommended:* CHEM 1303, 1304, 1113, 1114, 3351; CEE 4385. *Prerequisites:* One from GEOL 1301, 1305, 1307, 1308, 1313, 1315; and GEOL 3343, 3451, 3452, 3472.

ECONOMICS

www.smu.edu/economics

Professor Santanu Roy, Department Chair

Professors: Nathan Balke, Raveendra Batra, Rajat Deb, Klaus Desmet, Tom Fomby, Kathy Hayes, Daniel Millimet, Santanu Roy, Tim Salmon, Shlomo Weber. **Associate Professors:** Bo Chen, Thomas Osang, Saltuk Ozerturk. **Assistant Professors:** Anna Kormilitsina, Elira Kuka, James Lake, Omer Ozak, Danila Serra. **Senior Lecturers:** Helen Reynolds, Elizabeth Wheaton. **Lecturer:** Marcela Giraldo.

General Information

Students majoring in economics may choose among four degree plans. Under each degree plan, students are expected to take ECO 1311 and 1312, MATH 1309 or 1337, and STAT 2301 or 2331 during the first or second year. Once the major is declared, due progress must be made in terms of course enrollment. Finally, under each degree plan, students must have a GPA of at least 2.000 in economics courses attempted and must receive at least a grade of C- in all classes counting toward the major. If requirements change, the catalog in force at the time the major is declared prevails.

Notes for All B.S. in Economics Majors

1. ECO 3301 and 3302 require prior completion of MATH 1309 or 1337.
2. All economics courses at the 4000 level or above require prior completion of STAT 2301 or 2331 or 4340.
3. Additional recommended or required preparation for courses is indicated within the course descriptions.
4. Questions concerning specific courses and the undergraduate program in general should be directed to the economics undergraduate adviser and the director of undergraduate studies.
5. Students majoring in economics are urged to consult a departmental adviser periodically to review their degree plans and progress.
6. **Subfields:** The B.S. degree plans require the student to satisfy at least one subfield in economics when choosing advanced economic courses. Approved subfields are
Econometrics (2 out of 6): ECO 5350, 5375, 5380, 5385, 5390, 6352
Economic Growth and Development (2 out of 4): ECO 5359, 5360, 5361, 5362
Economics of Industrial Organization (2 out of 2): ECO 4371, 4382
International Economics (2 out of 2): ECO 4357, 4358
Labor Economics (2 out of 3): ECO 4351, 4361, 5357
Economics of Decision-Making (2 out of 4): ECO 5340, 5341, 5342, 5353
Monetary Economics (2 out of 2): ECO 4385, 4386
Public Economics (2 out of 4): ECO 4365, 5320, 5365, 5370

Students are encouraged to discuss these fields with faculty, especially while completing ECO 3301 and 3302.

Bachelor of Arts With a Major in Economics

The B.A. degree in economics is designed primarily for students who want a liberal arts education with an emphasis on economics but with great breadth. All advanced economics courses must have the ECO prefix, with the exception of FINA 3320, 3330 and 4326.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Economics	12
ECO 1311, 1312, 3301, 3302	
Mathematics and Statistics	6
MATH 1309 <i>or</i> 1337 STAT 2301 <i>or</i> 2331 <i>or</i> 4340	
Advanced Electives (six courses from the list below)	18
ECO 3355, 4301, 4351, 4357, 4358, 4361, 4365, 4368, 4371, 4376, 4378, 4382, 4385, 4386, 4390, 4395–99, 5301, 5320, 5340–42, 5350, 5353, 5357, 5359–62, 5365, 5370, 5375, 5380, 5385, 5390 (Note: only two can be from ECO 4390, 4395–99)	
FINA 3320, 3330, 4326	
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Bachelor of Science With a Major in Economics

The B.S. degree in economics offers more specialized training in economics and provides a firm basis for graduate study in business, economics or law. All advanced economics courses must have the ECO prefix; no substitutions are allowed. **Note:** Any 5000- or 6000-level courses taken to complete an approved economic field may also be used to satisfy the requirement for the B.S. degree of at least six hours at the 5000 level or above.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Economics	12
ECO 1311, 1312, 3301, 3302	
Mathematics and Statistics	9
MATH 1337, 1338 and one from STAT 2301, 2331, 4340	
Advanced Electives (eight courses from the list below, with at least 6 hours at the 5000 level or above)	24
<i>At least one of the approved subfields listed above in "Notes for All B.S. in Economics Majors" must be satisfied by the advanced economics courses selected.</i>	
ECO 3355, 4301, 4351, 4357, 4358, 4361, 4365, 4368, 4371, 4376, 4378, 4382, 4385, 4386, 4390, 4395–99, 5301, 5320, 5340–42, 5350, 5353, 5357, 5359–62, 5365, 5370, 5375, 5380, 5385, 5390 (Note: only two can be from ECO 4390, 4395–99)	
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Major in Economics With Financial Applications

This B.S. degree combines specialized training in economics with a concentration in areas significant to financial markets. It is particularly suited to those seeking a career in the financial sector. All advanced economics courses must have the ECO prefix; no substitutions are allowed. **Note:** Any 5000- or 6000-level courses taken to complete an approved economic field may also be used to satisfy the requirement for the B.S. degree of at least six hours at the 5000 or above level.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Economics	12
ECO 1311, 1312, 3301, 3302	
Financial Economics	9
ECO 3355, 4368, 4378	
Mathematics and Statistics	6
MATH 1309 <i>or</i> 1337	
STAT 2301 <i>or</i> 2331 <i>or</i> 4340	
Computer Science and Engineering	3
CSE 1340 <i>or</i> 1341 (<i>or</i> ITOM 3306 for business majors/ minors only)	
Accounting	3
ACCT 2301	
Advanced Electives (six courses from the list below, with at least 6 hours at the 5000 level or above)	18
<i>At least one of the approved subfields listed above in "Notes for All B.S. in Economics Majors" must be satisfied by the advanced eco- nomics courses selected.</i>	
ECO 4301, 4351, 4357, 4358, 4361, 4365, 4371, 4376, 4382, 4385, 4386, 4390, 4395–99, 5301, 5320, 5340–42, 5350, 5353, 5357, 5359–62, 5365, 5370, 5375, 5380, 5385, 5390 (Note: Only two can be from ECO 4390, 4395–99)	

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Major in Economics With Management Information Applications

This B.S. degree combines specialized training in economics, econometrics and management information systems in areas important to the study of big data. In order to take any upper-level EMIS classes, students must complete the subset requirements of the EMIS department, which include EMIS 1360 (students are limited to a maximum of two enrollments in this course), MATH 1337 and 1338, DISC 1312/2305 and 1313/2306 or equivalent, and CSE 1341 and 1342, with a 3.000 average subset GPA and a *C* or better in each subset course. All advanced economics courses must have the ECO prefix; no substitutions are allowed. **Note:** Any 5000- or 6000-level courses taken to complete an approved economic field may also be used to satisfy the requirement for the B.S. degree of at least six hours at the 5000 level or above.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Economics	12
ECO 1311, 1312, 3301, 3302	
Econometrics	6
ECO 5350	
At least one from ECO 5375, 5380, 5385, 6352	
Engineering	18
CSE 1341, 1342	
EMIS 1360, 2360, 3360	
EMIS 3340	
<i>or</i> CSE/STAT 4340	

<i>Requirements for the Major (continued)</i>	<i>Credit Hours</i>
Mathematics	9
MATH 1337, 1338, 3353	
Advanced Electives (five courses from the list below, with at least 6 hours at the 5000 level or above)	15
<i>At least one of the approved subfields listed above in "Notes for All B.S. in Economics Majors" must be satisfied by the advanced economics courses selected.</i>	
ECO 3355, 4301, 4351, 4357, 4358, 4361, 4365, 4368, 4371, 4376, 4378, 4382, 4385, 4386, 4390, 4395–99, 5301, 5320, 5340–42, 5353, 5357, 5359–62, 5365, 5370, 5375, 5380, 5385, 5390 (Note: Only two can be from ECO 4390, 4395–99)	
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Departmental Distinction

The student majoring in economics with sufficiently high standing may graduate with departmental distinction by pursuing a rigorous independent research project under the direction of a faculty sponsor. The research will occur while enrolled in ECO 4398. The project will be presented to the faculty sponsor and director of undergraduate studies at the end of the term.

Minor in Economics

Students majoring in other departments may obtain a minor in economics. Students must have a GPA of at least 2.000 in economics courses attempted and must receive at least a grade of C- in all classes counting toward the minor. Nonlecture classes cannot be used toward an economics minor. Students may obtain either a general minor in economics or a minor in a specialized field (international economics, public economics, labor economics, economic growth and development, econometrics, monetary economics, economics of industrial organization, or economics of decision-making). The specialization may be obtained if six hours of 4000- and 5000-level courses constitute one of the above eight fields currently approved by the Economics Department.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
Economics	12
ECO 1311, 1312, 3301, 3302	
Mathematics and Statistics	6
MATH 1309 or 1337 STAT 2301 or 2331 or 4340	
Advanced Electives (two courses from the list below)	6
ECO 4301, 4351, 4357, 4358, 4361, 4365, 4368, 4371, 4376, 4378, 4382, 4385, 4386, 4390, 4398, 5301, 5320, 5340–42, 5350, 5353, 5357, 5359–62, 5365, 5370, 5375, 5380, 5385, 5390	
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The Courses (ECO)

ECO 1310 (3). EXPLORING ECONOMIC ISSUES. An introduction to current economic issues and problems, discussed in a manner suitable for students not majoring in economics or related sciences. Students may not receive credit for this course after receiving credit for ECO 1311 or 1312. The course may not be used to satisfy requirements for either an economics major or minor.

ECO 1311 (3). PRINCIPLES OF MICROECONOMICS: CONSUMERS, FIRMS, AND MARKETS. Explains tools of economic analysis and focuses on the individual participants in the economy: producers, workers, employers, and consumers.

ECO 1312 (3). PRINCIPLES: INFLATION, RECESSION, AND UNEMPLOYMENT (MACRO-ECONOMICS). Covers inflation, unemployment, and growth from both national and global perspectives. Tools of economic analysis include models of open economies. *Prerequisite:* C- or better in ECO 1311.

ECO 2301 (3). TOPICS IN ECONOMICS. Topics vary. The course may not be used to satisfy requirements for either an economics major or minor. *Prerequisite:* ECO 1310, 1311, or 1312.

ECO 3301 (3). PRICE THEORY (INTERMEDIATE MICROECONOMICS). Building on topics covered in ECO 1311, this course considers problems of microeconomics that are more advanced, with a focus on understanding how consumers behave, firms make pricing and output decisions, and market structure impacts the behavior of firms and consumers. *Prerequisites:* C- or better in the following: ECO 1311, 1312 and MATH 1309 or 1337.

ECO 3302 (3). NATIONAL INCOME AND EMPLOYMENT (INTERMEDIATE MACRO-ECONOMICS). Investigates the factors that influence the level of aggregate income in an economy and the decision-making that ultimately results in the determination of levels of consumption, investment, or employment. Students analyze the impact of various government fiscal policies (using general equilibrium models) and the behavior of business cycles and patterns across various countries. *Prerequisites:* ECO 1311, 1312, 3301 and MATH 1309 or 1337.

ECO 3321 (3). INTERNATIONAL ECONOMIC POLICY. Examines the facts and theories of international trade and finance. Emphasis is placed on analyzing current issues such as the U.S. trade deficit, policies toward multinational firms, and harmonization of fiscal and monetary policies among countries. This course may not be used to satisfy requirements for either an economics major or minor. *Prerequisites:* C- or better in ECO 1311, 1312. Note: ECO 3321 cannot be taken after or concurrent with ECO 4357.

ECO 3355 (3). MONEY AND BANKING. Analyzes central and commercial banking. A student may not receive credit for both ECO 3355 and FINA 3330. *Prerequisites:* C- or better in ECO 1311, 1312. Reserved for economics majors and markets and cultures majors only.

ECO 4101 (1). TOPICS. Topics vary. *Prerequisites:* C- or better in ECO 3301 and 3302, or permission of instructor.

ECO 4110 (1). ECONOMICS PRACTICUM. This advanced economics internship credit course requires weekly journal entries reflecting student experience. *Prerequisites:* ECO 3301, 3302; two advanced economics classes (4000 level or above); a 3.000 GPA in economics classes; STAT 2301, 2331, or 4340; and approval of the director of undergraduate studies.

ECO 4201 (2). TOPICS. Topics vary. *Prerequisites:* C- or better in ECO 3301, 3302 or permission of instructor.

ECO 4301 (3). TOPICS. Topics vary. *Prerequisites:* C- or better in ECO 3301, 3302 or permission of instructor.

ECO 4351 (3). LABOR ECONOMICS. An overview of labor supply and labor demand models, with extensions to models of taxes and tax credits, welfare, and Social Security. Also, models of wage determination and extensions such as the effects of minimum wage, performance-based pay, unions, and discrimination. *Prerequisites:* C- or better in the following: ECO 3301 and STAT 2301, 2331, or 4340.

ECO 4357 (3). INTERNATIONAL TRADE. Examines international trade in goods and services among countries and develops a framework for analyzing trade policy issues. The course covers only the real effects of trade and not international financial issues. *Prerequisites:* C- or better in the following: ECO 3301 and STAT 2301, 2331, or 4340.

ECO 4358 (3). INTERNATIONAL MACROECONOMIC THEORY AND POLICY. Explores implications of contemporary banking and foreign exchange practices, with a focus on the

macroeconomic interactions among national economies and international systematic adjustments expected from market disturbances and shifting government policies. Students evaluate the operation of the international monetary system from the gold-standard period to the present. *Prerequisites:* C- or better in the following: ECO 3301, 3302 and STAT 2301, 2331, or 4340.

ECO 4361 (3). ECONOMICS OF EDUCATION. An economic analysis of the state of the U.S. educational system. Topics include trends in academic achievement, educational production functions, teacher labor markets, and educational reforms. *Prerequisites:* C- or better in the following: ECO 3301 and STAT 2301, 2331, or 4340.

ECO 4365 (3). STATE AND LOCAL GOVERNMENT. Examines how state and local governments make decisions about what services to provide their constituents and how to finance those services. *Prerequisites:* C- or better in the following: ECO 3301 and STAT 2301, 2331, or 4340.

ECO 4366 (3). ECONOMICS OF THE PUBLIC SECTOR. Explores both the positive and normative aspects of government expenditures. *Prerequisites:* C- or better in the following: ECO 3301 and STAT 2301, 2331, or 4340.

ECO 4368 (3). FOUNDATIONS OF FINANCIAL ECONOMICS. Applies the tools of economic analysis to financial decision-making. Emphasis is placed on developing a framework for understanding the problems and solutions associated with the economic nature of finance. *Prerequisites:* C- or better in the following: ECO 3301, 3355; ACCT 2301; and ITOM 2305 or STAT 2301, 2331, or 4340. Reserved for economics majors and minors only. (ECO 4368 cannot be taken if the student has taken FINA 3320.)

ECO 4371 (3). THEORY OF INDUSTRIAL STRUCTURE. A focus on the structure and behavior of firms in the marketplace. The course considers both the exercise of market power in relatively simple markets with a single firm as well as the more complicated exercise of market power in markets with multiple firms. *Prerequisites:* C- or better in the following: ECO 3301 and STAT 2301, 2331, or 4340.

ECO 4376 (3). SPECIAL TOPICS IN ECONOMIC HISTORY AND DEVELOPMENT. Economic principles are used to explore important and controversial questions. *Prerequisite:* C- or better in the following: ECO 3301 and STAT 2301, 2331, or 4340.

ECO 4378 (3). FINANCIAL ECONOMICS AND INVESTMENT BEHAVIOR. Gives a theoretical basis for financial analysis within the context of the total process of investment decision-making, and develops the theoretical foundations for analysis of equities, bonds, and portfolio performance. *Prerequisites:* Permission of instructor, or ECO 4368 or FINA 3320 and C- or better in ECO 3301 and in ITOM 2305 or STAT 2301, 2331, or 4340. Reserved for economics majors and minors. (ECO 4378 cannot be taken if the student has taken FINA 4320 or 4326.)

ECO 4382 (3). ECONOMICS OF REGULATED INDUSTRIES. Examines why government regulation of business exists and what impact it has on firms' behavior, market structure, and social welfare. *Prerequisites:* C- or better in the following: ECO 3301 and STAT 2301, 2331, or 4340.

ECO 4385 (3). MACROECONOMICS: THEORY AND POLICY. Examines new developments in the analysis of business cycles, the causes and consequences of inflation, and the sources of economic growth. *Prerequisites:* C- or better in the following: ECO 3301, 3302 and STAT 2301, 2331, or 4340.

ECO 4386 (3). TOPICS IN MONETARY ECONOMICS. An in-depth look at selected topics of current interest in the field of monetary theory and policy. The topics covered vary from year to year. *Prerequisites:* C- or better in the following: ECO 3301, 3302 and STAT 2301, 2331, or 4340.

ECO 4390 (3). INDEPENDENT STUDY IN ECONOMICS. By arrangement with departmental director of undergraduate studies. Eligible students undertake a research paper under the supervision of the faculty sponsor and give an oral presentation of the paper. Note: This course can only be taken once. *Prerequisites:* ECO 3301, ECO 3302, two advanced economics classes (4000 level or above), 2.500 GPA in economics classes, and one of the following: STAT 2301, 2331, or 4340.

ECO 4398 (3). DEPARTMENTAL DISTINCTION IN ECONOMICS. By arrangement with departmental director of undergraduate studies. Eligible students undertake a research paper under the supervision of a faculty sponsor and give an oral presentation of the paper. *Prerequisite:*

sites: ECO 3301, ECO 3302, two advanced economics courses (4000 level or above), 3.700 GPA in economics classes, 3.500 GPA overall, senior standing, and one of the following: STAT 2301, 2331, or 4340.

ECO 5101 (1). TOPICS. Topics vary. *Prerequisites*: C- or better in the following: ECO 3301, 3302 and STAT 2301, 2331, or 4340.

ECO 5201 (2). TOPICS. Topics vary. *Prerequisites*: C- or better in the following: ECO 3301, 3302 and STAT 2301, 2331, or 4340.

ECO 5301 (3). TOPICS. Topics vary. *Prerequisites*: Graduate standing or C- or better in the following: ECO 3301, 3302 and STAT 2301, 2331, or 4340.

ECO 5320 (3). HEALTH ECONOMICS. An introduction to the economics of health and health care policies and how they have affected the structure, function, and cost-effectiveness of the health care industry, principally in the United States. *Prerequisite*: C- or better in ECO 3301.

ECO 5340 (3). DECISION-MAKING UNDER UNCERTAINTY. Provides a basis for the modeling of decision-making under conditions of incomplete information. *Prerequisites*: C- or better in the following: ECO 3301, 3302 and STAT 2301, 2331, or 2340.

ECO 5341 (3). STRATEGIC BEHAVIOR. Introduces the basic concepts and tools of game theory, with applications to various areas of economics. The various topics are unified by the techniques employed for determining the outcome in particular situations. *Prerequisites*: Graduate standing or C- or better in the following: ECO 3301 and STAT 2301, 2331, or 4340.

ECO 5342 (3). EXPERIMENTAL AND BEHAVIORAL ECONOMICS. Students study the field of behavioral economics in which the underlying assumptions of economics models are tested using experimental techniques. Guided by behavioral regularities, new models of behavior are introduced. *Prerequisite*: C- or better in ECO 3301. *Recommended*: ECO 5341, 5350.

ECO 5350 (3). INTRODUCTORY ECONOMETRICS. The basic concepts of econometrics and, in particular, regression analysis, with topics geared to first-time regression users. *Prerequisites*: Graduate standing or C- or better in the following: MATH 1309 or 1337; ECO 3301; and ITOM 2305 or STAT 2301, 2331, or 4340.

ECO 5353 (3). LAW AND ECONOMICS. Examines economic theories that explain the development of common law and constitutional law and the economic implications of contracts, antitrust laws, and liability rules. *Prerequisites*: Graduate standing or C- or better in the following: ECO 3301 and STAT 2301, 2331, or 4340.

ECO 5357 (3). ECONOMICS OF HUMAN RESOURCES. Examines several topics of interest to modern labor economists. The course is equally devoted to theoretical modeling and the interpretation of empirical evidence, and to the analysis of policies such as education subsidies, unemployment insurance, the minimum wage, and immigration restrictions. *Prerequisites*: Graduate standing or C- or better in the following: ECO 3301 and STAT 2301, 2331, or 4340. ECO 4351 is recommended.

ECO 5359 (3). ECONOMIC DEVELOPMENT: MICROECONOMIC PERSPECTIVES. A micro-economic examination of various economic issues faced by developing countries. Topics include intrahousehold resource allocation, rural and urban labor markets, and credit and insurance markets. *Prerequisites*: Graduate standing or C- or better in the following: ECO 3301 and STAT 2301, 2331, or 4340.

ECO 5360 (3). ECONOMIC DEVELOPMENT: MACROECONOMIC PERSPECTIVES. A macro-economic examination of the economic issues faced by developing countries. Topics include population growth, national savings, capital accumulation, human capital formation, government institutions, and international integration. *Prerequisites*: Graduate standing or C- or better in the following: ECO 3302 and STAT 2301, 2331, or 4340.

ECO 5361 (3). NATURAL RESOURCES AND ENERGY ECONOMICS. Addresses the market effects of pollution and environmental damage, environmental valuation, property rights and externalities, sustainable development, poverty and the environment, trade and the environment, climate change policies, population growth, and public environmental policy. Students gain an understanding of the economics of energy and natural resource use and policy. *Prerequisites*: Graduate standing or C- or better in ECO 3301 and STAT 2301, 2331, or 4340.

ECO 5362 (3). ECONOMIC GROWTH. Examines the facts and theories of economic growth, the economics of technological changes, and the role of governments and markets in promoting

or impeding economic development. *Prerequisites:* Graduate standing or C- or better in the following: ECO 3301, 3302 and STAT 2301, 2331, or 4340.

ECO 5365 (3). PUBLIC FINANCE. Covers the theories of the public sector and the problems of market failures, externalities, and preference revelation. Specific government expenditure policies are analyzed. *Prerequisites:* Graduate standing or C- or better in the following: ECO 3301 and STAT 2301, 2331, or 4340. *Recommended:* ECO 3302.

ECO 5370 (3). COST-BENEFIT ANALYSIS. Introduces the tools for evaluating alternative methods of government intervention and develops a framework for evaluating costs and benefits of economic projects from the government's point of view. *Prerequisites:* Graduate standing or C- or better in the following: ECO 3301 and STAT 2301, 2331, or 4340.

ECO 5375 (3). ECONOMIC AND BUSINESS FORECASTING. Presentation of methods used by economists to forecast economic and business trends and ways of evaluating the usefulness of these methods. *Prerequisites:* C- or better in the following: STAT 2301, 2331; or STAT 4340; or ITOM 2305 and ECO 5350.

ECO 5380 (3). COMPUTING FOR ECONOMICS. The primary objective is to teach programming skills. Programs to be reviewed could include SAS, R, STAT, SPSS, MATLAB, SQL, and Cognos. *Prerequisites:* Graduate standing or C- or better in the following: ECO 3301, 3302, and 5350; MATH 1309 or 1337; and ITOM 2305 or STAT 2301, 2331, or 4340.

ECO 5390 (3). MATHEMATICAL FINANCE: THEORY AND APPLICATIONS. A study of selected topics in finance (such as capital asset pricing, options and their valuation, analytics of credit derivatives) that combines theory with actual applications in the financial profession. *Prerequisite:* C- or better in ECO 5350, ECO 4378 or FINA 4326, ECO 4368 or FINA 4325, and one of the following: STAT 2301, 2331, or 4340.

ENGLISH

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Professor Darryl Dickson-Carr, Department Chair

Professors: Timothy Crusius, Darryl Dickson-Carr, Thomas DiPiero, Dennis Foster, Ezra Greenspan, David Haynes, Ross Murfin, Jasper Neel, Willard Spiegelman, Steven Weisenburger. **Associate Professors:** Angela Ards, Richard Bozorth, Greg Brownderville, Michael Holahan, Daniel Moss, Beth Newman, Timothy Rosendale, Nina Schwartz, Lisa Siraganian, Rajani Sudan, Bonnie Wheeler. **Assistant Professors:** Timothy Cassedy, Jayson Gonzales Sae-Saue, Martha Satz. **Professors of Practice:** Joan Arbery, Cara Diaconoff, Patricia Pisano, Angela Wood. **Senior Lecturers:** Diana Grumbles Blackman, Carolyn Channell, Jo Goyne, Vanessa Hopper, Pamela Lange, Bruce Levy, Tom Stone. **Lecturers:** Stephanie Amsel, Marta Harvell, Pauline Newton, Kristen Polster, Ona Seaney, Sam Ross Sloan, Lori Ann Stephens, Vicki Tongate.

The B.A. in English offers a rich intellectual experience through the study of American, British and other literature written in English. The course of study engages with contemporary modes of literary inquiry in order to arrive at an understanding of how language, culture and society work. At the same time, it emphasizes the aesthetic, emotional and intellectual pleasures of imaginative writing. The degree is appropriate for students who wish to obtain a broad liberal education as a foundation for careers or further study, and is especially recommended as preprofessional training for fields such as law, administration, and business that require high proficiency in written and oral communication and in analytical thinking.

Bachelor of Arts With a Major in English

A grade of C- or better must be earned in all courses fulfilling major requirements, and English majors must attain a minimum GPA of 2.000 among all courses attempted for the major.

The department strongly recommends 12 hours of world language for all English majors. Students expecting to undertake graduate study in English should be advised that graduate schools require knowledge of at least one world language.

Secondary-school certification candidates must fulfill the departmental requirements described above. They should consult the departmental advisers on teacher training about further nondepartmental requirements for certification. (Revisions of these requirements may be mandated by the State of Texas; candidates should be alert to the possibilities of changes.)

The major requires a minimum of 33 hours of English courses, including no more than 12 hours at the 2000 level and below (of these hours, no more than three hours at the 1000 level) and at least 12 hours of 4000 level courses, distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Core Courses	6
ENGL 2311 or 2314, 2315	
Reading Historically	12
<i>One course at the 3000 or 4000 level from each group:</i>	
Medieval Literature	
Early Modern Literature	
Literature in the Age of Revolutions	
Modern to Contemporary Literature	

<i>Requirements for the Major (continued)</i>	<i>Credit Hours</i>
Criticism and Theory ENGL 3310 <i>or</i> 4310	3
Major Electives	12
	33

Notes

- The following courses are not acceptable as major electives: ENGL 1300, 1400 and 2302.
- CLAS 3312 Classical Rhetoric may be counted as an English major elective.
- Creative writing courses at the 4000 level do not fulfill the 4000-level literature requirement.

Bachelor of Arts in English With a Creative Writing Specialization

Students pursuing an English major with a creative writing specialization must fulfill all requirements for the English major. All 12 elective hours within the regular major will be devoted to courses selected from the following list: ENGL 2390, 3390, 4390. Students requiring additional terms to complete culminating projects may register for ENGL 4394. No more than 12 of these hours will be credited toward the requirements for the major, though additional English courses of all kinds are encouraged.

<i>Requirements for the Specialization</i>	<i>Credit Hours</i>
Core Courses ENGL 2311 <i>or</i> 2314, 2315	6
Reading Historically <i>One course at the 3000 or 4000 level from each group:</i> Medieval Literature Early Modern Literature Literature in the Age of Revolutions Modern to Contemporary Literature	12
Criticism and Theory ENGL 3310 <i>or</i> 4310	3
Creative Writing ENGL 2390 <i>Two courses from two categories of the following:</i> ENGL 3390 (Studies: thematic) ENGL 3390 (Studies: experiential) ENGL 3390 (Studies: craft) ENGL 4390	12
	33

Departmental Distinction

This program is open to seniors by invitation. To enter the program, a student ordinarily must earn an overall GPA of at least 3.000 by the middle of the junior year, and a 3.500 average or better in courses fulfilling requirements for the major. Candidates for distinction must take ENGL 5310 in the fall of the senior year. Candidates completing ENGL 5310 with a grade of *B+* or better will then choose from the following options: ENGL 5381 (culminating in a senior thesis); or a graduate pro-seminar in English numbered 6320–6380 (requires permission of instructor); or

(for creative writing specialists only) ENGL 4394. Candidates must earn a *B+* or better in the option selected, and attain a 3.500 GPA in all courses counting toward the major and distinction. ENGL 4394, 5381 and 5310 may not be used to satisfy the 12 hours required in 4000-level courses. A minimum of 36 hours is required to graduate with departmental distinction.

Minor in English

The minor in English, which is available to students who are not pursuing a major in English or major in English with creative writing, requires 15 hours of coursework with no more than six of them in courses numbered below 3000. A grade of *C-* or better must be earned in each course taken to fulfill the requirement for the English minor.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
ENGL 2311, 2314, or 2315	3
Minor electives, no more than one below the 3000 level	12
	15

Note: ENGL 1300, 1400 and 2302 may not be used to fulfill minor requirements.

The Courses (ENGL)

The courses are numbered by the final two digits as follows.

Expository Writing (00–09)	DISC 1311, 1312, 1313, 2305, 2306 ENGL 1300, 1400, 2306, 2406, 3301, 3305, 3308, 5301, 5309
Genre, Method, Criticism (10–19)	ENGL 2310–15, 3310, 4310, 5310
Medieval, c. pre-1500 (20–29)	ENGL 1320, 3320, 3329, 4320, 4321, 4323
Early Modern, c. 1500–1775 (30–39)	ENGL 1330, 3330–32, 3335, 4330–33, 4336, 4339
Age of Revolutions, c. 1775–1900 (40–49)	ENGL 3340, 3341, 3344–48, 4340, 4341, 4343, 4345, 4346, 4349
Modern to Contemporary, c. 1990–present (50–69)	ENGL 1360, 1362, 1363, 1365, 2361, 3350, 3354, 3355, 3359, 3360, 3362–69, 4350, 4351, 4356, 4360, 4369
Other Literature/Language Courses (70–89)	ENGL 1370, 1380, 1385, 2371, 3189, 3370, 3371, 3373–83, 3389, 4370, 5378, 5381
Creative Writing (90–99)	ENGL 2390, 3390, 4390, 4394

ENGL 1300 (3). FOUNDATIONS FOR RHETORIC. Writing paragraphs and short, analytic, thesis-directed essays in response to texts. Work on reading comprehension, principles of effective sentence construction, and punctuation.

ENGL 1301 (3). RHETORIC I: INTRODUCTION TO COLLEGE WRITING. The aims and processes of analytical-argumentative discourse. Understanding and evaluating sources. Use of MLA style. Students must earn *C-* or better.

ENGL 1302 (3). RHETORIC II: FIRST-YEAR SEMINAR IN RHETORIC, CONTEMPORARY ISSUES. Introduction to public intellectual life through inquiry into texts and discursive art. Multidisciplinary and multicultural. Analytical-argumentative writing. Research and oral communication components. Students must earn *C-* or better. *Prerequisite:* ENGL 1301.

ENGL 1305 (3). PERSPECTIVES OF THOUGHT. Focuses on analytical writing while exploring major modes of interpreting the world and defining what constitutes knowledge in the 21st century. Restricted: Sections available for Hilltop Scholars and New Century Scholars placing out of ENGL 1301. Departmental consent required.

ENGL 1320 (3). CULTURES OF MEDIEVAL CHIVALRY. The development of the ideal of chivalry from its origins in the medieval legends of King Arthur to modern literature.

ENGL 1330 (3). THE WORLD OF SHAKESPEARE. Introductory study of eight or nine of Shakespeare's important plays, placed in historical, intellectual, and cultural contexts.

ENGL 1360 (3). THE AMERICAN HEROINE. Images of the American heroine in popular and traditional literature, studied in terms of their reflection of the evolving roles of American women.

ENGL 1362 (3). CRAFTY WORLDS. An introductory study of selected 20th-century novels emphasizing both ideas of modernity and the historical or cultural contexts that generate these ideas.

ENGL 1363 (3). THE MYTH OF THE AMERICAN WEST. The myth and reality of the American West as seen through key works of history, folklore and fiction, including study of the serious Western novel and the subliterary Western.

ENGL 1365 (3). LITERATURE OF MINORITIES. Representative works of African-American, Asian-American, gay, Hispanic-American, and Native American literature, in their immediate cultural context and against the background of the larger American culture.

ENGL 1370 (3). TRAGEDY AND THE FAMILY. The study of individual tragedies and kindred texts in various genres and from various periods.

ENGL 1372 (3). ENGLISH STUDIES ABROAD. SMU credit for English courses taken in University-approved programs abroad. Departmental consent required.

ENGL 1380 (3). INTRODUCTION TO LITERATURE. An introduction to the study of literature including a range of literary genres and periods, varying by term.

ENGL 1385 (3). POWER, PASSION, AND PROTEST IN BRITISH LITERATURE. A survey of the history of British literature, from its medieval beginnings to the 20th century, with emphasis on literature as an instrument of power and desire.

ENGL 2302 (3). BUSINESS WRITING. Introduction to business and professional communication, including a variety of writing and speaking tasks, and the observation and practice of rhetorical strategies, discourse conventions, and ethical standards associated with workplace culture. *Prerequisite:* DISC 1312 or 2305.

ENGL 2306 (3). THE ETHICAL, THE CATASTROPHIC, AND HUMAN RESPONSIBILITY. Study of ethical questions derived from history, literature, psychology, anthropology, and philosophy, with a focus on what constitutes a meaningful life and historical challenges to the bases of ethics, racism, individual freedom, and community responsibility. Open only to students in the University Honors Program. *Prerequisite:* DISC 2305.

ENGL 2310 (3). IMAGINATION AND INTERPRETATION. An introduction to literary studies based on topics that vary from term to term. *Prerequisite:* DISC 1312 or 2305.

ENGL 2311 (3). POETRY. Analysis, interpretation, and appreciation of poetry, with attention to terms and issues relevant to the genre. *Prerequisite:* DISC 1312 or 2305.

ENGL 2312 (3). FICTION. Analysis, interpretation, and appreciation of fiction, with attention to terms and issues relevant to the genre. *Prerequisite:* DISC 1312 or 2305.

ENGL 2313 (3). DRAMA. Analysis, interpretation, and appreciation of dramatic works, with attention to terms and issues relevant to the genre. *Prerequisite:* DISC 1312 or 2305.

ENGL 2314 (3). DOING THINGS WITH POEMS. Introduction to the study of poems, poets, and how poetry works, focusing on a wide range of English and American writers. Some attention to matters of literary history. Open only to students in the University Honors Program. *Prerequisite:* DISC 1312 or 2305.

ENGL 2315 (3). INTRODUCTION TO LITERARY STUDY. An introduction to the discipline for beginning English majors, covering methods of literary analysis in selected texts spanning a range of genres and historical periods. *Prerequisite:* DISC 1312 or 2305.

ENGL 2322 (3). GUILTY PLEASURES. Examination of classic and not-so-classic detective fiction from Sophocles to the present, focusing primarily on 19th- and 20th-century British and American traditions. *Prerequisite:* DISC 1312 or 2305.

ENGL 2361 (3). FORTUNE, FAME, AND SCANDAL: THE AMERICAN DREAM. A survey of the pursuit of fame and fortune in classic American novels of business, politics, sports, and show business, with attention to contemporary parallels. *Prerequisite:* DISC 1312 or 2305.

ENGL 2371 (3). THE DAWN OF WISDOM: ANCIENT CREATION STORIES FROM FOUR CIVILIZATIONS. The visions of the cosmos expressed in the art, archaeology, and literature of Egyptian, Mesopotamian, Greco-Roman, and Mayan civilizations, emphasizing the role of human beings as central and responsible actors therein. *Prerequisite:* DISC 1312 or 2305.

ENGL 2372 (3). ENGLISH STUDIES ABROAD. SMU credit for English courses taken in University-approved programs abroad. Departmental consent required.

ENGL 2390 (3). INTRODUCTION TO CREATIVE WRITING. Workshop on the theory and techniques of writing fiction, poetry, and creative nonfiction. *Prerequisite:* DISC 1313 or 2306.

ENGL 2391 (3). INTRODUCTORY POETRY WRITING. Workshop in which student poetry and directed exercises in basic techniques form the content of the course. *Prerequisite:* DISC 1312 or 2305.

ENGL 2392 (3). INTRODUCTORY FICTION WRITING. Workshop in theory, technique, and writing of fiction. *Prerequisite:* DISC 1312 or 2305.

ENGL 2406 (4). ETHICAL ISSUES AND COMMUNITY ACTION. Exploration of major ethical ideas and problems through literary texts and testing, and reflecting upon them through practical involvement in the community. Requires a commitment of time to volunteer community activities. Open only to students in the University Honors Program. *Prerequisite:* DISC 2305.

ENGL 3189 (1). DIRECTED STUDIES. Directed readings in a coherent area of a student's choice to be approved by the director of undergraduate study and the instructor. *Prerequisite:* DISC 1313 or 2306.

ENGL 3301 (3). ADVANCED EXPOSITORY WRITING. Emphasis on styles and formats appropriate to academic writing, and on individual problems and needs. *Prerequisite:* DISC 1313 or 2306.

ENGL 3305 (3). WRITING AND THE PUBLIC INTELLECTUAL. Study and practice of writing for a broad, well-informed public, including the history and current status of the public intellectual. Includes advanced practice in revising and editing expository prose. *Prerequisite:* DISC 1313 or 2306.

ENGL 3308 (3). ENGLISH STUDIES INTERNSHIP. Work experience related to English studies, with instruction in professional communication. Workshop format and one-on-one consultation with instructor. *Prerequisite:* Open only to junior and senior English majors by permission of instructor.

ENGL 3310 (3). CONTEMPORARY APPROACHES TO LITERATURE, LANGUAGE, AND CULTURE. Introduction to contemporary methods of interpreting literature and to linguistic, cultural, and theoretical issues informing these methods. Readings of literary works to develop awareness of differences and limitations in approaches. *Prerequisite:* DISC 1313 or 2306.

ENGL 3320 (3). TOPICS IN MEDIEVAL LITERATURE. Study of a theme, issue, or topic in English literature from its beginnings to 1500, varying by term. May be repeated for credit under a different subtitle. *Prerequisite:* DISC 1313 or 2306.

ENGL 3329 (3). COURTLY CULTURES AND KING ARTHUR. Study of Britain's greatest native hero and one of the world's most compelling story stocks: the legends of King Arthur and the Knights of the Round Table. *Prerequisite:* DISC 1313 or 2306.

ENGL 3330 (3). TOPICS IN EARLY MODERN LITERATURE. Study of a theme, issue, or topic in British literature c. 1500–1775, varying by term. May be repeated for credit under a different subtitle. *Prerequisite:* DISC 1313 or 2306.

ENGL 3331 (3). BRITISH LITERARY HISTORY I: CHAUCER TO POPE. Introduction to earlier periods of English literature through the study of major authors in their historical context and from varied critical and thematic perspectives. *Prerequisite:* DISC 1313 or 2306.

ENGL 3332 (3). SHAKESPEARE. Studies of Shakespeare's major works in context with English history, society, and culture, including literary and theatrical conventions and practices.

Topics vary by term; may be repeated for credit under a different subtitle. *Prerequisite:* DISC 1313 or 2306.

ENGL 3335 (3). TRANSATLANTIC ENCOUNTERS I. Comparative studies in British and American literature during the early modern period (c. 1500–1775), with attention to issues of first contact, colonization, and cultural interrelations. Topics vary by term; may be repeated for credit under a different subtitle. *Prerequisite:* DISC 1313 or 2306.

ENGL 3340 (3). TOPICS IN BRITISH LITERATURE IN THE AGE OF REVOLUTIONS. Study of a theme, issue, or topic in British literature c. 1775–1900, varying by term. May be repeated for credit under a different subtitle. *Prerequisite:* DISC 1313 or 2306.

ENGL 3341 (3). BRITISH LITERARY HISTORY II: WORDSWORTH THROUGH YEATS. Introduction to later periods of English literature through the study of major authors in their historical context and from varied critical and thematic perspectives. *Prerequisite:* DISC 1313 or 2306.

ENGL 3344 (3). VICTORIAN GENDER. Through an exploration of fiction, poetry, drama, and other writing from the Victorian period, this course considers why so much of the literature of Victorian England still speaks meaningfully and directly about what it means to be a man or woman. The course focuses on the way writing of the period reflects, questions, and protests the gender distinctions that Victorians understood as the foundation of the social world. *Prerequisite:* DISC 1313 or 2306.

ENGL 3345 (3). TRANSATLANTIC ENCOUNTERS II. Comparative studies in British and American literature during the Age of Revolutions (c. 1775–1900), with attention to cultural interrelations during a period of rapid social change. Topics vary by term; may be repeated for credit under a different subtitle. *Prerequisite:* DISC 1313 or 2306.

ENGL 3346 (3). AMERICAN LITERARY HISTORY I. Introduction to earlier periods of American literature through the study of major authors in their historical context and from varied critical and thematic perspectives. *Prerequisite:* DISC 1313 or 2306.

ENGL 3347 (3). TOPICS IN AMERICAN LITERATURE IN THE AGE OF REVOLUTIONS. Study of a theme, issue, or topic in American literature c. 1775–1900, varying by term. May be repeated for credit under a different subtitle. *Prerequisite:* DISC 1313 or 2306.

ENGL 3348 (3). HISTORY OF THE BOOK IN AMERICA, 1620–1900. A multidisciplinary survey of print culture in the United States, exploring literary, historical, technological, legal, and sociological factors that shaped the formations, uses, and dynamics of print in American society. *Prerequisite:* DISC 1313 or 2306.

ENGL 3350 (3). TOPICS IN MODERN AND CONTEMPORARY BRITISH LITERATURE. Study of a theme, issue, or topic in British literature c. 1900 to the present, varying by term. May be repeated for credit under a different subtitle. *Prerequisite:* DISC 1313 or 2306.

ENGL 3354 (3). NON-WESTERN CULTURE AND LITERATURE. Major 20th-century, third-world literary and cultural texts, with emphasis on political and economic contexts of colonialism and postcolonialism. *Prerequisite:* DISC 1313 or 2306.

ENGL 3355 (3). TRANSATLANTIC ENCOUNTERS III. Comparative studies of British and American writing in the period of modern and contemporary literature (c. 1900 to the present), with attention to cultural interrelations during the period. Topics vary by term; may be repeated for credit under a different subtitle. *Prerequisite:* DISC 1313 or 2306.

ENGL 3359 (3). AMERICAN NARRATIVES OF DISCOVERY. Focuses on the generic process of culture, integrating methods from various disciplines. Considers aesthetic questions about the ways narratives engage in intercultural dialogue, and ethical questions about the implications of ongoing American discoveries of the Southwest. *Prerequisite:* DISC 1313 or 2306.

ENGL 3360 (3). TOPICS IN MODERN AND CONTEMPORARY AMERICAN LITERATURE. Study of a theme, issue, or topic in American literature c. 1900 to the present, varying by term. May be repeated for credit under a different subtitle. *Prerequisite:* DISC 1313 or 2306.

ENGL 3362 (3). AFRICAN-AMERICAN LITERATURE. Major African-American writers and their works, and various social and historical influences. *Prerequisite:* DISC 1313 or 2306.

ENGL 3363 (3). CHICANA/CHICANO LITERATURE. A broad examination of major 20th-century Mexican-American writers and their works in the context of various social, geographic, political, and historical influences. Some knowledge of Spanish is helpful to students but is not a prerequisite for the course. *Prerequisite:* DISC 1313 or 2306.

ENGL 3364 (3). WOMEN AND THE SOUTHWEST. A study and exploration of women writers, artists, and thinkers in the American Southwest and their vision of this region as singularly hospitable to women's culture. *Prerequisite:* DISC 1313 or 2306.

ENGL 3365 (3). JEWISH-AMERICAN LITERATURE AND CULTURE. An interdisciplinary introduction to Jewish culture through literature, especially in the American environment, as well as to the issues in studying any distinctive ethnic and cultural literature. *Prerequisite:* DISC 1313 or 2306.

ENGL 3366 (3). AMERICAN LITERARY HISTORY II. Introduction to later periods of American literature through the study of major authors in their historical context and from varied critical and thematic perspectives. *Prerequisite:* DISC 1313 or 2306.

ENGL 3367 (3). ETHICAL IMPLICATIONS OF CHILDREN'S LITERATURE. Examination of children's literature with emphasis on notions of morality and evil, including issues of colonialism, race, ethnicity, gender, and class. *Prerequisite:* DISC 1313 or 2306.

ENGL 3368 (3). LITERARY AND ARTISTIC TAOS: THE TOWN SEEN THROUGH MULTIPLE LENSES. Survey of the literary and artistic heritage of early 20th-century Taos, centered on the Native Americans, the artistic and literary salon of Mabel Dodge, and D.H. Lawrence. *Prerequisite:* DISC 1313 or 2306.

ENGL 3369 (3). STUDY OF NATIVE AMERICAN AUTHORS. A study of Native American authors and their works, and various social and historical influences. *Prerequisite:* DISC 1313/2306 or ENGL 1302/2306.

ENGL 3370 (3). SPECIAL TOPICS. Examination of a subject that includes material from a range of historical periods. Topics vary by term; examples include pastoral literature; Shakespeare in England and India; and irony, satire, and politics. May be repeated for credit under a different subtitle. *Prerequisite:* DISC 1313 or 2306.

ENGL 3371 (3). JOAN OF ARC: HISTORY, LITERATURE, AND FILM. The life and later reception of the extraordinary peasant girl Joan of Arc (c. 1412–1431), who in the 2 years before she was burned at the stake changed the course of European history. *Prerequisite:* DISC 1313 or 2306.

ENGL 3372 (3). ENGLISH STUDIES ABROAD. SMU credit for English courses taken in University-approved programs abroad. Departmental consent required.

ENGL 3373 (3). MASCULINITIES: IMAGES AND PERSPECTIVES. The representation of male sex roles in Western literature, from Achilles to James Bond. Open to juniors and seniors; sophomores by permission of instructors. *Prerequisite:* DISC 1313 or 2306.

ENGL 3374 (3). LITERATURE OF RELIGIOUS REFLECTION. Issues of faith and doubt in British and American literature, drawn from texts reflecting Christian humanism, secular rationalism, individualistic romantic faith, and scientific modernism and other modern alternatives. *Prerequisite:* DISC 1313 or 2306.

ENGL 3375 (3). EXPATRIATE WRITERS: THE INVENTION OF MODERNISM. Introduction to literary modernism in early 20th-century Europe through readings of, and films and excursions relating to, expatriate authors working in Paris. *Prerequisite:* DISC 1313 or 2306.

ENGL 3376 (3). LITERATURE OF THE SOUTHWEST. Includes 19th- and 20th-century Anglo, Hispanic, and Native American literature of the southwestern United States. *Prerequisite:* DISC 1313 or 2306.

ENGL 3377 (3). LITERATURE AND THE CONSTRUCTION OF HOMOSEXUALITY. Examination of same-sex desire in modern literature, as considered in the context of philosophical, religious, and scientific texts since the ancient world. *Prerequisite:* DISC 1313 or 2306.

ENGL 3378 (3). STUDIES IN THE ENGLISH LANGUAGE. Linguistic introduction to history of English and to present day American English as spoken and written. Topics include theory and description, basic grammatical structures, and their application to writing and regional and stylistic variation. *Prerequisite:* DISC 1313 or 2306.

ENGL 3379 (3). LITERARY AND CULTURAL CONTEXTS OF DISABILITY: GENDER, CARE, AND JUSTICE. An examination of disability as a cultural construct, with attention to how literary, ethical, and political representations bear upon it, and in relation to gender, race, and class issues. *Prerequisite:* DISC 1313 or 2306.

ENGL 3380 (3). THE LITERATURE OF VISION. An examination of the ways in which prophets and imaginative writers have sought to communicate the source, content, and meaning of

- "things invisible to mortal sight," whether as a consummation of or a challenge to the leading ideas of their time. *Prerequisite:* DISC 1313 or 2306.
- ENGL 3381 (3). SEMIOTICS OF CULTURE.** Analysis of form, technique, and meaning in literary and textual representation, in comparison or in conjunction with other representational media such as painting, photography, and cinema. Topics vary by term; may be repeated for credit under a different subtitle. *Prerequisite:* DISC 1313 or 2306.
- ENGL 3382 (3). HEROIC VISIONS: THE EPIC POETRY OF HOMER AND VERGIL.** The literature of classical heroism in works by Homer and Vergil that influenced the epic traditions of English literature. *Prerequisite:* DISC 1313 or 2306.
- ENGL 3383 (3). LITERARY EXECUTIONS: IMAGINATION AND CAPITAL PUNISHMENT.** The literary treatment of capital punishment in drama, poetry, novel, and biography. *Prerequisite:* DISC 1313 or 2306.
- ENGL 3384 (3). LITERATURE AND MEDICINE.** How literature reveals the experiences, ethics, and values of those who suffer and their healers. *Prerequisite:* DISC 1313 or 2306.
- ENGL 3389 (3). DIRECTED STUDIES.** Directed readings in a coherent area of a student's choice, to be approved by the director of undergraduate studies and the instructor. *Prerequisite:* DISC 1313 or 2306.
- ENGL 3390 (3). STUDIES IN CREATIVE WRITING: THEMATIC, EXPERIENTIAL, CRAFT, OR WORKSHOP.** Continues the development of fiction, nonfiction, and poetic craft while also engaging students in new media, community-based writing, publishing, editing, and the deeper study of professional technique. *Prerequisite:* ENGL 2390.
- ENGL 3391 (3). INTERMEDIATE POETRY WRITING.** *Prerequisite:* ENGL 2391 or permission of instructor.
- ENGL 3392 (3). INTERMEDIATE FICTION WRITING.** *Prerequisite:* ENGL 2392 or permission of instructor.
- ENGL 4310 (3). STUDIES IN LITERARY THEORY AND CRITICISM.** An advanced study of a theoretical or critical problem in literary study and interpretation. Topics could include questions of history, major theoretical movements, and cultural studies. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.
- ENGL 4320 (3). MEDIEVAL WRITERS.** Intensive study of one or two medieval writers. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.
- ENGL 4321 (3). STUDIES IN MEDIEVAL LITERATURE.** Advanced study of medieval literature focused on a specified problem, topic, or theme. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.
- ENGL 4323 (3). CHAUCER.** Advanced studies in the poetry of Geoffrey Chaucer in relation to historical contexts, medieval poetics, and Middle English language. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.
- ENGL 4330 (3). RENAISSANCE WRITERS.** Intensive study of one or two major writers from the period in context with English social and cultural history. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.
- ENGL 4331 (3). RESTORATION AND ENLIGHTENMENT WRITERS.** Intensive study of one or two major writers from the period 1660–1775. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.
- ENGL 4332 (3). STUDIES IN EARLY MODERN BRITISH LITERATURE.** Advanced study of British literature c. 1500–1775, focused on a specific problem, topic, or theme. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.
- ENGL 4333 (3). SHAKESPEARE.** Advanced studies in Shakespeare's poetry and plays, in historical, cultural, and theatrical contexts. May be repeated for credit under a different subtitle.

Prerequisites: ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.

ENGL 4336 (3). STUDIES IN EARLY MODERN AMERICAN LITERATURE. Advanced study of American literature c. 1500–1775, focused on a specified problem, topic, or theme. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.

ENGL 4339 (3). TRANSATLANTIC STUDIES I. Intensive study of a theme, genre, or topic in transatlantic literature in English from the early modern period (c. 1500–1775). May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.

ENGL 4340 (3). ROMANTIC WRITERS. Intensive study of one or two major British writers from the period. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.

ENGL 4341 (3). VICTORIAN WRITERS. Intensive study of one or two major British writers from the period. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.

ENGL 4343 (3). STUDIES IN BRITISH LITERATURE IN THE AGE OF REVOLUTIONS. Intensive study of British literature c. 1775–1900, focused on a specified problem, topic, or theme. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.

ENGL 4345 (3). AMERICAN WRITERS IN THE AGE OF REVOLUTIONS. Intensive study of one or two major writers from the period. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.

ENGL 4346 (3). STUDIES IN AMERICAN LITERATURE IN THE AGE OF REVOLUTIONS. Advanced study of American literature c. 1775–1900, focused on a specified problem, topic, or theme. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.

ENGL 4349 (3). TRANSATLANTIC STUDIES II. Intensive study of a theme, genre, or topic in transatlantic literature in English during the Age of Revolutions (c. 1775–1900). May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.

ENGL 4350 (3). MODERN AND CONTEMPORARY BRITISH WRITERS. Intensive study of one or two major writers from the period. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.

ENGL 4351 (3). STUDIES IN MODERN AND CONTEMPORARY BRITISH LITERATURE. Advanced study of British literature c. 1900 to the present, focused on a specified problem, topic, or theme. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.

ENGL 4356 (3). MODERN AND CONTEMPORARY AMERICAN WRITERS. Intensive study of one or two major writers from the period. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.

ENGL 4360 (3). STUDIES IN MODERN AND CONTEMPORARY AMERICAN LITERATURE. Advanced study of American literature c. 1900 to the present, focused on a specified problem, topic, or theme. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.

ENGL 4369 (3). TRANSATLANTIC STUDIES III. Intensive study of a theme, genre, or topic in transatlantic literature in English from the modern to contemporary period (c. 1900–present). May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or

2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.

ENGL 4370 (3). SPECIAL STUDIES. Intensive study of a theme, genre, or topic that includes material from a wide range of eras. May be repeated for credit under a different subtitle. *Prerequisites:* ENGL 2311 or 2314, ENGL 2315, and two additional ENGL courses (excluding ENGL 1300, 1400, 2302) or instructor approval.

ENGL 4391 (3). ADVANCED POETRY WRITING. Advanced course for students seriously interested in the composition of poetry. *Prerequisite:* ENGL 3391 or permission of instructor. May be repeated for additional credit.

ENGL 4392 (3). ADVANCED FICTION WRITING. Advanced course for students seriously interested in writing the short story or novel. *Prerequisite:* ENGL 3392 or permission of instructor. May be repeated for additional credit.

ENGL 4393 (3). DIRECTED STUDIES IN POETRY WRITING. *Prerequisite:* Open only to advanced students by permission of instructor.

ENGL 4394 (3). DIRECTED STUDIES IN FICTION WRITING. *Prerequisite:* Open only to advanced students by permission of instructor.

ENGL 4395 (3). DIRECTED STUDIES IN POETRY WRITING. *Prerequisite:* Open only to advanced students by permission of instructor.

ENGL 4396 (3). DIRECTED STUDIES IN FICTION WRITING. *Prerequisite:* Open only to advanced students by permission of instructor.

ENGL 4397 (3). CRAFT OF POETRY. Examination of various readings for their usefulness from a poet's point of view. Emphasis on observation of technique rather than on interpretation. *Prerequisite:* ENGL 2391.

ENGL 4398 (3). CRAFT OF FICTION. Examination of various readings for their usefulness from a fiction writer's point of view. Emphasis on observation of technique rather than on interpretation. *Prerequisite:* ENGL 2392.

ENGL 5301 (3). DISCOURSE IN SOCIAL SCIENCES. History, characteristics, and functions of scientific writing, with a focus on the rhetoric of inquiry and science as persuasion. Practice in editing of scientific prose. *Prerequisite:* Permission of instructor.

ENGL 5309 (3). SEMINAR IN TEACHING WRITING. Contemporary theory and practice of teaching writing: discourse and rhetorical theory, conferencing and small-group work, designing composition curricula, and writing in all disciplines. Special emphasis on argumentation and persuasion.

ENGL 5310 (3). SEMINAR IN LITERARY THEORY. A seminar for candidates for departmental distinction, designed to acquaint them with particular approaches to literature. *Prerequisite:* Permission of instructor.

ENGL 5378 (3). LINGUISTICS: GENERAL. Introduction to the study of language as a part of human culture.

ENGL 5381 (3). INDEPENDENT STUDIES. Directed readings in an area of the student's choice, to be approved by the director of undergraduate studies and the instructor. Requires a substantial amount of critical writing. Open only to candidates for departmental distinction and to graduate students.

ENGL 5382 (3). INDEPENDENT STUDIES. Directed readings in an area of the student's choice, to be approved by the director of undergraduate studies and the instructor. Requires a substantial amount of critical writing. Open only to candidates for departmental distinction and to graduate students.

ENGL 5383 (3). INDEPENDENT STUDIES. Directed readings in an area of the student's choice, to be approved by the director of undergraduate studies and the instructor. Requires a substantial amount of critical writing. Open only to candidates for departmental distinction and to graduate students.

ENGL 5384 (3). INDEPENDENT STUDIES. Directed readings in an area of the student's choice, to be approved by the director of undergraduate studies and the instructor. Requires a substantial amount of critical writing. Open only to candidates for departmental distinction and to graduate students.

HISTORY

www.smu.edu/history

Professor Andrew Graybill, Department Chair

Professors: Jeremy Adams, Kenneth Andrien, John Chávez, Edward Countryman, Neil Foley, Andrew Graybill, Alexis McCrossen, Daniel Orlovsky, Sherry Smith, Kathleen Wellman. **Associate Professors:** Sabri Ates, Crista DeLuzio, Melissa Dowling, Jeffrey Engel, Kenneth Hamilton, Thomas Knock, John Mears. **Assistant Professors:** Erin R. Hochman, Jill E. Kelly, Ada-Maria Kuskowski, Ling Shiao. **Visiting Assistant Professor:** Brandon Miller. **Adjunct Assistant Professor:** David Doyle. **Senior Lecturer:** Laurence H. Winnie. **Research Professor:** Robert Righter.

The William P. Clements Department of History offers three types of courses: introductory, survey and more advanced courses that explore large areas of human history; intermediate thematic courses that mix lectures and small group discussions to explore more closely defined topics; and seminars that probe deeply into given areas. Each student should devise a program of study that meets individual interests and needs and also achieves a balance between diversification and specialization. Except where specified, there are no prerequisites, and interested students are invited into all courses.

Bachelor of Arts With a Major in History

A total of 33 hours in history are required for the major, with at least 18 hours in courses at the 3000 and higher levels. All advanced courses taken for the major must be passed with a grade of C- or better. History majors must earn 2.000 minimum GPAs in their history coursework and may not take history courses pass/fail. Six hours of advanced-placement credit can be applied toward the history major.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Areas	18
United States History (two 3-hour courses)	
European History (two 3-hour courses)	
African, Asian, Latin American, or Middle Eastern History (two 3-hour courses)	
Junior Seminar	3
HIST 4300	
Senior Seminar	
(at least one 5000-level HIST course required) (counts toward the areas requirement or the electives)	
Electives	12

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Departmental Distinction

A history major with sufficiently high standing may graduate with honors in history by applying for the degree with departmental distinction. Eligible students (those who have completed 22 hours of history credit, including the junior seminar, with a 3.700 history GPA and overall 3.500 GPA) will be invited by the department chair to apply. During their senior year, candidates for distinction will pursue an individual research project under the direction of a particular professor (while enrolled in HIST

4375). This major research project will develop from the 5000-level seminar or HIST 4300, the junior seminar. The research project will be presented as a thesis before the end of the term. The successful honors graduate must also pass an oral examination on the thesis before a committee of three history faculty members and receive at least an A- on the work.

Minor in History

Students with a general interest in history may pursue a minor by taking 15 hours of departmental coursework. Nine term hours must be taken at the 3000-5000 level. Students may transfer in no more than two of the five courses required for the minor. Only one of the three required advanced courses may be transferred in. Courses for the minor may not be taken pass/fail. All advanced courses taken for the minor must be passed with a grade of C- or better. Students intending to take a minor in the department should design a program of study in consultation with the director of undergraduate studies.

The Courses (HIST)

Foundation and Special Courses	HIST 1311, 1312, 1321, 1322, 1323, 4300, 4375, 4376, 4397, 4398, 4399
United States History	HIST 1321, 2311, 2312, 2318, 2320, 2337, 2380, 2398, 3301, 3304–14, 3316, 3318–22, 3324, 3327, 3336, 3342, 3346–48, 3364, 3369, 3370, 3372, 3379, 3384, 3388, 3391, 3394, 3399, 3401, 4304, 4354, 5305, 5309, 5310, 5312, 5330, 5331, 5340, 5341, 5344, 5345, 5377
European History	HIST 1303, 1322, 2321, 2323, 2346, 2350, 2351–54, 2365, 2366, 3302, 3303, 3328, 3329, 3330, 3332–35, 3337–41, 3343–45, 3350–68, 3373–76, 3381, 3383, 3385, 3397, 4319, 4320, 4363, 4372, 4373, 4384, 4385, 5338, 5364, 5367, 5370–76, 5374–76, 5380, 5390–92
African, Asian, Latin American and Middle Eastern History	HIST 1323, 2355, 2379, 2384, 2385, 2390–95, 3315, 3323, 3325, 3326, 3371, 3377, 3378, 3380, 3382, 3386, 3387, 3389, 3390, 3392, 3393, 3395, 3396, 3398, 5330, 5331, 5382, 5387, 5395, 5397
SMU Abroad Courses	HIST 2100, 2200, 3100, 3200, 3300

HIST 1303 (3). MILLENNIALISM THROUGH THE AGES. A historical look at the ancient and current notion that an apocalyptic End Time will produce a New Heaven and New Earth turning conventional order upside down, and how to behave if so.

HIST 1311 (3). WESTERN CIVILIZATION TO 1527. A survey of the cultural phenomenon often called Western civilization from its prehistoric roots in western Asia and Europe; through ancient Mesopotamian and Egyptian civilization; to the Greeks, Romans, and the medieval experience; and up to the Renaissance. Lecture course, with much reference to literature and visual arts.

HIST 1312 (3). WESTERN CIVILIZATION SINCE 1527. An introductory survey of Western civilization from about the time of the Reformation to the present.

HIST 1321 (3). INTRODUCTORY TOPICS IN AMERICAN HISTORY. Offers the first- or second-year student the opportunity for intensive exploration of particular topics in American history in a small-class setting.

HIST 1322 (3). INTRODUCTORY TOPICS IN EUROPEAN HISTORY. Offers the first- or second-year student the opportunity for intensive exploration of particular topics in European history in a small-class setting.

HIST 1323 (3). INTRODUCTORY TOPICS IN NON-WESTERN HISTORY. Offers the first- or second-year student the opportunity for intensive exploration of particular topics in non-Western history in a small-class setting.

HIST 2100 (1). HISTORY STUDIES ABROAD. SMU credit for history courses taken in University-approved programs abroad.

HIST 2200 (2). HISTORY STUDIES ABROAD. SMU credit for history courses taken in University-approved programs abroad.

HIST 2311 (3). OUT OF MANY: U.S. HISTORY TO 1877. Growth of American civilization. General survey, with particular attention to social and political aspects. Open to first-year students.

HIST 2312 (3). UNFINISHED NATION: U.S. HISTORY SINCE 1877. Growth of American civilization. General survey, with particular attention to social and political aspects. Open to first-year students.

HIST 2313 (3). HISTORY OF AFRICAN-AMERICAN POPULAR CULTURE, 1890–1980. Investigates the forces that shaped post-emancipation African-American popular entertainment, fashion, and mannerisms, with a focus on 1890–1980.

HIST 2318 (3). SCHOOLS AND SOCIETY: THE EVOLUTION OF AMERICA'S PUBLIC SCHOOL SYSTEM. An interdisciplinary exploration of America's public school system from the Colonial period to the present. Emphasis on relationships among schools, families, and changing social and political ideals.

HIST 2320 (3). SOCIETY AND LIFE IN TEXAS.

HIST 2321 (3). PHILOSOPHICAL AND RELIGIOUS THOUGHT IN THE MEDIEVAL WEST. Study of the key issues in Western thought, and of their temporary resolutions, in the medieval millennium – and of the shifting balance between Greek and Hebrew elements in that evolving tradition.

HIST 2323 (3). RUSSIAN CULTURE. Significant aspects of Russian thought and culture at various stages of development, illustrated by examples from poetry, prose, drama, journalism, architecture, the fine arts, and music.

HIST 2337 (3). HISTORY OF SPORTS IN THE UNITED STATES. The social, cultural, and business history of sport in the U.S. Focus on the cultural meaning and ethical components of sports in the 19th and 20th centuries.

HIST 2346 (3). MODERN ENGLAND, 1714 TO THE PRESENT. A survey of modern English history from the accession of the Hanoverians to the present, with emphasis on social and political themes dealing with the transition from a landed to an industrial society. (SMU-in-Oxford)

HIST 2350 (3). LIFE IN THE MEDIEVAL WORLD, A.D. 306 TO 1095. A survey of the political, religious, and cultural history of Western Europe from Constantine the Great to the First Crusade.

HIST 2351 (3). LIFE IN THE MEDIEVAL WORLD, 1095 TO 1350. A survey of the political, social, and intellectual structures that characterized the civilization of Western Europe between the First Crusade and the Black Death.

HIST 2352 (3). GREEK MYTHOLOGY AND HISTORY. Introduction to Greek mythology in its original ancient context, through primary sources (Greek plays, poems, and works of art).

HIST 2353 (3). CURRENTS IN CLASSICAL CIVILIZATION. The interdisciplinary study of the art, literatures, and history of the ancient Greek and Roman worlds, focusing on the development of democracy, individualism, immortality, heroism, justice, sexuality, nature, etc.

HIST 2354 (3). ANCIENT FOUNDATIONS OF MODERN CIVILIZATION. An introduction to the study of the ancient world embracing both the ancient Near East and classical Greek and Roman civilization.

HIST 2355 (3). HISTORY OF THE ANCIENT NEAR EAST AND EGYPT. An introduction to the ancient civilizations of Mesopotamia, Israel, Anatolia, and Egypt. Examines changing

ancient cultures as they contact (or conquer) each other as seen through their literature, histories, and archaeological remains.

HIST 2365 (3). EUROPE IN THE MODERN WORLD, RENAISSANCE TO 1760. An introductory survey of the growth of European civilization.

HIST 2366 (3). EUROPE IN THE MODERN WORLD, 1760 TO THE PRESENT. A continuation of HIST 2365.

HIST 2379 (3). A HISTORY OF ISLAMIC EMPIRES. Introduces the history of various Islamic empires and covers the period from 600 to 1750.

HIST 2380 (3). ETHNIC REGIONS IN THE WESTERN WORLD. An interdisciplinary course that examines the ways regional ethnic minorities such as the Basques, Quebecois, and Chicanos have functioned within larger societies in Western Europe and North America.

HIST 2384 (3). LATIN AMERICA: THE COLONIAL PERIOD. An introductory survey covering the development of Latin American society from prediscovery to the early 19th century.

HIST 2385 (3). LATIN AMERICA IN THE MODERN ERA. An introductory survey beginning with the 19th-century wars of independence from Spain and Portugal and emphasizing the 20th century as the new nations struggle for political stability and economic independence.

HIST 2390 (3). CIVILIZATION OF INDIA. Introduction to the history, society, and cultural features of South Asia from the third millennium B.C.E. to the modern day.

HIST 2391 (3). AFRICA TO THE 19TH CENTURY. History of Africa south of the Sahara, focusing on culture and social organization, the Bantu migrations, African kingdoms, contacts with the world, Islam, and the slave trade.

HIST 2392 (3). MODERN AFRICA. Introduction to the history of Africa since 1800. Focuses on a number of themes to enable a better understanding of the recent past of this vast continent. Major topics include 19th-century social, political, and economic revolutions in Southern and West Africa, the incorporation of the continent into the capitalist world economy, class formation under colonial rule, the rise of nationalism, and the politics of liberation.

HIST 2393 (3). JAPAN BEFORE 1850. Japan from its origins through the Tokugawa period. Themes include the military and the emperor in the polity; religions in society and culture; and the continuous, contested creation of identity.

HIST 2394 (3). CHINA BEFORE 1850. Examines changes and continuities from Neolithic times to 1850 in Chinese state, society, and religion, and the relations among the three spheres, through scholarly writings and primary sources.

HIST 2395 (3). MODERN EAST ASIA. A survey of modern East Asia emphasizing an outline of the traditional societies, the Western impact, Japanese industrialization and imperialism, Pearl Harbor, and the rise of Chinese communism.

HIST 2398 (3). AMERICAN POLITICS AND CULTURE, FDR TO OBAMA. Examines life and culture in modern America.

HIST 3100 (1). HISTORY STUDIES ABROAD. SMU credit for history courses taken in University-approved programs abroad.

HIST 3200 (2). HISTORY STUDIES ABROAD. SMU credit for history courses taken in University-approved programs abroad.

HIST 3300 (3). HISTORY STUDIES ABROAD. SMU credit for history courses taken in University-approved programs abroad.

HIST 3301 (3). HUMAN RIGHTS: AMERICA'S DILEMMA. This course examines violations of human rights within their historical contexts and explores the foundations of current human rights issues such as torture, terrorism, slavery, and genocide. Attention is given to the evolution of civil and human rights as entities within global political thought and practice.

HIST 3302 (3). GEORGIAN AND VICTORIAN ENGLAND, 1714–1867. The political, social, and economic institutions of Britain and their development in the 18th and 19th centuries.

HIST 3303 (3). MODERN ENGLAND, 1867 TO THE PRESENT. Britain in the 20th century, with social and cultural emphasis; traces the changes in outlook and Empire to the present day.

HIST 3304 (3). AFRICAN AMERICANS AND THE CIVIL RIGHTS MOVEMENT. African Americans and the civil rights movement, with a focus on post-World War II migration, chang-

ing conceptions of race, increasing African-American prosperity, integration and black nationalism, and the lives of significant African-American leaders of the civil rights movement.

HIST 3305 (3). THE HISPANOS OF NEW MEXICO, 1848–PRESENT. History of the Mexican-American subculture of New Mexico. Field trips to historical sites. (SMU-in-Taos)

HIST 3306 (3). COLONY TO EMPIRE: U.S. DIPLOMACY 1789–1941. Examines major events in American foreign policy from the early national period to Pearl Harbor, emphasizing 19th-century continental expansion, early 20th-century imperialism, and American involvement in the world wars.

HIST 3307 (3). THE U.S. AND THE COLD WAR, 1945–1989. An examination of major events in American foreign policy since World War II, emphasizing policy toward Western Europe, the Soviet Union, Asia, and Latin America.

HIST 3308 (3). HISTORY OF HISPANICS IN THE U.S. THROUGH FILM. An examination of selected events and developments in the histories of Mexican Americans, Puerto Ricans, Cuban Americans, and other Latinos as depicted on TV and in film, video, and movies.

HIST 3309 (3). NORTH AMERICAN ENVIRONMENTAL HISTORY. Surveys North American environmental history since pre-Columbian times. It expands the customary framework of historical inquiry by focusing on the interaction of human beings and the natural world.

HIST 3310 (3). PROBLEMS IN AMERICAN HISTORY. Explores historical issues or trends in U.S. history will be explored using a case study or comparative format.

HIST 3311 (3). 19TH-CENTURY AMERICAN WEST. History of the trans-Mississippi West in the 19th century, with an emphasis on major political, social, economic, and environmental themes of the region's history.

HIST 3312 (3). WOMEN IN AMERICAN HISTORY TO 1900. Surveys the history of American women from the Colonial era to 1900 and introduces the major themes organizing these three centuries of U.S. women's history.

HIST 3313 (3). AFRICAN AMERICANS IN THE UNITED STATES, 1607–1877. Examines the people of the African continent, uprooted and enslaved, who continually grappled with the problem of how to preserve their dignity and identity in a hostile environment. The African Americans' adjustment to American society, their exterior struggle against political oppression, the interior nature of their group life, and the development of black institutions are critical to the course's concerns.

HIST 3314 (3). AFRICAN AMERICANS IN THE UNITED STATES, 1877 TO THE PRESENT. Particular attention will be given to populism, disfranchisement, segregation and lynching, black leadership ideologies, the influence of mass migrations, the impact of the Great Depression and two world wars on black life, the quest for equality in the 1950s and the civil rights movement in the 1960s, and the flowering of black culture and nationalism.

HIST 3315 (3). MODERN SOUTH ASIA: COLONIALISM AND NATIONALISM. Political history of South Asia from the 18th century onward, focusing on the period of British colonial rule, nationalist movements, and independence.

HIST 3316 (3). HISTORY OF SEX IN AMERICA. This course will test the hypothesis that gender and sexuality are constructed categories. Readings in anthropology, history, literary criticism, and psychiatry will be utilized.

HIST 3317 (3). PERSECUTION TO AFFIRMATION: SEXUAL MINORITIES AND HUMAN RIGHTS. Examines same-sex sexuality comparatively, using interdisciplinary readings, beginning with the Americas before European contact and then focusing on Europe, Asia, and Africa through time up until the present day. *Prerequisites:* DISC 1311, 1312, 1313 or 2305, and 2306.

HIST 3318 (3). THE HUMAN HISTORY OF NATURAL DISASTER IN THE UNITED STATES. A survey of the role of natural disasters in U.S. history, with emphasis on the ways that they (including Hurricane Katrina) are human events, caused or complicated by social practices.

HIST 3319 (3). TEXAS HISTORY. Texas as a crossroad of cultures from the 16th century to the present.

HIST 3320 (3). THE SPANISH FRONTIER IN NORTH AMERICA, 1513–1821. The exploration, colonization, and development of the South and Southwest under Spanish rule, 1513 to 1821, including interaction with Indian peoples.

HIST 3321 (3). THE AMERICAN SOUTHWEST. History of the American Southwest, from the initial penetration in 1821 to the present.

HIST 3322 (3). NATIVE AMERICAN HISTORY. Examines the roles Native Americans played in the history of North America (excluding Mexico) from 1500 to the present.

HIST 3323 (3). HISTORY OF ISLAM IN SOUTH ASIA. A cultural history of Islam in South Asia focusing on the sacred practices, literature, and institutions of Muslim communities in the Indian subcontinent from 1000 C.E. to modern times.

HIST 3324 (3). THE MEXICAN AMERICANS, 1848 TO THE PRESENT. Traces the historical evolution of the Mexican-American people in the Southwest from pre-Columbian to modern times with emphasis on the era since the Mexican War.

HIST 3325 (3). ISLAM AND POLITICS. This course aims to familiarize students with the basics of Islam and explore the relationship between Islam as a religion and Islam as ideology.

HIST 3326 (3). VENTURE OF ISLAM. An introduction to Islamic civilization through an examination of Islamic history and society, arts and letters, and science, as well as philosophy and the legal order. Considers the response of Islam to the challenge posed by the West.

HIST 3327 (3). WOMEN IN AMERICAN HISTORY FROM 1900 TO THE PRESENT. Surveys the history of American women from 1900 to the present and introduces the major themes organizing this period of U.S. women's history.

HIST 3328 (3). HISTORY OF MODERN GERMANY. Surveys developments in German society from unification under Bismarck to division in the wake of World War II, with particular attention given to Hitler's rise to power.

HIST 3329 (3). WOMEN IN EARLY MODERN EUROPE. A study of the influence of women in European society and intellectual movements from the Renaissance through the Enlightenment.

HIST 3330 (3). WOMEN IN MODERN EUROPEAN HISTORY. An exploration of the role of women in European society, from the cultures of Crete and Sumer to the present.

HIST 3332 (3). ANCIENT AND MEDIEVAL FRANCE. An exploration of selected themes that dominate the current history, archaeology, and historiography of ancient and medieval France, from the Paleolithic cave painters to Joan of Arc.

HIST 3333 (3). EARLY MODERN FRANCE TO 1789. An examination of the social, political and cultural transformation of 16th-, 17th-, and 18th-century France through the rise of the Bourbon monarchy, its consolidation under Louis XIV, and its evolution under his successors.

HIST 3334 (3). FRANCE SINCE 1789. A history of France from 1789 to the present, with special emphasis on social and cultural history, including the French Revolution and its legacy, the development of 19th-century French society, and France during the two world wars.

HIST 3335 (3). ONE KING, ONE LAW: FRANCE 1500–1789. The culture of France through its history and literature, emphasizing the historical developments, ideas, and literary texts that define the period and illuminate both French classicism and absolutism.

HIST 3336 (3). CULTURAL HISTORY OF THE UNITED STATES. Analysis of the literature, art, architecture, music, drama, popular amusements, and social customs of America since 1877.

HIST 3337 (3). ETHICAL DILEMMAS IN A GLOBAL AGE. A cross-cultural exploration of major ethical problems emanating out of the radically changing context of human existence in recent decades.

HIST 3338 (3). HISTORY OF SPAIN TO 1492. The main social, political, and cultural topics of the history of the Iberian Peninsula before Ferdinand and Isabella, focusing on the Roman and medieval periods. (For history majors, fulfills only the European requirement.)

HIST 3339 (3). HISTORY OF SPAIN, 1469 TO THE PRESENT. The main social, political, and cultural topics of the history of the Iberian Peninsula from Columbus to the present. (For history majors, fulfills only the European requirement.)

HIST 3340 (3). THE REVOLUTIONARY EXPERIENCE IN RUSSIA: 1900–1930. The effects of the breakdown of the old regime and the establishment of Soviet power on Russian society and culture. Examines the evolution of political and social institutions, ideologies, literature and the arts against the backdrop of the era's turbulent political history.

HIST 3341 (3). SOVIET AND POST-SOVIET SOCIETY AND POLITICS, 1917 TO THE PRESENT. Soviet, Russian, and Eurasian experience from historical, ethnographic, economic,

social, and cultural perspectives, beginning with the present and going back to the roots of the Soviet state and society in the revolutionary experience, 1917–1921.

HIST 3342 (3). UTOPIAN PERSPECTIVE ON THE AMERICAN SOUTHWEST. Focuses on the American Southwest when the region became a homeland of the imagination for those fleeing the modern, industrial culture of the West.

HIST 3343 (3). 20TH-CENTURY EUROPE. History of 20th-century Europe. Offered through international programs only.

HIST 3344 (3). THE OXFORD LANDSCAPE: FROM THE STONE AGE TO THE TUDORS. An exploration of several approaches to the development of the distinctive human landscape of the Upper Thames Valley and the city that gradually became its metropolis, from the Paleolithic era to the end of the Middle Ages. (SMU-in-Oxford)

HIST 3345 (3). ENGLAND IN MEDIEVAL AND EARLY MODERN TIMES. Treats selected themes in the history of England to 1688, with special attention to formative periods and developments in the evolution of the English state. (SMU-in-Oxford)

HIST 3346 (3). THE 20TH-CENTURY AMERICAN WEST. Examines the American West in the 20th century, emphasizing major social, economic and political themes of the region's last 100 years. Explores the characteristics that distinguish the West from other American regions and investigates its continued significance to American history.

HIST 3347 (3). CIVIL WAR AND RECONSTRUCTION. Examines the institution of slavery, the events leading to the Civil War, the war itself, and the subsequent efforts at reconstruction.

HIST 3348 (3). AMERICAN FAMILIES: CHANGING EXPERIENCES AND EXPECTATIONS. Explores changes in American family life from the Colonial period to the present. Seeks to understand how family ideals, structures, and roles have shaped and have been shaped by social and historical change.

HIST 3349 (3). IMAGES OF POWER. Using art, literature, history, and philosophy, this course explores the social, political, and intellectual life of the Parisian aristocracy and elite of the 17th century in its architectural setting. The Bourbon monarchs were well aware that the arts were instrumental to the construction of the absolutist state. As the course is set both intellectually and physically in Paris, the architectural monuments encourage students to make immediate connections between what they read and what they see. (SMU Abroad)

HIST 3350 (3). A HISTORY OF ANCIENT EGYPT. A history of ancient Egyptian civilization from construction of the pyramids to conquest by the Romans, explored through Egyptian literature, archaeology, and artifacts.

HIST 3351 (3). HISTORY OF ANCIENT NEAR EAST. Introduction to the civilizations, art, literature, and archaeology of the ancient Near East, from the origins of writing to conquest by Alexander the Great.

HIST 3352 (3). THE AGE OF THE CRUSADES. Exploration of patterns of thought and behavior underlying and motivating the military, ideological, and general cultural confrontation between Christendom and Islam from the late 11th to the 14th centuries.

HIST 3353 (3). THE HISTORY OF ANCIENT GREECE. A study of the ways in which the various societies of ancient Greece approached the problem of defining, establishing, and maintaining an equitable social order.

HIST 3354 (3). WARFARE AND DIPLOMACY IN ANTIQUITY. A study of the methods both of waging and of averting war in antiquity.

HIST 3355 (3). CLASS AND GENDER IN ANCIENT SOCIETY. An examination of class and gender in the ancient world, with emphasis on changing definitions of masculinity and femininity in Greek and Roman culture, as well as the position, rights, and interactions of different groups (e.g., free and slave, citizen and foreigner, soldier and civilian).

HIST 3356 (3). THE INDIVIDUAL AND SOCIETY IN ANTIQUITY. A study of different concepts of the nature of the individual and his relation to society in Homeric and classical Greece and republican and imperial Rome.

HIST 3357 (3). JOAN OF ARC: HISTORY, LITERATURE, AND FILM. The life and later reception of the extraordinary peasant girl Joan of Arc (c. 1412–1431), who in 2 years changed the course of European history before she was burned at the stake.

HIST 3358 (3). THE RENAISSANCE. A history of culture in the Renaissance from the perspective of advances in scholarship and science, and above all, in appreciation of social and political contexts.

HIST 3359 (3). EUROPE IN THE AGE OF THE REFORMATION, 1520–1598. The political, economic, religious and cultural history of Europe, including the impact of the Protestant and Catholic reform movements.

HIST 3360 (3). ENGLISH SOCIETY IN THE AGE OF ELIZABETH THE GREAT. Focuses selectively upon key aspects of the social, cultural, religious, and intellectual life of Elizabethan England, set against the background of political, economic, and diplomatic developments in Europe in the 16th century.

HIST 3361 (3). ROMAN HISTORY AND THE ROMAN MIND. The development of Roman civilization from its earliest beginnings to the dawn of the Middle Ages.

HIST 3362 (3). THE VIKINGS. Traces the rise of small Scandinavian communities into powerful communities of raiders, conquerors, and colonizers during the Viking Age (c. 8th–12th centuries).

HIST 3363 (3). THE HOLOCAUST. Examines the destruction of the European Jews as they emerged from pre-World War I anti-Semitism and Nazi racism. Considers Jewish responses to genocide, the behavior of bystanders, and possibilities of rescue.

HIST 3364 (3). CONSUMER CULTURE IN THE UNITED STATES, 1700–1990. The business, cultural, and political history of the rise of the consumer culture in the U.S., with a focus on the development of institutions, ideas, and practices centered on consumption.

HIST 3365 (3). PROBLEMS IN EUROPEAN HISTORY. Historical events or trends of particular significance in the development of modern Europe will be examined with consideration of the ways in which historians have assessed and reassessed their viewpoints. Students will be invited to join in the controversy with a modest research project of their own. Topics will be selected in accordance with the interests of students and instructors and hence will vary from term to term.

HIST 3366 (3). PROBLEMS IN EUROPEAN HISTORY. Historical events or trends of particular significance in the development of modern Europe will be examined with consideration of the ways in which historians have assessed and reassessed their viewpoints. Students will be invited to join in the controversy with a modest research project of their own. Topics will be selected in accordance with the interests of students and instructors and hence will vary from term to term.

HIST 3367 (3). REVOLUTIONS IN EUROPEAN HISTORY. Traces the impact of revolutionary explosions on European civilization from the peasant revolts of the late Middle Ages through the rebellions of the 1560s and 1640s and the great upheavals of the Age of Democratic Revolution to the events of 1917 in Russia. Recommended preparation: HIST 2365, 2366.

HIST 3368 (3). WARFARE IN THE MODERN WORLD. The evolution of weapons, tactics, strategy, and military organization in the Western world, from the Renaissance to the present, with special attention to the fundamental nature and causes of armed conflict as well as the interrelationships between warfare and society as a whole.

HIST 3369 (3). COLONIAL AMERICA. A study of the transfer of Europeans and Africans to the British mainland provinces and the development of a multicultural and multiregional colonial society.

HIST 3370 (3). THE AMERICAN REVOLUTION. A survey of political, social, and military history of the Revolutionary era. Major topics include the imperial crisis, mobilization and war, and state and federal constitutional development.

HIST 3371 (3). CONFLICTS IN THE MODERN MIDDLE EAST. Examines the Arab-Israeli conflict, other regional conflicts, and the U.S.-Soviet Cold War in the Middle East.

HIST 3372 (3). THE SOUTH IN AMERICAN HISTORY. Explores the origin, development, and present and future status of the South's position in America.

HIST 3373 (3). SCIENCE, RELIGION, AND MAGIC IN EARLY MODERN ENGLAND. A study of the interaction of three ways of thinking about nature and the place of human beings within nature – science, magic and religion. Focuses on early modern England and religious divisions of the English Reformation and civil wars that brought political dissension and many competing views of nature and society.

HIST 3374 (3). DIPLOMACY IN EUROPE: NAPOLEON TO THE EUROPEAN UNION. Treats the evolution of the European state system from the post-Napoleonic settlement through the end of the Cold War and creation of the European Union.

HIST 3375 (3). SOCIAL HISTORY OF EARLY MODERN EUROPE. Studies European social and cultural development from the Renaissance to the French Revolution.

HIST 3376 (3). SOCIAL AND INTELLECTUAL HISTORY OF EUROPE. Covers European social, cultural, and intellectual development from 1848 to the present.

HIST 3377 (3). HISTORY OF SOUTH AFRICA. A survey of the history of South Africa from the 17th century to the present. Emphasis on the historical development of the patterns of economic, social, and political interaction among the peoples that led to the emergence of a majority-ruled, “new” South Africa.

HIST 3378 (3). PROBLEMS IN AFRICAN HISTORY. Examines a particular topic in the history of Africa. Potential topics include the trans-Saharan caravan system, the arrival and spread of Islam, the rise of African-European cultures, the slave trade, the abolition of slavery, imperialism and colonial transformations, nationalism, liberation movements, independence and underdevelopment, and democratization.

HIST 3379 (3). A CULTURAL HISTORY OF NEW MEXICO. Explores the history of struggles among the state’s dominant ethnic groups – Native Americans, Hispanos, and Anglos – over rituals, spaces, and objects. (SMU-in-Taos)

HIST 3380 (3). PROBLEMS IN IBERO-AMERICAN HISTORY. Allows students to study special topics on a comparative or thematic basis. Avoids the strictly national, chronological approach to history in favor of topical organization.

HIST 3381 (3). THE FIRST WORLD WAR AND ITS IMPACT. This course explores the origins as well as the geopolitical, social, cultural, and economic impact of the Great War on Europe and the wider world.

HIST 3382 (3). HISTORY OF MEXICO. Covers pre-Columbian, colonial, and independent Mexico. Culture and social developments are stressed.

HIST 3383 (3). HABSBURG MONARCHY: MAKING OF EAST CENTRAL EUROPE. The Habsburg monarchy from its medieval origins through its disintegration at the end of World War I, with emphasis on its enduring legacy to contemporary Europe.

HIST 3384 (3). HISTORY OF THE CONSUMER ECONOMY IN THE UNITED STATES. The history of the production, distribution, and marketing of consumer goods and services in the United States since 1750.

HIST 3385 (3). THE BALKAN PENINSULA IN ITS EUROPEAN CONTEXT. The impact of events in the Balkan peninsula on the development of European civilization from the conquests of the Ottoman Turks prior to 1566 through the contemporary era.

HIST 3386 (3). ORIENT AND OCCIDENT: ENCOUNTERS BETWEEN THE MIDDLE EAST AND THE WEST IN THE MODERN ERA. Explores major themes in relations between the countries and cultures of the Middle East and Western Europe from the early modern era to the present, beginning with Napoleon’s invasion of Egypt in 1798.

HIST 3387 (3). ASIA AND THE WEST. Goods, ideas, religions, artistic styles, technologies, soldiers, and diseases have long traveled between East and West. Scholarship, primary sources, literature, and film illuminate the material and ideological effects of the exchanges.

HIST 3388 (3). THE AFRICAN-AMERICAN URBAN EXPERIENCE, 1865–1980. A history of African Americans in American cities during the post-Civil War era. Investigates the forces that inspired African Americans to relocate to urban areas and surveys the dynamic lifestyles created within evolving African-American urban communities, the long periods of major African-American rural-to-city migration, and institution building. Also, African-American politics, economics, race relations, and social life.

HIST 3389 (3). PROBLEMS IN MIDDLE EASTERN HISTORY. A contemporary topic is treated in historical perspective. Sample topics include the Arab-Israeli conflict, oil and the politics of energy, and Islamic fundamentalism.

HIST 3390 (3). MODERN MIDDLE EAST: 1914 TO PRESENT. This survey course introduces students to history and politics of the contemporary Middle East.

HIST 3391 (3). FROM PEW TO BLEACHER: AMERICAN CULTURE AND INSTITUTIONS. An introduction to the formation of 19th- and 20th-century American culture and civilization through the study of the Church, print culture, museums, galleries, libraries, theater, Hollywood, television, and professional sports.

HIST 3392 (3). THE AFRICAN DIASPORA: LITERATURE AND HISTORY OF BLACK LIBERATION. Examines the role of black literature in bringing on the collapse of European colonial order and as a major force in the struggle against neocolonialism today. Explores links between literature and politics, literature and history, and thought and action in 20th-century Africa and the Caribbean.

HIST 3393 (3). CHINA IN REVOLUTION. Examines the century of revolution in China, from the mid-19th century to the present, beginning with the unique political and social structure of Old China, and analyzing the impact of Western imperialism and the creative responses of intellectuals, warlords, and revolutionaries.

HIST 3394 (3). THE NEW WOMAN: THE EMERGENCE OF MODERN WOMANHOOD IN THE U.S., 1890–1930. Explores the experiences of a variety of women during 1890 to 1930, including feminists, reformers, intellectuals, artists, working women, mothers, high school and college students, and juvenile delinquents.

HIST 3395 (3). PROBLEMS IN ASIAN HISTORY. Explores historical issues, trends or special topics in Asian history will be explored using a thematic or comparative format.

HIST 3396 (3). MIDDLE EASTERN ECONOMIC HISTORY. Examines economic patterns in Middle Eastern history, politics, and social life from the 18th century until the present.

HIST 3397 (3). MODERNITY AND CRISES OF IDENTITY. Draws on the works of major intellectuals and artists. Explores crises of identity in Western culture during the decades prior to World War I.

HIST 3398 (3). WOMEN IN CHINESE HISTORY. Examines changes and continuities from Neolithic times to today in women's roles in politics and the state, religions and ideologies, the family and its alternatives, and production and consumption.

HIST 3399 (3). U.S. FOREIGN POLICY FROM THE SPANISH AMERICAN WAR TO VIETNAM. A broad survey of American foreign relations in the 20th century. Traces the rise of the United States as a world power from Teddy Roosevelt's charge up Kettle Hill to the evacuation of Saigon in 1975.

HIST 3401 (4). THE GOOD SOCIETY. Examines the values and ideals that have been fundamental to the historical concept of the good society, with an emphasis on themes to aid students in understanding issues of race, gender, ethics, and power essential to any meaningful evaluation of society.

HIST 4101 (1). INDEPENDENT STUDY. Independent study of a selected topic in history under the direction of a faculty member.

HIST 4300 (3). JUNIOR SEMINAR IN RESEARCH AND WRITING. Consists of a common body of readings on research methods and writing and a relatively small core of required readings that are different in each section and organized around a topic chosen by the instructor. Closely supervised writing assignments, based upon the required readings, grow into a major research project by the end of the term.

HIST 4304 (3). AT THE CROSSROADS: GENDER AND SEXUALITY IN THE SOUTHWEST. Approaches the study of New Mexico, and by extension the Southwest, through the lens of gender and sexuality. Examines the area's history and changes over time.

HIST 4314 (3). JEWS IN EUROPE: MIDDLE AGES TO THE PRESENT. History of the Jews in Europe from the Middle Ages to the present.

HIST 4315 (3). HISTORY OF EAST CENTRAL EUROPE.

HIST 4319 (3). MEDIEVAL FORMATION OF ENGLISH CULTURE. When, where, and how was English culture – that globally widespread and distinctive variation of Western culture – formed? In the eighth to 16th centuries, in a realm with Oxford at its center.

HIST 4320 (3). MEDIEVAL EUROPE I. History of medieval Europe.

HIST 4321 (3). MEDIEVAL EUROPE II.

HIST 4322 (3). LEGAL HISTORY OF MEDIEVAL ENGLAND.

HIST 4323 (3). HISTORY OF IRELAND.

HIST 4324 (3). MEDIEVAL SPIRITUALITY.

HIST 4325 (3). ISLAM TO A.D. 1453.

HIST 4326 (3). ANGLO-SAXON ENGLAND TO 1160.

HIST 4327 (3). INDIA BEFORE THE EUROPEANS.

HIST 4354 (3). HISTORY OF IDEAS IN AMERICA. Studies the main themes of American public thought from the Colonial period to the Civil War and from the Civil War to the present.

HIST 4363 (3). INSIDE NAZI GERMANY. The reality beneath the spectacle of the Nuremberg rallies and the efficiency of the totalitarian state.

HIST 4365 (3). MAKING OF AUSTRALIAN SOCIETY. Examines the working of Australian society with special emphasis given to either the 19th or 20th century or to particular themes such as the impact of war, the response of the Australians to booms and depressions, and Australian national character.

HIST 4372 (3). HISTORY OF FRANCE I. A study of the history of France.

HIST 4373 (3). HISTORY OF MODERN FRANCE. A study of the history of modern France.

HIST 4375 (3). DEPARTMENTAL DISTINCTION. Honors program open to qualified seniors by invitation of the department.

HIST 4376 (3). DEPARTMENTAL DISTINCTION. Honors program open to qualified seniors by invitation of the department.

HIST 4384 (3). EARLY AND MEDIEVAL ENGLAND, FROM THE BEGINNING TO 1485. The early historical heritage of the English peoples, from prehistoric times through the end of the Middle Ages.

HIST 4385 (3). TUDOR AND STUART ENGLAND, 1485 TO 1714. The emergence of the modern British state and societies in the 16th and 17th centuries.

HIST 4388 (3). GEORGIAN AND VICTORIAN ENGLAND. The history of Georgian and Victorian England 1714–1867.

HIST 4397 (3). INTERNSHIP IN HISTORY. An opportunity for students to apply historical skills in a public setting working with a supervisor of the student's work and a professor assessing the academic component of the project. *Prerequisites:* Junior or senior standing and at least 2.500 overall GPA.

HIST 4398 (3). INDEPENDENT STUDY. History majors in their junior year may apply to the director of undergraduate studies to pursue a personally designed course of study under the guidance of an appropriate professor during the junior or senior year.

HIST 4399 (3). INDEPENDENT STUDY. History majors in their junior year may apply to the director of undergraduate studies to pursue a personally designed course of study under the guidance of an appropriate professor during the junior or senior year.

HIST 5305 (3). SEMINAR IN HISPANIC-AMERICAN BORDERLANDS. Study of the historiography of the social interactions among varied peoples along the native, colonial, and national borders of Hispanic America, particularly those borders shaping the United States.

HIST 5309 (3). SEMINAR IN NORTH AMERICAN BORDERLANDS. Study of the historiography of the social interactions among varied peoples along the native, imperial, and national borders of the North American continent, particularly those shaping the United States.

HIST 5310 (3). SEMINAR ON THE AMERICAN WEST. Introduction to the historiography of the American West and its contested meanings.

HIST 5312 (3). SEMINAR ON NATIVE AMERICAN HISTORY. Introduction to the historiography of Native Americans in United States history.

HIST 5330 (3). SEMINAR IN MEXICAN-AMERICAN HISTORY. An examination of the growing historiography on Mexican Americans that focuses on the relationship between their ethnic identity and the Southwest. (Also listed under Latin American history.)

HIST 5331 (3). SEMINAR IN MEXICAN-AMERICAN HISTORY. An examination of the growing historiography on Mexican Americans that focuses on the relationship between their ethnic identity and the Southwest. (Also listed under Latin American history.)

HIST 5338 (3). 20TH-CENTURY ENGLAND. A study of the decline and fall of 20th-century England.

- HIST 5340 (3). SEMINAR IN AMERICAN HISTORY.** Intensive examination of major topics in American history.
- HIST 5341 (3). SEMINAR IN AMERICAN HISTORY.** Intensive examination of major topics in American history.
- HIST 5344 (3). AMERICAN CULTURAL HISTORY.** Considers the histories of cultural institutions, objects, ideas, and practices. Explores an array of representative cultural conflicts and obsessions that have marked American history.
- HIST 5345 (3). INDUSTRIALISM AND REFORM IN THE U.S., 1877–1919.** An investigation of life in America in the Gilded Age and the Progressive Era, including industrialization, urbanization, and social conflict.
- HIST 5364 (3). THE CITY OF GOD IN ITS MILIEU.** An examination of St. Augustine's masterpiece, along with several of its models and analogues from the Greco-Roman and Hebrew traditions.
- HIST 5367 (3). RUSSIA FROM THE KIEVAN ERA TO 1881.** Surveys the development of state and society from the beginnings of history in East Slavic territory through the Era of the Great Reforms.
- HIST 5370 (3). SEMINAR IN FRENCH HISTORY.** An examination of key historians and of the several modes of historiographical writing that shape the vision of premodern France.
- HIST 5371 (3). THE FRENCH REVOLUTION AND NAPOLEON, 1789–1815.** The nature and causes of revolution, the French Revolution, and the career of Napoleon Bonaparte.
- HIST 5374 (3). RECENT EUROPEAN HISTORY: 1918 TO THE PRESENT.** Considers two attempts to revive Europe from the effects of disastrous world wars, as well as the sources of new vigor it has found in the past 30 years.
- HIST 5375 (3). EUROPE IN THE AGE OF LOUIS XIV.** The scientific revolution, the culture of the Baroque era, and development of the European state system under the impact of the Thirty Years' War and the wars of Louis XIV.
- HIST 5376 (3). EUROPE AGE OF ENLIGHTENMENT, 1715–1789.** A study of society and culture in 18th-century Europe, Enlightenment philosophies, rococo art, the classical age of music, enlightened despotism, and the coming of the French Revolution.
- HIST 5377 (3). THE UNITED STATES AND THE COLD WAR.** History of the U.S. and the Cold War.
- HIST 5380 (3). AUGUSTUS AND THE ROMAN EMPIRE.** After 100 years of civil war, the first Roman emperor, Augustus, inaugurated the 250-year Roman Peace that transformed government, society, art, and culture across the Roman Empire.
- HIST 5382 (3). SEMINAR IN LATIN AMERICAN HISTORY.** Intensive examination of major topics in Latin American history.
- HIST 5387 (3). SEMINAR IN AFRICAN HISTORY.** Intensive examination of special topics in African history.
- HIST 5390 (3). SEMINAR IN RUSSIAN HISTORY.** This advanced seminar covers selected topics in late Imperial Russian and Soviet history.
- HIST 5391 (3). ATHENIAN DEMOCRACY.** This seminar will examine the development of democratic government in Athens and study the functioning of that government in peace and in war.
- HIST 5392 (3). SEMINAR IN EUROPEAN HISTORY.** Intensive examination of major topics in European history.
- HIST 5395 (3). A HISTORY OF IRAN.** This seminar aims to introduce students to the history, cultures, and peoples of Iran and familiarize them with this complex and increasingly important country.
- HIST 5397 (3). SEMINAR IN ASIAN HISTORY.** Intensive examination of major topics in Asian history.

INTERDISCIPLINARY PROGRAMS AND COURSES

Biochemistry Program

www.smu.edu/biochemistry

Professor Steven Vik, Director

Bachelor of Science With a Major in Biochemistry

The B.S. degree in biochemistry reflects the interdisciplinary nature of modern biochemistry and includes courses in physics, mathematics, chemistry and biology. Undergraduate research is also highly recommended. These courses will prepare students for graduate study leading to a Ph.D. degree, for entrance to professional schools such as medicine, or for the chemical or biotechnology industry. The program includes a core of required courses but allows some flexibility in the choice of additional upper-division courses. Students planning to attend graduate school are advised to take at least three credits of undergraduate research (BIOL 3398, 4398 or CHEM 4397).

Note: There are two options for choosing the additional courses. Option 1 has been certified by the American Chemical Society for professional training in biochemistry. Option 2 provides a more traditional curriculum for biochemistry majors.

Students obtaining a B.S. degree in biochemistry may not also obtain a major or minor in chemistry or biology.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Core Chemistry Courses	25
CHEM 1303, 1304, 1113, 1114 General Chemistry	
CHEM 3351 Quantitative Analysis	
CHEM 3371, 3372, 3117, 3118 Organic Chemistry	
CHEM 5383, 5384 Physical Chemistry	
Core Biological Sciences Courses	11
BIOL 1401, 1402 Introductory Biology	
BIOL 3304 Genetics	
Core Biochemistry Courses	4
BIOL/CHEM 5310 Biological Chemistry: Macromolecular Structure and Function	
BIOL/CHEM 5110 Biological Chemistry: Laboratory	
Core Mathematics Courses	9
MATH 1337, 1338, 2339 Calculus	
Core Physics Courses	8
PHYS 1105, 1106, 1303/1307, 1304/1308 General Physics	
Additional Courses (Option 1 or Option 2)	9–11
<i>Option 1</i> (11 credits)	
<i>Required</i> (8 credits)	
CHEM 4397 Undergraduate Research	
CHEM 5185 Laboratory Methods in Physical Chemistry	
CHEM 5192 Inorganic Synthesis Laboratory	
CHEM 5392 Advanced Inorganic Chemistry	
<i>Electives</i> (choose 3 credits)	
BIOL/CHEM 5311 Biological Chemistry: Metabolism	
or BIOL/CHEM 5312 Physical Biochemistry	

Additional Courses (continued)**Option 2 (9 credits)****Required (6 credits)**

BIOL 3350 Cell Biology

BIOL/CHEM 5311 Biological Chemistry: Metabolism

Electives (choose 3 credits)

BIOL/CHEM 5311 Biological Chemistry: Metabolism

BIOL/CHEM 5312 Physical Biochemistry

or BIOL 5304 Molecular Biology: Control and
Expression of Genetic Information

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Departmental Distinction

A biochemistry major may graduate with departmental distinction by successfully completing a special program of study that includes independent reading and research and a senior thesis under the direction of a member of the faculty. The student must submit an application to the biochemistry adviser by the first term of the junior year and must have completed at least 22 hours toward the biochemistry degree with a GPA of at least 3.500 in courses required for the major. Upon approval from the respective departments, the student must enroll in the following courses: BIOL 4398, 4399 or CHEM 4397. Upon completion of these courses, the student will write a senior thesis and present it orally before a public audience including a faculty committee composed of the student's research adviser, the biochemistry adviser, and at least one additional faculty member. Upon successful completion of all degree requirements, the senior thesis and maintenance of a GPA of at least 3.500 in courses required for the major, the B.S. degree will be awarded with departmental distinction.

Classical Studies Program

Associate Professor Melissa Dowling, Director

Minor in Classical Studies

The minor in classical studies offers an integrated program studying the various aspects of the civilization of ancient Greece and Rome. The minor requires 18 hours, of which at least nine hours must be at the advanced level (3000 or above). Course-work for the minor must be distributed as follows:

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
Classical Languages	6
LATN 2311, 2312 or other advanced Latin courses or classical Greek at the 2000 level, when available	
Classical Studies (at least one course from each group)	12
<i>Group 1: Art History</i>	
ARHS 1303 Introduction to Western Art I: Prehistoric Through Medieval	
ARHS 3303 Archaeological Field Methods of Italy (3 hours on the excavation)	
ARHS 3312 Etruscan and Roman Art	
ARHS 3313 Etruscan and Iron Age Italy	
ARHS 3314 The Art and Architecture of Ancient Pompeii	
ARHS 3316 Art in Rome (SMU-in-Rome)	
ARHS 3317 Ancient Painting	
ARHS 3319 Art of the Roman Empire	
ARHS 3603 Archaeological Field Methods of Italy (6 hours on the excavation)	
ARHS 4310 Seminar in Ancient Art	
CLAS 3311 Mortals, Myths, Monuments of Ancient Greece	
<i>Group 2: History</i>	
HIST 3353 The History of Ancient Greece	
HIST 3354 Warfare and Diplomacy in Antiquity	
HIST 3355 Class and Gender in Ancient Society	
HIST 3361 Roman History and the Roman Mind	
HIST 5391 Athenian Democracy	
PHIL 3351 History of Western Philosophy (Ancient)	
<i>Group 3: Other</i>	
ARHS 3603 Archaeological Field Methods of Italy	
CLAS 2311 Myth and Thought in the Ancient World	
CLAS 3312 Classical Rhetoric	
LATN 3323 Latin Literature	
LATN 3324 Advanced Latin Grammar and Composition	
LATN 3325 Advanced Latin Readings and Composition	
LATN 3326 Advanced Latin Readings: Vergil	
LATN 3335 Medieval Latin	
RELI 3320 Introduction to Classical Judaism	
RELI 3326 Introduction to New Testament	
RELI 3349 Early Christianity	
RELI 3371 The World of the New Testament	

The Courses (CLAS)

CLAS 2311 (3). MYTH AND THOUGHT IN THE ANCIENT WORLD. Explores the conceptual and philosophical underpinnings of ancient understandings of reality in Western and non-Western cultures in both ancient and modern times. Materials for investigation will be primarily textual, including myths, epics, tragedies, and philosophical discourse in ancient Greece.

CLAS 2332 (3). SOCIETY EXPANDING: POLIS AND EMPIRE. This course presents a case-study approach to the development of cities, civilizations, and empires from the appearance of urbanism in Mesopotamia to the end of the European Middle Ages, with special reference to political, economic, and religious institutions.

CLAS 3311 (3). MORTALS, MYTHS, AND MONUMENTS OF ANCIENT GREECE. A visual analysis of the rich tapestry of ancient Greek culture, fountainhead of Western civilization, with emphasis on mythological, archaeological, and historical settings in which the art and architecture occur. Touches on various aspects of ancient Greek life, including religious practices, Olympic contests, theatrical performances, and artistic perfection.

CLAS 3312 (3). CLASSICAL RHETORIC. Readings in the ancient sophists, Plato, Aristotle, Isocrates, Cicero, Quintilian, Longinus, and St. Augustine; study of the intellectual foundations of the Western world.

Environmental Sciences Program

www.smu.edu/esp

Professor John Walther, Director

Bachelor of Science With a Major in Environmental Sciences

The natural systems that constitute Earth's environment are in continuous mutual interaction. These interactions occur on spatial scales that range from microscopic to global and on temporal scales that range from fractions of a second to millions of years. Scientific efforts to understand how the activities of humans affect the workings of such a complex arrangement must properly involve the identification and study of the fundamental processes operating at present in Earth's environment. Furthermore, to apply such knowledge with skill, insight and perspective, information must also be acquired on the extent to which ancient environmental conditions on Earth may have differed from those observed today and how such changes affected life on the planet. An intellectual and practical scientific problem of such vast scope must be approached in an interdisciplinary manner. This interdisciplinary requirement is important not only for students who will become professional environmental scientists, but also for those who want a solid scientific foundation for postgraduate training in environmental law, public policy, business and other fields.

The program includes a set of core courses that provide the student with the necessary background in chemistry, Earth science, physics, biology and mathematics to move into an Earth science, chemistry or biology emphasis in the upper-division courses. All environmental science majors come together their senior year in a multidisciplinary seminar in environmental science. Juniors and seniors may do an internship (e.g., with a nonprofit agency, an environmental lawyer, or an assessment and remediation company) for course credit and by special arrangement.

The environmental sciences major requires 68 total hours, consisting of 50 hours of core classes and 15–18 hours of electives taken with an emphasis in chemistry, Earth science or biology.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Core Biology Courses	7
BIOL 1402 Introductory Biology II	
BIOL/GEOL 3307 Ecology	
Core Chemistry Courses	15–16
CHEM 1303/1113 General Chemistry I and Lab	
CHEM 1304/1114 General Chemistry II and Lab	
CHEM 3371/3117 Organic Chemistry I and Lab	
CHEM 3372/3118 Organic Chemistry II and Lab	
or CHEM 3351 Quantitative Analysis	
Core Earth Sciences Courses	11
GEOL 1301 Earth Systems	
or GEOL 1315 Introduction to Environmental Sciences	
GEOL 3451, 3452 Earth Materials I, II	
Core Environmental Science Course	3
GEOL 3363 Environmental Geology Seminar	
Core Mathematics Courses	6
MATH 1337, 1338 Calculus With Analytic Geometry I, II	

Core Physics Courses	8
PHYS 1303/1105 Introductory Mechanics and Lab or PHYS 1307/1105 General Physics I and Lab	
PHYS 1304/1106 Introductory Electricity/Magnetism, Lab or PHYS 1308/1106 General Physics II and Lab	
Emphasis Courses (chosen from one area of emphasis)	15–18
<i>Chemistry Emphasis</i> (15–16 credits):	
CHEM 3372/3118 Organic Chemistry II and Lab or CHEM 3351 Quantitative Analysis	
CHEM 5383 Physical Chemistry I	
<i>Electives (9 or more credits from the following):</i>	
CHEM 4397 Research	
CHEM 5390 Environmental Chemistry	
GEOL 3353 Modern and Ancient Climates	
GEOL 3366 Environmental Geology/Geochemical Cycles	
GEOL 5384 Hydrogeology	
GEOL 5386 Geochemistry	
ME 5317 Groundwater Hydrology and Contamination	
<i>Earth Sciences Emphasis</i> (18 credits from the following):	
CEE 3341 Intro to Solid/Hazardous Waste Management	
CHEM 3351 Quantitative Analysis	
CHEM 3372/3118 Organic Chemistry II and Lab	
CHEM 5383 Physical Chemistry I	
CHEM 5390 Environmental Chemistry	
GEOL 3353 Modern and Ancient Climates	
GEOL 3360 Process Geomorphology	
GEOL 3366 Environmental Geology and Geochemical Cycles	
GEOL 3369 Paleobiology	
GEOL 3454 Structural Geology	
GEOL 3472 Principles of Sedimentation	
GEOL 4296, 4298 Senior Thesis Research Project or GEOL 4321 Internship in Geoscience	
GEOL 4390 Introduction to Geophysical Prospecting	
GEOL 5368 Paleoecology	
GEOL 5384 Hydrogeology	
GEOL 5386 Geochemistry	
ME 2342 Fluid Mechanics	
STAT 2331 Introduction to Statistical Methods or STAT 4340 Statistical Methods for Engineers and Applied Scientists	
<i>Biology Emphasis</i> (18 credits)	
BIOL 1401 Introductory Biology I	
<i>Electives (14 or more credits from the following):</i>	
BIOL 3303 Evolution	
BIOL 3304 Genetics	
BIOL 3305 Aquatic Biology	
BIOL 3306 Physiology	
BIOL 3311 Tropical Ecology/Sustainable Development (SMU-in-Costa Rica)	

Biology Emphasis Electives (continued)

- BIOL 3312 Wildlife Ecology (SMU-in-Kenya)
- BIOL 3342 Plant Kingdom
- BIOL 3343 Field Botany (SMU-in-Taos)
- BIOL 3347 Systematic Botany (SMU-in-Taos)
- BIOL 3354 Parasitology
- BIOL 3357 Biology of the Invertebrates
- BIOL 3403 Microbiology
- BIOL 4360 Environmental Toxicology
- BIOL 5366/5166 Vertebrate Anatomy and Origins, Lab
- BIOL 5311/5110 Biological Chemistry: Metabolism, Lab
- BIOL 5311 Biological Chemistry: Metabolism
- GEOL 3353 Modern and Ancient Climates

65–68**The Courses (ENSC)**

ENSC 3100 (1). SPECIAL TOPICS ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval is required. May be repeated for credit under different subtitle. A maximum of 6 credit hours may be applied toward the B.S. degree in environmental science.

ENSC 3200 (2). SPECIAL TOPICS ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval is required. May be repeated for credit under different subtitle. A maximum of 6 credit hours may be applied toward the B.S. degree in environmental science.

ENSC 3300 (3). SPECIAL TOPICS ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval is required. May be repeated for credit under different subtitle. A maximum of 6 credit hours may be applied toward the B.S. degree in environmental science.

ENSC 3310 (3). ECONOMIC AND ETHICAL ISSUES IN SUSTAINABLE DEVELOPMENT. Addresses and applies principles of ecological economics to assess the sustainability of development models at the micro and macro level. Basic concepts of ecological economics cost-benefit valuation techniques are presented and applied to the local people, government, and aid agencies for the implementation of sustainable development models. (SMU-in-Costa Rica only)

ENSC 3312 (3). DIRECTED RESEARCH. Scientific writing, oral, graphic, and tabular presentation of results derived from experimental design, field techniques, basic descriptive statistics, and parametric and nonparametric quantitative analysis. (SMU-in-Costa Rica only)

ENSC 3313 (3). TECHNIQUES IN WILDLIFE MANAGEMENT. Introduces laboratory techniques for monitoring ungulate populations and optimizing management practices, while studying behavioral, physiological, and social responses of animals to a changing environment. (SMU-in-Kenya only)

ENSC 3316 (3). DIRECTED RESEARCH. Scientific writing, oral, graphic, and tabular presentation of results derived from experimental design, field techniques, basic descriptive statistics, and parametric and nonparametric quantitative analysis. (SMU-in-Kenya only)

ENSC 3322 (3). INTERNSHIP IN ENVIRONMENTAL SCIENCE. Students experience work in a business or organization concerned with environmental issues. Opportunities may be found in environmental law, assessment and remediation companies, or among nonprofit or government agencies.

Environmental Studies Program
www.smu.edu/environmentalstudies

Professor John Walther, Director

Bachelor of Arts With a Major in Environmental Studies

The B.A. in environmental studies provides students with the tools necessary to address society's environmental problems through careers in government, non-governmental or educational organizations, public policy, business, and related fields. This interdisciplinary program incorporates courses from numerous departments and three schools in the University. The environmental studies major can be tailored to emphasize an area of interest (e.g., environmental biology, sustainability and globalization, environmental policy) and would be complemented by minors or other majors in environmental Earth science, economics, business, environmental science, biology, anthropology, journalism, corporate communications and public affairs, advertising, sociology and many of the disciplines in the humanities and social sciences.

The environmental studies core classes provide the student with the appropriate concepts and tools to understand the scope of global, regional and local environmental issues. Elective credit hours are chosen in consultation with an academic adviser, with at least one course from each of the three groups listed below. A senior thesis is required, with a field, research or other practical component taken in a department relevant to the student's interest (e.g., ANTH 4391 or 4392 Independent Study, JOUR 5308 Honors Thesis, ECON 4398 Departmental Distinction in Economics or GEOL 4399 Integrative Research).

Majors are strongly encouraged to take advantage of opportunities for study abroad and to seek relevant internships. Internship courses are offered in many departments and can be counted toward the major by petition. Approved SMU Abroad courses can also count as elective courses.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Core Courses	21
BIOL/GEOL 3307 Ecology	
GEOL 1301 Earth Systems	
GEOL 3353 Modern and Ancient Climates	
HIST 3309 North American Environmental History	
PP 3310 Environmental Policy	
STAT 2331 Introduction to Statistical Methods	
<i>or</i> STAT 2301 Statistics for Modern Business Decisions	
One thesis-related course	
Elective Courses	15
<i>Natural Sciences and Statistics (minimum of 3 hours)</i>	
BIOL 3303 Evolution	
BIOL 3308 Biology of Marine Mammals	
BIOL 3309 Marine Biology of European Coastal Waters	
BIOL 3310 Ecology and Human Impact in the North and Baltic Seas	
BIOL 3342 Plant Kingdom	
BIOL 3343 Field Botany	
CEE 2421 Aquatic Chemistry	

Elective Courses
Natural Sciences and Statistics (continued)

- ENSC 3313 Techniques in Wildlife Management
- GEOL 3330 Resources and the Environment
- GEOL 3340 Face of the Earth
- GEOL 3359 Computer Methods in Geological Sciences
- GEOL 3363 Environmental Geology Seminar
- GEOL 3366 Environmental Geology/Geochemical Cycles
- GEOL 3472 Principles of Sedimentation
- GEOL 5370 Global Change
- GEOL 5368 Paleocology
- GEOL 5384 Hydrogeology
- STAT 3380 Environmental Statistics
- STAT 5371, 5372 Experimental Statistics I, II

Social Sciences (minimum of 3 credit hours)

- ANTH 3319 Human Ecology
- ANTH 3374 Cultures and Environments of the Southwest
- ANTH 3384 Paradise Lost? The Archaeology and Ethics of Human Environmental Impacts
- ANTH 3385 Sustainable Living
- ANTH 4346 Environmental Anthropology
- ECO 4366 Economics of the Public Sector
- ECO 4382 Economics of Regulated Industries
- ECO 5301 Environmental Economics
- ECO 5360 Economic Development
- ECO 5361 Natural Resources and Energy Economics
- ENSC 3310 Economic and Ethical Issues in Sustainable Development
- ENSC 3311 Principles of Resource Management
- ENSC 3315 Environmental Policy/Socioeconomic Values
- ENST 3301 Natural Resource/Environmental Economics
- HIST 3318 Human History of Natural Disasters
- PHIL 3377 Animal Rights
- PHIL 3379 Environmental Ethics
- SOCI 4321 Immigration and Population Issues

Business and Engineering (minimum of 3 credit hours)

- CEE 1301 Environment and Technology: Ecology and Ethics
- CEE 1302 Intro to Civil and Environmental Engineering
- CEE 2304 Intro to Environmental Engineering and Science
- CEE 3341 Intro to Solid/ Hazardous Waste Management
- CEE 3355 Environmental Impact Evaluation, Policy, and Regulation
- CEE 5325 Disaster Management
- MNO 3375 Corporate Social Responsibility and Ethical Leadership
- MNO 4371 Leadership and Culture

The Courses (ENST)

ENST 1100 (1). ENVIRONMENTAL STUDIES ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitles.

ENST 1200 (2). ENVIRONMENTAL STUDIES ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitles.

ENST 1300 (3). ENVIRONMENTAL STUDIES ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitles.

ENST 2100 (1). ENVIRONMENTAL STUDIES ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitles.

ENST 2200 (2). ENVIRONMENTAL STUDIES ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitles.

ENST 2300 (3). ENVIRONMENTAL STUDIES ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitles.

ENST 3100 (1). SPECIAL TOPICS ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval is required. May be repeated for credit under different subtitle. A maximum of 6 credit hours may be applied toward the B.A. degree in environmental studies.

ENST 3200 (2). SPECIAL TOPICS ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval is required. May be repeated for credit under different subtitle. A maximum of 6 credit hours may be applied toward the B.A. degree in environmental studies.

ENST 3300 (3). SPECIAL TOPICS ABROAD. Courses offered in SMU-approved international programs. Prior departmental approval is required. May be repeated for credit under different subtitle. A maximum of 6 credit hours may be applied toward the B.A. degree in environmental studies.

ENST 3301 (3). NATURAL RESOURCE AND ENVIRONMENTAL ECONOMICS. Development of the principles of natural resource and environmental economics from an Earth science perspective. Includes supply and demand for energy, mineral, and water resources. Also, sustainability and climate change. *Prerequisite:* ECO 1311. *Recommended:* GEOL 3330.

ENST 3311 (3). PRINCIPLES OF RESOURCE MANAGEMENT. Introduces practical tools used in addressing complex environmental problems, including coastal zone planning, guidelines for ecologically sustainable development, environmental impact assessment, fisheries management, and protected area planning and management. (SMU-in-Costa Rica only)

ENST 3315 (3). ENVIRONMENTAL POLICY AND SOCIOECONOMIC VALUES. Introduces the major constituencies that affect African conservation (nongovernmental conservation groups, economic interests, etc.) and their underlying philosophies. Students learn to determine effective approaches to resource management. (SMU-in-Kenya only)

Ethnic Studies Program

Associate Professor Kenneth Hamilton, Director

The ethnic studies program offers an interdisciplinary examination of African-American and Mexican-American experiences through the social sciences and humanities. Students receive instruction in important periods of African, Mexican and American history, probing the roots of traditions beginning in early African and pre-Columbian cultures, as well as examining minorities in contemporary U.S. society. This program provides good preparation for graduate work in the social sciences, the humanities and professional schools, as well as jobs and careers in many fields. Education, law, journalism, urban planning, business, social work and politics are a few of the fields for which ethnic studies provides a strong background.

Bachelor of Arts With a Major in African/African-American Studies or Mexican-American Studies

The B.A. degree focuses on humanities and, consequently, requires less work in methodology and statistics than the B.S. degree. Courses to fulfill the requirements for these programs should be selected in consultation with the program director. A total of 33 hours are required to complete the major in African and African-American studies, and 34 hours are required to complete the major in Mexican-American studies.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Foundation Courses	6
ETST 2301 (SOCI 3305, CFA 3310) Race and Ethnicity in the United States	
SOCI 3370 Minority-Dominant Relations	
Basic Courses	18–19
<i>African and African-American Studies (18 credit hours)</i>	
HIST 2392 Modern Africa	
HIST 3313 African Americans in the United States, 1607–1877	
HIST 3314 African Americans in the United States, 1877–Present	
<i>Three courses chosen from the following, with two outside of history and at least one at the 3000 level or above:</i>	
ANTH 3314 Peoples of Africa	
ARHS 3390 Traditional Arts of Africa	
ENGL 3362 African-American Literature	
HIST 2391 Africa to the 19th Century	
HIST 3304 Blacks and the Civil Rights Movement	
HIST 3378 Problems in African History	
HIST 3388 The African-American Urban Experience, 1865–1980	
HIST 5341 Seminar in American History: African Slavery in the U.S.	
MUHI 3340 Jazz: Tradition and Transformation	

Basic Courses***Mexican-American Studies (19 credit hours)***

- ETST 4352 (SPAN 4352) Conversations and Community
 HIST 3324 The Mexican Americans, 1848 to the Present
 SOCI 3372 Chicanos in the Southwest
 SPAN 1401 Beginning Spanish (or higher level)

Three courses chosen from the following:

- ANTH 3312 Mesoamerican Archaeology
 ARHS 3383 The Ancient Maya
 ARHS 3385 The Aztecs Before and After the Conquest
 ENGL 3363 Chicana/Chicano Literature
 HIST 3305 The Hispanos of New Mexico,
 1848 to the Present
 HIST 3308 History of Hispanics in the U.S. Through
 Film
 HIST 3382 History of Mexico
 HIST 5330, 5331 Seminar in Mexican-American History
 WL 3306 Chicano Literature of the Southwest

Cross-Cultural Course**3**

- African/African-American studies students choose from
 Mexican-American studies courses
 Mexican-American studies students choose from African/
 African-American studies courses

Supporting Courses (6 hours chosen from the following)**6**

- ANTH 3353 Indians of North America
 ANTH 3361 Language in Culture and Society
 ANTH 3368 (SOCI 3368) Urban Life: A Cross-Cultural
 Perspective
 ENGL 1365 Literature of Minorities
 ENGL 3354 Non-Western Culture and Literature
 ENGL 3365 (CF 3398) Jewish-American Literature/Culture
 ETST 2305 Internship in Ethnic Studies
 HIST 2380 Ethnic Regions in the Western World
 PLSC 4337 Civil Rights
 RELI 3324 The Jewish Experience in America

33–34***Bachelor of Science With a Major in African/African-American Studies or Mexican-American Studies***

The B.S. includes both humanities and social science. A total of 36 hours are required to complete the major in African and African-American studies, and 37 hours are required to complete the major in Mexican-American studies. The same pattern of courses is required as for the B.A. degree, with the addition of six hours of required methods courses, three of which may substitute for three hours of supporting courses:

- SOCI 3311 Qualitative Research Methods
 STAT 2301 Statistics for Modern Business Decisions
 or STAT 2331 Introduction to Statistical Methods

**Minor in African/African-American Studies
or Mexican-American Studies**

The African and African-American studies minors are each 18 credit hours. The Mexican-American studies minor is 19 credit hours.

Requirements for the Minor

African and African-American Studies

HIST 2392 Modern Africa

HIST 3313 African Americans in the U.S., 1607–1877

HIST 3314 African Americans in the U.S., 1877–Present

Three courses chosen from the following, with two outside of history and at least one at the 3000 level or above:

ANTH 3314 Peoples of Africa

ARHS 3390 Traditional Arts of Africa

ENGL 3362 African-American Literature

HIST 2391 Africa to the 19th Century

HIST 3304 Blacks and the Civil Rights Movement

HIST 3378 Problems in African History

HIST 3388 The African-American Urban Experience, 1865–1980

HIST 5341 Seminar in American History: African Slavery in the U.S.

MUHI 3340 Jazz: Tradition and Transformation

Mexican-American Studies

ETST 4352 (SPAN 4352) Conversations and Community

HIST 3324 The Mexican Americans, 1848 to the Present

SOCI 3372 Chicanos in the Southwest

SPAN 1401 Beginning Spanish (or higher level)

Three courses chosen from the following:

ANTH 3312 Mesoamerican Archaeology

ARHS 3383 The Ancient Maya

ARHS 3385 The Aztecs Before and After the Conquest

ENGL 3363 Chicana/Chicano Literature

HIST 3305 The Hispanics of New Mexico, 1848–Present

HIST 3308 History of Hispanics in the U.S. Through Film

HIST 3382 History of Mexico

HIST 5330, 5331 Seminar in Mexican-American History

WL 3306 Chicano Literature of the Southwest

The Courses (ETST)

ETST 2301 (3). INTRODUCTION TO RACE AND ETHNICITY IN THE UNITED STATES. An interdisciplinary seminar designed to introduce students to the analysis of race and ethnicity in the United States.

ETST 2305 (3). INTERNSHIP IN ETHNIC STUDIES. Offers experience in varied careers serving ethnic communities. Opportunities include advertising for public service, community organizing, nonprofit economic development, local historical preservation, and more. Departmental consent required.

ETST 4352 (3). CONVERSATIONS AND COMMUNITY. Advanced Spanish course that brings oral and written language to the center of students' learning by bringing them in contact with native Spanish speakers from a variety of Dallas communities. Includes fieldwork and contact hours in the classroom. Aimed at improving oral and listening skills of non-native speakers of Spanish. *Prerequisite:* C- or better in SPAN 3358. Not for heritage or native speakers of Spanish.

Human Rights Program
www.smu.edu/humanrights

Professor of Practice Rick Halperin, Director

Bachelor of Arts With a Major in Human Rights

The Embrey Human Rights Program offers an interdisciplinary program introducing students to the study of universally recognized civil, political, economic, social and cultural human rights. The program offers undergraduate majors and minors, lecture programs, and the opportunity for any SMU student to participate in educational travel programs to visit human rights sites worldwide.

The human rights major consists of 30 hours of coursework related to human rights and at least 11 hours in any one world language. Students may also demonstrate proficiency in a world language through testing or other approved means. Given the interdisciplinary nature of the study of human rights, students are required to take a second major or a minor in a related field. Students must also select three elective courses from the approved elective list below (or they may substitute other courses as approved by the director).

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Core Courses	12
HRTS/HIST 3301 Human Rights America's Dilemma	
HRTS/WGST 3310 Gender and Human Rights	
HRTS/PLSC 4334 Politics/Legacies: Civil Rights Movement	
PLSC 4380 National Security and Human Rights	
Human Rights Tracks	9
<i>Three courses from either track, from at least two departments and with at least 6 hours at the 3000 level or above.</i>	
<i>Gender and Human Rights Track</i>	
ANTH 1321 First-Year Seminar in Anthropology	
ANTH 2301 Introductory Cultural Anthropology	
ANTH 3310 Gender and Sex Roles: A Global Perspective	
ANTH/WGST 3328 Gender Violence	
ANTH 3336 Gender and Globalization	
ANTH 4386 The Archaeology of Gender and Sexuality	
HIST 3312 Women in American History	
HIST 3317 Women in Latin American Societies	
HIST 5340 Seminar: Women's Rights in the United States	
PLSC 4339 Women in the Law	
PLSC 4344 Gender and World Politics	
SOC1 3371 Sociology of Gender	
SOC1 4373 Class, Race, and Gender Inequalities	
WGST 2309 Lesbian and Gay Literature and Film	
<i>Public Policy and Human Rights Track</i>	
ANTH 3327 Culture Change and Globalization	
ANTH/HRTS 3329 Contesting Development: Global and Local Impacts and Human Rights	
ANTH 3333 The Immigrant Experience	
ANTH/HRTS 3348 Health as a Human Right	
ANTH 3351 Forensic Anthropology: Stories Told by Bones	
ANTH 3353 Indians of North America	

Public Policy and Human Rights Track (continued)

- ANTH 3354 Latin America: People, Places, and Power
- ANTH 3358 Indians of the Southwest, 16th Century–Present
- ANTH 3388 Warfare and Violence
- ANTH 4303 Political Economy of Health
- ANTH/HRTS 4309 Human Rights, Indigenous Peoples, and Nation States
- ENGL 3383 Literary Executions
- HIST 2391 Africa to the 19th Century
- HIST 2392 Modern Africa
- HIST 2395 Modern East Asia
- HIST 3304 Blacks and the Civil Rights Movement
- HIST 3306 Colony to Empire: U.S. Diplomacy 1789–1941
- HIST 3307 The U.S. and the Cold War, 1945–1989
- HIST 3313 African Americans in the U.S., 1607–1877
- HIST 3314 African Americans in the U.S., 1877–Present
- HIST 3322 Native American History
- HIST 3341 Soviet/Post-Soviet Society Politics, 1917–Present
- HIST 3371 Conflicts in the Modern Middle East
- HIST 3392 The African Diaspora
- HIST 3393 China in Revolution
- HIST 3401 The Good Society
- HIST 4363 Inside Nazi Germany
- MNO 3375 Corporate Social Responsibility and Ethical Leadership
- PHIL 3371 Social and Political Philosophy
- PHIL 3374 Philosophy of Law
- PHIL 3377 Animal Rights
- PHIL 3380 Ethical Theory
- PLSC 1380 Introduction to International Relations
- PLSC 3345 Governments and Politics of the Middle East
- PLSC 3346 Japanese Politics and Society
- PLSC 3347 Governments and Politics of Africa
- PLSC 3348 Governments and Politics of Latin America
- PLSC 3352 Governments and Politics of China
- PLSC 3358 Governments and Politics of Russia
- PLSC 3381 Current Issues in International Politics
- PLSC 3383 The American Foreign Policy Process
- PLSC 4321 Basic Issues in American Democracy
- PLSC 4337 Civil Rights
- PLSC 4381 National Security Policy
- SOCI 3305/ETST 2301 Race/Ethnicity in the United States
- SOCI 3360 Law and Society
- SOCI 3363 Crime and Delinquency
- SOCI 3370 Minority-Dominant Relations
- SOCI 4335 Social Movements
- SOCI 4360 Gangs in the United States
- SOCI 4364 Correctional Systems

Electives	9
<i>Three courses from at least two departments, if not taken for track 1 or 2 above, with at least 3 hours at the 3000 level or above.</i>	
Any ANTH (or colisted HTRS course), ETST, or WGST course from track 1 or 2 above.	
ANTH 3301/SOCI 3301 Health, Healing, and Ethics	
ANTH 3311 Mexico: From Conquest to Cancun	
ANTH 4305 Applied Anthropology	
ANTH 4386 The Archaeology of Gender and Sexuality	
ARHS 1338 Chicano Art and the Politics of Place	
ARHS 3310 War, Looting, Collecting in the Ancient World	
ARHS 3334 The Look of Freedom	
ARHS 3388 Why We Go to Auschwitz	
ENGL 1365 Literature of Minorities	
ENGL 3367 Ethical Implications of Children's Literature	
ENGL 3377 Literature/Construction of Homosexuality	
ENGL 3383 Literary Executions	
FREN 4376 Introduction to Francophone Cultures	
Any HIST course from track 1 or 2 above.	
HIST 3363 The Holocaust	
HIST 3377 History of South Africa	
HIST 3398 Women in Chinese History	
HRTS/ASAG 3315 Art and Social Practice	
HRTS/WL 3341 The Failure of Humanity in Rwanda	
HRTS 3348 Health as a Human Right	
HRTS/RELI 3387 Religion and Human Rights	
HRTS 4309 Human Rights/Indigenous People	
HRTS 4390, 4391 Special Topics (for group tour credit)	
HRTS 4392 Special Topics	
JOUR 5305 Human Rights and the Journalist	
MNO 3375 Corporate Social Responsibility/Ethical Ldshp	
MNO 4371 Leadership and Culture	
Any PHIL course from track 1 or 2 above.	
Any PLSC course from track 1 or 2 above.	
PSYC 3375 Human Rights From a Psychological Perspective	
RELI 3321 Religion and the Holocaust	
RELI 3390 Anti-Semitism in Western Civilization	
Any SOCI or colisted ETST course from track 1 or 2 above.	
SPAN 3313 Human Rights in Latin America	
SPAN 3374 Topics in Spanish-American Civilization	
SPAN 5364 Human Rights Issues: Contemp Spanish Lit	
WL/SOCI/COMM 3302 Ethnoviolence	
WL 3330 Migration, Occupation, and Independence in North	
African Cinema	
WL 3355 Tradition, Community, Identity in African Cinema	
WL 3362 Postcolonial France	
WL 3370 Shadows of Enlightenment: Human Rights in	
Germany	
World Language (a single language)	11

Minor in Human Rights

A human rights minor consists of a minimum of 18 hours of coursework. HRTS/HIST 3301 is required. The remaining 15 hours must be taken from the approved elective list; nine hours of these must be at the advanced level (3000 or above). In addition to HRTS/HIST 3301, no more than two courses from any one department may be taken as electives unless preapproval is given by the director. Students may not earn both the B.A. in human rights and the minor in human rights.

The minor also requires a commitment of students' effort, time and talent in defense of or in advocacy for human rights. Students will complete either a 20-hour service-learning placement with a human rights community-based agency (as a component of HRTS/HIST 3301) or will receive independent credit (HRTS 4390, 4391) by participating in an Embrey Human Rights Program sponsored journey to a location where recent human rights violations have occurred or are occurring (e.g., Cambodia, Rwanda, Poland, Argentina, the U.S.-Mexico border) and completing a research paper on a human rights topic related to the site.

The Courses (HRTS)

HRTS 3301 (3). HUMAN RIGHTS: AMERICA'S DILEMMA. Examines certain violations of human rights within their historical context and explores America's commission and prevention of human rights violations.

HRTS 3309 (3). LESBIAN AND GAY LITERATURE AND FILM: MINORITY DISCOURSE AND SOCIAL POWER. The exploration, through literature and film, of the struggles by gay men and lesbians to create social identities and achieve human rights. Study of key cultures and pivotal historical periods in the West from ancient Greece to contemporary America.

HRTS 3310 (3). GENDER AND HUMAN RIGHTS. Introduction to global women's human rights and other intersections of human rights and gender, such as abuse of children's rights, gender-based violence, health and reproductive rights, and evolving concepts of sexual rights.

HRTS 3315 (3). ART AND SOCIAL PRACTICE. Research in a variety of areas that support practices in art outside the studio, including contemporary developments in criticism and theory, approaches to media, social and community contexts, and specific geographic or cultural contexts. Focused seminar discussion, research, and group projects. *Prerequisite:* Permission of instructor.

HRTS 3329 (3). CONTESTING DEVELOPMENT: GLOBAL AND LOCAL IMPACTS AND HUMAN RIGHTS. Examines the highly variable impacts of economic development on lives and communities around the world, with a focus on human rights issues.

HRTS 3341 (3). THE FAILURE OF HUMANITY IN RWANDA. An introduction to the 1994 Rwanda genocide that seeks to understand not only its origins but also its sociological, ethical, and human rights implications.

HRTS 3348 (3). HEALTH AS A HUMAN RIGHT. This course examines the concept of human rights critically, with an eye for cross-cultural variation and a particular focus on rights that are health-related.

HRTS 3377 (3). LITERATURE AND THE CONSTRUCTION OF HOMOSEXUALITY. Same-sex love and desire have been a focus for literary, philosophical, and religious writing from the ancient world to the present and today's concerns with LGBT civil rights and marriage. This course examines the cultural history of concern with the nature of same-sex love; its social value or dangers; and its moral and philosophical significance as the object of literary expression and representation, as a crucial thread in the history of gender politics, and as an ongoing locus of conflict over human rights.

HRTS 3387 (3). RELIGION AND HUMAN RIGHTS. Major world religious traditions and modern ideas of human rights. Religious understandings of humanity and political order are considered in relation to contemporary human rights issues.

HRTS 4309 (3). HUMAN RIGHTS, INDIGENOUS PEOPLES, AND NATION STATES. An examination of human rights issues among contemporary indigenous peoples, especially the

impact on their cultures and societies from governmental and nongovernmental organizations, large-scale development programs, and global tourism.

HRTS 4334 (3). THE POLITICS AND LEGACIES OF THE CIVIL RIGHTS MOVEMENT. Examines the politics and legacies of the movement that destroyed the system known as Jim Crow and removed barriers to political participation by African Americans.

HRTS 4390 (3). SPECIAL TOPICS IN HUMAN RIGHTS ABROAD. Students travel abroad to designated countries to research and write about human rights situations and violations through interaction with educational, governmental, and nongovernmental representatives; human rights activists; and survivors of human rights violations.

HRTS 4391 (3). SPECIAL TOPICS IN HUMAN RIGHTS ABROAD. Students travel abroad to designated countries to research and write about human rights situations and violations through interaction with educational, governmental, and nongovernmental representatives; human rights activists; and survivors of human rights violations.

HRTS 4392 (3). SPECIAL TOPICS IN HUMAN RIGHTS. Students research and write about a specific human rights issue under the supervision of the director and interact with human rights agencies in the greater Dallas area (or beyond).

Individualized Studies in the Liberal Arts Program

Professor Renee McDonald, Director

Bachelor of Arts With a Major in Individualized Studies in the Liberal Arts

General Information. The individualized studies major in the liberal arts provides students the opportunity to design an interdisciplinary program of study that brings fields of inquiry together in unique combinations not currently offered as a program in the SMU curriculum. Interested and academically qualified students are invited to explore this possibility with the program's director (214-768-2168). If the student's plan of study appears to have merit, the director will suggest faculty members in appropriate departments and divisions of the University who can provide further assistance in designing the program. Students must ask at least three faculty members to constitute a Faculty Supervisory Committee, with one serving as chair.

Students with at least a 3.500 GPA in the first 24 term hours taken through enrollment at SMU are eligible to pursue the program, which consists of individually designed majors in the liberal arts of at least 36 term hours, with a minimum of 24 term hours of advanced courses (3000 level or above). The program must satisfy all Universitywide requirements and all other University and Dedman College graduation requirements. Students are responsible for fulfilling all prerequisites for courses taken. The degree will be identified as a B.A. with a major in individualized studies in the liberal arts. A note on the transcript will denote the specialization. Students intending to seek admission to graduate schools are encouraged to include at least 30 hours of a coherent set of courses in an identifiable disciplinary field.

Administrative Procedures. The Dedman College Undergraduate Council shall have the final authority to approve all individualized studies programs. The Dedman College associate dean for academic affairs will act as the director of the individualized studies program. Prior to declaring the major, a number of steps must be completed:

1. The student, with the assistance of the director, must form a Faculty Supervisory Committee with a minimum of three members. The committee will provide advice and guidance to the student. At least two members, including the chair of the committee, shall be resident members of the Dedman College faculty.
2. The student will submit a plan of study to the director and to each Faculty Supervisory Committee member. If the committee and the director approve the plan of study, the plan is then submitted for approval by the Dedman College Undergraduate Council.
3. The plan is transmitted to the Dedman College Office of the Associate Dean for Academic Affairs and to the Dedman College Office of Records and Academic Services.

The plan of study must be submitted to the Dedman College Undergraduate Council for approval before the completion of 60 total term hours of coursework. The chair of the Faculty Supervisory Committee and the Dedman College Dean's Office will recommend candidates for graduation. The director of the Office of Records and Academic Services will be responsible for verifying and certifying graduation requirements.

Distinction. Students completing an individualized studies major can do so with distinction, which is a prearranged, two-term sequence of advanced coursework culminating in an advanced research project. The research is planned during the junior year and accomplished during the senior year. Many of these projects may qualify as a project through the Dedman College Interdisciplinary Institute and/or an Engaged Learning project, and it is the student's responsibility to consider all possibilities and deadlines.

To undertake distinction, a student must have completed 60 hours of coursework, have a GPA of 3.500 in the major courses, and must have completed a minimum of 15 advanced hours in the individualized studies major. The research project for distinction in individualized studies must be substantively different from a research project for possible distinction in a second major field. Graduation with distinction is designated on the diploma for a student who successfully completes the criteria outlined.

To earn distinction, a student must

1. Complete 36 hours of approved coursework for the individualized studies major with a 3.500 GPA or higher.
2. Submit a formal research proposal, based on the two options listed below, for approval of the student's Faculty Supervisory Committee and the individualized studies program director (Dedman College Dean's Office). The proposal must be unanimously approved. Any substantive changes must be reviewed and approved by the Faculty Supervisory Committee.

Option One:

Create a distinction committee of three faculty members including at least two members of the Faculty Supervisory Committee. This project committee should include a mentor in each field that the project brings together.

Complete an advanced theory or methods course as recommended by the student's distinction committee and approved by the Faculty Supervisory Committee. This course may or may not be a part of the 36-hour major and should directly relate to the development of the distinction project.

Complete a research project for three term hours of credit beyond the 36-hour major requirement. This can either be a DCAR course or an independent study taken in the field connected to the primary distinction committee member. As part of the course, the student must complete a significant research paper with a minimum of 5,000 to 8,000 words of text, including a bibliography, in APA or other appropriate academic writing style. The course instructor is the primary member of the distinction committee.

Option Two:

If the student has significant coursework in one Dedman College subject area, the student may submit a proposal to the Faculty Supervisory Committee to meet that department's requirements for distinction. This plan must have the approval of the Faculty Supervisory Committee and the department. The course instructor for distinction must be a faculty member of that department and a member of the student's Faculty Supervisory Committee.

3. Give an oral presentation and defense of the project to the distinction committee or instructor (whichever is applicable), the student's Faculty Supervisory Committee and the individualized studies program director (Dedman College Dean's Office). The presentation should include an overview of the project rationale, methodology, significant results and relevance to the larger academic community. This presentation must be scheduled to take place before the last day of instruction. The distinction paper must be submitted at least two weeks prior to presentation to the distinction committee or instructor, the Faculty Supervisory Committee, and the individualized studies program director (Dedman College Dean's Office). All parties must be able to attend. For option two, the instructor and the Faculty Supervisory Committee must be able to attend.
4. Complete the overall project with a grade of A or A-, determined by the student's distinction project committee or instructor, and approved by the Faculty Supervisory Committee and the director of the individualized studies program.

When all the above qualifications have been met, the granting of distinction for individualized studies in the liberal arts is recommended by the Faculty Supervisory Committee to the director of the program, and ultimately granted or denied by the individualized studies program director (Dedman College Dean's Office).

The Courses (DCAR)

DCAR 4001 (0). DEDMAN COLLEGE ADVANCED RESEARCH. Independent research for students pursuing distinction in interdisciplinary or individualized majors or engaged in advanced independent research in relation to other Dedman College programs. Enrollment in this course requires preapproval of the senior associate dean of academic affairs.

DCAR 4301 (3). DEDMAN COLLEGE ADVANCED RESEARCH. Independent research for students pursuing distinction in interdisciplinary or individualized majors or engaged in advanced independent research in relation to other Dedman College programs. Enrollment in this course requires preapproval of the senior associate dean of academic affairs.

DCAR 4302 (3). DEDMAN COLLEGE ADVANCED RESEARCH. Independent research for students pursuing distinction in interdisciplinary or individualized majors or engaged in advanced independent research in relation to other Dedman College programs. Enrollment in this course requires preapproval of the senior associate dean of academic affairs.

International Studies and Area Studies Program

www.smu.edu/internationalstudies

Professor Stephen K. Wegren, Director

Bachelor of Arts With a Major in International Studies

To succeed in an international career, students need expertise in the politics, economics, history, language and cultures of societies other than their own. The curricula for the International and Area Studies Program are designed to provide students with a foundation for this expertise, requiring coursework in the social sciences, business, language and humanities. A student majoring in international studies also chooses a region in which to specialize: Europe, Asia, Latin America, or the Middle East/Africa.

As an alternative to the international studies major, a student may choose an area of study to earn a minor. Minors include European studies, Asian studies, Latin American and Iberian studies, and Middle Eastern/African studies.

The international studies major provides exposure to global issues through the basic curriculum. **Note:** Courses taken in the basic curriculum do not double count in the regional specialization. The international studies major provides students with the opportunity to design an interdisciplinary program of study that facilitates an understanding of the human experience in a global perspective, while at the same time allowing them to develop in-depth knowledge and expertise in a specific geographical area. The major requires 33 hours of coursework (in addition to prerequisites for certain courses and the language requirement).

The senior seminar, **INTL 4388**, which must be taken on campus by all majors in their senior year, is designed as a capstone course where students integrate and apply what they have learned. The topic of the seminar will vary depending upon the professor.

A cocurricular requirement for the B.A. in international studies is two years of college-level study of a world language or equivalent. **Note:** Latin does not fulfill the language requirement in this major. Courses for the language requirement do not count toward the 33-hour requirement. The language requirement may be met through examination, the transfer of language study credit from another university or by taking courses on campus or study abroad.

An updated list of available courses and additional information about independent readings, departmental distinction requirements, study abroad opportunities and internship requirements are available on the website for international studies.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Basic Curriculum (at least two courses must be 3000 level or above)	15
<i>Introduction to World Cultures</i> (select one)	
ANTH 2301 Introductory Cultural Anthropology	
HIST 1302 World Cultures and Civilization	
SOC1 2377 Markets and Cultures	
<i>International Economics</i> (select one)	
ANTH 4384 Global Issues and Development	
ECO 4357 International Trade	
ECO 4358 International Macroeconomics	

International Economics (continued)

PLSC 3389 International Political Economy (ECO 1311 or 1312 is strongly recommended although neither is required as a prerequisite.)

International Politics (select one)

PLSC 1340 Introduction to Comparative Politics
PLSC 1380 Introduction to International Relations

Global Perspective (select two)

These courses do not have a regional focus:

ADV 3354 International Advertising (SMU-in-London)
ANTH/SOCI 3301 Health, Healing, and Ethics
ANTH/SOCI 3310 Gender/Sex Roles: A Global Perspective
ANTH 3327 Culture Change and Globalization
ANTH 3329 Contesting Development: Global and Local Impacts and Human Rights
ANTH 3333 The Immigrant Experience
ANTH 3336 Gender/Globalization: Cultural/Ethical Issues
ANTH 3348 Health as a Human Right
ANTH 3365 The Rise and Fall of Superpowers
ANTH/RELI/SOCI 3366 Magic, Myth, and Religion Across Cultures
ANTH/SOCI 3368 Urban Life: A Cross-Cultural Perspective
ANTH 3384 Paradise Lost? Archaeology/Ethics of Human Environmental Impacts
ANTH 3388 Warfare and Violence
ANTH 4303 Political Economy of Health
ANTH 4304 Migration, Ethnicity, and Nationalism
ANTH 4307 Seminar in International Health
ANTH 4309 Human Rights, Indigenous Peoples, and National States
ANTH 4384 Global Issues and Development: An Overview (seniors only)
ARHS 3368 Art and Context: 1940–1970
ARHS 3369 Contemporary Art: 1965–Present
BA 3300 Topics: International Management (study abroad)
COMM 3321 Communication in Global Contexts
ECO 5359 Economic Development: Microeconomic Perspectives
ECO 5360 Economic Development: Macroeconomic Perspectives
ECO 5361 Natural Resources and Energy Economics
ECO 5362 Economic Growth
ENGL 3354 Non-Western Culture and Literature
FILM 2351 International Film History
FILM 4399 Global Media Systems
FINA 4329 International Finance (available only to business majors with a minor or second major in international studies)
HIST 2380 Ethnic Regions in the Western World

Global Perspective (continued)

- HIST 3301** Human Rights: America's Dilemma
HIST 3306 Colony to Empire: U.S. Diplomacy 1789–1941
HIST 3307 The U.S. and the Cold War
HIST 3337 Ethical Dilemmas in a Global Age
HIST 3368 Warfare in the Modern World
HIST 3397 Modernity and Crises of Identity
HIST 3399 U.S. Foreign Policy From the Spanish-American War to Vietnam
MKTG 3300 Marketing Management Field Project (study abroad programs)
MKTG 3348 International Marketing (available only to business majors with a minor or second major in international studies)
PLSC 3342 Making Democracy Work
PLSC 3365 Communism and Post-Communism
PLSC 3381 Current Issues in International Politics
PLSC 3382 International Organizations: Global/Regional
PLSC 3383 The American Foreign Policy Process
PLSC 3387 Political Geography
PLSC 3390 Negotiating International Trade
PLSC 4342 Why Nations Revolt
PLSC 4344 Gender in World Politics
PLSC 4354 The Third World and North-South Relations
PLSC 4380 Special Studies in International Relations (also study abroad)
PLSC 4381 National Security Policy
PLSC 4382 The Politics of Military Force
PLSC 4391 NAFTA and Free Trade in the Americas
PLSC 4398 Nuclear Weapons and World Politics
RELI 1304 Introduction to Western Religions
SOCI 3340 Global Society
SOCI 4321 Immigration and Population Issues

Regional Specialization

15

At least four courses must be 3000 level or above.

Social Sciences (three courses selected from the student's regional specialization)

African/Middle Eastern Studies

- ANTH 3314** Peoples of Africa
ANTH 3359 Peoples and Cultures of the Middle East
HIST 2355 History of the Ancient Near East and Egypt
HIST 2379 History of Islamic Empires
HIST 2391 Africa to the 19th Century
HIST 2392 Modern Africa
HIST 3323 History of Islam in South Asia
HIST 3326 The Venture of Islam
HIST 3371 Conflicts in the Modern Middle East
HIST 3378 Problems in African History
HIST 3389 Problems in Middle Eastern History

Social Sciences**African/Middle Eastern Studies (continued)**

- HIST 3390 The Modern Middle East: 1914 to the Present
- HIST 3392 The African Diaspora
- HIST 3396 Middle Eastern Economic History
- HIST 4364 History: South Africa, Background to Conflict
- HIST 5395 A History of Iran
- PLSC 3345 Government and Politics of the Middle East
- PLSC 3347 Government and Politics of Africa

Asian Studies

- ANTH 3316 Cultures of the Pacific Islands
- ANTH 3317 Peoples of Southeast Asia
- ANTH 3323 East Asian Cultural Traditions
- ANTH 4390 Asian Society (SMU-in-Australia)
- BA 3300 Japanese Business (SMU-in-Japan)
- ECO 4357 Japanese Economy (SMU-in-Japan)
- HIST 2390 Civilization of India
- HIST 2393 Japan Before 1850
- HIST 2394 China Before 1850
- HIST 2395 Modern East Asia
- HIST 3315 Modern South Asia
- HIST 3387 Asia and the West
- HIST 3393 China in Revolution
- HIST 3395 Problems in Asian History
- HIST 3398 Women in Chinese History
- HIST 4394 Modern History of China (SMU-in-Taipei)
- PLSC 3346 Japanese Politics and Society
- PLSC 3352 Chinese Politics
- PLSC 4340 Comparative Government and Politics
- PLSC 4353 Political Economy of East Asia
- PLSC 4386 International Relations of East Asia
- SOCI 3300 Japanese Society (SMU-in-Japan)
- WL 3350/SOCI 3341 Perspectives: East Asian Woman
- WL 3395 A Cultural Journey to China (SMU-in-Suzhou)

European Studies

- ANTH 3355 Society and Culture in Contemporary Europe
- BA 3300 European Business Environment: The EU
(SMU-in-Copenhagen)
- BA 4315 EU Seminar (SMU-in-Copenhagen)
- HIST 2323 Russian Culture
- HIST 2366 Europe in the Modern World, 1760–Present
- HIST 3303 Modern England, 1867–Present
- HIST 3328 Economic History Europe 1000 A.D.–Present
- HIST 3329 Women in Early Modern Europe
- HIST 3330 Women in Modern European History
- HIST 3334 France Since 1789
- HIST 3335 One King/Law: France 1500–1798 (Paris)
- HIST 3340 The Revolutionary Experience in Russia,
1900–1930

Social Sciences**European Studies (continued)**

- HIST 3341** Soviet and Post-Soviet Society and Politics, 1917–Present
HIST 3343 20th-Century European History (SMU-in-Copenhagen)
HIST 3346 Modern England, 1714 to the Present (SMU-in-Oxford)
HIST 3352 The Age of the Crusades
HIST 3353 The History of Ancient Greece
HIST 3358 The Renaissance
HIST 3359 Europe in the Age of the Reformation
HIST 3363 The Holocaust
HIST 3365, 3366 Problems in European History
HIST 3367 Revolutions in European History
HIST 3374 Diplomacy in Europe: Napoleon to the European Union (SMU-in-Oxford)
HIST 3375 Social History of Early Modern Europe
HIST 3376 Social and Intellectual History of Europe
HIST 3381 The First World War and Its Impact
HIST 3383 Habsburg Monarchy: Making of East Central Europe
HIST 3385 The Balkan Peninsula: European Context
HIST 4314 The Jews in Europe (SMU-in-Copenhagen)
HIST 4363 Inside Nazi Germany
HIST 4369 History of Modern Germany
HIST 4373 History of Modern France
HIST 4381 History of Spain, 1469 to the Present
HIST 4388 Georgian/Victorian England, 1714–1867 (SMU-in-Oxford)
HIST 5367 Russia From the Kievan Era to 1881
HIST 5371 The French Revolution/Napoleon, 1789–1815
HIST 5373 Europe: Bismarck to WWI, 1870–1918
HIST 5374 Recent European History, 1918–Present
HIST 5376 Europe: Age of Enlightenment, 1715–1789
HIST 5390 Seminar in Russian History
HIST 5392 Seminar in European History
OBBP 3300 Business Relations With Russia and Central Europe (SMU-in-Copenhagen)
PLSC 3340 Western European Politics
PLSC 3351 Russia Under Putin (SMU-in-Copenhagen)
PLSC 3358 Government and Politics of Russia
PLSC 3359 From Communism to Democracy
PLSC 4340 Special Studies in Comparative Government and Politics
PLSC 4343 Nationalities and Minorities in Europe
PLSC 4358 Soviet Politics: Revolution to Revolution
PLSC 4380 Historical/Contemporary Issues of European Construction (SMU-in-Paris)
PLSC 4384 American-Russian Relationship
PLSC 5341 European Politics: The European Union

Social Sciences**European Studies (continued)**

PLSC 5383 European Conflict and Security Issues (SMU-in-Copenhagen)

SOCI 5363 Criminal Justice in Scandinavia (SMU-in-Copenhagen)

WL 2343 After Communism (SMU-in-Moscow)

Latin American and Iberian Studies

ANTH 3311 Mexico: From Conquest to Cancun

ANTH 3313 South-American Indians, Past and Present

ANTH 3354 Latin America: Peoples, Places, and Power

ANTH 3376 Caribbean Transformations

HIST 2384 Latin America: The Colonial Period

HIST 2385 Latin America in the Modern Era

HIST 3308 Film History of U.S. Hispanics

HIST 3317 Women in Latin American Societies

HIST 3320 The Spanish Frontier in North America, 1513–1821

HIST 3321 The American Southwest

HIST 3324 The Mexican Americans, 1848 to the Present

HIST 3380 Problems in Ibero-American History (study abroad programs)

HIST 3382 History of Mexico

HIST 4380 History of Spain to 1492

PLSC 3348 Governments and Politics of Latin America

PLSC 3349 Politics of Major Latin American Countries

PLSC 4340 Special Studies in Comparative Government and Politics (SMU-in-Spain)

PLSC 4356 Latin American Political Economy

PLSC 4385 Inter-American Relations

PLSC 4391 NAFTA and Free Trade in the Americas

SOCI 3370 Minority-Dominant Relations

SOCI 3372 Chicanos in the Southwest

Humanities and Arts (two courses selected from the student's regional specialization)**African/Middle Eastern Studies**

ARHS 3306 Mummies, Myths, and Monuments of Ancient Egypt

ARHS 3328 Byzantine Art

ARHS 3354 Modern/Contemporary Art, Arab World

ARHS 3390 Traditional Arts of Africa

ARHS 3392 Islamic Art and Architecture

RELI 3329 Introduction to Islam

RELI 3362 Islam and the West

RELI 3372 Biblical Interpretation and the State of Israel

WL 3349/HIST 3392 The African Diaspora: Literature and History of Black Liberation

Humanities and Arts
Asian Studies

- ARHS 3394 Arts and Architecture of Japan
 ARHS 3395 Arts and Architecture of India
 ARHS 3396 Art/Architecture of China (SMU-in-Taipei)
 CHIN 4381 Readings in Chinese Literature and Culture
 CHIN 4382 Chinese Culture and Society in Film
 RELI 1303 Introduction to Eastern Religions
 RELI 3306 Introduction to the Hindu Tradition
 RELI 3307 Introduction to Buddhism
 RELI 3365 Understanding the Self: East and West
 RELI 3367 The Religious Life of China and Japan
 RELI 3376 Constructions of Gender: Sexuality/Family in
 South Asian Religions
 RELI 3377 The Cultural History of Tibet
 RELI 3378 Religions of China
 RELI 3382 Mysticism, East and West
 RELI 3384 Hinduism and Colonial Encounters
 RELI 3385 Philosophies of India
 WL 3310 Transnational Chinese Cinema
 WL 3312 Women in Modern China
 WL 3322 Japanese Literature in Translation (SMU-in-
 Japan)
 WL 3325 Perspectives on Modern China
 WL 3395 A Cultural Journey to China (SMU-in-Suzhou)

European Studies

- ARHS 1303 Introduction to Western Art I
 ARHS 1304 Introduction to Western Art II
 ARHS 1331 19th-Century European Art
 ARHS 1332 20th-Century Art: Sources and Styles of
 Modern Art
 ARHS 3320 Medieval Art
 ARHS 3321 Age of the Crusades: Power and Piety in the
 Ancient and Medieval Near East
 ARHS 3324 Art and Cultures of Medieval Spain
 ARHS 3325 The Gothic Cathedral
 ARHS 3329 Paris Art and Architecture I (SMU-in-Paris)
 ARHS 3330 Renaissance and Baroque Architecture
 ARHS 3331 Art and Culture of the Italian Renaissance
 ARHS 3332 16th-Century Italian Art
 ARHS 3333 Art and Architecture in Italy (SMU-in-Italy)
 ARHS 3339 El Greco to Goya: Spanish Painting of the
 Golden Age
 ARHS 3344 Paintings at the Prado (SMU-in-Spain)
 ARHS 3346 Paris Art and Architecture II (SMU-in-Paris)
 ARHS 3347 18th-Century European Art and Theatre:
 Staging Revolution
 ARHS 3350 Modern Art and Media Culture
 ARHS 3352 Impressionism, Symbolism, Deviant Body
 ARHS 3353 Impressionism in Context (SMU-in-Paris)

Humanities and Arts**European Studies (continued)**

- ARHS 3362 Picturing Children: European Art 1848–1940
- ARHS 3364 History and Theory of Prints
- ARHS 3388 Why We Go To Auschwitz
- ARHS 3399 The Medieval Jewish-Christian Dialogue in Art and Text
- ARHS 4344 Images of Power: Kings, Nobles, and Elites (SMU-in-Paris)
- ENGL 3341 British Literary History II
- ENGL 3344 Victorian Gender
- ENGL 3360 Writers in Paris: Invention of Modernism (SMU-in-Paris)
- FILM 2352 History of European Film (SMU-in-Copenhagen)
- FREN 4373, 4374 French Civilization (SMU-in-Paris)
- FREN 4375 Introduction to French History and Culture
- FREN 4376 Introduction to Francophone Cultures
- PHIL 3333 European Thought: Modernism to Post-modernism (SMU-in-Copenhagen)
- PHIL 3352 History of Western Philosophy (Modern)
- PHIL 3370 19th-Century Philosophy (also SMU-in-Copenhagen)
- PHIL 3382 20th-Century European Philosophy
- WL 3303/SPAN 3373 Spanish Civilization (SMU-in-Spain)
- WL 3307 The Belle Époque and the Birth of Modernity (SMU-in-Paris)
- WL 3323/HIST 2323 Russian Culture
- WL 3331 Survey of Russian Literature in Translation
- WL 3361 Special Topics French Literature in Translation
- WL 3369 Perspectives on Modern Germany
- WL 3390 Italian Cinema
- WL 3391, 3392 Italian Literature in Translation

Latin American and Iberian Studies

- ANTH 3312 Mesoamerican Archaeology
- ARHS 1308 Epic of Latin America
- ARHS 1338 Chicano Art and the Politics of Place
- ARHS 1350 Transoceanic Visions: The Arts and Cultures of the Portuguese Empire
- ARHS 3324 Arts and Cultures of Medieval Spain
- ARHS 3338 Baroque Art in Italy, Spain, the New World
- ARHS 3339 El Greco to Goya: Painting of the Golden Age
- ARHS 3344 Paintings at the Prado (SMU-in-Spain)
- ARHS 3360 Modern Painters in Spain (SMU-in-Spain)
- ARHS 3363 Topics in Brazilian Art and Architecture
- ARHS 3376 Latin American Art
- ARHS 3377 Art/Architecture of Hispanic New Mexico
- ARHS 3379 Power/Spectacle: Arts of Spain/New Spain

Humanities and Arts**Latin American and Iberian Studies (continued)**

ARHS 3382 Arts of the Ancient Andean Tradition:
Chavin to Inca

ARHS 3383 The Ancient Maya: Art and History

ARHS 3385 The Aztecs Before and After the Conquest:
Mesoamerica 1400–1600

ARHS 3391 Visual Culture in Colonial Mexico

ENGL 3363 Chicana/Chicano Literature

RELI 3353 Latino/a Religions

SPAN 3374 Spanish-American Civilization
(also SMU-in-Xalapa)

SPAN 4391 Commercial Spanish for International Trade

SPAN 4395 Introduction to Hispanic Literature

SPAN 5310 Spanish Literature Before 1700

SPAN 5311 Spanish Literature Since 1700

SPAN 5315 Spanish-American Literature to 1888

SPAN 5316 Spanish-American Literature Since 1888

SPAN 5317 Literature of Mexico

SPAN 5320 The Renaissance and Golden Age: Drama

SPAN 5321 The Renaissance and Golden Age: Prose
Fiction

SPAN 5323 19th-Century Prose Fiction of Spain

SPAN 5324 20th-Century Poetry and Drama

SPAN 5325 20th-Century Peninsular Prose Fiction

SPAN 5334 The Novel of the Post-Civil War Period

SPAN 5335 Genre Studies in Spain

SPAN 5336 The Spanish-American Novel (also SMU-in-
Xalapa)

SPAN 5337 The Spanish-American Essay

SPAN 5338 The Spanish-American Short Story (also
SMU-in-Xalapa)

SPAN 5339 Spanish-American Poetry

SPAN 5360 The Concept of Honor in Spanish Literature

SPAN 5361 Don Quixote: The Idea, Character, Book

SPAN 5365 Contemporary Spanish Women Writers

SPAN 5370 Rewriting Discovery and Exploration in the
Spanish Borderlands

SPAN 5375 Contemporary Fiction by Latin American
Women Writers

WL 3303/SPAN 3373 Spanish Civilization

WL 3305 Latin American Literature in Translation

WL 3306 The Heart of Aztlan: Chicano Literature of the
Southwest

Capstone**3**

INTL 4388 Seminar: International Government and Politics

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Minor in International Studies

The minor in international studies requires 15 hours of coursework from the basic curriculum, nine hours of which must be in courses at the 3000 level or above. A cocurricular requirement is one year of college-level study or equivalent of a world language. **Note:** Latin does not count as a second language. Courses taken in language study do not count toward the 15 hours of required coursework.

Minor in Area Studies

The area studies minor is separate from the major or minor in international studies. A student may earn a minor in a geographical area in order to increase expertise and in-depth knowledge of a region's history, politics, society and culture. A minor in an area study is offered in Middle Eastern/African studies, Asian studies, European studies, and Latin American and Iberian studies.

Requirements for the Minor. A minor in one of the four geographic areas of study requires 15 hours of coursework. The first six hours (two courses) must be chosen from the four categories of the basic curriculum; each of the two courses must be from a separate category: "World Cultures," "International Economics," "International Politics" or "The Global Perspective." The next nine hours (three courses) must be chosen from a regional specialization: 1) the African and Middle Eastern studies curriculum, 2) the Asian studies curriculum, 3) the European studies curriculum, or 4) the Latin American and Iberian studies curriculum. At least one course must be selected from the social sciences group and at least one course must be selected from the humanities and arts group for the selected curriculum. At least nine hours must be at the 3000 level or above. If a student is an international studies major, only one course from the area studies curriculum may be double counted toward the area studies minor. The language requirement for the minor may be met through examination, the transfer of language study credit from another university or by taking courses on campus.

Minor in Middle Eastern/African Studies. A cocurricular requirement for the minor is two years of college-level study of a language native to Africa or the Middle East. To maximize the educational experience, students are strongly encouraged to spend at least one term or summer studying in Africa or the Middle East. Most of the courses taught in University study abroad programs in Africa and the Middle East may be applied to the African and Middle Eastern studies minor.

Minor in Asian Studies. A cocurricular requirement for the minor in Asian studies is two years of college-level study of an Asian language. To maximize the educational experience, students are strongly encouraged to spend at least one term or summer studying in Asia. Most of the courses taught in University study abroad programs in Asia may be applied to the Asian studies minor.

Minor in European Studies. A cocurricular requirement for the minor in European studies is two years of college-level study of a European language other than English. To maximize the educational experience, students are strongly encouraged to spend at least one term or summer studying in Europe. Most of the courses taught in University study abroad programs in Europe may be applied to the European studies minor.

Minor in Latin American and Iberian Studies. A cocurricular requirement for the minor in Latin American and Iberian studies is two years of college-level study of Spanish or Portuguese. To maximize the educational experience, students are

strongly encouraged to spend at least one term or summer studying in Latin America or Iberia. Most of the courses taught in University study abroad programs in Latin America/Iberia may be applied to the Latin American and Iberian studies minor.

International Studies Major and Minor Rules for SMU Abroad Credit

To maximize the educational experience in these degree programs, all international studies majors and minors are strongly encouraged to spend at least one term or summer studying abroad. The University offers numerous study abroad opportunities around the world; most of these courses may be applied to the international and area studies major or minor. The following policies apply to the International and Area Studies Program:

For the International Studies Major

- Up to 12 hours of world language study may be taken in an SMU-approved study abroad program and counted toward the language requirement for the major.
- Up to 15 hours in the student's regional specialization may be taken in an SMU-approved study abroad program and counted toward the major.
- Of the 15 hours required from the basic curriculum, 12 hours must be taken on an SMU campus (Dallas, Taos or Plano). Three hours of transfer credit (not an SMU-approved study abroad program) may be counted toward fulfillment of the basic curriculum requirement.
- If a student wishes to take a course abroad for credit in the global perspective, it is highly recommended that the course be preapproved by the director before enrolling. Petitions after the course has been taken may not be approved.
- The senior seminar (INTL 4388) must be taken on an SMU campus (Dallas, Taos or Plano).
- A total of 33 hours (exclusive of the 12 hours of language study required for the major) are required for the major in international studies.
- These policies do not change the required number of credit hours in advanced courses.

For the International Studies Minor

- Up to six hours of world language study may be taken in an SMU-approved study abroad program and counted toward the language requirement for the minor.
- Of the 15 hours required from the basic curriculum, 12 hours must be taken on an SMU campus (Dallas, Taos or Plano). Three hours of transfer credit (not an SMU-approved study abroad program) may be counted toward fulfillment of the basic curriculum requirement.

For an Area Studies Minor

- Up to 12 hours of world language study may be taken in an SMU-approved study abroad program and counted toward the language requirement for any area studies minor.
- Three of nine hours in the student's regional specialization may be taken in an SMU-approved study abroad program and counted toward the minor.

Jewish Studies Program

Professor of Practice Shira Lander, Director

Minor in Jewish Studies

The minor in Jewish studies offers students of all backgrounds a multidisciplinary examination of Jewish culture and religion, the Jewish people, and the State of Israel. Coursework for the minor must be distributed as follows:

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
Jewish Studies	3
JWST 1300 Introduction to Jewish Studies	
General Electives (at most one from the following)	0–3
HIST 3390 Modern Middle East: 1914 to the Present	
RELI 1304 Introduction to Western Religions	
RELI 3341 U.S. Religious History From 1865 to the Present	
RELI 3342 Religion in the United States to 1865	
Focused Electives (at least three from the following at the 3000 level or higher)	9–12
ARHS 3324 Art and Cultures of Medieval Spain	
ARHS 3388/4349 Why We Go to Auschwitz: Art, Trauma, and Memory	
ARHS 3399 The Medieval Jewish-Christian Dialogue in Art and Text	
ENGL 3365 Jewish-American Literature and Culture	
HIST 3363 The Holocaust	
HIST 4314 The Jews in Europe: Middle Ages to the Present	
MUHI 1322 Introduction to Jewish Music	
RELI 1311 Judaism, Christianity, and the Bible	
RELI 3318 The Hero in the Bible and the Ancient Near East	
RELI 3319 Hebrew Bible	
RELI 3320 Classical Judaism	
RELI 3321 Religion and the Holocaust	
RELI 3324 American Judaism	
RELI 3348 Temples, Churches, and Synagogues in the Ancient Mediterranean	
RELI 3360 The History of Judaism	
RELI 3371 The World of the New Testament	
RELI 3383 Reel Judaism: Cinematic Representations of Jewish Life	
RELI 3390 A Persistent Prejudice: Anti-Semitism in Western Civilization	

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The Courses (JWST)

JWST 1300 (3). INTRODUCTION TO JEWISH STUDIES. Introduces the various subfields and research methods used within the interdisciplinary field of Jewish studies: Hebrew language; Israel studies; Judaism; and Jewish art, history, literature, and music. Provides academic foundations for advanced courses offered in each of these areas.

Law and Legal Reasoning Program

Associate Professor Pamela Corley, Director

Minor in Law and Legal Reasoning

The minor in law and legal reasoning provides a coherent grouping of courses from different disciplines that examine the foundations and applications of the law. Specifically, the minor is designed to provide students with the knowledge of substantive law, along with skills in legal analysis and reasoning, oral advocacy, research and writing.

PLSC 1320 Introduction to American Politics and Government is a prerequisite for the minor. In addition to taking PLSC 1320, students must take a minimum of 18 hours selected from the following:

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
Required Courses	6
PLSC 3330 Law, Politics, and the Supreme Court or PLSC 3325 Introduction to Law	
COMM 3327 Argumentation and Advocacy or COMM 3345 Persuasion Theory and Practice	
Electives (one or more courses from the following)	12
COMM 2300 Public Speaking	
COMM 2310 Rhetoric, Community, and Public Deliberation	
COMM 3300 Free Speech and the First Amendment	
COMM 3327 Argumentation and Advocacy	
COMM 3345 Persuasion Theory and Practice	
COMM 4323 Forensics Workshop	
COMM 4324 Competitive Mock Trial	
<i>One or more courses from the following:</i>	
PLSC 3325 Introduction to Law	
PLSC 3330 Law, Politics, and the Supreme Court	
PLSC 3335 Judicial Process	
PLSC 4335 Constitutional Law	
PLSC 4336 First Amendment and Privacy	
PLSC 4337 Civil Rights	
PLSC 4338 Criminal Process Rights	
PLSC 4341 Rights and Representation	
PLSC 4371 Jurisprudence	
<i>One or more courses from the following:</i>	
PHIL 1301 Elementary Logic	
PHIL 3373 Philosophy of Criminal Law	
PHIL 3374 Philosophy of Law	
SOCI 3363 Crime and Delinquency	

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Notes

- Students may receive credit toward the minor for either but not both COMM 3300 and PLSC 4336.
- Students may receive credit toward the minor for either but not both COMM 4323 and COMM 4324.
- COMM 3327, COMM 3345, PLSC 3330 and PLSC 3325 can be taken as an elective if not taken as one of the required courses.

Medieval Studies Program

www.smu.edu/medievalstudies

Associate Professor Bonnie Wheeler, Director

Bachelor of Arts With a Major in Medieval Studies

The Medieval Studies Program affords the student an opportunity for a classically liberal education within a broad subset of Western (Celtic, Franconic, Italic, Germanic, Visigothic) and non-Western (Byzantine, Islamic, Persian) contexts. Studies reveal how the historical shapes, institutional structures, literary visions and artistic forms that emerged from the Middle Ages have colored our concepts of God, society, self, love, individualism and success. It is appropriate for preprofessional training in multiple fields such as business, religious studies, biology, music theory, and world languages and literatures. The major can also lead to graduate work in medieval studies or, more usually, in such disciplines as literature, history, and art and music history. The Dallas Medieval Consortium makes it possible for students at SMU, the University of Dallas and the University of Texas at Dallas to enroll in selected medieval studies courses on the other campuses. Through the consortium, SMU students can elect no more than a total of 15 hours in medieval subject courses at any other consortium university.

Medieval studies is an interdisciplinary major of 30 hours in medieval subjects, and advanced Latin language and literature, distributed over at least three broad subject areas in medieval studies: 1) history, 2) literature, and 3) music and visual arts (art/music history), with no fewer than six hours in each area. Latin language and literature courses after the second year may, with the approval of the director, count toward hours for the medieval studies major. Students are encouraged to take courses in medieval philosophy, religious studies and church history when they are available. Individual student programs are approved by the director and a committee of two other members of the Medieval Studies Program faculty.

Many departmental courses in the field of medieval studies are offered each year; courses listed as "MDVL" are interdisciplinary. Students should consult with the director about offerings and frequency.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Medieval Studies	3–6
One or two interdisciplinary courses from the MDVL course list.	
Advanced Latin Language and Literature	6
LATN 3324 Advanced Latin Grammar and Composition	
LATN 3335 Advanced Latin Readings and Composition	
Art History and Music History (two or three from the following)	6–9
ARHS 1315 Medieval Messages	
ARHS 3320 Medieval Art	
ARHS 3321 Age of the Crusades	
ARHS 3322 Art and the Italian Commune	
ARHS 3323 Romanesque Art and Architecture	
ARHS 3324 Art and Cultures of Medieval Spain	
ARHS 3325 The Gothic Cathedral	

Art History and Music History (continued)

- ARHS 3328 Byzantine Art
 ARHS 3329 Paris Art and Architecture I (SMU-in-Paris)
 ARHS 3392 Islamic Art and Architecture
 ARHS 3399 Medieval Jewish-Christian Dialogue in Art and Text
 ARHS 4320 Seminar in Medieval Art
 ARHS 4321 Word and Image: Seminar in Early Middle Ages
 MUHI 3301 Survey of Music History I
 MUHI 4301 Research Project: Music History (when applicable)
 MUHI 4392 Directed Studies in Music History: The Middle Ages
 MUHI 6309 Seminar: Medieval/Renaissance Sources/Styles
 PERE 3175 Collegium Musicum

History (two or three from the following)

6–9

- HIST 2321 Philosophical/Religious Thought, Medieval West
 HIST 3332 Ancient and Medieval France
 HIST 3344 The Oxford Landscape: Stone Age to the Tudors
 (SMU-in-Oxford)
 HIST 3345 England in Medieval and Early Modern Times
 HIST 3350 Life in the Medieval World, A.D. 306–1095
 HIST 3351 Life in the Medieval World, A.D. 1095–1350
 HIST 3352 Age of the Crusades
 HIST 3357 (ENGL 3371) Joan of Arc: History, Literature, Film
 HIST 3365 Problems in European History (when applicable)
 HIST 3366 Problems in European History (when applicable)
 HIST 4320, 4321 Medieval Europe I, II
 HIST 4322 Constitutional/Legal History of Medieval England
 HIST 4323 History of Ireland
 HIST 4324 Medieval Spirituality
 HIST 4325 Islam to A.D. 1453
 HIST 4326 Anglo-Saxon England to A.D. 1160
 HIST 4380 History of Spain to 1492
 HIST 4384 Early/Medieval England: The Beginning to 1485
 HIST 5364 The City of God: Utopias in the Christian Tradition
 HIST 5378 Medieval Renaissances
 HIST 5392 European History Autobiographical Tradition
 (when applicable)
 PHIL 3351 History of Western Philosophy (Ancient)
 PLSC 4361 Political Regimes: Understandings of Rome
 RELI 3349 Early Christianity
 RELI 3362 Islam and the West

Literature (two or three from the following)

6–9

- ENGL 1320 Chivalry
 ENGL 3320 Topics in Medieval Literature
 ENGL 3371/HIST 3357 Joan of Arc in History, Literature, Film
 ENGL 3389 Directed Studies (when applicable)
 ENGL 1320 Chivalry

Literature (continued)

- ENGL 3320 Topics in Medieval Literature
 ENGL 3371/HIST 3357 Joan of Arc in History, Literature, Film
 ENGL 3389 Directed Studies (when applicable)
 ENGL 4320 Medieval Writers
 ENGL 4323 Chaucer
 FREN 5320, 5321 Literary Periods (when applicable)
 FREN 5334, 5335 Genre Studies (when applicable)
 SPAN 5310 Spanish Literature Before 1700
 WL 3365, 3366 Special Topics: French Literature in Translation
 (when applicable)
 WL 3391, 3392 Special Topics: Italian Literature in Translation
 (when applicable)
 WL 3393 Dante's Poetic Vision
 PLSC 4362 Medieval Political Philosophy
 RELI 3326 Introduction to the New Testament

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Departmental Distinction

The major offers graduation with distinction to select student majors of high academic achievement. Interested students with a minimum 3.000 overall GPA and a 3.500 GPA in the major may consult with the director of the Medieval Studies Program for admission to the distinction track. If the director determines that the student has satisfied the requirements, the student may then request a faculty member to direct a senior-year distinction paper. The distinction paper must be a substantial piece of independent and original research that will be presented to and evaluated by a distinction committee. Upon positive recommendation from this committee, the student will be awarded graduation with distinction. Criteria for graduating with departmental distinction include the following:

1. A minimum 3.000 overall GPA at graduation.
2. A minimum 3.500 average in courses taken for the medieval studies major.
3. Preparation of a distinction thesis under the supervision of a faculty member while enrolled in MDVL 5399. MDVL 5399 will be taken in addition to all other requirements for the major. The faculty adviser's grade for the thesis must be A- or higher.
4. A passing grade on an oral examination conducted by a faculty distinction committee, which reviews the candidate's thesis. The distinction committee includes the faculty adviser, the director of the Medieval Studies Program and one additional faculty member selected by the faculty adviser in consultation with the student.

Minor in Medieval Studies

A student must complete 15 hours from the courses listed above, including at least three interdisciplinary and nine advanced hours. No more than six hours at the introductory (1000 or 2000) level may be counted; some of the MDVL and CF (Cultural Formations) courses listed below are also interdisciplinary. Other courses may satisfy the interdisciplinary component. Individual student programs are approved by the director of the Medieval Studies Program.

The Courses (MDVL)

MDVL 3323 (3). TALES OF WALES. Survey of native Welsh literature (in translation) from the sixth to the 20th century. Primary focus on medieval and Arthurian texts and their influence on the British and European literary imagination.

MDVL 3327 (3). THE UNICORN: UNDERSTANDING VARIETIES OF TRUTH IN THE MIDDLE AGES. Investigates the question of how history and fiction were perceived in the Middle Ages.

MDVL 3329 (3). THE WORLD OF KING ARTHUR. Study of Britain's greatest native hero and one of the world's most compelling story stocks: the legends of King Arthur and the Knights of the Round Table.

MDVL 3351 (3). THE PILGRIMAGE: MEDIEVAL. A look at the medieval world through one of its own literal and metaphorical images, investigating the music, art, monuments, and literature of pilgrimage during the Middle Ages.

MDVL 3352 (3). IDEAS AND IDEAL OF GENDER IN THE MIDDLE AGES.

MDVL 3353 (3). MEDIEVAL IDEAS. Presents some of the classic achievements of the medieval mind, focusing on developments of continuing interest; where advisable, comparisons and contrasts are drawn with methods of thinking and solving problems in use in later times. While the focus is on medieval Europe and the adjacent Muslim world, wherever possible, students' attention is drawn to developments in other culture areas.

MDVL 3390 (3). MEDIEVAL PHILOSOPHY TOPICS. Research and writing in medieval fields on special philosophical topics at the forefront of current intellectual interest.

MDVL 3398 (3). DIRECTED STUDIES.

MDVL 3399 (3). DIRECTED STUDIES.

MDVL 4308 (3). TOWNS, TRADE, AND REVOLUTION IN THE MEDIEVAL WEST. Investigates the medieval city from its origins through 1500. Within a chronological framework, students explore urban populations and institutions, commerce, universities, guilds, and the Black Death.

MDVL 4318 (3). BYZANTINE HISTORY 285–1453. Traces the outlines of Byzantine history from 285 to 1453. Topics include the changing structure of the family, gender roles, ruler and ruled, and town and country.

MDVL 4371 (3). SPECIAL TOPIC. Research and writing in medieval fields on special topics at the forefront of current intellectual interest.

MDVL 5301 (3). INDEPENDENT STUDIES. Research and writing in medieval fields on special topics at the forefront of current intellectual interest.

MDVL 5302 (3). INDEPENDENT STUDIES. Research and writing in medieval fields on special topics at the forefront of current intellectual interest.

MDVL 5398 (3). INDEPENDENT STUDIES. Research and writing in medieval fields on special topics at the forefront of current intellectual interest.

MDVL 5399 (3). INDEPENDENT STUDIES. Research and writing in medieval fields on special topics at the forefront of current intellectual interest.

Natural Sciences Program

Professor William C. Orr, Director

Minor in Natural Sciences

A minor in the natural sciences offers students a systematic exposure to biology and chemistry. The minor is particularly suitable for engineering and business majors who are interested in medicine, dentistry or other biomedical careers. This interdisciplinary minor may not be selected by students majoring or minoring in the biological sciences, biochemistry or chemistry. Each advanced course must be taken in residence.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
BIOL 1401, 1402 Introductory Biology	8
BIOL 3350 Cell Biology	3
CHEM 1303/1113, 1304/1114 General Chemistry	8
CHEM 3371/3117, 3372/3118 Organic Chemistry	8
BIOL 3306 Physiology (<i>Prerequisite:</i> BIOL 3350) or BIOL 3304 Genetics	3
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Public Policy Program

Professor Dennis Ippolito, Director

Bachelor of Arts With a Major in Public Policy

The public policy major is an interdisciplinary program in economics and political science designed to provide students with the analytical skills and historical context to understand and address contemporary policy issues. The major in public policy is useful as preparation for work in government and business and as preparation for postgraduate study in law, public policy and the social sciences.

The B.A. degree in public policy requires at least 15 hours of advanced courses selected from the electives, with no fewer than six hours in economics and six hours in political science or public policy. Students must receive at least a *C-* in all classes counting toward the major. A maximum of 12 hours of (preapproved) advanced-level courses in SMU-approved study abroad programs may be counted toward the major.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Core Courses	24
ECO 1311 Principles of Microeconomics	
ECO 1312 Principles of Macroeconomics	
ECO 3301 Price Theory (Intermediate Microeconomics)	
MATH 1309 Intro to Calculus for Business/Social Science or MATH 1337 Calculus I	
PLSC 1320 Intro to American Government and Politics	
PLSC 1340 Introduction to Comparative Politics or PLSC 1380 Introduction to International Relations	
PLSC 3320 Principles of Public Policy	
STAT 2301 Statistics for Modern Business Decisions or STAT 2331 Introduction to Statistical Methods or STAT 4340 Statistical Methods: Engrs/App Scientists	
Electives	15
<i>Quantitative Methods (one from the following):</i>	
ECO 5341 Strategic Behavior	
ECO 5350 Introductory Econometrics	
ECO 5370 Cost-Benefit Analysis	
ECO 5375 Economic and Business Forecasting	
<i>Two courses from any two of the following groups:</i>	
<i>Political Economy</i>	
ECO 4366 Economics of the Public Sector	
ECO 4371 Theory of Industrial Structure	
ECO 4382 Economics of Regulated Industries	
ECO 4385 Macroeconomics: Theory and Policy	
ECO 5361 Natural Resources and Energy Economics	
ECO 5365 Public Finance	
PLSC 3329 Bureaucracy and Regulatory Politics	
PLSC 3355 The Political Economy of the Welfare State	
PLSC 3389 International Political Economy	
PLSC 3390 Negotiating International Trade	
PLSC 4329 The Politics of Economic Policy	
PLSC 4333 Policy, Politics and the Budget	
PLSC 4356 Latin American Political Economy	

Electives (continued)*Law and Social Policy*

- ECO 4351 Labor Economics
- ECO 4361 Economics of Education
- ECO 5320 Health Economics
- ECO 5353 Law and Economics
- ECO 5357 Economics of Human Resources
- PLSC 3321 Congress and the Legislative Process
- PLSC 3327 Texas Politics
- PLSC 3330 Law, Politics and the Supreme Court
- PLSC 3333 Environmental Policy
- PLSC 3335 Judicial Process
- PLSC 3370 Women and Politics
- PLSC 4321 Basic Issues in American Democracy
- PLSC 4334 Politics/Legacies: Civil Rights Movement
- PLSC 4335 Constitutional Law
- PLSC 4336 Civil Liberties: First Amendment/Privacy
- PLSC 4337 Civil Rights
- PLSC 4338 Criminal Process Rights
- PLSC 4339 Women and the Law
- PLSC 4341 Comparative Rights and Representation
- PLSC 4371 Jurisprudence
- PP 3310 Environmental Policy

International Politics and Policy

- ECO 4357 International Trade
- ECO 4358 International Macroeconomic Theory/Policy
- ECO 5360 Economic Dvlp: Macroeconomic Perspectives
- PLSC 3340 Western European Politics
- PLSC 3345 Governments and Politics of the Middle East
- PLSC 3346 Japanese Politics and Society
- PLSC 3347 Governments and Politics of Africa
- PLSC 3348 Governments and Politics of Latin America
- PLSC 3352 Chinese Politics
- PLSC 3358 Government and Politics of Russia
- PLSC 3383 The American Foreign Policy Process
- PLSC 3389 International Political Economy
- PLSC 4356 Latin American Political Economy
- PLSC 4381 National Security Policy
- PLSC 4382 The Politics of Military Force
- PLSC 4384 American-Russian Relationship
- PLSC 4386 International Relations of East Asia
- PLSC 4391 NAFTA and Free Trade in the Americas
- PLSC 4398 Nuclear Weapons and World Politics

Tower Scholars

Students currently enrolled at SMU may apply to become a Tower Scholar via the competitive admissions requirements outlined below. Interested students with a GPA of 3.300 or higher may apply in the fall of their second year of enrollment at SMU; eligible transfer students must have sophomore standing to apply. **Note:** To be

considered for admission, students must agree to complete the prerequisites/corequisites for the minor in public policy and international affairs.

The selection process for choosing Tower Scholars will be based on merit and determined by the application and interview process. Applicants must submit the following four items:

1. Transcript(s) of all college/university coursework.
2. An online application with basic information, including areas of study, awards, interests and activities.
3. An 800–1,000 word essay.
4. Two letters of recommendation, at least one of which must be from an SMU faculty member.

The applicant pool will be evaluated using a variety of relevant criteria, including but not limited to the following: the relevance of the minor in public policy and international affairs to a student's career goals, a strong academic record, a strong extracurricular record with demonstrated interest in community and/or public service, demonstrated leadership and sense of social responsibility, and excellent written communication skills. The selection committee will be recruiting students from a variety of majors and schools, as well as considering diversity broadly defined. Once the applicant pool has been evaluated, a select number will be invited to the final stage of the application process, which is an interview with the Minor in Public Policy and International Affairs Selection Committee. In addition to all of the criteria listed above, the selection committee will seek to evaluate the verbal communication skills of each candidate and will expect candidates to be able to express why becoming a Tower Scholar and being accepted into the minor in public policy and international affairs would be meaningful given their specific career goals.

Minor in Public Policy and International Affairs

The minor in public policy and international affairs is a selective program for Tower Scholars that will enable admitted students from any academic major to receive practical training in public policy analysis. Policy practitioners and SMU faculty offer a curriculum that emphasizes critical thinking and analytical skills as well as professional training to ensure that Tower Scholars graduate with skills for effective policy analysis and with the experience of making concrete policy recommendations in real-world applications.

The following prerequisites/corequisites for the minor must be completed before students begin their junior year:

- A grade of *C-* or better in ECO 1311 or 1312, a score of 4 or better in the Macroeconomics Advanced Placement Test, or a score of 4 or better in the Microeconomics Advanced Placement Test.
- A grade of *C-* or better in one quantitative course (ITOM 2305, MATH 1309 or 1337, SOCI 3311 or 3312, or STAT 2301, 2331 or 4340) or a score of 4 or better in the Statistics Advanced Placement Test.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
PPIA 2380, 3301, 3302, 4306	12
PLSC 3320 Principles of Public Policy	3
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The Courses (PP)

PP 3310 (3). ENVIRONMENTAL POLICY. Overview of governmental environmental policies designed to provide a foundation for future application and study in the growing environmental field.

The Courses (PPIA)

PPIA 2380 (3). GATEWAY TO GLOBAL POLICYMAKING. Examines foreign, economic, and domestic policy issues and analyzes the ways policy is made in the United States. Students look at the interaction of substantive policy problems, policy tools, and organizational structures at the local, national, and international levels, while considering the ethics of political choices. Reserved for Tower Scholars.

PPIA 3301 (3). JUNIOR-YEAR POLICY SEMINAR: THEORETICAL PUBLIC POLICY. First of a two-part sequence. Students review policy case studies and learn how to analyze and interpret data related to public policy issues. They apply what they learn during the following term, in PPIA 3302. Reserved for Tower Scholars.

PPIA 3302 (3). JUNIOR-YEAR POLICY SEMINAR: PUBLIC POLICY IN PROFESSIONAL PRACTICE. Second of a two-part sequence. Students work on a specific policy-related project from a real-world setting. Culminates in written policy recommendations presented to a non-academic client. Prerequisite: PPIA 3301. Reserved for Tower Scholars.

PPIA 4306 (3). TOWER SCHOLARS POLICY-RELATED INTERNSHIP. Offers Tower Scholars experience in varied organizations and agencies. Students conduct in-depth research, analysis, and structured reflection on an assigned policy issue. Includes interviews and discussions off-campus, research online and in the SMU libraries, and completion of a significant and useful research paper. During weekly class meetings, students relate their fieldwork experiences to readings, discussions, and the shared experiences of fellow Tower Scholars. Reserved for Tower Scholars.

Women's and Gender Studies Program

www.smu.edu/womgenstudies

Senior Lecturer Josephine Caldwell-Ryan, Director

Minor in Women's and Gender Studies

Students in the Women's and Gender Studies Program explore a wide variety of disciplines and life experiences through gender, which is the set of meanings that societies attach to being female or male. The program's dual name acknowledges two approaches. One emphasizes the intellectual, artistic, political and social contributions of women. The other extends into to a broader range of issues, including the social and cultural meanings of masculinity and the relationships between gender, sexuality and sexual identity. Through participation in the program, SMU students are exposed to contemporary challenges to traditional academic disciplines and to scholarship that addresses matters of personal identity. Because it is interdisciplinary, a women and gender studies minor complements a variety of majors and minors, especially those in the humanities, social sciences and fine arts.

Students satisfy requirements for the minor through a combination of core courses and a wide array of courses offered by many departments in Dedman College and the Meadows School of the Arts. (Courses subject to approval are topics and problems courses that earn credit toward the minor only when offered under specific preapproved titles.)

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
WGST 2322 (or approved substitute)	3
Three WGST or non-WGST program-approved courses at the 3000 level or above	9
One non-WGST program-approved course	3
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Major in Individualized Studies in the Liberal Arts With a Focus on Women's and Gender Studies

Students may complete a B.A. in individualized studies in the liberal arts with a focus on women's and gender studies. Students wishing to earn distinction must take a directed studies course that requires a research project and paper.

Students who qualify for individualized studies in the liberal arts and who have a strong interest in women's role in culture and society, or in the study of gender and sexuality more generally, may propose a program that focuses on women's and gender studies. The program should expose the student to the diversity of gender meanings within and across cultures. The program description and administrative procedures specified for the individualized major in the liberal arts apply, with the following additional stipulations:

1. The student must consult with the director, who shall serve as one of the members of the Faculty Supervisory Committee for the student's major.
2. Two additional faculty members who teach courses in the program serve on this committee, which oversees the student's progress and certifies completion of the major.

3. The student's program must include courses in at least four disciplines (not counting WGST courses). At least two at the 4000 level or above are strongly recommended.

Many program-approved departmental courses with a subject area in women's and gender studies courses are offered annually and, with a few exceptions, the remainder are available at least every other year. Students should consult with the director about offerings and frequency.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
WGST 2322 Gender: Images and Perspectives	3
<i>Two courses chosen from the following:</i>	
ANTH 3310 Gender and Sex Roles: A Global Perspective	
HIST 3312 Women in American History to 1900	6
<i>or HIST 3327 Women in American History, 1900–Present</i>	
HIST 3329 Women in Early Modern Europe	
WGST 6300 Advanced Feminist Theory	
Eight relevant WGST and/or non-WGST program-approved courses (below) at the 3000-level or above	24
ANTH 3310 Gender and Sex Roles: A Global Perspective	
ANTH 3328 Gender Violence: What Does Culture Have to Do With It?	
ANTH 3336 Gender/Globalization: Cultural/Ethical Issues	
ANTH 4386, 6386 The Archaeology of Gender and Sexuality	
ARHS 3357 Women Artists	
ARHS 3358, 6389 Women in the Visual Arts: Both Sides of the Easel	
ARHS 3365, 6365 Race and Gender in Visual Studies	
ARHS 4371/WGST 3381 Modern Myth-Making	
COMM 3341 Ethnicity, Culture, and Communication	
ECO 4351 Labor Economics	
ECO 5357 Economics of Human Resources	
ENGL 1360 The American Heroine: Fiction and Fact	
ENGL 3344 Victorian Gender	
ENGL 3364/WGST 3370 Women and the Southwest	
ENGL 3367 Ethical Implications of Children's Literature	
ENGL 3371/HIST 3357 Joan of Arc: History, Literature, Film	
ENGL 3377 Literature/Construction of Homosexuality	
ENGL 3373/WL 3359 Masculinities: Images/Perspectives	
ENGL 3379 Literary/Cultural Contexts of Disability: Gender, Care, and Justice	
ENGL 3361, 4330, 4343, 4363, 6391, 6392, 6393, 6394, 6395 Topics/Seminars (topic must be approved by director)	
FILM 2332 American Popular Film	
FILM 2362 Diversity and American Film	
FILM 3310 Screen Artists (topic to be approved by director)	
FILM 3395, 3398 Topics in Cinema/Television (topic to be approved by director)	

Program-approved courses (continued)

- FREN 5334** French Women Writers and Society (topic to be approved by director)
- HIST 1321** Marriage in America
- HIST 1322** Seminar in European History (topic to be approved by director)
- HIST 3301** Human Rights: America's Dilemma
- HIST 3310** Problems in American History: Women's Movements and Gender Systems
- HIST 3312** Women in American History to 1900
- HIST 3317** Women in Latin American Societies
- HIST 3327** Women in American History, 1900 to the Present
- HIST 3329** Women in Early Modern Europe
- HIST 3330** Women in Modern European History
- HIST 3348** American Families: Changing Experiences and Expectations
- HIST 3355** Class and Gender in Ancient Society
- HIST 3394** The New Woman: Emergence of Modern Womanhood, U.S. 1890–1930
- HIST 3398** Women in Chinese History
- HIST 4304** At the Crossroads: Gender and Sexuality in the Southwest
- HX 8328** Women in the History of Christianity (Perkins' graduate course; instructor approval)
- HX 8337** Sex/Gender Roles in the History of Patristic Thought
- JOUR 4360** Women and Minorities in Mass Media
- MDVL 3352** Ideas and Ideals of Gender in the Middle Ages
- MUHI 3341** Women/Music "Like a Virgin": From Hildegard to Madonna
- MUHI 4341** Women Composers/Performers, 19th and 20th Centuries (majors only)
- PHIL 3305** Philosophy and Gender
- PLSC 3370** Women and Politics
- PLSC 4339** Women and the Law
- PLSC 4344** Gender in World Politics
- PSYC 3371** Psychology of Women
- RELI 3374** Female and Male in Religion and Culture
- RELI 3375** Wives, Mothers, Lovers, Queens
- RELI 3376** Constructions of Gender, Sexuality, and Family in South Asian Religions
- RELI 3380** Women and Religion in America
- RELI 3381** Religion, Gender, and Economic Development
- SOCI 3345** Media Ethics and Gender
- SOCI 3351** Marriage and the Family
- SOCI 3371** Sociology of Gender
- SOCI 4373** Race, Gender, and Inequality

Program-approved courses (continued)

SPAN 5336 (Re)presentations of Gender, Contemporary Short Latin American Novel (director approves topic)	
ST 8375 Feminist/Womanist Theologies (Perkins' graduate course; instructor approval)	
THEA 4381–4 Studies in Contemporary Performance: Solo Performance; Gender/Performance (director approves topic)	
WL 3312 Women in Modern China	
WL 3363/WGST 3347 Figuring the Feminine	
WO 8308 Women and Worship (Perkins' graduate course; instructor approval)	
XS 8345 Faith, Feminism, and Public Policy (Perkins' graduate course; instructor approval)	
One additional WGST or non-WGST program-approved course	3

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The Courses (WGST)

WGST 1395 (3). SPECIAL TOPICS ABROAD IN WOMEN'S AND GENDER STUDIES. Course offered in SMU-approved international programs. Prior approval by the director is required. A maximum of 3 credit hours may be applied toward the minor in women's and gender studies.

WGST 2308 (3). REVISIONS WOMAN AS ARTIST. This course is designed to discover how an emphasis on the particular experiences of women can enhance and complicate traditionally conceived areas of scholarship and critical endeavor. It also explores areas of women's experience traditionally undervalued, such as friendship, sexuality, motherhood, and old age.

WGST 2309 (3). LESBIAN AND GAY LITERATURE AND FILM: MINORITY DISCOURSE AND SOCIAL POWER. The exploration, through literature and film, of the struggles by gay men and lesbians to create social identities and achieve human rights. Study of key cultures and pivotal historical periods in the West from ancient Greece to contemporary America.

WGST 2315 (3). GENDER, CULTURE, AND SOCIETY. An interdisciplinary study of gender ideology stressing anthropological and literary perspectives, this course analyzes gender difference as a structuring principle in all societies and explores some of its representations in literature, film, and contemporary discourse.

WGST 2322 (3). GENDER: IMAGES AND PERSPECTIVES. An interdisciplinary examination of the ways femininity and masculinity have been represented in the past and present, with attention to what is constant and what changes.

WGST 2395 (3). SPECIAL TOPICS ABROAD IN WOMEN'S AND GENDER STUDIES. Course offered in SMU-approved international programs. Prior approval by the director is required.

WGST 3310 (3). GENDER AND HUMAN RIGHTS. Introduction to global women's human rights and other intersections of human rights and gender, such as abuse of children's rights, gender-based violence, health and reproductive rights, and evolving concepts of sexual rights.

WGST 3328 (3). GENDER VIOLENCE: ANTHROPOLOGICAL PERSPECTIVES. This course examines how gender-based violence shapes individual subjectivities and collective experiences, material realities, and psychological states, as well as the impacts of interventions on intimate, interpersonal, local, and global scales.

WGST 3347 (3). FIGURING THE FEMININE. This course introduces students to a large body of French literary texts (in translation) by and about women, which bear witness to women's struggle for civil, social, and political adulthood. They span the period from the 14th century to the present.

WGST 3370 (3). WOMEN IN THE SOUTHWEST. A study and exploration of women writers, artists, and thinkers in the American Southwest and their vision of this region as singularly hospitable to women's culture.

WGST 3380 (3). HUMAN SEXUALITY. This course explores the biosocial aspects of human sexuality and sex behaviors. A multidisciplinary and cross-cultural perspective will be used to address a wide range of theoretical and pragmatic sexual issues.

WGST 3381 (3). MODERN MYTH-MAKING. The quest for enduring cultural heroes and the projection of changing social messages as reflected in art from past epochs to modern times.

WGST 3382 (3). WOMEN'S BODY POLITICS. A cross-cultural, interdisciplinary exploration of the cultural and ideological work that women's bodies perform, as reflected in literature, art, medicine, philosophy, and political discourses from the Classical era to today.

WGST 3395 (3). SPECIAL TOPICS ABROAD IN WOMEN'S AND GENDER STUDIES. Course offered in SMU-approved international programs. Prior approval by the director is required.

WGST 4109 (1). INDEPENDENT STUDIES. Supervised practicum and/or directed readings on specific problems or themes formulated by the student under faculty guidance. Director approval required.

WGST 4209 (2). INDEPENDENT STUDIES. Supervised practicum and/or directed readings on specific problems or themes formulated by the student under faculty guidance. Director approval required.

WGST 4303 (3). WOMEN'S AND GENDER STUDIES INTERNSHIP. Offers experience with organizations serving women or addressing women's and gender issues, with volunteer opportunities in the community, or with varied potential careers.

WGST 4309 (3). INDEPENDENT STUDIES. Supervised practicum and/or directed readings on specific problems or themes formulated by the student under faculty guidance. Director approval required.

WGST 4395 (3). SPECIAL TOPICS ABROAD IN WOMEN'S AND GENDER STUDIES. Course offered in SMU-approved international programs. Prior approval by the director is required.

WGST 5310 (3). SPECIAL TOPICS IN WOMEN'S AND GENDER STUDIES 1. Study of a theme, issue, or topic relevant to the study of women, gender, and/or sexuality. The syllabus and assignments must be approved by a committee consisting of the professor of record, the WGST director, and a faculty member who teaches courses in the WGST program. *Prerequisite:* Enrollment in the WGST Certificate Program.

MATHEMATICS

www.smu.edu/math

Professor Alejandro Aceves, Department Chair

Professors: Alejandro Aceves, Vladimir Ajaev, Thomas Hagstrom, Amnon Meir, Peter Moore, Douglas Reinelt, Johannes Tausch. **Associate Professors:** Thomas Carr, Barry Lee, Daniel Reynolds, Brandilyn Stigler, Sheng Xu, Yunkai Zhou. **Assistant Professors:** Andrea Barreiro, Weihua Geng, Kathryn Hedrick, Scott Norris, Benno Rumpf. **Senior Lecturers:** Adriana Aceves, Judy Newell. **Lecturer:** Carol Seets.

The department of mathematics offers B.S. and B.A. degrees in mathematics as well as a minor in mathematics. All mathematics majors, either B.S. or B.A., and minors must earn grades of at least *C*- in all courses taken in fulfillment of the requirements for the mathematics major or minor. MATH 6000-level courses may be taken for either the B.S. or B.A. major by students who have fulfilled the prerequisites and have departmental permission. Transfer credit for MATH 1307, 1309 or 1337 will not be approved after any student matriculates to SMU, regardless of major.

Bachelor of Science With a Major in Mathematics

The B.S. degree in mathematics reflects contemporary trends in mathematics by incorporating computer science, mathematical and computational modeling, natural science and statistics courses. This degree is particularly appropriate for students who wish to proceed toward careers in industry concentrating on analytical problem solving, or toward graduate schools in any mathematical science area. Computer science, economics, electrical engineering, mechanical engineering, management science, physics and chemistry provide attractive opportunities as areas for a double major with mathematics. With a minimum of 21 approved advanced hours in the major, the following courses are required:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Fundamental Mathematics	12
MATH 1337, 1338 or 1340, 2339, 2343	
Natural Science (at least 6 hours from the following)	6
BIOL 1401, 1402	
CHEM 1303, 1304	
One GEO 1300-level course	
PHYS 1303, 1304	
Computer Science	3
CSE 1341 or 1342	
Statistics	3
STAT 4340/CSE 4340/EMIS 3340, or STAT 5340, or EE 3360	
Advanced Mathematics Elective	3
One 3000+ MATH course	
Specialization	15
<i>At least two courses at the 4000+ level from one specialization, including at least one MATH 4000+ course</i>	
Applied and/or Numerical Mathematics:	
MATH 3315/CSE 3365 or MATH 3316	
Four from MATH 3334, 3337, 3353, 4335, 4370, 5315, 5316, 5331, 5334, 5353; EMIS 3360	

Specialization (continued)**Computer Science and Computer Engineering:**

MATH 3315/CSE 3365 or MATH 3316, and CSE 4381

Three from MATH 3353, 4370, 5315, 5316

Engineering:

MATH 3315/CSE 3365 or MATH 3316

MATH 3337

Civil Engineering: Two from CEE 5361, 5364; ME 5322

Electrical Engineering: Two from EE 3322, 3330, 3372, 5330, 5332, 5336, 5360, 5362, 5372 (with at least one course at the 4000+ level)

Environmental Engineering: Two from ME 5336 (MATH 6336), CEE 5331, 5332, 5334

Mechanical Engineering: Two from ME 4360, 5302, 5320, 5322, 5336, 5361, 5386

Operations Research:

MATH 3315/CSE 3365 or MATH 3316

Two from MATH 3353, 4370, 5315, 5316, 5353

EMIS 3360 (required)

One from EMIS 5361, 5362, 5369; STAT 5344/EMIS 5364

Pure Mathematics:

Five from MATH 3308, 3337, 3353, 4338, 4351, 4355, 4381, 5331, 5353

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Bachelor of Arts With a Major in Mathematics

The B.A. degree in mathematics is designed for students who need a traditional mathematics degree leading to careers in teaching, industry, business and government. It is particularly attractive when combined with liberal arts, social science or business administration as a double major. The requirements are the same as for the B.S. degree except that there is no natural science requirement.

Minor in Mathematics

The mathematics minor, available to students who are not seeking the B.A. or B.S. in mathematics, consists of 18 hours of MATH courses: MATH 1337, 1338 or 1340, 2339 and nine hours selected from mathematics courses at the advanced (3000+) level. MATH 2343 may replace an advanced-level mathematics course. All courses in the minor must be passed with a grade of C- or higher.

The Courses (MATH)

MATH 1303 (3). PRECALCULUS FOR BUSINESS. Inequalities, absolute value, graphs, functions, basic analytic geometry, polynomials, logarithms, exponentials, linear equations, and mathematics of finance. *Prerequisite:* High school algebra. No credit is given if taken after any calculus course. Credit is not given for both MATH 1303 and 1304. Intended for students planning to take MATH 1309.

MATH 1304 (3). PRECALCULUS MATHEMATICS. Graphs, functions, basic analytic geometry, exponentials, logarithms, trigonometry, and inverse functions. *Prerequisites:* Three years of high school math at the level of Algebra I and above. No credit is given if taken after any calculus course. Credit is not given for both MATH 1303 and 1304. Intended for students planning to take MATH 1337.

MATH 1305 (3). MATHEMATICS FOR ELEMENTARY AND MIDDLE SCHOOL TEACHERS. Study of rational number arithmetic, with a focus on explanation through models and representations. Emphasizes algebra from the viewpoint of the elementary curriculum and problem-solving. *Prerequisite or corequisite:* EDU 2350 or PSYC 1300.

MATH 1307 (3). INTRODUCTION TO MATHEMATICAL SCIENCES. Permutations and combinations, probability, voting methods, elementary statistics, and mathematics of finance. *Prerequisite:* High school algebra.

MATH 1309 (3). INTRODUCTION TO CALCULUS FOR BUSINESS AND SOCIAL SCIENCE. Derivatives and integrals of algebraic, logarithmic, and exponential functions with applications to the time value of money, curve sketching, maximum-minimum problems, and computation of areas. Applications to business and economics. (Natural science and engineering students must take MATH 1337. Credit not allowed for both MATH 1309 and 1337.) *Prerequisite:* Placement out of MATH 1303 or a C- or higher in MATH 1303.

MATH 1337 (3). CALCULUS I. Differential and integral calculus for algebraic, trigonometric functions, and other transcendental functions, with applications to curve sketching, velocity, maximum-minimum problems, area and volume. (Credit not allowed for both MATH 1309 and 1337.) *Prerequisite:* Placement out of MATH 1304 or a C- or higher in MATH 1304.

MATH 1338 (3). CALCULUS II. A continuation of MATH 1337 through differential and integral calculus, areas, techniques of integration, improper integrals, and infinite sequences and series, including Taylor series. *Prerequisite:* C- or higher in MATH 1337 (or MATH 1309 and departmental permission).

MATH 1340 (3). CONSOLIDATED CALCULUS. A combined course in Calculus I and II for students with a background in Calculus I. Students receive credit for both this course and MATH 1337 if they receive a C- or higher. Students may not receive credit for both MATH 1338 and MATH 1340. *Prerequisite:* A score of 3 or higher on the AB or BC Calculus AP exam, or permission of the Mathematics Department.

MATH 2339 (3). CALCULUS III. A continuation of MATH 1338. Includes parametric equations, polar coordinates, partial differentiation, multiple integrals, and vector analysis. *Prerequisite:* C- or higher in MATH 1338 or 1340.

MATH 2343 (3). ELEMENTARY DIFFERENTIAL EQUATIONS. First-order equations, linear equations, Laplace transform linear systems, and phase plane. *Prerequisite:* C- or better in MATH 1338 or 1340.

MATH 3308 (3). INTRODUCTION TO DISCRETE MATHEMATICS. Introduces logic, set theory, graph theory, recurrence relations, and combinatorics. Presents mathematical foundations and applications of these subjects. Credit is not allowed for both CSE 2353 and MATH 3308. *Prerequisite:* C- or higher in MATH 1338 or 1340.

MATH 3315 (3). INTRODUCTION TO SCIENTIFIC COMPUTING. An elementary survey course that includes techniques for root-finding, interpolation, functional approximation, linear equations, and numerical integration. Special attention is given to MATLAB programming, algorithm implementations, and library codes. Students registering for this course must also register for an associated computer laboratory. *Prerequisites:* C- or better in MATH 1338 or 1340, and in CSE 1341 or 1342. *Corequisite:* MATH 3353.

MATH 3316 (3). INTRODUCTION TO HIGH-PERFORMANCE SCIENTIFIC COMPUTING. An elementary survey course that includes techniques for root-finding, interpolation, functional approximation, linear equations, and numerical integration. Computational work focuses on the Python and C++ programming languages using Linux. *Prerequisites:* C- or higher in MATH 1338 or 1340, and in CSE 1342. *Corequisite:* MATH 3353.

MATH 3334 (3). MATHEMATICAL MODELING AND APPLICATIONS. Discussion of modeling principles such as conservation laws, dimensional analysis and scale, model validation, and the continuum hypothesis. Applications may include vibrations, traffic flow, population dynamics, and optimization. *Prerequisite:* C- or higher in MATH 2343.

MATH 3337 (3). ADVANCED MATHEMATICS FOR SCIENCE AND ENGINEERING. Elements of vector integral calculus, Fourier series, and boundary-value problems in partial differential equations. (No credit given if taken after MATH 5334.) *Prerequisites:* C- or higher in MATH 2343, 2339.

MATH 3353 (3). INTRODUCTION TO LINEAR ALGEBRA. Matrices and linear equations, Gaussian elimination, determinants, rank, geometrical notions, eigenvalue problems, coordinate transformations, norms, inner products, orthogonal projections, and Gram-Schmidt and least squares. No credit is given if taken after MATH 5353. *Prerequisite:* C- or higher in MATH 1338 or 1340.

MATH 4335 (3). MATHEMATICAL BIOLOGY. Introduction of mathematical models of biological systems. Also, population dynamics, infectious diseases, population genetics, and molecular and cellular biology. *Prerequisites:* C- or higher in MATH 2343, 3353.

MATH 4338 (3). ANALYSIS. Sequences and series of real numbers and functions, properties of continuous functions, differentiation and integration with some attention paid to higher dimensions. *Prerequisite:* C- or higher in MATH 3308 or permission of instructor.

MATH 4351 (3). THEORY OF NUMBERS. Classical number theory, including divisibility, congruencies, quadratic reciprocity, Diophantine equations, and number theoretic functions. *Prerequisite:* C- or higher in MATH 3308 or permission of instructor.

MATH 4355 (3). GROUPS AND RINGS. Basic properties of groups, rings and fields, homomorphisms, normal subgroups, integral domains, ideals, algebraic extension fields, geometric constructions. *Prerequisite:* C- or higher in MATH 3308 or permission of instructor.

MATH 4370 (3). INTRODUCTION TO PARALLEL SCIENTIFIC COMPUTING. An introduction to parallel computing in the context of scientific computation. *Prerequisites:* MATH 3316 and 3353, or permission of instructor.

MATH 4381 (3). INTRODUCTION TO GENERAL TOPOLOGY. Elementary topology of the line and plane, metric spaces, and general topological spaces. Also, continuity of mappings, connectedness, compactness, completeness, and fixed-point theorems. *Prerequisite:* C- or higher in MATH 3308 or permission of instructor.

MATH 5315 (3). INTRODUCTION TO NUMERICAL ANALYSIS. Numerical solution of linear and nonlinear equations, interpolation and approximation of functions, numerical integration, floating-point arithmetic, and the numerical solution of initial value problems in ordinary differential equations. Student use of the computer is emphasized. *Prerequisites:* MATH 2343, and MATH 3315/CSE 3365 or MATH 3316; a programming course (e.g., C, Fortran, or MATLAB).

MATH 5316 (3). INTRODUCTION TO MATRIX COMPUTATION. The efficient solution of dense and sparse linear systems, least squares problems, and eigenvalue problems. Elementary and orthogonal matrix transformations provide a unified treatment. Programming is in MATLAB, with a focus on algorithms. *Prerequisites:* MATH 3353; MATH 3315/CSE 3365 or MATH 3316.

MATH 5331 (3). FUNCTIONS OF A COMPLEX VARIABLE. Complex numbers, analytic functions, mapping by elementary functions, and complex integration. Cauchy-Goursat theorem and Cauchy integral formulas. Taylor and Laurent series, residues, and evaluation of improper integrals. Applications of conformal mapping and analytic functions. *Prerequisite:* C- or higher in MATH 3337.

MATH 5334 (3). INTRODUCTION TO PARTIAL DIFFERENTIAL EQUATIONS. Elementary partial differential equations of applied mathematics: heat, wave, and Laplace's equations. Topics include physical derivations, separation of variables, Fourier series, Sturm-Liouville eigenvalue problems, and Bessel functions. *Prerequisite:* C- or higher in MATH 3337.

MATH 5353 (3). LINEAR ALGEBRA. Spectral theory of Hermitian matrices, Jordan normal form, Perron-Frobenius theory, and convexity. Applications include image compression, Internet page ranking methods, optimization, and linear programming. *Prerequisite:* C- or better in MATH 3353.

PHILOSOPHY

www.smu.edu/philosophy

Professor Eric Barnes, Department Chair

Professors: Eric Barnes, Doug Ehring, Robert Howell, Steven Sverdlik. **Associate Professors:** Philippe Chuard, Justin Fisher, Matthew Lockard, Jennifer Matey, Luke Robinson, Brad Thompson. **Senior Lecturer:** Ken Daley. **Lecturers:** Kirsten Egerstrom, Stephen Hiltz.

The Philosophy Department is well known for strength in ethics, moral psychology, metaphysics, epistemology, philosophy of mind and philosophy of science. Students focus on the development of skills in reasoning, their understanding of arguments and viewpoints, the critical evaluation of varied perspectives, and clear written and oral communication. The critical thinking skills developed in the major and minor are of benefit to students in many disciplines and are especially useful as preparation for law school. The department offers a B.A. in philosophy and minors in philosophy and ethics. Courses include core areas of philosophy and specialized topics such as animal rights, philosophy of mind and philosophy of law.

Bachelor of Arts With a Major in Philosophy

The B.A. degree requires at least 21 term hours of advanced work (courses 3000 and above). At least 12 hours in any one world language are strongly recommended.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Core Courses	12
PHIL 1301, 3351, 3352 One from PHIL 3310–3319	
Electives	18
Six additional PHIL courses, with at least four courses at the 3000 level or above	
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Departmental Distinction

Departmental distinction is awarded to philosophy majors graduating with at least a 3.500 GPA in philosophy and who successfully complete a writing project under the guidance of a faculty member.

Minor in Philosophy

The minor is available to students who are not seeking the B.A. in philosophy.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
PHIL 3351 or 3352	3
Four additional PHIL courses, with at least two courses at the 2000 level or above	12
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Minor in Ethics

Students majoring in philosophy may not minor in philosophy/ethics.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
PHIL 1305 or 1306	3
One from PHIL 1316, 1317, 1318	3
Three from PHIL 3371–3381	9
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	15

The Courses (PHIL)

PHIL 1300 (3). INTRODUCTION TO CRITICAL THINKING. Learning to analyze, evaluate, and present information in order to better assess one's own beliefs and to persuade others more effectively.

PHIL 1301 (3). ELEMENTARY LOGIC. An introductory course in symbolic logic. Logic provides a means for determining whether the purported conclusion of an argument really does follow from the premises. In symbolic logic, mechanical procedures are developed for determining whether a given argument is valid. The techniques and skills acquired through logic have important applications not only within other academic areas such as the sciences and humanities, but may be of use within various professional areas, including law.

PHIL 1305 (3). INTRODUCTION TO PHILOSOPHY. A general introduction to the central questions of philosophy. We will discuss topics from such areas as the theory of knowledge, philosophy of religion, metaphysics, philosophy of mind, ethics, and political philosophy. Typical questions might include: Can we know the world outside our minds? Is it rational to believe in a God who allows evil to exist? Do the laws of physics allow for human freedom? Is morality more than a matter of opinion? Can there be unequal wealth in a just society? Readings will include classical authors such as Plato, Descartes, Locke, Hume, and Mill, as well as contemporary philosophers. The focus of the course will be on arguments for and against proposed solutions to key problems of philosophy.

PHIL 1306 (3). INTRODUCTION TO PHILOSOPHY: MINDS, MACHINES, AND PERSONS. A focused introduction to the central questions of philosophy, with an emphasis on the mind and the self. Typical questions might include the following: Does the soul exist? Is the mind the same thing as the brain? Can animals feel pain? Can they think? Can a computer think? Might the mind be a computer? What is consciousness? Can people understand experiences radically different from their own? What is the self? Can one survive the death of the body? The focus of the course is on arguments for and against proposed solutions to philosophical problems concerning mind, machines, and persons.

PHIL 1316 (3). INTRODUCTION TO ETHICS. An introduction to philosophical ethics focusing on questions in ethical theory. Topics vary, but the following are representative. Is morality merely conventional – and hence historically and culturally relative – or is there an objective morality? If there is an objective morality, what is its content? And what is its basis: reason, human nature, or divine command? Why be moral? If the demands of morality conflict with self-interest, why should one comply with them? And what exactly is in one's self-interest: in what does human happiness or well-being consist? Students read, discuss, and write about philosophical arguments for and against proposed answers to questions like these.

PHIL 1317 (3). BUSINESS ETHICS. A discussion of the moral and political issues surrounding a free-enterprise system. Students are introduced to basic moral theory. Topics include distributive (or economic) justice and the moral preferability of capitalism and socialism. Also, selected concrete moral issues such as truth in advertising, worker safety, and affirmative action.

PHIL 1318 (3). CONTEMPORARY MORAL PROBLEMS. An introduction to philosophical ethics focusing on questions in applied ethics. Students begin by exploring ethical theories and philosophical methods. The majority of the course is devoted to applying those theories and methods to some of the most controversial and pressing issues confronting contemporary society. Topics vary, but the following are representative: abortion, animal rights, affirmative action, capital punishment, economic justice, euthanasia, sexuality, war and terrorism, and

world hunger. Class discussion is an important component of the course, as is reading and (in some sections) writing argumentative essays about these issues.

PHIL 3161 (1). PHILOSOPHY OF SCIENCE. Covers fundamental issues in the philosophy of science, including the nature of scientific theories, the distinction between science and pseudoscience, the scientific method, the logic of theory confirmation, and the realist versus antirealist debate. *Corequisite:* CHEM 1304.

PHIL 3301 (3). INTERMEDIATE LOGIC. Introduces the formal theory of the logical systems students have already learned to use: sentential logic and predicate logic. Students learn to prove the completeness and soundness of both of these systems. Also, simple nonstandard logical systems such as modal, epistemic, or deontic logic, if time permits. *Prerequisite:* PHIL 1301 or its equivalent.

PHIL 3302 (3). PROBLEMS IN THE PHILOSOPHY OF RELIGION. The philosophy of religion, considering such problems as religious experience, human freedom, good and evil, belief in God, and immortality.

PHIL 3305 (3). PHILOSOPHY AND GENDER. Considers whether or not there are differences between the sexes and whether or not Western science, philosophy, and ethics have been dominated by male thinking. Also, current issues such as pornography, censorship, rape, and reproductive technologies. Students examine writings by feminist philosophers and their critics.

PHIL 3310 (3). ADVANCED TOPICS IN PHILOSOPHY. May be repeated for credit.

PHIL 3311 (3). 20TH-CENTURY PHILOSOPHICAL ANALYSIS. An examination of the method of philosophical analysis as practiced by such 20th-century philosophers as Moore, Russell, Wittgenstein, Quine, and Austin.

PHIL 3312 (3). INTRODUCTION TO PHILOSOPHY OF LANGUAGE. A systematic treatment of such topics as the nature of linguistic reference, meaning, synonymy, truth, vagueness, and metaphor. Also, issues relating to the goals and methodology of linguistics, such as the status of semantic descriptions, and the nature versus nurture controversy in language acquisition theories.

PHIL 3313 (3). KNOWLEDGE AND SKEPTICISM. A systematic treatment of such topics as skepticism, analyses of factual knowledge, theories of epistemic justification, foundational versus coherence theories of knowledge, and the relationship between psychology and a philosophical account of knowledge.

PHIL 3314 (3). METAPHYSICS. Some of the most central and traditional questions in philosophy are metaphysical: Do objects really exist? What are they? And what are persons: do we persist over time, can we survive change? Are we really free, or are all our actions determined by the laws of nature? Are our minds simply reducible to our brains? Are there such things as souls? How about the properties of things – objects have sizes and shapes, we have nationalities and genders, but what are these properties exactly? Can we know anything about the ultimate structure of reality? Does it include God? Is science the only way to discover what really exists and how things really are? This course offers a systematic approach to these questions and others.

PHIL 3315 (3). PHILOSOPHY OF MIND. A systematic treatment of the nature of consciousness, self, and person.

PHIL 3316 (3). MINDS, BRAINS, AND ROBOTICS. Topics may include neural networks, artificial intelligence, perception and action, consciousness, robotics, dynamical systems, embodied cognition, game theory, and the evolution of cognition. *Prerequisites:* Two courses in fields related to cognitive science (philosophy, computer science, computer engineering, psychology, linguistics, biology, or anthropology).

PHIL 3317 (3). PHILOSOPHY OF PERCEPTION. We see penguins (and other things), we hear trumpets (and other things), we smell fresh bread (and other things), taste mustard, touch water, etc. Perceptual experiences like these raise many central philosophical questions. Do they represent reality in an accurate way? Can they provide knowledge about our environment? Is there a special kind of consciousness such experiences instantiate, and if so what is it? This course addresses a host of questions about the nature of our perceptual experiences and surveys some of the answers, including some of the more significant results obtain by the cognitive neurosciences.

PHIL 3318 (3). COLORS, SOUNDS, AND OTHER APPEARANCES. Objects look colored, they produce sounds, smells, and some have a taste. But what are these sensory appearances – colors, sounds, tastes, smells, etc. – exactly? Do they even exist or are they mere appearances produced by our brains? Could they be identified or reduced to objective physical features of the objects we perceive, or are they somehow mere projections of our minds? What can science and philosophy tell us about colors, sounds, and the like? This course offers a systematic analysis of some of these appearances, of their nature, their objectivity, and what can best explain them.

PHIL 3319 (3). IDENTITY, PERSONS, AND OTHER OBJECTS. Persons and individuals like you and me raise a host of central philosophical questions. You are, we assume, the very same person you were three minutes ago, distinct from all the other individuals on the surface of the planet. But how is that so, and how it is even possible? Persons, just like tables, chairs, and other particular objects, seem to retain their identity through time despite the changes they go through: they persist and survive change. Does this mean each particular person (and each particular table) has a very specific essence it keeps throughout its life? What exactly constitutes a person? And what do we mean by identity anyway, in this context? And what of the powerful arguments suggesting that persons (and other objects) cease to exist whenever they go through the most trivial change, or that the existence of persons and other objects is a mere illusion? This course will consist in a systematic survey of some of the central answers to some of these and other related questions.

PHIL 3320 (3). CAUSATION. Intensive investigation of the metaphysics of causation. Examines regularity theory, counterfactual theory, probabilistic theory, and process theories. *Prerequisite:* Permission of instructor.

PHIL 3321 (3). TIME, SPACE, AND METAPHYSICS. Does time pass? Do the past and the future exist? Is space a thing? What are the laws of nature? This course introduces some central issues in the metaphysics of science.

PHIL 3333 (3). TOPICS IN PHILOSOPHY. May be repeated for credit.

PHIL 3351 (3). HISTORY OF WESTERN PHILOSOPHY (ANCIENT). A study of the major philosophers from Thales to Plotinus, including Plato and Aristotle.

PHIL 3352 (3). HISTORY OF WESTERN PHILOSOPHY (MODERN). Survey course in the history of modern philosophy covering the modern period, from Descartes to Hume, including Leibniz, Spinoza, Locke, and Berkeley. We will examine many seminal writings in philosophy on such key issues as rationalism and empiricism, the nature of external reality and one's knowledge of it, the existence and nature of God, the relation between mind and body, causation, induction, and the nature of morality and moral action. Satisfies one part of the history requirement for philosophy majors; may be used to satisfy the history requirement for philosophy minors.

PHIL 3362 (3). CREATIVITY, DISCOVERY, AND SCIENCE. Considers central issues in the history and philosophy of science, with a special emphasis on the nature of creativity and discovery in scientific thought. General questions include the following: What is science, and what is the nature of scientific method? What is the nature of evidence and explanation in science? Addresses in detail the question of how new ideas such as theories and problem solutions are produced and assessed in scientific thinking. Is creativity essentially a random or blind process or is it rule-governed in some way? What is the nature of scientific discovery? Combines literature in the history and philosophy of science together with psychological literature on the nature of creativity to answer these and other questions. No previous coursework in science is required, but some science background equips students to appreciate the relevant issues.

PHIL 3363 (3). AESTHETIC EXPERIENCE AND JUDGMENT. Attention is devoted to the following questions: What is beauty? Are there any standards or rules concerning what is beautiful? What is art? Why is art an important part of human culture? Students also consider the role of emotion in art, the problem of correct interpretation, and the nature of tragedy.

PHIL 3364 (3). PHILOSOPHY OF BIOLOGY. A survey of topics in the philosophy of biology, including evolution versus creationism, fitness, units of selection, adaptationism, biological taxonomy, evolution in humans, cultural evolution, and niche construction.

PHIL 3366 (3). PHILOSOPHY IN LITERATURE. A nontechnical introduction to philosophy by an examination of traditional philosophical problems embodied in great works of fiction.

PHIL 3370 (3). 19TH-CENTURY PHILOSOPHY. A detailed study of selected major thinkers from the 19th century, such as Kant, Hegel, Kierkegaard, Nietzsche, Schopenhauer, Fichte, Feuerbach, and Marx.

PHIL 3371 (3). SOCIAL AND POLITICAL PHILOSOPHY. Examines some of the basic questions in social and political philosophy, and the most important answers that have been given to them. Typical questions that have been asked since antiquity include the following: What forms of government are most reasonable and morally defensible? Are citizens in a modern state normally obligated to obey the law? What is justice, and how might it be embodied in a system of government? Are there such things as natural rights, and how does one know about them? What is the basis for saying that Americans have rights to freedom of speech and religion? When, if ever, is it legitimate for a state to go to war?

PHIL 3372 (3). LIBERTY. Investigates the topics of freedom and autonomy primarily from the standpoint of social and political philosophy. Students explore the nature of a freedom and its role in a good society along with the nature of autonomy (self-governance) and its role in a good life. Also, the distinction between negative and positive liberty, the nature of coercion, the republic theory of freedom, the nature of personal autonomy, the value of freedom, and other topics. Grades are partially based on two short papers and one term paper.

PHIL 3373 (3). PHILOSOPHY OF CRIMINAL LAW. By what right does society punish some people? What is the correct amount of punishment? Who ought to be punished? Students examine various philosophical responses to these questions. Other topics include the morality of capital punishment, excuse and justification, the morality of self-defense, and the justifiability of punishing self-regarding acts such as drug use.

PHIL 3374 (3). PHILOSOPHY OF LAW. This course explores some central and interrelated issues in philosophy of law, or jurisprudence, with a particular emphasis on the role that morality plays in our understanding of law and in the interpretation and application of the law. Here are some of the questions we will consider: When and why does the content of law – what the law is – depend on the content of morality – on what is right and wrong, just and unjust, fair and unfair, etc.? When and how does interpreting and applying laws (statutes, precedents, etc.) involve making value judgments, including moral judgments? Does the United States Constitution enact the “original understanding” of freedom of speech, due process of law, equal protection of the laws, and so on? Or does it, instead, direct us to apply our own, perhaps quite different, understandings of these concepts? (The latter view is called “the moral reading” of the Constitution.) Is there a moral obligation to obey the law? When and why is punishing those who break the law morally justified? Satisfies elective requirements in the following majors and minors: philosophy, ethics, human rights, and law and legal reasoning.

PHIL 3375 (3). TOPICS IN MORAL PHILOSOPHY. A topics offering that seeks to take advantage of the wide variety of issues that can be fruitfully explored in a course on moral philosophy. (May be repeated for credit.)

PHIL 3376 (3). BIOETHICS. An examination of ethical questions arising within medical practice, medical research, and the life sciences.

PHIL 3377 (3). ANIMAL RIGHTS. Explores the nature of nonhuman animals, their moral status, and the way we treat them. First we'll consider questions about the minds of animals. Are animals conscious? Can they think about the future? Are they self-aware? Exploring those questions will prepare us for our second set of topics about the moral status of animals. Do animals have rights like humans do? Do we have moral obligations to animals? Is there a difference between the moral status of animals that fall into different categories (pets, domesticated animals, and wild animals)? Third, we'll examine the way animals are used for food, for entertainment, and in biomedical research. What laws already protect animals and what changes are needed? Satisfies elective requirements in the following majors and minors: philosophy, ethics, human rights, and environmental studies.

PHIL 3379 (3). ENVIRONMENTAL ETHICS. Explores society's ethical obligations concerning the natural world. Topical issues like climate change, endangered species, recycling, and the population explosion are covered from a variety of philosophical perspectives.

PHIL 3380 (3). ETHICAL THEORY. This course explores some central and interrelated issues in normative ethical and political theory, with a particular emphasis on morality, self-interest, and social justice. Here are some of the questions we will consider: Might enlightened self-interest be the basis of moral rights and duties? Is a morally right action one that maximizes

overall happiness or well-being, or are there moral rights or duties that prohibit the sacrifice of individuals or their interests for the sake of the greater good? Does individual well-being (or self-interest) consist in pleasure and freedom from pain? Do our subjective interests (our desires or preferences) determine what is ultimately best for us, or are there desire-independent goods, such as knowledge or moral virtue? To what extent, if any, does justice permit certain forms of economic inequality, such as inequality of income or wealth? Do individuals have pre-institutional (or “natural”) rights that prohibit society and social institutions (including the state) from using certain means (e.g., taxes and transfers) to promote desirable outcomes, such as greater social welfare or less economic inequality? Satisfies elective requirements in the following majors and minors: philosophy, ethics, and human rights.

PHIL 3381 (3). NEUROETHICS. Neuroethics concerns the ethical questions raised by the brain sciences. Is neuroenhancement morally problematic? Should the use of brain scans be limited? What does neuroscience tell us about ethical judgment?

PHIL 3382 (3). 20TH-CENTURY EUROPEAN PHILOSOPHY. An examination of some methods and principles of European philosophies in the 20th century. Students study the following philosophical schools: phenomenology, existentialism, neo-Kantianism, life-philosophy, hermeneutics, and neo-Marxist critical theory.

PHIL 3383 (3). AMERICAN PHILOSOPHY. Historical development and contemporary themes in American philosophy. Varying emphasis may be placed on trends (e.g., pragmatism), historical figures (e.g., Dewey), or influential contemporary figures (e.g., Quine).

PHIL 4194 (1). INDEPENDENT STUDY AND RESEARCH.

PHIL 4381 (3). PHILOSOPHY IN THE IBERO-AMERICAN WORLD. A survey of Latin American philosophy as it relates to the social and cultural development of Latin America. (SMU-in-Madrid only.)

PHIL 4393 (3). INDEPENDENT STUDY AND RESEARCH. Special topics to be selected by the student in consultation with the department. *Prerequisites:* Senior standing and departmental approval.

PHIL 4394 (3). INDEPENDENT STUDY AND RESEARCH. Special topics to be selected by the student in consultation with the department. *Prerequisites:* Senior standing and departmental approval.

PHYSICS

www.smu.edu/physics

Associate Professor Thomas W. Carr, Department Chair

Professors: Thomas Coan, Robert Kehoe, Fred Olness, Ryszard Stroynowski, Jingbo Ye. **Associate Professors:** Jodi Cooley-Sekula, Kent Hornbostel, Pavel Nadolsky, Stephen Sekula, Roberto Vega. **Senior Lecturers:** Simon Dalley, Randall Scalise. **Research Associate Professors:** Datao Gong, Tiankuan Liu. **Research Assistant Professors:** Sami Kama, Chonghan Liu.

The Physics Department offers a program consisting of courses in classical and modern physics, and research studies in both experimental and theoretical particle physics as well as in dark matter searches. The research activities of the faculty focus primarily in high energy, elementary particle physics and related fields. The advanced classes are small, so there are many opportunities for students to work closely with Physics Department faculty, particularly in the advanced laboratories where students become familiar with state-of-the-art equipment. Undergraduate physics majors are strongly encouraged to participate in research activities. A majority of majors go on to pursue advanced degrees upon graduation from SMU.

Bachelor of Science With a Major in Physics

This degree program is designed for students who plan careers in physics in industry, research laboratories or academia. Students planning to pursue graduate studies are encouraged to complete more than the minimum 40 credit hours in physics and 15 credit hours in mathematics.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Physics	40
PHYS 1105, 1106, 1303, 1304 (or 1307 and 1308), 3305, 3340, 3344, 3374, 4211, 4321 or 3345, 4392, 5382, 5383 6 hours of physics electives or in related fields with departmental permission	
Computer Science and Engineering	3
CSE 1341 or 1342	
Mathematics	15
MATH 1337, 1338, 2339, 2343, 3353	
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Bachelor of Arts With a Major in Physics

This degree program is appropriate for students who wish to combine a physics curriculum with a broad liberal arts program with the intention of pursuing careers in medicine, teaching, business or government.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Physics	30
PHYS 1105, 1106, 1303, 1304 (or 1307 and 1308), 3305, 3344, 4211, 4392, 5382 8 hours of physics electives or in related fields with departmental permission	
Mathematics	15
MATH 1337, 1338, 2339, 2343, 3353	
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Departmental Distinction

A physics major achieving a B.S. degree may graduate with departmental distinction by successfully completing a special program of study in addition to the requirements stated above, while maintaining a minimum GPA of 3.500. The special program consists of independent reading, research and senior thesis under the direction of a departmental faculty member. The student must apply to the department for this designation during his or her junior year. The student will enroll in PHYS 4375 or 4390 during the program, and a senior thesis is to be written and presented to the faculty.

Minor in Physics

A minor in physics is particularly appropriate for majors in the natural sciences, excluding physics but including prehealth, prelaw, Earth science, biology, mathematics and engineering.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
PHYS 1105, 1106, 1303, 1304 (or 1307 and 1308) Additional 9 hours of advanced coursework	
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The Courses (PHYS)

PHYS 1100 (1). SPECIAL TOPICS ABROAD. Course offered in approved SMU Abroad program. May be repeated for credit under different subtitle.

PHYS 1101 (1). INTRODUCTION TO THE UNIVERSE. Topics in cosmology (designed for first-year students), including expansion of the universe, the cosmic microwave background, cosmic nucleosynthesis and cosmic inflation; treated qualitatively but with illustrative mathematics. *Prerequisite or corequisite:* Comfortable with calculus or taking it concurrently.

PHYS 1105 (1). MECHANICS LABORATORY. One 3-hour laboratory period per week. Taken with PHYS 1303, 1307 if 8 hours of credit, including laboratory, are needed.

PHYS 1106 (1). ELECTRICITY AND MAGNETISM LABORATORY. One 3-hour laboratory period per week. Taken with PHYS 1304, 1308 if 8 hours of credit, including laboratory, are needed. *Prerequisite:* PHYS 1105 or self-test.

PHYS 1200 (2). SPECIAL TOPICS ABROAD. Course offered in approved SMU Abroad program. May be repeated for credit under different subtitle.

PHYS 1300 (3). SPECIAL TOPICS ABROAD. Course offered in approved SMU Abroad program. May be repeated for credit under different subtitle.

PHYS 1301 (3). THE IDEAS OF MODERN PHYSICS. Presents cosmology, relativity, quantum mechanics, and particle physics in an essentially descriptive, nonmathematical framework accessible to all SMU students.

PHYS 1303 (3). INTRODUCTORY MECHANICS. For science and engineering majors. Covers vector kinematics, Newtonian mechanics, gravitation, rotational motion, special relativity, and structure of matter. *Prerequisite or corequisite:* MATH 1337.

PHYS 1304 (3). INTRODUCTORY ELECTRICITY AND MAGNETISM. For science and engineering majors. Covers electricity, magnetism, electromagnetic radiation, and special relativity. *Prerequisite or corequisite:* MATH 1338.

PHYS 1307 (3). GENERAL PHYSICS I. For life sciences majors. Covers vector kinematics, Newtonian mechanics, gravitation, rotational motion, vibrations, waves, and fluids. *Prerequisite or corequisite:* MATH 1337.

PHYS 1308 (3). GENERAL PHYSICS II. For life sciences majors. Covers electricity, magnetism, electromagnetic radiation, and geometrical and physical optics. *Prerequisite:* PHYS 1303 or 1307.

PHYS 1309 (3). ASTRONOMY. A course in planetary and stellar astronomy, with an introduction to cosmology. Intended for the nonscience major, with no prerequisites. Observation sessions included. Does not include laboratory component.

PHYS 1311 (3). ELEMENTS OF ASTRONOMY. Planetary and stellar astronomy, including laboratory and observations.

PHYS 1313 (3). FUNDAMENTALS OF PHYSICS. Contemporary concepts of physics, including Newtonian mechanics, gravitation, rotational motion, fluids, the gas laws, vibrations and waves, and sound. Intended for the nonscience major. No prior knowledge of physics is assumed.

PHYS 1314 (3). THE PHYSICAL PERSPECTIVE. Principles and concepts of physics, including electricity, magnetism, the nature of light, Einstein's theory of relativity, quantum theory, atomic physics, and the Big Bang. Intended for the nonscience major. No prior knowledge of physics is assumed.

PHYS 1320 (3). MUSICAL ACOUSTICS. Covers both the acoustics (physical sound properties) and the psycho-acoustics (psychological, perceptual properties) of music. Topics include sound in general, sound of musical instruments (including voice), sound characteristics of rooms, electronic production (synthesis), and reproduction of sound. No prior knowledge of physics is assumed. While this course requires no previous formal training in music theory, it is helpful if students have a basic understanding of musical scales and notation.

PHYS 1403 (4). GENERAL PHYSICS. Equivalent of PHYS 1303 and 1105.

PHYS 1404 (4). GENERAL PHYSICS. Equivalent of PHYS 1304 and 1106.

PHYS 1407 (4). GENERAL PHYSICS. For life sciences majors. Covers vector kinematics, Newtonian mechanics, gravitation, rotational motion, vibrations, waves, and fluids. *Prerequisite or corequisite:* MATH 1337.

PHYS 1408 (4). GENERAL PHYSICS. For life sciences majors. Covers electricity, magnetism, electromagnetic radiation, and geometrical and physical optics. *Prerequisite:* PHYS 1303 or 1307.

PHYS 2100 (1). SPECIAL TOPICS ABROAD. Course offered in approved SMU Abroad program. May be repeated for credit under different subtitle.

PHYS 2200 (2). SPECIAL TOPICS ABROAD. Course offered in approved SMU Abroad program. May be repeated for credit under different subtitle.

PHYS 2300 (3). SPECIAL TOPICS ABROAD. Course offered in approved SMU Abroad program. May be repeated for credit under different subtitle.

PHYS 3100 (1). SPECIAL TOPICS ABROAD. Course offered in approved SMU Abroad program. May be repeated for credit under different subtitle.

PHYS 3200 (2). SPECIAL TOPICS ABROAD. Course offered in approved SMU Abroad program. May be repeated for credit under different subtitle.

PHYS 3300 (3). SPECIAL TOPICS ABROAD. Course offered in approved SMU Abroad program. May be repeated for credit under different subtitle.

PHYS 3305 (3). INTRODUCTION TO MODERN PHYSICS. For science and engineering majors. Covers special relativity, elements of quantum physics, structure of atoms, molecules and solids, nuclear physics, and elementary particles. *Prerequisite:* PHYS 1304 or 1308.

PHYS 3310 (3). INTRODUCTION TO RELATIVITY AND THE PHYSICS OF WAVES. One-dimensional harmonic oscillator, coupled oscillators, longitudinal and transverse waves, sound and electromagnetic waves, interference and diffraction, Lorentz transforms and invariants, time dilation, length contraction, equivalence principle, and black holes. *Prerequisite:* MATH 2339. *Prerequisites or corequisites:* PHYS 3305, MATH 2343.

PHYS 3320 (3). PHYSICS OF MUSIC. Covers the acoustics (physical sound properties) of music. Topics include sound in general, sound of musical instruments, acoustics, electronic synthesis, Fourier transforms, interference, diffraction, and resonance. While this course requires no previous formal training in music theory, it is helpful if students have a basic understanding of musical scales and notation. *Prerequisites:* PHYS 1303, 1304 or equivalent. *Recommended:* PHYS 3344.

PHYS 3333 (3). THE SCIENTIFIC METHOD (DEBUNKING PSEUDOSCIENCE). Provides students with an understanding of the scientific method sufficient to detect pseudoscience in its many guises: paranormal phenomena, free-energy devices, alternative medicine, creationism, and many others.

PHYS 3340 (3). COMPUTATIONAL PHYSICS. Introduction to the modeling of physical systems. Emphasis is on algorithm selection and implementation for simulating classical and quantum physics. *Prerequisite or corequisite:* MATH 2343. Prior programming experience recommended.

PHYS 3344 (3). CLASSICAL MECHANICS. The motion of a particle and of systems of particles, including oscillatory systems, accelerated coordinate systems, central-force motion, rigid-body dynamics, gravitation, and Lagrangian mechanics. *Prerequisites:* PHYS 1303 and MATH 2339 (or taken concurrently).

PHYS 3345 (3). ADVANCED MECHANICS. Topics in classical mechanics including the motion of a system of particles, the two-body central-force problem, small oscillations of coupled systems, collision theory, Lagrange's and Hamilton's formulations, the vibrating string, and the special theory of relativity. *Prerequisite:* PHYS 3344.

PHYS 3350 (3). COMPUTATIONAL PHYSICS. The principles of analog and digital electronics relevant for designing instrumentation for modern physics experiments. *Prerequisite:* PHYS 1304 or equivalent.

PHYS 3368 (3). PRINCIPLES OF ASTROPHYSICS AND COSMOLOGY. Cosmic distance scales, physics of stars, expansion of the universe, cosmic nucleosynthesis, and other selected topics as appropriate. *Prerequisite:* PHYS 3305.

PHYS 3374 (3). THERMODYNAMICS AND STATISTICAL MECHANICS. Basic concepts of thermodynamics and statistical mechanics, with emphasis on quantum statistics. Also, the laws of thermodynamics; entropy; and Maxwell-Boltzmann, Bose-Einstein, and Fermi-Dirac statistics. *Prerequisite:* PHYS 3305. MATH 2343 recommended.

PHYS 4049 (0). UNDERGRADUATE RESEARCH. For students who hold research fellowships but are not enrolled in any credit hour courses. No tuition. *Prerequisite:* PHYS 3305 or consent of instructor.

PHYS 4112 (1). LABORATORY PHYSICS II. Intermediate-level experimental physics. Approximately one experiment per week. One 3-hour laboratory period per week. *Prerequisites:* PHYS 1106, 3305.

PHYS 4190 (1). SPECIAL PROJECTS IN PHYSICS. Directed study of special topics. For physics majors only. *Prerequisites:* Junior or senior classification and permission of department.

PHYS 4211 (2). LABORATORY PHYSICS I. Introduction to experimental physics. Approximately one experiment per week. One 2-hour laboratory period per week. *Prerequisites:* PHYS 1105, 1106, 3305.

PHYS 4213 (2). ADVANCED LABORATORY PHYSICS.

PHYS 4290 (2). SPECIAL PROJECTS IN PHYSICS. Directed study of special topics. For physics majors only. *Prerequisites:* Junior or senior classification and permission of department.

PHYS 4321 (3). METHODS OF THEORETICAL PHYSICS. Matrices, determinants, linear algebra, complex variables, inhomogeneous equations, Sturm-Liouville theory, partial differen-

tial equations, special functions, Fourier series and integral transformations, integral equations, calculus of variations, and applications. *Prerequisites:* MATH 2339, 2343.

PHYS 4375 (3). RESEARCH. For physics majors. Students participate in physics research with a member of the faculty of the Physics Department. *Prerequisite:* Instructor's permission.

PHYS 4390 (3). SPECIAL PROJECTS IN PHYSICS. Directed study of special topics. For physics majors only. *Prerequisites:* Junior or senior classification and permission of department.

PHYS 4392 (3). INTRODUCTION TO ELECTROMAGNETIC THEORY. Fundamental principles of electrodynamics, including electrostatics, magnetostatics, electric potential, electric and magnetic fields in matter, simple behavior of time-dependent electric and magnetic fields, and Maxwell's equations. *Prerequisites:* PHYS 1304; MATH 2339, 2343. PHYS 4321 recommended.

PHYS 5161 (1). SELECTED TOPICS IN PHYSICS FOR HIGH SCHOOL TEACHERS. Additional information is available from the department.

PHYS 5337 (3). INTRODUCTION TO SOLID STATE PHYSICS. Crystal lattices and the reciprocal lattice, the free-electron model of metals, crystal binding, lattice vibrations phonons, thermal properties of solids, and energy bands in solids.

PHYS 5380 (3). CONCEPTS OF EXPERIMENTAL PARTICLE PHYSICS. Principles of elementary particle physics and the experiments by which one learns the laws obeyed by these particles, with reading of scientific papers. *Prerequisite:* PHYS 3305 or equivalent. PHYS 5382 is recommended.

PHYS 5382 (3). INTRODUCTION TO QUANTUM MECHANICS. An introduction to the principles of quantum mechanics, the Schrodinger equation and solutions for one-dimensional problems, the Dirac formalism, angular momentum and quantum mechanics in three dimensions, the central potential, spin, and additions of spins. *Prerequisites:* PHYS 3305, MATH 3353.

PHYS 5383 (3). ADVANCED QUANTUM MECHANICS. Applications and approximation methods in quantum mechanics. Also, applications to laser physics, solid-state physics, molecular physics, and scattering. *Prerequisite:* PHYS 5382.

PHYS 5384 (3). QUANTUM PHYSICS II. Quantum statistics; band theory of solids; superconductivity, magnetism, and critical phenomena; nuclear physics; and physics of elementary particles. *Prerequisite:* PHYS 5383 or permission of instructor

PHYS 5393 (3). ELECTROMAGNETIC WAVES AND OPTICS. Theory and applications of electromagnetic wave radiation, propagation, and scattering. Also, geometrical and physical optics, guided waves, lasers, coherent optics, and interferometry and holography. *Prerequisite:* PHYS 4392, equivalent, or consent of instructor.

PHYS 5395 (3). INTRODUCTION TO ELEMENTARY PARTICLES. Modern theories of elementary particles, including relativistic kinematics, Feynman diagrams, quantum electrodynamics, quarks, weak interactions, and gauge theories. *Prerequisite:* PHYS 5383.

PHYS 5398 (3). APPLICATIONS OF QUANTUM MECHANICS. The principles of quantum theory are used in a study of radiative transition in atoms and molecules, quantum statistics, band theory of solids, semiconductor theory, and laser physics. *Prerequisite:* PHYS 5382 or equivalent.

POLITICAL SCIENCE

www.smu.edu/politicalscience

Professor Dennis Ippolito, Department Chair

Professors: James Hollifield, Dennis Ippolito, Calvin Jillson, Michael Lusztyg, Harold Stanley, Stephen Wegren. **Associate Professors:** Pamela Corley, Joseph Kobylka, Luigi Manzetti, Joshua Rovner, Dennis Simon, Hiroki Takeuchi, Matthew Wilson. **Assistant Professor:** Karisa Cloward. **Lecturer:** Victoria Farrar-Myers.

General Information

The Political Science Department offers a curriculum that addresses political ideas, institutions and processes in such regional settings as Asia, Europe, Latin America and the U.S., and in such problem settings such as international relations, economic and social policies, and constitutional and public law. Students study with nationally visible faculty, have the opportunity to become involved in significant research projects and are eligible for summer or term internships in Washington, D.C.

The department offers a B.A. and a minor in political science, with four available concentrations. Undergraduate courses include introductory courses (at the 1000 level) which survey each of the broad fields of study in the discipline. Advanced courses (at the 3000 and 4000 levels) explore more closely defined topics within each of those fields: 3000-level courses examine relatively broad subjects; 4000-level courses examine more specific topics but are not inherently more demanding than 3000-level courses. Introductory-level preparation or at least sophomore standing is recommended for students undertaking these advanced courses. Independent study courses (at the 4000 level) are offered to majors with sophomore or higher standing; prerequisites for these courses are stated in the course descriptions that follow.

Note: Offerings for independent study, research and study abroad (PLSC 4102, 4202, 4302, 4301, 4401, 4402, 4403, 4404, 4304, 4306, 4307) are available to majors in political science. Students must have departmental approval prior to registering for these courses. Such courses may not be counted toward departmental subfield requirements.

Students must receive at least a *C-* in all classes counting toward the major or minor. No course may be counted more than once toward meeting departmental major or minor requirements. In unusual circumstances, a student may petition, through his or her adviser, to the department chair for exceptions to the above requirements. Only the department chair may grant such a written waiver.

Bachelor of Arts With a Major in Political Science

At least 18 advanced hours must be completed in residence. No coursework counting toward the major may be taken pass/fail. The following additional requirements apply to the 27 advanced hours (3000 level and above):

- A minimum of 15 hours of in-class advanced-level courses must be taken on an SMU campus (Dallas, Plano or Taos). In-class hours do not include directed reading courses (PLSC 4102, 4202, 4302), internships (PLSC 4306) and departmental distinction thesis (PLSC 4307). SMU campus courses do not include transfer courses, Washington term courses (PLSC 4401, 4402, 4403, and 4404) and courses taken in SMU-approved study abroad programs.

- A maximum of three hours of directed reading courses (PLSC 4102, 4202, and 4302) or internships (PLSC 4306) may count toward the major.
- A maximum of 15 hours of (preapproved) advanced-level courses in SMU-approved study abroad programs may be counted toward the major. (These hours will not count toward the required 15 hours of in-class, on-campus, advanced-level courses specified above.)

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Introductory Courses (any two PLSC courses at the 1000 level)	6
Advanced Courses (3000 level or above)	27
<i>At least two courses from two groups and an additional course from a third group:</i>	
American Government and Politics	
Comparative Politics	
Political Theory	
International Relations	

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Departmental Distinction

The department offers graduation with distinction to select majors of high academic achievement. Interested students may consult with an appropriate faculty member and apply to the director of undergraduate studies for admission to the distinction track. Eligible students must have completed two introductory departmental courses and 24 hours of departmental credit before applying for candidacy. Criteria for graduating with departmental distinction include the following:

1. A minimum 3.000 overall GPA at graduation.
2. A minimum 3.500 average in courses taken for the political science major.
3. Preparation for a departmental distinction thesis under the supervision of a faculty thesis adviser. The faculty adviser's grade for the thesis must be A- or higher. This work will be accomplished by taking PLSC 4307.
4. Passing with distinction an oral examination of at least one hour, conducted by a faculty distinction examination committee, which reviews the candidate's thesis and major curriculum.
5. A minimum 3.500 average in at least two advanced courses related to the topic of the thesis; one of these may, but need not, be a course taken outside the requirements of the political science major.

Eligible students will be admitted to the distinction track upon recommendation of the director of undergraduate studies in consultation with the faculty member who has agreed to chair the distinction committee and oversee the student's research and writing. The department does not require candidates for distinction to take PLSC 4376, but strongly advises students interested in empirical research to do so.

Students advanced to the distinction track must write a substantial piece of independent and original research (PLSC 4307) and present it to a distinction committee composed of faculty selected by the distinction adviser in consultation with the student. Upon positive recommendation of this committee, the department will award the student graduation with distinction.

Minor in Political Science

At least half of the advanced hours applied toward a political science minor must be completed through enrollment at SMU. No coursework counting toward the minor may be taken pass/fail. A maximum of six hours of (preapproved) advanced-level courses in SMU-approved study abroad programs may be counted toward the minor.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
Concentration Introductory Courses (one concentration)	3–6
<i>General:</i> PLSC 1320 and one other 1000-level PLSC course	
<i>American Politics:</i> PLSC 1320	
<i>Comparative and International Studies:</i> PLSC 1340, 1380	
<i>Political Thought:</i> PLSC 1360	
Concentration Advanced Courses (3000 level or above)	12–15
<i>At least two courses from two groups (and encompassing the student's concentration) and an additional course from a third group if needed:</i>	
American Government and Politics	
Comparative Politics	
Political Theory	
International Relations	
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The Courses (PLSC)

For purposes of distribution and concentration, courses are grouped in their broad fields in the listings below, as indicated by the last two digits of their course numbers:

American Government and Politics (20–39)	PLSC 1320, 3124, 3224, 3320–27, 3329, 3330, 3331, 3333–36, 4320–39
Comparative Politics (40–59)	PLSC 1340, 3144, 3244, 3340–42, 3344–52, 3355, 3358–59, 3424, 3444, 4340–44, 4348, 4353–58, 5341
Political Theory (60–79)	PLSC 1360, 3164, 3264, 3360–65, 3370, 3464, 4360–65, 4368, 4369, 4371
International Relations (80–99)	PLSC 1380, 3184, 3284, 3381–84, 3387, 3389, 3390, 3484, 4380–82, 4384–86, 4388, 4391, 4392, 4398, 5383

PLSC 1320 (3). INTRODUCTION TO AMERICAN GOVERNMENT AND POLITICS. The organization, functions, and processes of the national government, with particular attention to parties, pressure groups, and other forces that influence its course. Attention is also given to the Texas Constitution.

PLSC 1340 (3). INTRODUCTION TO COMPARATIVE POLITICS. Analyzes and contrasts different patterns of national political development in Western, Marxist-Leninist, and Third World countries. Political dilemmas confronting each type of system will be examined.

PLSC 1360 (3). INTRODUCTION TO POLITICAL THEORY. Introduces political theory through an examination of classical and modern approaches to the study of politics. Addresses how to become knowledgeable about politics and what to do with that knowledge.

PLSC 1380 (3). INTRODUCTION TO INTERNATIONAL RELATIONS. A basic survey of the elements of international relations, including the nation-state system, international organizations, international law, diplomacy, foreign policy, and various nonstate actors such as multinational corporations.

PLSC 3124 (1). STUDIES ABROAD: AMERICAN POLITICS AND GOVERNMENT. SMU credit for political science courses in American politics and government taken in SMU-approved programs abroad.

PLSC 3144 (1). STUDIES ABROAD: COMPARATIVE POLITICS AND GOVERNMENT. SMU credit for political science courses in comparative politics and government taken in SMU-approved programs abroad.

PLSC 3164 (1). STUDIES ABROAD: POLITICAL THEORY. SMU credit for political science courses in political theory taken in SMU-approved programs abroad.

PLSC 3184 (1). STUDIES ABROAD: INTERNATIONAL RELATIONS. SMU credit for political science courses in international relations taken in SMU-approved programs abroad.

PLSC 3224 (2). STUDIES ABROAD: AMERICAN POLITICS AND GOVERNMENT. SMU credit for political science courses in American politics and government taken in SMU-approved programs abroad.

PLSC 3244 (2). STUDIES ABROAD: COMPARATIVE POLITICS AND GOVERNMENT. SMU credit for political science courses in comparative politics and government taken in SMU-approved programs abroad.

PLSC 3264 (2). STUDIES ABROAD: POLITICAL THEORY. SMU credit for political science courses in political theory taken in SMU-approved programs abroad.

PLSC 3284 (2). STUDIES ABROAD: INTERNATIONAL RELATIONS. SMU credit for political science courses in international relations taken in SMU-approved programs abroad.

PLSC 3320 (3). PRINCIPLES OF PUBLIC POLICY. Public policy is the study of the outcome of the political process. Parties, pressure groups, bureaucracies, and legislative bodies are part of the mix that creates the decisions that govern U.S. domestic social policy, international economic policy, and defense policy. *Prerequisites:* ECO 1311, PLSC 1320. *Recommended:* ECO 1312 and PLSC 1340 or 1380.

PLSC 3321 (3). CONGRESS AND THE LEGISLATIVE PROCESS. The powers, organization, and rules and procedures of legislatures in the United States. Emphasizes the U.S. Congress: its constitutional responsibilities, committee and staff systems, and legislative procedures in the House and Senate.

PLSC 3322 (3). THE AMERICAN PRESIDENCY. An evaluation of the office of president in the American political system, with emphasis on the functional and institutional development of the office and presidential leadership in policymaking.

PLSC 3323 (3). SOUTHERN POLITICS. Focuses on the South, paying particular attention to partisan competition, the politics of race, redistricting, and voting rights in the 11 Southern states.

PLSC 3324 (3). STUDIES ABROAD: AMERICAN POLITICS AND GOVERNMENT. SMU credit for political science courses in American politics and government taken in SMU-approved programs abroad.

PLSC 3325 (3). INTRODUCTION TO LAW. Provides the student with an understanding of the American legal system, covering such substantive areas of law as torts, contracts, property, civil procedure, and criminal law.

PLSC 3326 (3). STATE GOVERNMENT AND POLITICS. A comparative study of the structure, procedure, and functional services of state, county, and municipal governments with emphasis upon intergovernmental relations in the federal government and Texas government.

PLSC 3327 (3). TEXAS POLITICS. Focuses on government and politics in Texas both by exploring its processes, institutions, and policies and by placing them within the broader context of the U.S. federal system.

PLSC 3329 (3). BUREAUCRACY AND REGULATORY POLITICS. Examines the "fourth branch" of government, including its instructions and organization, the rise of regulatory policymaking in the 20th century, the role of administrative law, the behavior of civil servants and interest groups, and the relationship between bureaucracies and other branches of government.

PLSC 3330 (3). LAW, POLITICS, AND THE SUPREME COURT. An introduction to the uniquely political and legal role played by the Supreme Court in elaborating the scope of governmental power and defining individual rights and liberties.

PLSC 3331 (3). MEDIA AND POLITICS. Examines how the media influence the American institutional governing process and citizen engagement in democratic practices such as acquisition of political knowledge and political decision-making.

PLSC 3333 (3). ENVIRONMENTAL POLICY. Overview of governmental environmental policies designed to provide a foundation for future application and study in the growing environmental field.

PLSC 3334 (3). PUBLIC OPINION AND AMERICAN POLITICS. The influence of public opinion on American politics and policymaking. Topics include public opinion and democratic theory, the methods of survey research, the use of the polling industry, and the influence of polls on politicians and policy.

PLSC 3335 (3). JUDICIAL PROCESS. Examines the role played by courts in the American system of government. Topics include the generation of disputes, the tools used by the judiciary to resolve disputes, the ways judges are selected and make decisions, and the impact of those decisions on society and government.

PLSC 3336 (3). CONGRESS, THE PRESIDENT, AND THE CONSTITUTION. An examination of how constitutional interpretation, precedent, and politics affect presidential and congressional powers and the separation of powers with respect to war and foreign affairs, legislation and administration, and budgetary and fiscal policies.

PLSC 3340 (3). WESTERN EUROPEAN POLITICS. The political development of Britain, France, Germany, and Italy. Topics include the emergence of parliament and parties, democratic breakdown and the rise of fascism, modern parties and interest groups, state economic planning, corporatism, and extraparlimentary oppositions.

PLSC 3341 (3). POLITICS OF PARTICIPATION AND REPRESENTATION IN WESTERN DEMOCRACIES. Focuses on the numerous avenues through which citizens influence politics and policymaking in advanced industrial democracies. Considers the implications of formal institutional structures such as electoral and party systems, the impact of organized groups, and the less formal forms of participation such as protest movements and citizen initiatives.

PLSC 3342 (3). MAKING DEMOCRACY WORK. Aims to answer the fundamental question of why democracy thrives in some nations while in others it struggles, and in many more it has not yet taken root.

PLSC 3344 (3). STUDIES ABROAD: COMPARATIVE POLITICS AND GOVERNMENT. SMU credit for political science courses in comparative politics and government taken in SMU-approved programs abroad.

PLSC 3345 (3). GOVERNMENTS AND POLITICS OF THE MIDDLE EAST. A survey of modern Middle East governments and politics, including historical, ideological, economic, and social influences on their domestic and foreign policies. Also, analysis of emerging political forms, with some emphasis on modernization problems.

PLSC 3346 (3). JAPANESE POLITICS AND SOCIETY. A survey of the major political and social trends in Japan, focusing on popular attitudes, political participation, and the government's response.

PLSC 3347 (3). GOVERNMENTS AND POLITICS OF AFRICA. The politics of Africa in an international context, emphasizing the problems of race, nationalism, and economic development.

PLSC 3348 (3). GOVERNMENTS AND POLITICS OF LATIN AMERICA. The structure, functions, and operations of government in Latin American countries, with emphasis on political practices and institutions.

PLSC 3349 (3). POLITICS OF MAJOR LATIN AMERICAN COUNTRIES. An introduction to the problems of political development in some of the major countries of Latin America: Argentina, Brazil, Chile, and Mexico.

PLSC 3350 (3). POLITICS OF CANADA.

PLSC 3351 (3). RUSSIA UNDER PUTIN. A study of contemporary Russia. Students prepare a multifaceted assessment (political, economic, and military development) of the superpower that is and was Russia. (SMU-in-Copenhagen)

PLSC 3352 (3). CHINESE POLITICS. A survey of Chinese political history since the establishment of the People's Republic of China in 1949 and the major challenges confronting the PRC today, evaluating the positive and negative aspects of China's socialist experiment by using a working knowledge of Chinese politics.

PLSC 3355 (3). THE POLITICAL ECONOMY OF THE WELFARE STATE. Focuses on the origins, evolution, and management of industrial democracy in Europe and America. Emphasizes the interconnections between political and economic challenges inherent in policymaking, and the economic implications of public policy.

PLSC 3358 (3). GOVERNMENT AND POLITICS OF RUSSIA. Examines attempts to reform the former Soviet Union since 1985, and analyzes the social and political processes behind the demise of the Soviet system. Emphasis is placed on sources for support of, as well as obstacles to, political, economic, and social reform in post-Communist Russia.

PLSC 3359 (3). FROM COMMUNISM TO DEMOCRACY. The rise and fall of communist regimes and the transition to democracy in Eastern Europe and the former Soviet Union, emphasizing social, economic, and political influences affecting divergent paths to democracy.

PLSC 3360 (3). FOUNDATIONS OF POLITICAL THOUGHT. Main currents of political thought in their historical settings from Plato to the 17th century, with a critical evaluation of those elements of continuing worth.

PLSC 3361 (3). MODERN POLITICAL THOUGHT. Main currents of political thought in their historical setting from the 17th century to the present.

PLSC 3362 (3). 20TH-CENTURY POLITICAL THOUGHT. Analysis of the political implications of selected responses to the problems of modern mass society.

PLSC 3363 (3). AMERICAN POLITICAL THOUGHT. A historical and analytical survey of the thinkers, actors, and main currents of American political thought from the founding of the first European colonies to the present day.

PLSC 3364 (3). STUDIES ABROAD: POLITICAL THEORY. SMU credit for political science courses in political theory taken in SMU-approved programs abroad.

PLSC 3365 (3). COMMUNISM AND POST-COMMUNISM. Theoretical foundations of communism and its variant forms in practice, explanations for the collapse of Eastern European communist systems, and possible futures of communism.

PLSC 3370 (3). WOMEN AND POLITICS. An analysis and critique of women's role in politics; theories on women's status and power; and the political activities, ideologies, and programs of feminists, past and present.

PLSC 3381 (3). CURRENT ISSUES IN INTERNATIONAL POLITICS. An interdisciplinary survey of contemporary issues and challenges in the international arena. The student researches and proposes solutions, taking into account the multidimensional aspects of these international challenges.

PLSC 3382 (3). INTERNATIONAL ORGANIZATIONS: GLOBAL AND REGIONAL. A study of the United Nations and other international agencies in their attempts to deal with the great international political problems of recent times.

PLSC 3383 (3). THE AMERICAN FOREIGN POLICY PROCESS. A survey of the contemporary content and the conduct of American foreign policy.

PLSC 3384 (3). STUDIES ABROAD: INTERNATIONAL RELATIONS. SMU credit for political science courses in international relations taken in SMU-approved programs abroad.

PLSC 3387 (3). POLITICAL GEOGRAPHY. An examination of topics in international political rivalries within the nation-state system. Major emphasis will be given to the adaptations within that system since 1850 for spatial distributions of physical terrain, populations, economic resources and activities, and political and social divisions.

PLSC 3389 (3). INTERNATIONAL POLITICAL ECONOMY. Introduces the study of international political economy, including the indicators of a new interdependence and globalization: the growth in trade, the expansion of foreign direct investment, and the increase in international migration. Also, the ways nation-states respond to globalization and manage international economic relations.

PLSC 3390 (3). NEGOTIATING INTERNATIONAL TRADE. Examines the means by which countries negotiate international trade. In part, the course is theoretical, examining standard

theories of trade. It is also empirical, with hemispheric trade as the substantive focus. The practical aspect of the course is a computer-based simulation exercise that engages with students from other universities.

PLSC 3424 (4). STUDIES ABROAD: AMERICAN POLITICS AND GOVERNMENT. SMU credit for political science courses in American politics and government taken in SMU-approved programs abroad.

PLSC 3444 (4). STUDIES ABROAD: COMPARATIVE POLITICS AND GOVERNMENT. SMU credit for political science courses in comparative politics and government taken in SMU-approved programs abroad.

PLSC 3464 (4). STUDIES ABROAD: POLITICAL THEORY. SMU credit for political science courses in political theory taken in SMU-approved programs abroad.

PLSC 3484 (4). STUDIES ABROAD: INTERNATIONAL RELATIONS. SMU credit for political science courses in international relations taken in SMU-approved programs abroad.

PLSC 3902 (9). COMPARATIVE PUBLIC POLICY.

PLSC 4102 (1), 4202 (2), 4302 (3). DIRECTED READINGS. Students develop and execute independent reading or research projects under the guidance of a departmental faculty member, culminating in a written report. *Prerequisites:* Written approval of the instructor and the department chair or a designate, at least sophomore standing, and appropriate introductory and advanced course preparation.

PLSC 4301 (3). WASHINGTON TERM. Intensive study of national political institutions. Includes a 4 hour research project (PLSC 4401), a 4-hour internship (PLSC 4402), and an 8-hour seminar (PLSC 4403, 4404). *Prerequisites:* Two courses in political science, at least one at the upper level, that are relevant to the selected program. Available for political science, public policy, or international studies majors or minors.

PLSC 4304 (3). DEPARTMENTAL SEMINAR: SCOPE AND METHODS OF POLITICAL SCIENCE. An overview of the enterprise of political science. It canvasses the areas of interest to the discipline, the questions political scientists pursue, and the ways scholars have addressed these questions.

PLSC 4306 (3). INTERNSHIP IN POLITICAL SCIENCE. Undergraduate students who arrange for part-time or full-time jobs in government, political parties, interest groups, or other organizations relate these experiences to their academic curriculum through research and writing, under the guidance of a departmental faculty member. *Prerequisites:* Written approval of the instructor and the department chair or a designate, at least sophomore standing, and appropriate introductory and advanced preparation.

PLSC 4307 (3). DEPARTMENTAL DISTINCTION THESIS. Candidates for departmental distinction write a thesis under the direction of a departmental faculty member, culminating in an oral examination over the field of the thesis. *Prerequisite:* Admission to departmental honors candidacy.

PLSC 4320 (3). SPECIAL STUDIES IN AMERICAN GOVERNMENT AND POLITICS.

PLSC 4321 (3). BASIC ISSUES IN AMERICAN DEMOCRACY. An analysis of current American public policy issues within a theoretical framework. Examines the foundations of concepts and value orientations within which policy considerations are made.

PLSC 4322 (3). LATINO POLITICS. An analysis of contexts, causes, and consequences of Latino political participation. The focus is on Latinos in the Southwest with some attention to other racial and ethnic groups elsewhere in the U.S.

PLSC 4323 (3). THE POLITICS OF CHANGE IN AMERICA, 1930–2000. Focuses upon American politics and society from 1930 to the present. Examines the ways America has changed, explains why changes occur, and assesses the consequences of these changes.

PLSC 4324 (3). POLITICAL DYNAMICS. Covers the use of political parties in formulating political opinions. Also, pressure groups, propaganda, measurement of mass opinions, and political leadership.

PLSC 4325 (3). PRACTICAL ELECTORAL POLITICS. An exploration of techniques of political organization drawing on studies of recent campaigns and examining the political pressures that affect policymaking in government.

PLSC 4326 (3). PRESIDENTIAL ELECTIONS. Examines presidential nominations and elections. Topics include voter decision-making, media coverage, campaign finance, delegate selection rules, and the Electoral College.

PLSC 4327 (3). URBAN POLITICS. Traces ideas and beliefs about the nature and purpose of local political arenas in the American experience from New England townships to modern metropolises.

PLSC 4328 (3). SEMINAR: AMERICAN GOVERNMENT AND POLITICS. An overview of the central questions in the study of American government and politics.

PLSC 4329 (3). THE POLITICS OF ECONOMIC POLICY. Analysis of interactions among political beliefs, economic theories, political processes, and public policies that shape and change the American political economy.

PLSC 4330 (3). POLITICS AND FILM. Uses films as a vehicle for understanding politics, leadership, and the political process in the U.S. Involves substantial reading and writing. *Prerequisite:* Political science or film studies major or minor, or permission of instructor.

PLSC 4331 (3). LAW AND FILM. American popular culture has demonstrated an enduring fascination with lawyers, the law, and the legal system. This course focuses on how the portrayal of attorneys and the legal system in films shapes public perception of lawyers, creates viewer expectations regarding law and justice, and perhaps influences the conduct of practicing attorneys and judges.

PLSC 4332 (3). POLITICS OF LITIGATION. An examination of the interaction between law and politics and, in particular, of the role interest groups have played in the litigation process.

PLSC 4333 (3). POLICY, POLITICS, AND THE BUDGET. Examines the federal budget's historical evolution and contemporary significance. Also, the constitutional division of the power of the purse between the legislative and executive branches, presidential-congressional conflicts over control of budget policy, major policy issues relating to the size of the federal budget, spending and tax policy priorities, and deficit and debt problems.

PLSC 4334 (3). THE POLITICS AND LEGACIES OF THE CIVIL RIGHTS MOVEMENT. Examines the politics and legacies of the movement that destroyed the system known as Jim Crow and removed barriers to political participation by African Americans.

PLSC 4335 (3). CONSTITUTIONAL LAW. Examines the scope of constitutional power in the American governmental system, questions of separation of powers between the branches of the national government, and the federal relationship between the national government and state governments.

PLSC 4336 (3). CIVIL LIBERTIES: FIRST AMENDMENT AND PRIVACY. Examines the place and treatment of expression, religion, and personal autonomy in the American Constitution and in the cases in which the Supreme Court has defined and applied the Constitution.

PLSC 4337 (3). CIVIL RIGHTS. Examines changes wrought in the American system of governance by addition of the 14th Amendment, particularly its Equal Protection Clause, and the ways the Supreme Court has interpreted and applied it over time. Topics of attention include racial discrimination, sex discrimination, and equality in the political process.

PLSC 4338 (3). CRIMINAL PROCESS RIGHTS. Examines the application of the principles of ordered liberty and the Bill of Rights to criminal process disputes, including the initial police investigation, trial preparation, trial and jury concerns, and the posttrial determination of punishment.

PLSC 4339 (3). WOMEN AND THE LAW. The status of women in the American legal system, including an assessment of women defined as a legal category and the impact of increasing numbers of women lawyers, judges, and criminals.

PLSC 4340 (3). SPECIAL STUDIES IN COMPARATIVE GOVERNMENTS AND POLITICS.

PLSC 4341 (3). COMPARATIVE RIGHTS AND REPRESENTATION. Examines the tension that exists between rights and democratic representation. Explores judicial activism in making social policy, individual versus collective rights, aboriginal rights, and affirmative action.

PLSC 4342 (3). WHY NATIONS REVOLT. Survey of the major theories that have been developed to explain the occurrence of revolutions. Examines various revolutions as case studies, including the French, Russian, Nazi, and Chinese revolutions, and at least one peasant revolution in the Third World.

PLSC 4343 (3). NATIONALITIES AND MINORITIES IN EUROPE. A study of minority issues in Europe. The Balkans, the Baltics, the Basques: what is the fighting for? In modern Europe, minority issues are constantly debated and acted upon, both by majorities and minorities. This course is part of the SMU-in-Copenhagen program.

PLSC 4344 (3). GENDER IN WORLD POLITICS. A survey of classic and contemporary scholarship on women and gender in world politics, focusing on theoretical and empirical explorations of political participation, representation, activism, democracy, war, and human rights.

PLSC 4348 (3). SEMINAR: COMPARATIVE GOVERNMENT AND POLITICS. An overview of the central questions in the study of comparative government and politics.

PLSC 4353 (3). POLITICAL ECONOMY OF EAST ASIA. Analysis of the interplay between politics and economics in East Asia, examining in what ways and to what degree the growth experiences of the high-performing economies in East Asia shed light on the prospects for long-term success of reforms currently underway in China.

PLSC 4354 (3). THE THIRD WORLD AND NORTH-SOUTH RELATIONS. An inquiry into problems and theories of political economy of development and dependency in Third World countries.

PLSC 4355 (3). COMPARATIVE POLITICAL ECONOMY OF INDUSTRIALIZED DEMOCRACIES. Examines the nature and workings of the political economies of industrialized democracies of North America, Europe, and the Pacific in comparative perspective. *Recommended:* Prior completion of one introductory political science and/or economics course.

PLSC 4356 (3). LATIN AMERICAN POLITICAL ECONOMY. Focuses on the challenges facing public policy in the Latin American region and how to interpret that region's politics and economic frustrations. Attentive to the basic rules of the Latin American political game and the lack of agreement on them.

PLSC 4357 (3). SOUTH AMERICAN POLITICS.

PLSC 4358 (3). SOVIET POLITICS REVOLUTION TO REVOLUTION. A survey of Soviet political history from 1917 to 1991. Special attention is devoted to the way in which each Soviet leader attempted to change the political and economic system.

PLSC 4360 (3). SPECIAL STUDIES IN POLITICAL THEORY.

PLSC 4361 (3). POLITICAL REGIMES: UNDERSTANDINGS OF ROME. Focuses on the various understandings of Rome as developed in the writings of Plutarch, St. Augustine, and Machiavelli. Addresses three fundamentally different conceptions of the regime: the Roman Empire, the effects of the Christian order, and the new modes and orders introduced by Machiavelli.

PLSC 4362 (3). MEDIEVAL POLITICAL PHILOSOPHY. Introduces the tradition of political philosophy represented by various thinkers of the medieval period. Also, the fundamental issues at stake in the works of Islamic, Jewish, and Christian authors, and the alternative solutions proposed for solving what has been termed the theological-political problem.

PLSC 4363 (3). RELIGION AND POLITICS IN THE WESTERN TRADITION. Analysis of the relationship between religious faith and civil government in the Western tradition, with a focus on thinkers and controversies from the late Roman Empire to the contemporary United States.

PLSC 4364 (3). POLITICAL THOUGHT.

PLSC 4365 (3). COMMUNISM.

PLSC 4368 (3). SEMINAR: POLITICAL THEORY AND PHILOSOPHY. An overview of the central questions in the study of political theory and philosophy.

PLSC 4369 (3). REPUBLICANISM AND THE GOOD SOCIETY. Examines the intellectual history of republicanism, its uneasy alliance with liberalism, and its various contemporary manifestations, particularly in the U.S. and Canada.

PLSC 4371 (3). JURISPRUDENCE. An introduction to alternative ways of viewing the sources, functions, and uses of law. Attention is given to various understandings of concepts of justice and rights.

PLSC 4380 (3). SPECIAL STUDIES IN INTERNATIONAL RELATIONS.

PLSC 4381 (3). NATIONAL SECURITY POLICY. Examines the changing nature of foreign policy and national security policy issues in a world characterized by growing interdependence and globalization, with particular attention to how technology offers both new opportunities

and new dangers. Includes analysis of counterterrorism and homeland security, cyberterrorism, global public health, energy security, nuclear proliferation, and global financial stability. Students learn how to analyze national security policy objectives by using real-world situations and how to determine optimal policy implementation by examining potential actors, potential hurdles to implementation, and sources of funding.

PLSC 4382 (3). THE POLITICS OF MILITARY FORCE. Examines use of U.S. military force as a political instrument and its effectiveness as a tool of American foreign policy since the end of the World War II.

PLSC 4384 (3). AMERICAN-RUSSIAN RELATIONSHIP. Surveys American-Russian relations since 1945, with emphasis on how and why the Cold War began. Also, the reasons for the end of the Cold War, the nature of American-Russian relations in the post-Cold War era, and common interests and issues that divide the two nations. Incorporates a negotiation simulation exercise between American and Russian negotiating teams.

PLSC 4385 (3). INTER-AMERICAN RELATIONS. A survey of the diplomatic and commercial relations between the United States and the republics of the western hemisphere with particular attention to involvement in the Caribbean area.

PLSC 4386 (3). INTERNATIONAL RELATIONS OF EAST ASIA. A survey of the history of diplomacy, war, and economic relations of the East Asian region while introducing the leading theories and debates about regional cooperation in the field of international relations.

PLSC 4388 (3). SEMINAR: INTERNATIONAL GOVERNMENT AND POLITICS. An overview of the central questions in the study of international government and politics.

PLSC 4391 (3). NAFTA AND FREE TRADE IN THE AMERICAS. Explores the domestic politics of Canada, Mexico, and the U.S. that led to the North American Free Trade Agreement. Also, the effects of the agreement and the possibilities for expanding free trade in the Americas.

PLSC 4392 (3). STRATEGY. An introduction to major debates about strategy, or the relationship between military violence and political objectives. Includes close examination of historical cases and current conflicts.

PLSC 4398 (3). NUCLEAR WEAPONS AND WORLD POLITICS. Focuses on the nuclear rivalry between the U.S. and the USSR, and on how this rivalry has transformed the nature and conduct of world politics. Emphasis is placed on theoretical and analytical perspectives, including deterrence theory, bargaining, and game theory. Attention is also given to the implications stemming from both the vertical and horizontal proliferation of nuclear weapons.

PLSC 4401 (4), 4402 (4), 4403 (4), 4404 (4). WASHINGTON TERM. Intensive study of national political institutions. Includes a 4 hour research project (PLSC 4401), a 4-hour internship (PLSC 4402), and an 8-hour seminar (PLSC 4403, 4404). *Prerequisites:* Two courses in political science, at least one at the upper level, that are relevant to the selected program. Available for political science, public policy, or international studies majors or minors.

PLSC 5341 (3). EUROPEAN POLITICS: THE EUROPEAN UNION. Europe is in a period of transformation, emerging as a major player on the world scene while internally developing a novel balance between unification of countries and the rise of local identities. What are the forces that shape the new Europe? How does European policy materialize, and who makes the decisions? (SMU-in-Copenhagen)

PLSC 5383 (3). SEMINAR ON REGIONAL CONFLICTS. A study of the problems of European security, with emphasis on the issues confronting populations and policymakers after the Cold War, on the search for a new European security order, and on the emergence of new threats to security. (SMU-in-Copenhagen)

PSYCHOLOGY

www.smu.edu/psychology

Professor George Holden, Department Chair

Professors: Alan Brown, George Holden, Ernest Jouriles, Akihito Kamata, Renee McDonald, Thomas Ritz. **Associate Professors:** Austin Baldwin, Robert Hampson, Alicia Meuret, David Rosenfield, Lorelei Simpson Rowe. **Assistant Professors:** Michael Chmielewski, Chrystyna Kouros. **Senior Lecturers:** Michael Crow, Susan Hornstein, Chris Logan. **Lecturer:** James Calvert.

General Information

Psychology is the study of human behavior and cognition. A degree in psychology equips students with a variety of fundamental and transferable skills. These include the ability to think scientifically, interpersonal and communication skills, and a sensitivity to diversity. A degree in psychology provides students with a solid academic foundation and prepares graduates to succeed in a variety of careers in addition to psychology, including law, medicine and business.

The research interests of faculty members fall into three broad areas of inquiry: psychopathology, biological and health psychology, and family psychology. There are many opportunities for students to become involved in faculty research. Highly motivated students can choose from a series of three departmental distinction courses that provide students with the opportunity to design and execute their own research project.

Bachelor of Arts With a Major in Psychology

Prior to declaring a psychology major, students must complete PSYC 1300, 2301 and STAT 2331 or 2301 with no individual grade less than a C-. Practicum, research training and independent study courses (PSYC 3099, 3199, 3299, 3399, and 4395) may be taken only on a pass/fail basis. Such courses will not count toward the major.

	<i>Credit Hours</i>
PSYC 1300, 2301	6
STAT 2331 <i>or</i> 2301	3
Five courses chosen from the following:	15
PSYC 2351, 3310, 3332, 3341, 3360, 3370, 4320	
Additional courses at the 3000 level or above	12
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Departmental Distinction

The department offers a distinction program to select majors with high academic achievement. The program consists of a sequence of up to three classes where students, under the guidance of their faculty mentor, develop and conduct an independent research study. The program includes designing the study, collecting and analyzing the data, and then writing a paper for conference presentation and journal submission. Interested students should consult with the departmental adviser or director of undergraduate studies.

Minor in Psychology

PSYC 1300 must be successfully completed with a grade of C- or better before declaring a psychology minor. Practicum, research training and independent study courses (PSYC 3099, 3199, 3299, 3399, and 4395) may be taken only on a pass/fail basis. Such courses will not count toward the minor.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
PSYC 1300	3
Three from PSYC 2301, 2351, 3310, 3332, 3341, 3360, 3370, 4320, with at least one at the 3000 level or higher	9
Two elective courses in psychology at the 3000 level or higher	6
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The Courses (PSYC)

PSYC 1300 (3). INTRODUCTION TO PSYCHOLOGY. Broad introduction to psychology as a behavioral science with special emphasis on cognition, development, learning, social, personality, physiological, and clinical psychology (psychopathology and psychotherapy).

PSYC 2301 (3). RESEARCH METHODS IN PSYCHOLOGY. Design and evaluation of psychological research, with emphasis on scientific method, data collection, experimentation, control procedures, validity, reliability, and report-writing skills. This is a challenging and rigorous class in research; required for psychology majors. *Prerequisites:* PSYC 1300 and one additional psychology course, or instructor approval.

PSYC 2351 (3). ABNORMAL PSYCHOLOGY. A study of the theories, causes, assessment, and treatment of abnormal behavior, including depression, anxiety, psychosis, personality disorders, and other forms of psychopathology in adults. There is an examination of the continuum of normal and abnormal behavior, with consideration of historical and cultural perspectives, ethical concerns, and research methodologies in understanding psychological disorders. *Prerequisites:* PSYC 1300 and one additional psychology course, or instructor approval.

PSYC 3099 (0). RESEARCH TRAINING. Supervised experience in faculty research projects in labs, clinics, or field settings. May involve library research, participant recruitment, data collection, and data input and analysis. *Prerequisites:* PSYC 1300 and instructor approval.

PSYC 3192 (1). DISTINCTION SEMINAR IN PSYCHOLOGY: DATA COLLECTION AND ANALYSES. The second course in a three-course sequence for the psychology distinction program. During the term, students collect their data and begin analyses. In addition, continued attention is devoted to scientific writing. *Prerequisite:* Instructor approval.

PSYC 3199 (1). RESEARCH TRAINING. Supervised experience in faculty research projects in labs, clinics, or field settings. May involve library research, participant recruitment, data collection, and data input and analysis. *Prerequisites:* PSYC 1300 and instructor approval.

PSYC 3291 (2). DISTINCTION SEMINAR IN PSYCHOLOGY: RESEARCH PROJECT DEVELOPMENT. The first course in a three-course sequence for the psychology distinction program. Includes advanced training in research methodology. During the term, students design a rigorous research project. *Prerequisite:* Instructor approval.

PSYC 3299 (2). RESEARCH TRAINING. Supervised experience in faculty research projects in labs, clinics, or field settings. May involve library research, participant recruitment, data collection, and data input and analysis. *Prerequisites:* PSYC 1300 and instructor approval.

PSYC 3310 (3). MEMORY AND COGNITION. A survey of how information is encoded, stored, and retrieved in adults. Topics may include attentional processes, perception, verbal learning, and memory. *Prerequisites:* PSYC 1300 and one additional psychology course, or instructor approval.

PSYC 3332 (3). DEVELOPMENTAL PSYCHOLOGY. A survey of the processes and variables that influence the development of the fetus, infant, child, and adolescent. Emphasis is on theories and research in such areas as perceptual, cognitive, language, social/emotional, and moral development.

PSYC 3335 (3). PSYCHOLOGY OF THE FAMILY. A basic introduction to understanding the family. Topics include coupling and dating, parenting of young and older children, and progression to older age. Also, understanding competent family functioning, dealing with health and illness, and family counseling. *Prerequisites:* PSYC 1300 and one additional psychology course or instructor approval.

PSYC 3341 (3). SOCIAL PSYCHOLOGY. Addresses the question of how an individual's thoughts, feelings, and behaviors are influenced by his/her social environment; includes topics such as attitude change, conformity, attraction, aggression, and small-group behavior.

PSYC 3360 (3). HEALTH PSYCHOLOGY. A basic introduction to the subject. Topics include causes and correlates of health, illness, and dysfunction, as well as the interplay of emotions, cognitions, and behavioral and/or physical factors. *Prerequisites:* PSYC 1300 and one additional psychology course, or instructor approval.

PSYC 3364 (3). FORENSIC PSYCHOLOGY. Examination of the interface between psychology and the legal system, focusing in particular on the role of mental health experts in criminal trials and civil disputes. *Prerequisites:* PSYC 1300 and one additional psychology course, or instructor approval.

PSYC 3365 (3). ORGANIZATIONAL PSYCHOLOGY. Psychological principles applied to organizations, both business and volunteer, emphasizing a systems approach and including personnel selection, leadership, motivation, communication, group dynamics, and an overview of organizational development. *Prerequisites:* PSYC 1300 and one additional psychology course or instructor approval.

PSYC 3370 (3). PERSONALITY. An examination of theories and research that address the underlying bases of personality and the causes of individual differences. Emphasis is on the normal personality, but the causes of abnormal personality development are also considered. *Prerequisites:* PSYC 1300 and one additional psychology course or instructor approval.

PSYC 3371 (3). PSYCHOLOGY OF WOMEN. This course focuses on understanding women as individuals. Also, personality theories as they relate particularly to women. Modern women's options and conflicts, motives and values, and their perceptions of their individuality in the face of rapid social change are examined. *Prerequisites:* PSYC 1300 and one additional psychology course or instructor approval.

PSYC 3375 (3). HUMAN RIGHTS FROM A PSYCHOLOGICAL PERSPECTIVE. Examines human rights as informed by psychological concepts and research. Insights from social, clinical, and developmental psychology are used to better understand human rights violations and issues. *Prerequisite:* Instructor approval.

PSYC 3384 (3). SPECIAL TOPICS ABROAD: PSYCHOLOGY. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitle. A maximum of 6 credit hours permissible toward the B.A. in psychology.

PSYC 3399 (3). RESEARCH TRAINING. Supervised experience in faculty research projects in labs, clinics, or field settings. May involve library research, participant recruitment, data collection, and data input and analysis. *Prerequisites:* PSYC 1300 and instructor approval.

PSYC 3484 (4). SPECIAL TOPICS ABROAD: PSYCHOLOGY. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitle. A maximum of 6 credit hours permissible toward the B.A. in psychology.

PSYC 4172 (1). PRACTICUM. An intensive study of interpersonal helping relationships based upon psychological theories and research, with an emphasis on supervised personal involvement with others as a helper.

PSYC 4320 (3). BIOLOGICAL PSYCHOLOGY. An advanced overview of the topic. Classes focus on understanding perception, consciousness and sleep, motor behavior, emotion, and learning, with evidence from biological and medical fields. Students learn basic anatomy, physiology, and research methods. Applications to research and treatment are addressed. *Prerequisites:* PSYC 1300, PSYC 2301, and one additional psychology course, or instructor approval.

PSYC 4321 (3). BEHAVIORAL ACTION OF DRUGS. Addresses the principles of drugs and behavior, classification, and chemical effects of behaviorally active drugs; influences of envi-

ronmental, response, and task variables; and the evaluation and treatment of addiction. *Prerequisites:* PSYC 1300, 2301 and one additional psychology course, or instructor approval.

PSYC 4325 (3). PSYCHOLOGY OF EMOTIONS. An advanced introduction to the topic, with a focus on theory as well as psychological and psychobiological research on humans and animals. Considers the role that cognitions, culture, language, and the nervous system play in determining emotions. Classes include group projects and demonstrations. *Prerequisites:* PSYC 1300, PSYC 2301, and one additional psychology course, or instructor approval.

PSYC 4334 (3). PSYCHOLOGICAL DISORDERS OF CHILDREN. Theories, causes, assessment, and treatment of abnormal behavior from infancy through adolescence. Topics include behavioral and emotional disorders, as well as developmental and learning problems. Historical and cultural perspectives, ethics, and research methods are also addressed. *Prerequisites:* PSYC 1300, PSYC 2301, and one additional psychology course, or instructor approval.

PSYC 4339 (3). PSYCHOLOGY OF AGING. An exploration of the biological, psychological, and sociocultural influences on adult development and aging. Difficulties specific to older adults such as elder abuse and neurodegenerative diseases are also covered. *Prerequisites:* PSYC 1300, PSYC 2301, and one additional psychology course, or instructor approval.

PSYC 4341 (3). SOCIAL COGNITION. Surveys social perception and cognition, including person perception, nonverbal communication, emotional expression, accuracy, and stereotyping. Considers ecological, evolutionary, and cognitive theoretical approaches. *Prerequisites:* PSYC 1300, PSYC 2301, and one additional psychology course, or instructor approval.

PSYC 4342 (3). CLOSE RELATIONSHIPS. Covers research and theory in the psychology of close relationships, including different theoretical perspectives, with emphasis on attraction, relationship development and maintenance, communication, conflict resolution, and relationship dissolution. *Prerequisites:* PSYC 1300, PSYC 2301, and one additional psychology course, or instructor approval.

PSYC 4352 (3). INTRODUCTION TO CLINICAL PSYCHOLOGY. A survey of the important issues and subfields of clinical psychology from the viewpoint of the scientist-practitioner model. Covers research, assessment, diagnosis, and theories in the area of psychotherapy. Intended for students contemplating graduate school in clinical psychology or related fields. *Prerequisites:* PSYC 1300, PSYC 2301, and one additional psychology course, or instructor approval.

PSYC 4363 (3). PSYCHOLOGY OF CONFLICT RESOLUTION. Covers research and theory in the psychology of interpersonal conflict, as well as mechanisms for resolving, managing, or avoiding conflict. Emphasized domains are alternative dispute resolution, close relationships, and workplace and international conflict. *Prerequisites:* PSYC 1300, PSYC 2301, and one additional psychology course, or instructor approval.

PSYC 4376 (3). PSYCHOLOGY OF RELIGION. Introduces the major issues, theories, and empirical approaches to the psychology of religion. Topics covered include the role that religion plays in the beliefs, motivations, emotions, and behavior of individuals. *Prerequisites:* PSYC 1300 and one additional psychology course, or instructor approval.

PSYC 4380 (3). HISTORY OF PSYCHOLOGY. Covers the most important movements and individuals contributing to the development of modern psychology. *Prerequisites:* Instructor approval or PSYC 1300, PSYC 2301, and one additional psychology course.

PSYC 4381 (3). SPECIAL TOPICS. Cover topics that may have temporary or limited interest. Topics include child development, family violence, advanced family psychology, anxiety disorders, and positive psychology. *Prerequisites:* PSYC 1300 and 2301, or instructor approval.

PSYC 4393 (3). DISTINCTION SEMINAR IN PSYCHOLOGY: COMPLETION OF RESEARCH PROJECT. The third course in a three-course sequence for the psychology distinction program. Over the course of the term, students complete their research projects and prepare them for dissemination. *Prerequisite:* Instructor approval.

PSYC 4395 (3). PRACTICUM/INTERNSHIP. Intensive study of interpersonal helping relationships based on psychological theories and research findings, with emphasis on supervised personal involvement with others. *Prerequisites:* PSYC 1300, 2301 and instructor approval.

PSYC 5381 (3). SPECIAL TOPICS. Covers topics that may have temporary or limited interest, including psychology and law, health psychology, and the psychology of attachment. *Prerequisites:* PSYC 1300, PSYC 2301, and one additional psychology course, or instructor approval.

RELIGIOUS STUDIES

Professor Carl Johan Elverskog, Department Chair

Professors: William Barnard, Mark Chancey, Carl Johan Elverskog, Serge Frolov.

Associate Professors: Richard Cogley, Jill DeTemple, Kate Carté Engel, John Lamoreaux, Steven Lindquist. Professor of Practice: Shira Lander.

Bachelor of Arts With a Major in Religious Studies

The B.A. degree in religious studies is appropriate for a general liberal arts education and for preprofessional training leading to graduate degrees in religious studies, law, theology or other areas of the humanities.

Departmental courses are offered in four areas: philosophical studies of religious ideas and values, historical studies of religious movements and institutions, social-scientific studies of religious beliefs and behavior, and textual studies of religious traditions and scriptures. A well-balanced program of undergraduate study includes courses from each of these four areas. Students planning to undertake Ph.D. work in religious studies are strongly encouraged to take the major with departmental distinction and to complete 12 term hours in either French or German.

A total of 30 term hours are required in the department, and 24 hours must be completed in courses numbered at the 3000 level or above.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
One from RELI 3306, 3307, 3378	3
One from RELI 3319, 3326	3
One from the following if not taken for the above requirements: RELI 3306, 3307, 3352, 3365, 3368, 3375, 3377, 3378, 3382, 3384, 3386	3
Additional RELI courses at the 3000 level or above	15
Other departmental courses	6
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Departmental Distinction

A student majoring in religious studies with a minimum overall GPA of 3.000 and a 3.500 GPA in the major by the middle of the junior year may apply for the degree with departmental distinction. Candidates for distinction must enroll in a directed research tutorial in the fall term of their senior year followed by an independent studies course in the spring term for which they will write a senior thesis. Only the directed research tutorial may be used to fulfill the 30-term-hour requirement for the major.

Minor in Religious Studies

Students majoring in other departments or schools may obtain a minor in religious studies by completing 15 term hours in the department. Nine hours must be completed in courses numbered at the 3000 level or above.

The Courses (RELI)

RELI 1300 (3). SPECIAL TOPICS ABROAD: RELIGIOUS STUDIES. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under a different subtitle.

RELI 1301 (3). WAYS OF BEING RELIGIOUS. A comparative study of the beliefs and practices of a wide variety of religious traditions. Special attention to such perennial themes as God, salvation, evil, morality, and death.

RELI 1303 (3). INTRODUCTION TO ASIAN RELIGIONS. An introductory historical overview of select religious traditions of Asia. The course explores developments in religious and cultural trends expressed in South Asia and East Asia in traditions such as Hinduism, Buddhism, Jainism, Sikhism, Confucianism, Taoism, and/or Shintoism.

RELI 1304 (3). INTRODUCTION TO WESTERN RELIGIONS. A historical introduction to Judaism, Christianity, and Islam. Topics include Moses and ancient Israelite religion; Jesus and early Christianity; rabbinic Judaism; Muhammad and classical Islam; the birth of Protestantism; and Jewish, Christian, and Islamic modernism.

RELI 1305 (3). INTRODUCTION TO PRIMAL RELIGIONS. An introduction to the religious world views and ritual life of such primal cultures as Australian aboriginals, African tribal peoples, and native North and South Americans. Also, the significance of the resurgence of neo-paganism in the West.

RELI 1308 (3). RELIGION IN THE UNITED STATES. Explores the role of religion in contemporary American culture, including mainstream civil religion, specific religious traditions, and the interactions among different groups.

RELI 1311 (3). JUDAISM, CHRISTIANITY, AND THE BIBLE. An exploration of the common and distinctive elements in Judaism and Christianity; a study of the historical relationships between Jews and Christians.

RELI 2300 (3). SPECIAL TOPICS ABROAD: RELIGIOUS STUDIES. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitle.

RELI 3300 (3). SPECIAL TOPICS ABROAD: RELIGIOUS STUDIES. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitle.

RELI 3302 (3). PROBLEMS IN THE PHILOSOPHY OF RELIGION. The philosophy of religion, considering such problems as religious experience, human freedom, good and evil, belief in God, and immortality.

RELI 3304 (3). CHRISTIAN THEOLOGY. An exploration of such theological problems as the authority of the Bible, the reality of God, the meaning of Christ, the nature of humanity, and the end of history in light of the biblical heritage and contemporary thought.

RELI 3306 (3). HINDUISM. An exploration of the major attitudes and institutions that define Hinduism, with attention to ideology, social organization, and ritual in light of both historical development and contemporary practice.

RELI 3307 (3). BUDDHISM. Communal rituals, practice, ethics, and political involvement of the Buddhist community ("sangha") as it has taken form in five cultural areas: India, South Asia, Tibet, East Asia, and America.

RELI 3308 (3). CHRISTIAN ETHICS AND MORAL ISSUES. An examination of the relationship between moral reasoning and Christian belief. An analysis of various Roman Catholic and Protestant theories of religious ethics and of specific questions of personal conduct and social policy.

RELI 3309 (3). BIOETHICS FROM A CHRISTIAN PERSPECTIVE. Examines bioethics from a Christian ethical perspective, with special attention to different methodological approaches to the significant themes and realities involved (e.g., life, health, suffering, death), and to the most important issues faced today.

RELI 3310 (3). THE SOCIAL-SCIENTIFIC STUDY OF RELIGION. An introduction to scientific ways of thinking about the social, cultural, and psychological aspects of religious life. Attention is given to major thinkers and theories dealing with religion in the disciplines of anthropology, psychology, sociology, and the social-scientific study of religion.

RELI 3314 (3). STUDIES: COMPARATIVE RELIGION. An examination of a particular topic or theme as expressed in a variety of religious traditions, Eastern and Western, ancient and modern. Topics will vary from term to term.

RELI 3315 (3). RELIGION IN POLITICS. Examines the impact of religious belief; ethical thought; and social, cultural, and psychological factors on the involvement of religious people in the political sphere. Introduces the social-scientific study of religion to aid in the analysis of current and recent case studies, ranging from far-right conservatism to the revolution of the political left, and involving Christian, Jewish, Muslim, Hindu, and Buddhist traditions.

- RELI 3316 (3). RELIGION AND SCIENCE.** An exploration of how religion and science understand such topics as the origins and destiny of the universe and the evolution of life.
- RELI 3318 (3). THE HERO IN THE BIBLE AND THE ANCIENT NEAR EAST.** An examination of concepts of the hero in the literatures of ancient Mesopotamia, Canaan, and Israel, with special attention to the nature of traditional narrative and to the relationship between the hero, society, and the self.
- RELI 3319 (3). HEBREW BIBLE.** An introduction to the Old Testament and to the religion and history of ancient Israel. Special emphasis is given to the ancient Near Eastern roots of biblical religion and to the modern interpretation of biblical myth, epic, and prophecy.
- RELI 3320 (3). CLASSICAL JUDAISM.** An introduction to the study of religion through examination of Judaism. The course looks at central Jewish religious ideas and their development within the rabbinic and medieval periods. Special attention is given to conflicts and controversies, such as Judaism's rejection of early Christianity, heretical movements within medieval Judaism, and Jewish attitudes toward other religions.
- RELI 3321 (3). RELIGION AND THE HOLOCAUST.** A study of responses to the Holocaust by Jews and Christians. Includes an overview of the history of the Holocaust as it affected the Jewish communities of Central and Eastern Europe. Students read personal memoirs of survivors of ghettos, concentration camps, and Nazi Germany. Postwar responses include questions of faith after the Holocaust, Christian responsibility for modern anti-Semitism, the impact of the Holocaust on the creation of the State of Israel and Middle East politics today, and postwar relations between Jews and Germans.
- RELI 3324 (3). AMERICAN JUDAISM.** Examines Jewish life in America, including history, literature, cultural expressions, and religious beliefs from the 17th century to the present.
- RELI 3326 (3). NEW TESTAMENT.** An introduction to the writings of the New Testament, the formative events, and the people who played leading roles in the origin of Christianity.
- RELI 3329 (3). ISLAM.** An examination of the history, doctrines, and rituals of the Muslim community, including Islam in the past and present and in its global context.
- RELI 3330 (3). HISTORY OF CHRISTIANITY.** An introduction to the European development of Christianity, focusing on the key movements, the outstanding leaders, and crucial turning points in the history of Christianity.
- RELI 3331 (3). RENEWAL: ROMAN CATHOLICISM.** Concentrates on the more significant documents of the Second Vatican Council (1962–1965). Includes the background prior to the Second Vatican Council, the changes that helped bring it about, and developments in Roman Catholicism during the last 30 years.
- RELI 3333 (3). RELIGION IN AMERICA.** A consideration of the history of religion in America from the Colonial period to the present. Special emphasis on either selected religious groups, movements, or thinkers.
- RELI 3334 (3). CONSERVATISM AND LIBERALISM IN CHRISTIANITY.** An examination of the fundamentalist, evangelical, and liberal understandings of Christianity, with attention to the issues at stake, and the problems and possibilities of dialogue.
- RELI 3335 (3). RELIGIOUS SECTS IN AMERICA.** An examination of new religious movements that originated in America, e.g., Mormonism; Seventh-Day Adventism; Scientology; the Church of Christ, Scientist (Christian Science); and the Nation of Islam, as well as religious movements in the U.S. that originated abroad, e.g., Hasidic Judaism, Theosophy, the Unification Church, the Hare Krishna movement, and Baha'i.
- RELI 3336 (3). AFRICAN-AMERICAN RELIGIOUS HISTORY.** Examines the major movements, figures, and critical issues in African-American religious history, with a focus on the U.S., although West African, Caribbean, and South American materials are included. Special attention is given to slave religion, the civil rights movement, and black criticism of Christianity.
- RELI 3337 (3). CHRISTIANITY AND AMERICAN PUBLIC LIFE.** Explores the individualism permeating American understanding and life, and the communitarian dimensions of human existence from the Christian perspective. Helps students enter more critically into the dialogue about the role of religion in pluralistic, contemporary American society.
- RELI 3338 (3). CHRIST AS CULTURAL HERO.** An exploration of the impact of Jesus on the history of Western culture, not only in religion and philosophy, but also in the fine arts, literature, and politics.

RELI 3339 (3). THE PURITAN TRADITION IN ENGLAND AND AMERICA. An examination of the religious, political, scientific, economic, and literary dimensions of the Puritan movement in Tudor-Stuart England and in Colonial America.

RELI 3340 (3). RELIGIOUS EXPERIENCE. An examination of the varieties of religious experience from traditional forms of mystical and ecstatic experience, to nontraditional forms of altered states of consciousness. Attention is given to social, cultural, ethical, psychological, and existential dimensions of religious experience approached from a cross-cultural perspective.

RELI 3341 (3). RELIGION IN THE UNITED STATES SINCE 1865. Explores American religion and the role of religion in politics, science and knowledge, community, gender and family, and culture.

RELI 3342 (3). RELIGION IN THE UNITED STATES TO 1865. Investigates the foundations of American religious culture, including native, African, and European traditions; colonization; early evangelicalism; the Revolutionary War; and the religious culture of the new United States.

RELI 3343 (3). RELIGION AND THE AMERICAN REVOLUTION. Investigates the history of religion and the American Revolution, including their Colonial background, evangelicalism and Enlightenment, and the influence of religion on founding documents and leaders.

RELI 3348 (3). TEMPLES, CHURCHES, AND SYNAGOGUES IN THE ANCIENT MEDITERRANEAN. Explores the forms, politics, and social functions of sacred spaces in the ancient Mediterranean using contemporary theories of spatiality. Students learn how to analyze archaeological and literary remains.

RELI 3349 (3). EARLY CHRISTIANITY. Major developments in the history of Christianity from 100 to 600. Emphasis is placed on institutional and ideological developments.

RELI 3350 (3). HISTORY OF BIBLICAL INTERPRETATION. A survey of the interpretive approaches to the Bible in Jewish and Christian traditions from ancient times to the modern era. Topics include interpretation in the biblical period, rabbinic and early Christian exegesis, mystical interpretation, and modern historical scholarship. The social context and the aims of interpretation are key concerns of the course.

RELI 3352 (3). LOVE AND DEATH. Exploration of love and death in the mythologies of Mesopotamia, Egypt, Canaan, Greece, and India. The interaction of these twin themes is pursued as a key to the religious and philosophical perspectives of these ancient peoples. The significance of ancient mythology for modern reflection is a central concern throughout the course.

RELI 3353 (3). LATINO/A RELIGIONS. Introduces the Latino/a religions and religious practices in the United States, with a special emphasis on social constructions of the borderland.

RELI 3358 (3). PSYCHOLOGY OF RELIGION. An investigation of the biological and psychological underpinning of religious belief, behavior, and experience, as well as the psychological and biological consequences of religion.

RELI 3359 (3). NORDIC MYTHOLOGY. An examination of the beliefs, practices, and values of the Teutonic peoples prior to the Christianization of Northern Europe.

RELI 3360 (3). THE HISTORY OF JUDAISM. An overview of both the historical development of the Jewish tradition and its central laws, religious practices, and theology.

RELI 3362 (3). ISLAM AND THE WEST. A study of past and present encounters between Islam and the West, with special attention to the bearing of the contemporary Islamic resurgence upon these encounters today.

RELI 3364 (3). NATIVE AMERICAN RELIGIONS. An investigation of the mythologies of North America, centering on southwestern and northern Plains cultures. Native texts are approached by way of modern theories of the interpretation of myth, ritual, and religion. Topics include creation myths, culture heroes, trickster tales, sacred music and dance, and rites of healing and passage.

RELI 3365 (3). UNDERSTANDING SELF: EAST AND WEST. Examines several basic notions pertaining to selfhood, including consciousness, cognition, motivation, personal identity, and decision, as found in Eastern and Western sources.

RELI 3366 (3). MAGIC, MYTH AND RELIGION ACROSS CULTURES. A cross-cultural and comparative exploration of religion, ritual, magic, and supernatural belief systems. Examines how religion permeates other aspects of society and culture.

RELI 3367 (3). THE RELIGIOUS LIFE OF CHINA AND JAPAN. Introduction to the history, thought, and religious practices of Taoism, Confucianism, Shinto, and Mahayana Buddhism.

RELI 3368 (3). WHOLENESS AND HOLINESS: RELIGION AND HEALING ACROSS CULTURES. An exploration of various understandings of the relationship between religion and healing. Analysis of the interface between medical and religious models of health through a wide range of ethnographic examples and theoretical perspectives. Special attention is also given to different religious healing modalities.

RELI 3370 (3). GREAT RELIGIOUS LEADERS. A comparative study of the life and thought of outstanding representatives of diverse religious traditions, with special attention to founders and revitalizers of the world religions.

RELI 3371 (3). THE WORLD OF THE NEW TESTAMENT. Investigates the intersections of political history, social history, philosophical thought, and religious belief and practice, with particular attention to Judaism and Christianity in their Greco-Roman context.

RELI 3372 (3). BIBLICAL INTERPRETATION AND THE STATE OF ISRAEL. An examination of the ways in which the Bible has been interpreted both in support of and in opposition to the modern state of Israel.

RELI 3374 (3). FEMALE AND MALE IN RELIGION AND CULTURE. Students explore how the study of gender differences affects their understanding of history, religion, and culture. Includes a critical look at current discussions in the field of women's studies and their impact on contemporary thought.

RELI 3375 (3). THE FEMININE DIVINE. A historical and cross-cultural overview of the relationship between feminine and religious cultural expressions through comparative examinations and analyses of various goddess figures in world religions.

RELI 3377 (3). THE CULTURAL HISTORY OF TIBET. A critical study of Tibetan history, culture, and religion, and how they relate to the representation of Tibet in travel, scholarly, and popular literature.

RELI 3378 (3). RELIGIONS OF CHINA. A historical survey of the religious cultures of China from the ancient Shang dynasty through the contemporary period.

RELI 3380 (3). WOMEN AND RELIGION IN AMERICA. A historical introduction to the role of women in American religious history with special attention to the interplay between women and wider religious and cultural values.

RELI 3381 (3). RELIGION, GENDER, AND ECONOMIC DEVELOPMENT. A consideration of gender and religion in the context of international economic development with a particular emphasis on "tradition" as a category of analysis and evaluation.

RELI 3382 (3). MYSTICISM. An inquiry into mysticism as a path for attaining individual religious fulfillment. Attention to such mystic traditions as Zen, Tantra, Yoga, Sufism, Kabbalah, and Christian mysticism.

RELI 3383 (3). REEL JUDAISM: CINEMATIC REPRESENTATIONS OF JEWISH LIFE. Explores how American, European, and Israeli films variously represent Jewish life past and present. Addresses issues of identity-construction, cultural context, collective memory, politicization, majority representation, and minority self-representation.

RELI 3384 (3). HINDUISM AND COLONIAL ENCOUNTERS. A critical study of the history of colonialism in India and its impact on social, religious, and political discourse.

RELI 3386 (3). MYTHS, EPICS, AND TALES FROM INDIA. Examines religious narratives from ancient India. Students read and analyze many examples across different genres (myth, epic, folktale) in text and performance, focusing on literary and historical context and interpretation.

RELI 3387 (3). RELIGION AND HUMAN RIGHTS. Major world religious traditions and modern ideas of human rights. Religious understandings of humanity and political order are considered in relation to contemporary human rights issues.

RELI 3388 (3). WESTERN IDEAS OF ENLIGHTENMENT: PLATO, AUGUSTINE, AND KANT. Explores how Plato, Augustine, and Kant defined enlightenment and how their competing ideas shape contemporary understandings of the educated, virtuous, and free person.

RELI 3390 (3). A PERSISTENT PREJUDICE: ANTI-SEMITISM IN WESTERN CIVILIZATION. Studies the evolution of anti-Jewish stereotypes in Western culture in the context of

human rights as well as classical anti-Judaism's transformation into the modern phenomena of anti-Semitism and anti-Zionism.

RELI 4198 (1). INDEPENDENT STUDY. Individual study with an instructor. Permission of instructor and departmental chair required.

RELI 4199 (1). INDEPENDENT STUDY. Individual study with an instructor. Permission of instructor and departmental chair required.

RELI 4298 (2). INDEPENDENT STUDY. Individual study with an instructor. Permission of instructor and departmental chair required.

RELI 4299 (2). INDEPENDENT STUDY. Individual study with an instructor. Permission of instructor and departmental chair required.

RELI 4300 (3). SPECIAL TOPICS ABROAD: RELIGIOUS STUDIES. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitle.

RELI 4352 (3). JESUS AND THE GOSPELS. An examination of canonical and noncanonical Christian Gospels, with special attention to methods of Gospel research and to the study of the historical Jesus.

RELI 4354 (3). PROPHETS OF THE OLD TESTAMENT. An introduction to the writings and religious concepts of the prophets of ancient Israel. Special emphasis will be given to the roots of prophecy in ancient Near Eastern religions, the social role of the Israelite prophet, and comparisons with seers and shamans of modern religious traditions.

RELI 4356 (3). THE BIBLE AND ETHICS. Examines the ways in which Christians have appealed to the Bible in ethical debates, with special attention to classic ethical approaches, specific ethical issues, and methodological problems.

RELI 4371 (3). PAULINE CHRISTIANITY. A study of Paul and Pauline Christianity, drawing on Paul's letters, the Acts of the Apostles, and other documents of the New Testament.

RELI 4381 (3). INTERNSHIP IN RELIGIOUS STUDIES. This course enables students to gain vocational experience by working in nonsectarian religious organizations and institutions, such as social justice agencies, ecumenical associations, and charitable or educational foundations.

RELI 4388 (3). SPECIAL TOPICS IN RELIGIOUS STUDIES. A detailed investigation of a topic chosen by the instructor. Topics vary.

RELI 4389 (3). SPECIAL TOPICS IN RELIGIOUS STUDIES. A detailed investigation of a topic chosen by the instructor. Topics vary.

RELI 4396 (3). DIRECTED READING AND RESEARCH. Special topics to be selected by the student in consultation with the department. Open to seniors upon departmental approval.

RELI 4397 (3). DIRECTED READING AND RESEARCH. Special topics to be selected by the student in consultation with the department. Open to seniors upon departmental approval.

RELI 4398 (3). INDEPENDENT STUDY. Individual study with an instructor. Permission of instructor and departmental chair required.

RELI 4399 (3). INDEPENDENT STUDY. Individual study with an instructor. Permission of instructor and departmental chair required.

RELI 4498 (4). INDEPENDENT STUDY. Individual study with an instructor. Permission of instructor and departmental chair required.

RELI 4499 (4). INDEPENDENT STUDY. Individual study with an instructor. Permission of instructor and departmental chair required.

RELI 5330 (3). INTRODUCTION TO DIGITAL HUMANITIES. Provides a theoretical and practical introduction to the digital humanities, covering digital texts, GIS tools, visualizations, online archiving and presentation, and the culture of this developing field.

SOCIOLOGY

www.smu.edu/sociology

Associate Professor Sheri Kunovich, Department Chair

Associate Professors: Matthew R. Keller, Sheri Kunovich, Anne E. Lincoln.
Assistant Professor: Lucas Kirkpatrick. Senior Lecturer: Debra Branch. Lecturers:
Nancy Campbell-Jeffrey, Leslie DeArman.

General Information

The sociology curriculum includes courses on research design, data analysis and social theory, as well courses on developing an understanding of domestic and international social conditions. In today's information society, these skills give sociology majors a competitive advantage in fields that rely heavily upon social research.

Sociology majors entering the business world often work in marketing research, human resources, personnel management, industrial relations, public relations or sales, while sociology majors entering human services often work in nonprofits focused on addressing social problems and helping individuals solve problems related to economic insecurity, substance abuse or housing insecurity. In the government sector, sociology majors often work in policy analysis, program evaluation or urban planning.

The Department of Sociology offers three majors and one minor. Students are not permitted to pursue both a B.A. and B.S. in sociology but may pursue the combination of a markets and culture major and either the B.A. or B.S. in sociology. Students who combine a markets and culture major with the B.A. or B.S. in sociology may double count up to 15 hours of course credit between these programs. SOCI 3311, 3312 will automatically be included, as well as three additional courses as determined by the order in which the course work is completed.

Bachelor of Arts With a Major in Sociology

Prior to declaring a sociology major, students must complete SOCI 1300 with a grade of *C* or better. Students must receive at least a *C-* in all remaining required courses and meet a minimum GPA of 2.000 in all courses counted toward the major. STAT 2301 or 2331 is recommended but is not applied toward the B.A. Only one independent study course (SOCI 4393 or 4396) may be taken for a grade and applied toward the major. General internship courses (SOCI 4198, 4298, 4398) may only be taken on a pass/fail basis, and will not be counted toward the major.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Core Courses	12
SOCI 1300, 3311, 3312, and 4313 or 4314	
Electives	21
Four additional courses at the 2000 or 3000 level	
Three additional courses at the 4000 level	
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Bachelor of Science With a Major in Sociology

The B.S. degree provides a more rigorous curriculum in social science research and analytic writing, and a solid foundation for graduate study or professional school. Prior to declaring a sociology major, students must complete SOCI 1300 with a grade of *C* or better. Students must receive at least a *C-* in all remaining required

courses and meet a minimum GPA of 2.000 in all courses counted toward the major. Only one independent study course (SOCI 4393 or 4396) may be taken for a grade and applied toward the major. General internship courses (SOCI 4198, 4298, 4398) may only be taken on a pass/fail basis, and will not be counted toward the major.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Core Courses	18
SOCI 1300, 3311, 3312, 4313, 4314 STAT 2301 or 2331	
Electives	18
Three additional courses at the 2000 or 3000 level Three additional courses at the 4000 level	

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Bachelor of Arts With a Major in Markets and Culture

The B.A. in markets and culture provides students the opportunity to learn about the world's marketplaces from an interdisciplinary vantage in the social sciences. Students receive a firm grounding in the economic principles of markets, the values and history of commerce, the social bases of economic behavior, and business concepts and practices while gaining an understanding of the multiple institutions and cultures that shape the world's markets.

Prior to declaring a major in markets and culture, students must achieve a grade of *C* or better in SOCI 2377. Students must receive at least a *C-* in all remaining required courses and meet a minimum GPA of 2.000 in all courses counted toward the major. Students are encouraged to choose their electives using one of the three areas of specialization presented below. General internship courses (SOCI 4179, 4279, 4379) may only be taken on a pass/fail basis and they will not be counted toward the major.

Students are also permitted to petition to include specific courses that broaden their knowledge of global society or of a particular region or country from disciplines such as history, English and world languages. While pure language courses will not be approved, upper-level language courses that involve literature, applications or business skills will be approved. Relevant study abroad courses may also be petitioned for approval. Students interested in the management, business strategy and organizations elective concentration are encouraged to consider completing the Cox minor in business.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Core Courses	30
ACCT 2301 Fundamentals of Accounting I or ACCT 2310 Accounting Concepts <i>One from the following:</i> ECO 3355 Money and Banking FINA 3330 Money and Capital Markets FINA 3310 Finance Concepts ENGL 2302 Business Writing or BLI 3302 Business Communications/Leader Dvlpmnt SOCI 2377 Introduction to Markets and Culture	

Core Courses (continued)

SOCI 3311 Social Science Research Methods
 SOCI 3312 Database Methods and Analysis
 SOCI 3340 Global Society
 SOCI 3377 Organizations and Their Environment

One from the following:

SOCI 4377 Economic Sociology
 SOCI 4384 Sociology of Innovation: Knowledge,
 Technology, and Institutions
 SOCI 4385 Environmental Sociology

One from the following:

STAT 2301 Statistics for Modern Business Decisions
 STAT 2331 Introduction to Statistical Methods
 ITOM 2305 Managerial Statistics
 ITOM 3310 Business Processes and Decisions

Electives (from one or more of the following groups)

12

Management, Business Strategy, and Organizations

ANTH 3344 Cultural Aspects of Business
 CISB 2388 Entrepreneurship Concepts
 COMM 3321 Communication in Global Contexts
 ECO 3301 Price Theory (Intermediate Microeconomics)
 ECO 3302 National Income and Employment (Intermediate
 Macroeconomics)
 ECO 4351 Labor Economics
 ECO 4368 Foundations of Financial Economics
 ECO 5365 Public Finance
 MKTG 3310 Marketing Concepts
 MKTG 3340 Fundamentals of Marketing (Cox majors only)
 MNO 3310 Management Concepts
 MNO 3370 Management (Cox majors only)
 MNO 3373 Negotiations
 MNO 4371 Leadership and Culture
 PHIL 1317 Business Ethics
 PLSC 3320 Principles of Public Policy
 PLSC 3382 Internat'l Organizations: Global and Regional
 PLSC 3390 Negotiating International Trade
 PLSC 4329 The Politics of Economic Policy
 PSYC 3365 Organizational Psychology
 SOCI 3321 Nonprofit Organizations: Conceptual Primer
 STRA 5370 Strategic Management in a Global Economy

Political Economy, Inequality, and Development

ANTH 3385 Sustainable Living
 ANTH 4303 Political Economy of Health
 ANTH 4384 Global Issues and Development: An Overview
 ECO 4357 International Trade
 ECO 4358 International Macroeconomic Theory and Policy
 ECO 4365 State and Local Government
 ECO 4366 Economics of the Public Sector
 ECO 5360 Economic Development
 PLSC 3389 International Political Economy

Electives (continued)

- PLSC 4353 Political Economy of East Asia
 PLSC 4355 Comparative Political Economy of Industrialized Democracies
 PLSC 4356 Latin American Political Economy
 SOCI 3335 Political Sociology
 SOCI 3372 Contemporary Issues in the American Southwest
 SOCI 4373 Class, Race, and Gender Inequalities
Consumers and Markets in Historical and Cultural Contexts
 ADV 3362 Marketing Principles of Advertising (advertising majors only)
 ADV 4317 Consumer Behavior
 ANTH 3310 Gender and Sex Roles: A Global Perspective
 ANTH 3314 Peoples of Africa
 ANTH 3336 Gender/Globalization: Cultural/Ethical Issues
 ANTH 3350 Good Eats and Forbidden Flesh: Culture, Food, and the Global Grocery Market
 ANTH 3354 Latin America: People, Places, and Power
 ANTH 3361 Language in Culture and Society
 COMM 3342 Race/Identity Construction in Global Contexts
 HIST 3327 Women in American History, 1900–Present
 HIST 3364 Consumer Culture in the U.S., 1770–1990
 PLSC 4354 The Third World and North–South Relations
 PLSC 4391 NAFTA and Free Trade in the Americas
 RELI 3365 Understanding the Self: East and West
 RELI 3366 Magic, Myth, and Religion Across Cultures
 SOCI 3345 Construction of Social Identities in the Media
 SOCI 4340 Sociology of Culture
 SOCI 4372 Wealth and Consumption

Departmental Distinction

The department offers graduation with distinction to majors of high academic achievement. Interested students with a minimum 3.000 overall GPA and a 3.500 GPA in the major may consult with the director of undergraduate study for admission to the distinction track. If the director determines that the student has satisfied the requirements, the student may then contact a departmental faculty member to request direction of the distinction paper. The candidate's distinction paper must be a substantial piece of independent and original research. The research will be presented and evaluated by a distinction committee comprised of at least two faculty members. Upon positive recommendation from this committee, the student will be awarded graduation with distinction. Criteria for graduating with departmental distinction include the following:

- A minimum 3.000 overall GPA at graduation.
- A minimum 3.500 GPA in required courses for the major.
- A minimum grade of A- in SOCI 4396.

Minor in Sociology

Markets and culture majors who want to minor in sociology will be allowed to double count up to six hours, specifically SOCI 3311 and 3340.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
SOCI 1300 and one from SOCI 3311, 3312, 4313, or 4314	6
Two out of three additional courses at the 3000 level or above	9
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The Courses (SOCI)

SOCI 1300 (3). INTRODUCTION TO SOCIOLOGY. This course presents the sociological approach to understanding human behavior. Sociology considers how particular life experiences, attitudes, and values are shaped by membership in ascribed and achieved social categories such as social class, race/ethnicity, sex, sexuality, and nationality. *Prerequisite:* First-year, sophomore, or junior standing only.

SOCI 2180 (1). SMU ABROAD: SOCIOLOGY. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitle. Maximum of 6 credit hours permissible toward the B.A. or B.S. in sociology or the B.A. in markets and culture.

SOCI 2280 (2). SMU ABROAD: SOCIOLOGY. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitle. Maximum of 6 credit hours permissible toward the B.A. or B.S. in sociology or the B.A. in markets and culture.

SOCI 2300 (3). SOCIAL PROBLEMS. Examines social problems within the contexts of their particular societies and cultures; how a social problem is defined; and how solutions are shaped by politics, corporations, media interests, and social movements. *Prerequisite:* First-year, sophomore, or junior standing only.

SOCI 2310 (3). NONPROFITS AT WORK IN THE COMMUNITY. Explores the nonprofit sector's role in addressing myriad social problems, especially those most prevalent in the Dallas area. Students examine issues such as poverty, domestic violence, health care, and the aging population. Traditional lectures on campus introduce concepts relating to the social issue being explored and the specific ways in which the nonprofit sector is working to mitigate the problems. Includes fieldtrips to local nonprofit agencies to tour facilities and meet with administrators, volunteers, and clients who are working to address the social problems discussed in class.

SOCI 2377 (3). INTRODUCTION TO MARKETS AND CULTURE. General introduction to economic sociology, examining the effects of culture and social relations on shaping production, distribution, and consumption in domestic and global markets. *Prerequisite:* First-year, sophomore, or junior standing only.

SOCI 2380 (3). SMU ABROAD: SOCIOLOGY. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitle. Maximum of 6 credit hours permissible toward the B.A. or B.S. in sociology or the B.A. in markets and culture.

SOCI 3180 (1). SMU ABROAD: SOCIOLOGY. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitle. Maximum of 6 credit hours permissible toward the B.A. or B.S. in sociology or the B.A. in markets and culture.

SOCI 3280 (2). SMU ABROAD: SOCIOLOGY. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitle. Maximum of 6 credit hours permissible toward the B.A. or B.S. in sociology or the B.A. in markets and culture.

SOCI 3301 (3). HEALTH, HEALING, AND ETHICS: CROSS-CULTURAL PERSPECTIVES ON SICKNESS AND SOCIETY. A cross-cultural exploration of cultures and organization of medical systems, economic development and the global exportation of biomedicine, and ethical dilemmas associated with medical technologies and global disparities in health.

SOCI 3305 (3). INTRODUCTION TO RACE AND ETHNICITY IN THE UNITED STATES. An interdisciplinary seminar designed to introduce the analysis of race and ethnicity in the United States. Topics include inequality, residential segregation, immigration, and ethics.

SOCI 3311 (3). SOCIAL SCIENCE RESEARCH METHODS. Introduces qualitative and quantitative research methods used by sociologists. Students learn how to design, conduct, and report research in an ethical, clear, and concise manner. Assignments provide hands-on experience using and collecting data for social science research. This is the first course in the research methods sequences. *Prerequisite:* Sociology majors, markets and culture majors, sociology minors, or markets and culture premajors.

SOCI 3312 (3). DATABASE METHODS AND ANALYSIS. Focuses on data analysis of existing data commonly used for economic and social scientific purposes (e.g., U.S. Census, General Social Survey, World Bank) and the construction of new data from multiple sources. Reviews basic quantitative research methodology, descriptive and inferential statistics, data reduction and management techniques, and the interpretation of statistics in applied social research. Students become adept at using multiple database programs (e.g., Excel, SPSS, SAS). This is the second course in the research methods sequence. *Prerequisites:* Sociology majors, markets and culture majors, or sociology minors only; C- or better in SOCI 3311.

SOCI 3320 (3). THE SOCIAL-SCIENTIFIC STUDY OF RELIGION. An introduction to scientific ways of thinking about the social, cultural, and psychological aspects of religious life. Attentive to major thinkers and theories dealing with religion in the disciplines of anthropology, psychology, sociology, and the social-scientific study of religion.

SOCI 3321 (3). NONPROFIT ORGANIZATIONS: CONCEPTUAL PRIMER. Explores the nonprofit sector and relevant topics (e.g., nonprofit history, theories, management, and trends), focusing on strategies for improving organizations in light of the nonprofit sector's relationship with government and business. Prepares students for their subsequent nonprofit internship.

SOCI 3330 (3). SOCIAL CONSTRUCTION OF IDENTITIES. Classical and contemporary theoretical explanations for the development, persistence, and destruction of constructed social identities based on gender, sexuality, race and ethnicity, social class, disability status, etc.

SOCI 3335 (3). POLITICAL SOCIOLOGY. Political movements, impact of politics on other institutions in America, issues of power and control, and global issues of economics and political power. *Prerequisites:* SOCI 1300 or 2300, SOCI 3311 or 3312, sophomore standing or above.

SOCI 3340 (3). GLOBAL SOCIETY. Provides a sociological orientation to the evolving interconnectedness among societies, nation-states, cultures, economies, and individuals worldwide.

SOCI 3345 (3). CONSTRUCTION OF SOCIAL IDENTITIES IN THE MEDIA. Provides a broad historical and contemporary background to the study of media representations of groups in society. Particular attention is paid to how gender, race, sexuality, and social class are constructed in visual and print media.

SOCI 3350 (3). ETHNOVIOLENCE: INTERDISCIPLINARY PERSPECTIVES. An introduction to ethnoviolence (violence or the threat of violence based on one's race, ethnicity, religion, gender, or sexual orientation) from a comparative, global, and critical framework that synthesizes sociology, colonial studies, and communications, as well as ethnic, religious, historical, and gender studies.

SOCI 3351 (3). SOCIOLOGY OF THE FAMILY. Examines the relationship between social structure and the family by considering the historical development of the family, variations in families, and current issues and changes affecting the family.

SOCI 3360 (3). LAW AND SOCIETY. A broad overview of the history and functions of American major legal institutions and their relationship to American culture and social structure.

SOCI 3363 (3). CRIME AND DELINQUENCY. Explores U.S. crime problems from a sociological perspective, including impacts of inequality, crime patterns, theories of criminal behavior, and prevention of crime.

SOCI 3368 (3). URBAN LIFE: A CROSS-CULTURAL PERSPECTIVE. An introduction to urban life and culture around the world, including how to study cities, who inhabits cities, and the special features of city places and spaces.

SOCI 3370 (3). MINORITY-DOMINANT RELATIONS. The nature, origins, and consequences of relationships between unequal groups; U.S. and other societies are compared.

SOCI 3371 (3). SOCIOLOGY OF GENDER. Examines the social and cultural construction of gender within relationships, friendships, families, schools, the media, and the workplace. It also explores the intersection of gender with race, ethnicity, social class, and sexuality.

SOCI 3372 (3). CONTEMPORARY ISSUES IN THE AMERICAN SOUTHWEST. Focuses on contemporary issues facing the American Southwest, including social problems that exist within the contexts of particular groups, communities, cultures, and societies. Explores sociological issues relating to the environment, the media, poverty, immigration, food insecurity, education, crime, economic development, and health, among others.

SOCI 3377 (3). ORGANIZATIONS AND THEIR ENVIRONMENTS. Explores theories of organizations and relationships between organizations and their environments, and applies these theories to the analysis of real-world organization activities. Sociology or markets and culture majors only.

SOCI 3380 (3). SMU ABROAD: SOCIOLOGY. Courses offered in SMU-approved international programs. Prior departmental approval required. May be repeated for credit under different subtitle. Maximum of 6 credit hours permissible toward the B.S. in sociology

SOCI 4093 (0). UNDERGRADUATE FULL-TIME STATUS. Noncredit course with no tuition.

SOCI 4179 (1). MARKETS AND CULTURE INTERNSHIP. Students arrange for part-time jobs in fields of interest to markets and culture and relate their experiences to their academic curriculum through written organizational analyses under the guidance of an approved departmental faculty sponsor. Students apply for permission to enroll. Graded on a pass/fail basis only. *Prerequisites:* Sociology or markets and culture major, and sophomore standing or above.

SOCI 4193 (1). INDIVIDUAL RESEARCH. Students develop an independent research project, guided by a department faculty sponsor, culminating in a written report. *Prerequisites:* C- or better in SOCI 3311, 3312; sociology or markets and culture major; and instructor consent.

SOCI 4198 (1). SOCIOLOGICAL INTERNSHIP. Students arrange for part-time jobs in fields of interest to sociology and relate their experiences to their academic curriculum through written organizational analyses under the guidance of an approved departmental faculty sponsor. Students apply for permission to enroll. Graded on a pass/fail basis only. *Prerequisites:* Sociology or markets and culture major, and sophomore standing or above.

SOCI 4279 (2). MARKETS AND CULTURE INTERNSHIP. Students arrange for part-time jobs in fields of interest to markets and culture and relate their experiences to their academic curriculum through written organizational analyses under the guidance of an approved departmental faculty sponsor. Students apply for permission to enroll. Graded on a pass/fail basis only. *Prerequisites:* Sociology or markets and culture major, and sophomore standing or above.

SOCI 4293 (2). INDIVIDUAL RESEARCH. Students develop an independent research project, guided by a department faculty sponsor, culminating in a written report. *Prerequisites:* C- or better in SOCI 3311, 3312; sociology or markets and culture major; and instructor consent.

SOCI 4298 (2). SOCIOLOGICAL INTERNSHIP. Students arrange for part-time jobs in fields of interest to sociology and relate their experiences to their academic curriculum through written organizational analyses under the guidance of an approved departmental faculty sponsor. Students apply for permission to enroll. Graded on a pass/fail basis only. *Prerequisites:* Sociology or markets and culture major, and sophomore standing or above.

SOCI 4313 (3). THE SOCIOLOGICAL TRADITION. Introduction to theories of 19th- and early 20th-century sociologists. *Prerequisites:* Sociology major or sociology minor, and sophomore standing or above.

SOCI 4314 (3). CONTEMPORARY SOCIOLOGICAL THEORY. Surveys recent trends in sociological theory. *Prerequisites:* Sociology major or minor, and sophomore standing or above.

SOCI 4335 (3). SOCIAL MOVEMENTS AND COLLECTIVE BEHAVIOR. Nature, causes, and consequences of social movements/collective behavior (e.g., crowds, riots, fads, public opinion, social movements, revolution). *Prerequisites:* SOCI 1300, sophomore standing or above.

SOCI 4340 (3). SOCIOLOGY OF CULTURE. Provides an overview of the sociological study of culture, focusing on the ways language, artifacts, ideas, identities, and narratives construct social reality. *Prerequisite:* Markets and culture major, sociology major, or sociology minor.

SOCI 4351 (3). NONPROFIT FUNDRAISING AND GRANT WRITING. Examines sources of revenue for nonprofit organizations. Specific topics include fundraising, grant writing, the

history of philanthropic giving in America, and donor dynamics. *Prerequisite:* SOCI 3321 or instructor approval.

SOCI 4363 (3). THE ADMINISTRATION OF JUSTICE. Examination of law enforcement and criminal court systems, as well as the ideal of justice and public policy. *Prerequisites:* SOCI 1300 and sophomore standing or above.

SOCI 4364 (3). CORRECTIONAL SYSTEMS. The history of punishment, adjustment to incarceration, comparison of prisons for men and women, and constitutional issues of criminal punishment. *Prerequisites:* SOCI 1300 and sophomore standing and above.

SOCI 4366 (3). DEVIANT BEHAVIOR. Explores causes and consequences of deviant behavior and evaluates leading theories. *Prerequisites:* SOCI 1300 and sophomore standing or above.

SOCI 4372 (3). WEALTH AND CONSUMPTION. Focuses on how group membership (e.g., race, social class) and societal forces (e.g., economic development) affect spending and savings patterns, with particular attention to sociological theories of consumption. *Prerequisites:* SOCI 3311 or 3312 and markets and culture major, sociology major, or sociology minor.

SOCI 4373 (3). CLASS, RACE, AND GENDER INEQUALITIES. Explores the causes and consequences of the unequal distribution of power, prestige, and opportunity within society. *Prerequisites:* SOCI 3311 or 3312 and markets and culture major or sociology major or minor.

SOCI 4374 (3). SOCIAL CHANGE. Review of major social change theories emphasizing technology, modernization, and social power. Also, the impact of change on individuals and institutions, and possible solutions to resulting problems. *Prerequisites:* SOCI 1300 and sophomore standing or above.

SOCI 4377 (3). ECONOMIC SOCIOLOGY. Capstone course that applies knowledge acquired in core markets and culture courses to develop critical understanding of the social, economic, technological, and political forces shaping current global markets. *Prerequisites:* SOCI 3311 or 3312, C- or better in SOCI 3377, and markets and culture major.

SOCI 4379 (3). MARKETS AND CULTURE INTERNSHIP. Students arrange for part-time jobs in fields of interest to markets and culture and relate their experiences to their academic curriculum through written organizational analyses under the guidance of an approved departmental faculty sponsor. Students apply for permission to enroll. Graded on a pass/fail basis only. *Prerequisites:* Sociology or markets and culture major, and sophomore standing or above.

SOCI 4384 (3). SOCIOLOGY OF INNOVATION: KNOWLEDGE, TECHNOLOGY, AND INSTITUTIONS. Examines the social, organizational, and institutional bases of the development and diffusion of innovations, with a focus on the dynamics and debates concerning the generation of new knowledge and novel technologies. *Prerequisites:* SOCI 3311 or 3312; markets and culture major, sociology major, or sociology minor.

SOCI 4385 (3). ENVIRONMENTAL SOCIOLOGY. Capstone course that examines the relationships among society, culture, economy, and the environment. *Prerequisites:* SOCI 3311 or 3312 and markets and culture major, sociology major, or sociology minor.

SOCI 4390 (3). ADVANCED RESEARCH METHODS. Supervised research experience collecting primary data in the field and/or secondary data and data analysis in the classroom. Students gain advanced understanding of specific methods, sampling and recruitment, data collection, and analysis. *Prerequisite:* SOCI 3311 or 3312.

SOCI 4393 (3). INDIVIDUAL RESEARCH. Students develop an independent research project, guided by a department faculty sponsor, culminating in a written report. *Prerequisites:* C- or better in SOCI 3311, 3312; sociology or markets and culture major; and instructor consent.

SOCI 4396 (3). INDIVIDUAL RESEARCH FOR DISTINCTION. Students develop a substantial piece of independent and original research for graduation with distinction. *Prerequisites:* Minimum overall GPA of 3.000, minimum major GPA of 3.500, SOCI 3311 and 3312, sociology or markets and culture major, and junior standing or above.

SOCI 4398 (3). SOCIOLOGICAL INTERNSHIP. Students arrange for part-time jobs in fields of interest to sociology and relate their experiences to their academic curriculum through written organizational analyses under the guidance of an approved departmental faculty sponsor. Students apply for permission to enroll. Graded on a pass/fail basis only. *Prerequisites:* Sociology or markets and culture major, and sophomore standing or above.

SOCI 4399 (3). SPECIAL TOPICS: SOCIOLOGY SEMINAR. Seminar on selected sociological areas. May be repeated for credit if topics differ.

STATISTICAL SCIENCE

www.smu.edu/statistics

Professor Wayne Woodward, Department Chair

Professors: Ronald Butler, Richard Gunst, Daniel Heitjan, Hon Keung Ng, Lynne Stokes, Sherry Wang, Wayne Woodward. **Associate Professors:** Jing Cao, Ian Harris, Monnie McGee. **Assistant Professor:** Cornelis Potgieter. **Senior Lecturers:** Alan Elliot, Stephen Robertson. **Lecturer:** Bivin Sadler.

General Information

Statistical data scientists are specialists in the collection, analysis and interpretation of data. There is an accelerating demand for experts in statistical analysis and data analytics because of today's big data phenomenon fueled by an explosion of data from sources such as sensors, social media, cloud computing, medical instruments, business processes and surveys. As a result, the field of statistics will be increasingly more fundamental to academia, business and government in order to accommodate the escalating dependence on data-driven decisions. An attractive aspect of the statistics profession is the wide variety of problems that can be addressed:

- Government agencies such as the U.S. Census Bureau and the Food and Drug Administration need statisticians.
- Manufacturing and related industries employ statisticians to work in areas such as quality and productivity.
- Banks and insurance companies hire statisticians to assist in modeling financial data.
- Medical schools, research hospitals and pharmaceutical companies typically employ statistical specialists as biostatisticians.

Because of its interdisciplinary nature, statistical science is a valuable double major or minor.

Bachelor of Science With a Major in Statistical Science

The B.S. in statistical science prepares students for advanced studies in statistical science, such as graduate work in the field or in a related discipline.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Mathematics and Statistics	18
MATH 1337, 1338 STAT 5304, 5371, 5372; and STAT 4340/EMIS 3340/CSE 4340 <i>or</i> STAT 5373 (with departmental approval)	
Electives	24
<i>At least 9 hours from the following:</i> STAT 3312, STAT 4340/EMIS 3340/CSE 4340, STAT 4385, 5350 (or ECO 5350), 5370, 5375, 5377 (or EMIS 5377), 5380 (or ECO 5385), 6308	
<i>Remaining hours from below if not included in the 9 hours above:</i> ECON 3301 and any 4000 level or higher class EMIS 3308, 3360, 3361, any 5000-level class MATH 2339, 2343, any 3000 level or higher class One from STAT 1301, 2301, 2331; ITOM 2305 Other approved courses	

Minor in Statistical Science

A minor in statistical science is a valuable complement to majors in the natural or social sciences, engineering or business. Students planning careers that involve the collection, processing, description and/or the analysis of quantitative information will enhance their career opportunities with a minor in statistical science. A minor in statistical science requires at least 15 term hours, as specified below. In addition, students may receive three hours of credit one of the following: STAT 1301, 2301, 2331; ITOM 2305.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
STAT 5371, 5372 and at least two additional STAT courses at the 3000 level or higher	12
PSYC 3382	3
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The Courses (STAT)

STAT 1301 (3). INTRODUCTION TO STATISTICS. Introduces collecting observations and measurements, organizing data, variability, and fundamental concepts and principles of decision-making. Emphasis is placed on statistical reasoning and the uses and misuses of statistics.

STAT 2301 (3). STATISTICS FOR MODERN BUSINESS DECISIONS. A foundation in data analysis and probability models is followed by elementary applications of confidence intervals, hypothesis testing, correlation, and regression. Introduces the use of Excel for statistical analysis, with a focus on business applications.

STAT 2331 (3). INTRODUCTION TO STATISTICAL METHODS. An introduction to statistics for behavioral, biological, and social sciences. Topics include descriptive statistics, probability, and inferential statistics, including hypothesis testing and contingency tables.

STAT 3312 (3). CATEGORICAL DATA ANALYSIS. Examines techniques for analyzing data that are described by categories or classes. Discusses classical chi-square tests and modern log-linear models. Emphasizes practical applications using computer calculations and graphics. *Prerequisite:* STAT 2301 or 2331, or equivalent.

STAT 3380 (3). ENVIRONMENTAL STATISTICS. Examines statistical design and analysis methods relevant to environmental sampling, monitoring, and impact assessment. Emphasizes statistical procedures that accommodate the likely temporal and spatial correlation in environmental data. *Prerequisite:* STAT 2301 or 2331, or equivalent.

STAT 4340 (3). STATISTICAL METHODS FOR ENGINEERS AND APPLIED SCIENTISTS. Basic concepts of probability and statistics useful in the solution of engineering and applied science problems. Covers probability, probability distributions, data analysis, sampling distributions, estimation, and simple tests of hypothesis. *Prerequisites:* MATH 1337, 1338.

STAT 4385 (3). INTRODUCTION TO NONPARAMETRIC STATISTICS. Statistical methods that do not require explicit distributional assumptions such as normality. Analyses based on ranks. One- and multi- sample procedures. Tests of randomness and independence. *Prerequisite:* STAT 2301 or 2331, or equivalent.

STAT 5110 (1), 5310 (3). INDEPENDENT STUDY IN STATISTICAL SCIENCE. Independent study of a selected topic in statistical science. Individual study under direction of a faculty member allowed for STAT 5110; group projects allowed for STAT 5310.

STAT 5304 (3). INTRODUCTION TO STATISTICAL COMPUTING. Introduces statistical computing, with an emphasis on SAS programming. Students learn how to read, write, and import data; prepare data for analysis; use SAS procedures; and create graphs. *Prerequisites:* STAT 1301, 2301, 2331 or equivalents.

STAT 5340 (3). PROBABILITY AND STATISTICS FOR SCIENTISTS AND ENGINEERS. Introduction to fundamentals of probability and distribution theory, statistical techniques used by engineers and physical scientists. Examples of tests of significance, operating characteristic curve, tests of hypothesis about one and two parameters, estimation, analysis of variance, and

the choice of a particular experimental procedure and sample size. *Prerequisites:* MATH 1337, 1338, and 2339, or equivalent.

STAT 5344 (3). STATISTICAL QUALITY CONTROL. Statistics and simple probability are introduced in terms of problems that arise in manufacturing; their application to control of manufacturing processes. Acceptance sampling in terms of standard sampling plans: MIL-STD 105, MIL-STD 414, Dodge-Romig plans, continuous sampling plans, etc. *Prerequisites:* STAT 4340 or 5340.

STAT 5350 (3). INTRODUCTORY ECONOMETRICS. The basic concepts of econometrics and, in particular, regression analysis, with topics geared to first-time regression users. *Prerequisites:* Graduate standing or C- or better in the following: MATH 1309 or 1337; ECO 3301; and ITOM 2305 or STAT 2301, 2331, or 4340.

STAT 5370 (3). SURVEY SAMPLING. Covers principles of planning and conducting surveys: simple random sampling; stratified and systematic subsampling; means, variances, and confidence limits; finite population correction; sampling from binomial populations; and margin of error and sample-size determination. *Prerequisites:* STAT 2301 (or 2331), 5304.

STAT 5371 (3). EXPERIMENTAL STATISTICS I. Noncalculus development of fundamental statistical techniques, including hypothesis testing for population means and proportions, analysis of variance, factorial designs, and linear regression. Covers obtaining sample sizes during the planning stages of research studies and emphasizes interpretation of results from analysis with SAS statistical software. *Corequisite:* STAT 5304.

STAT 5372 (3). EXPERIMENTAL STATISTICS II. Extension of techniques in STAT 5371 to multivariate data. Multiple linear regression, multivariate analysis of variance, canonical regression, and principal components analysis. Emphasizes interpretation of results from analysis with SAS. *Prerequisites:* STAT 5304, 5371.

STAT 5373 (3). MATHEMATICAL STATISTICS WITH APPLICATIONS. Similar to STAT 4340 but designed for students in the M.S. in applied statistics and data analytics program or for undergraduate students planning to take the 4+1 option to obtain an M.S. with a major in applied statistics and data analytics or to pursue a graduate degree in statistics. *Prerequisites:* MATH 1337, 1338.

STAT 5374 (3). MATHEMATICAL STATISTICS II. Second course in mathematical statistics. Topics include order statistics, limiting distributions, central limit theorem, point estimation, testing statistical hypotheses, Bayesian procedures, and nonparametric methods. *Prerequisite:* STAT 5373.

STAT 5375 (3). ECONOMIC AND BUSINESS FORECASTING. This course presents methods used by economists to forecast economic and business trends. Statistical procedures for evaluating the usefulness of these methods are also discussed. Illustrative examples include forecasting GNP, interest rates, and unemployment. *Prerequisites:* C- or better in ECO 3301 and one of the following: STAT 2301, 2331, or 4340; or ITOM 2305 or equivalent; or graduate standing.

STAT 5377 (3). STATISTICAL DESIGN AND ANALYSIS OF EXPERIMENTS. Introduction to statistical principles in the design and analysis of industrial experiments. Completely randomized, randomized complete and incomplete block, Latin square, and Plackett-Burman screening designs. Complete and fractional factorial experiments. Descriptive and inferential statistics. Analysis of variance models. Mean comparisons. *Prerequisite:* STAT 4340 or 5371, or permission of instructor.

STAT 5380 (3). DATA MINING TECHNIQUES FOR ECONOMISTS. A study of data mining techniques used by economists in the fields of applied economics, marketing, finance, and statistics. These techniques include classification methods (logistic models, classification trees, neural networks), affinity analysis (association rules), and data reduction and exploration methods (principal components and k-means clustering). *Prerequisites:* C- or better in ECO 5350 and one of the following: STAT 2301, 2331, or 4340; or ITOM 2305 or equivalent; or graduate standing.

WORLD LANGUAGES AND LITERATURES

www.smu.edu/worldlanguages

Associate Professor Dayna Oscherwitz, Department Chair

ARABIC: Senior Lecturer: Liljana Elverskog. Professor of Practice: Omar Al-Rashdan. **CHINESE:** Senior Lecturer: Yan Xia. Professors of Practice: Xiao Hu, Wei Qu. **FRENCH:** Professor: Thomas DiPiero. Associate Professor: Dayna Oscherwitz. Assistant Professors: Maxime Foerster, Hervé Tchumkam. Senior Lecturers: Gwen Aaron, Paola Buckley, Martine Kincaid. Lecturers: Denis Bettaver, Rachel Ney. Professors of Practice: Omar Al-Rashdan, Janet Dodd, Thierry Tirado. **GERMAN:** Associate Professors: Gordon Birrell, Marie-Luise Gättens. **ITALIAN:** Senior Lecturers: Brandy Alvarez, Teresa Brentegani. Lecturer: Damiano Bonuomo. **JAPANESE:** Senior Lecturer: Keiko Flores. **LATIN:** Professor of Practice: Patricia Rawlins. **SPANISH:** Professors: Denise DuPont, Francisco Morán. Associate Professors: Olga Colbert, Luis Maldonado-Peña, Alberto Pastor, Elizabeth Russ, Gabriela Vokic, Alicia Zuese. Assistant Professor: Rubén Sánchez-Godoy. Senior Lecturers: Maria Egeuz, Susana Fernandez-Solera, Verónica León, Leticia McDoniel, Betty Nelson. Lecturers: Miroslava Detcheva, Linda Koski, Angie Morón-Nozaleda, Luis Polanco, Joy Saunders. Professors of Practice: Maria del Pilar Melgarejo Acosta, Donna Binkowski, Lourdes Molina.

The Department of World Languages and Literatures offers a B.A. degree in French, German, Spanish or world languages and minors in nine languages: French, German, Spanish, Arabic, Chinese, Italian, Japanese, Latin and Russian. Students may also take classes in Hindi. Through these courses, students are able to explore many dimensions of languages and cultures through literature, history, film and television. In an increasingly global world, all students benefit from exposure to other cultures and to expanded language capacity.

SMU Abroad Rules for Credit. Students participating in an SMU Abroad term program can count nine hours toward a world languages and literatures major and six hours toward the minor; additional hours count as elective credit. For students studying abroad for a full year, the number of hours counting toward the major could be increased to a maximum of 15 hours with specific approval from the area chair of the language.

Bachelor of Arts

The B.A. degree is offered in French, German, Spanish and world languages. The requirements for the B.A. in French, German and Spanish are listed below. Students wishing to specialize in two languages receive the B.A. degree in world languages by completing the requirements for the minor plus two additional advanced courses in one language and also completing the requirements for a minor in a second language (Arabic, Chinese, French, German, Italian, Japanese, Latin, Russian or Spanish). Courses are selected in consultation with the major adviser in the first language. Minors in area studies may not be applied to the world languages major. If a language other than French, German or Spanish is chosen as the first language, the consent of the department and area chair of the language is required.

Departmental Distinction

1. Overall 3.500 GPA by the middle of the junior year.
2. Overall 3.700 GPA in the major by the middle of the junior year.

3. Invitation of area faculty after the area as a whole has discussed the student's candidacy.
4. Two extra courses beyond the requirements for the major. One course must include a major research paper, to be undertaken and completed in the first term of the candidate's senior year.

Majors, Minors and Courses in World Languages

Requirements for academic majors in French, German and Spanish are given below, as well as for academic minors in Arabic, Chinese, French, German, Italian, Italian area studies, Japanese, Latin, Russian area studies and Spanish.

Arabic

Minor in Arabic

<i>Required Courses</i>	<i>Credit Hours</i>
ARBC 2301, 2302, 3301, 3302 or equivalents	12
Two from the following, with at least one 3000-level or higher:	6
ANTH 3359	
ARBC 4312	
ARHS 3354, 3392 (CFA 3313)	
HIST 2355, 2379, 3323, 3326 (CF 3310), 3371, 3389, 3390, 3396, 4325	
PLSC 3345, 4340	
RELI 3329, 3362	
WL 3355 (CFB 3304)	
	18

Arabic Courses (ARBC)

All courses are conducted in Arabic.

ARBC 1310 (3). SPECIAL TOPICS ABROAD IN ARABIC. Courses in SMU-approved international programs. Prior departmental approval required.

ARBC 1320 (3). SPECIAL TOPICS ABROAD IN ARABIC. Courses in SMU-approved international programs. Prior departmental approval required.

ARBC 1401 (4). BEGINNING ARABIC I. Introductory course for students with no knowledge of the language. The course presents essential vocabulary, grammar, and Arabic culture.

ARBC 1402 (4). BEGINNING ARABIC II. Continues the oral practice, reading, writing, grammar, and cultural studies begun in ARBC 1401. Students acquire a substantial amount of vocabulary and idiomatic language. *Prerequisite:* ARBC 1401 (C- or higher) or its equivalent.

ARBC 2301 (3). INTERMEDIATE ARABIC I. Continues oral practice, reading, writing, grammar, and cultural studies. Students acquire a substantial amount of vocabulary, idiomatic language, and syntax that is more advanced. *Prerequisite:* ARBC 1402 or equivalent.

ARBC 2302 (3). INTERMEDIATE ARABIC II. Continues oral practice, reading, writing, grammar, and cultural studies. Students acquire a substantial amount of vocabulary, idiomatic language, syntax that is more advanced. *Prerequisite:* ARBC 2301 (C- or higher) or its equivalent.

ARBC 2310 (3). SPECIAL TOPICS ABROAD IN ARABIC. Courses in SMU-approved international programs. Prior departmental approval required.

ARBC 2320 (3). SPECIAL TOPICS ABROAD IN ARABIC. Courses in SMU-approved international programs. Prior departmental approval required.

ARBC 3301 (3). ADVANCED ARABIC I. Provides a thorough study of authentic materials in classical prose for mastery of classical Arabic. Involves extended readings and discussions of contemporary and historical cultural topics. *Prerequisite:* ARBC 2302 or its equivalent.

ARBC 3302 (3). ADVANCED ARABIC II. Provides a thorough study of authentic materials in classical prose for mastery of classical Arabic. Involves extended readings and discussions of contemporary and historical cultural topics. *Prerequisite:* ARBC 3301 (C- or higher) or its equivalent.

ARBC 3310 (3). SPECIAL TOPICS ABROAD IN ARABIC. Courses in SMU-approved international programs. Prior departmental approval required.

ARBC 3320 (3). SPECIAL TOPICS ABROAD IN ARABIC. Courses in SMU-approved international programs. Prior departmental approval required.

ARBC 4312 (3). ADVANCED MEDIA ARABIC. Introduces authentic texts and audio files from a wide variety of media sources and emphasizes the semantic and stylistic aspects of media Arabic rather than its grammar. *Prerequisites:* ARBC 3301 and 3302, or placement test, or departmental permission.

Chinese

Minor in Chinese

Students taking CHIN 4381 and 4382 for the language training component of the requirement must take another course from the list of supporting courses (Chinese culture, history or literature courses), for a total of 20 hours. Students testing into any course above 2402 will have to earn nine hours in SMU credit (six hours in Chinese language and three hours in Chinese culture) in order to receive the minor in Chinese. Study with SMU-in-China's summer program is strongly recommended.

<i>Required Courses</i>	<i>Credit Hours</i>
Language Training	14
CHIN 2401, 2402	
Two from CHIN 3311, 3312, 4381, 4382	
Supporting Courses (one from the following)	3
CHIN 4380, 4381, 4382, 4385	
HIST 3393, 3395, 3398	
RELI 3377, 3378	
WL 3310, 3312, 3325, 3395, 3397, 3398	
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Chinese Courses (CHIN)

All courses are conducted in Chinese.

CHIN 1401 (4). BEGINNING CHINESE. Introduction to spoken and written Mandarin Chinese. Emphasizes intensive drills in sounds and tones, sentence structure, and a vocabulary of 500 characters. Students attend three weekly master classes plus 2 hours of practice in small groups. Computer, video, and audio assignments are required.

CHIN 1402 (4). BEGINNING CHINESE: SECOND TERM. Introduction to spoken and written Mandarin Chinese. Emphasizes intensive drills in sounds and tones, sentence structure, and a vocabulary of 500 characters. Students attend three weekly master classes plus 2 hours of practice in small groups. Computer, video, and audio assignments are required. *Prerequisite:* C- or better in 1401 or permission of area chair.

CHIN 2401 (4). INTERMEDIATE CHINESE. Enhances basic language skills learned in beginning Chinese but focuses on language proficiency, particularly in the areas of description, narration, correspondence, and comparisons based on situational context. Students attend four weekly classes. Video and audio materials are used. *Prerequisite:* C- or better in CHIN 1402 or permission of area chair.

CHIN 2402 (4). INTERMEDIATE CHINESE: SECOND TERM. Enhances basic language skills learned in beginning Chinese but focuses on language proficiency, particularly in the areas of description, narration, correspondence, and comparisons based on situational context. Students

attend four weekly classes. Video and audio materials are used. *Prerequisite:* C- or better in CHIN 2401 or permission of area chair.

CHIN 3311 (3). ADVANCED CHINESE. Emphasizes the refinement of skills in Mandarin Chinese through the study of selected topics in contemporary Chinese culture and society. Students develop the ability to express themselves in sustained oral and written forms. *Prerequisite:* Beginning and intermediate Chinese.

CHIN 3312 (3). ADVANCED CHINESE, SECOND TERM. Enhances students' proficiency in Mandarin Chinese through a multimedia software program. Special concentration is given to China's current affairs through the use of authentic journalistic materials: television news and newspaper reports. *Prerequisite:* CHIN 3311.

CHIN 3321 (3). SPECIAL TOPICS ABROAD IN CHINESE. Courses in SMU-approved international programs. Prior departmental approval required.

CHIN 3322 (3). SPECIAL TOPICS ABROAD IN CHINESE. Courses in SMU-approved international programs. Prior departmental approval required.

CHIN 4380 (3). DIRECTED STUDIES IN CHINESE. Independent study in Chinese literature and culture in selected topics, authors, and genres. Permission of department required.

CHIN 4381 (3). READINGS IN CHINESE LITERATURE AND CULTURE. An upper-level course designed for students who have finished third-year Chinese. Students enhance their four language skills, especially reading and writing, through a wide variety of primary, unedited texts. *Prerequisite:* CHIN 3312 or consent of area chair.

CHIN 4382 (3). CHINESE CULTURE AND SOCIETY IN FILMS. An advanced course for students who have completed CHIN 4381. Enhancement of all four language skills through unedited texts and films from China and Taiwan. *Prerequisite:* CHIN 4381 or consent of area chair.

French

Bachelor of Arts With a Major in French

Courses are to be selected in consultation with the major adviser. Study with SMU-in-Paris and/or SMU-in-the-South of France is strongly recommended. **Note:** FREN 4371 and 4372 cannot be double counted.

<i>Required Courses</i>	<i>Credit Hours</i>
FREN 2455, 3356	7
FREN 4371 or 4372, 4375	6
One course from FREN 4370, 4371, 4372, 4381	3
Two 5000-level FREN courses or one 5000-level FREN course and one from WL 3302, 3308, 3309, 3330, 3341, 3351, 3355, 3362, CFA 3344, 3353, 3304, 3306	6
Electives: Three 4000- or 5000-level FREN courses	9
	28

Minor in French

<i>Required Courses</i>	<i>Credit Hours</i>
FREN 2401 or equivalent	4
FREN 2455, 3356, 4370 or 4375	10
Two 4000- or 5000-level FREN courses	6
	20

French Courses (FREN)

All courses are conducted in French.

Language Courses	FREN 1401, 1402, 1601, 2201, 2401, 2455, 3101, 3356, 4103, 4185, 4285, 4385, 4355, 4356, 4357
Literature and Culture Courses	FREN 4365, 4370–76, 4381, 4391, 5180, 5320, 5321, 5325, 5334, 5335, 5344, 5345, 5350, 5351, 5361, 5365–69, 5380, 5381

FREN 1101 (1). BEGINNING CONVERSATION PRACTICE.

FREN 1102 (1). BEGINNING CONVERSATION PRACTICE.

FREN 1401 (4). BEGINNING FRENCH: TERM ONE. Stresses acquisition of basic skills: speaking, listening comprehension, reading, and writing. Five classes per week. *Prerequisite:* This course is reserved for students with no previous knowledge of French.

FREN 1402 (4). BEGINNING FRENCH: TERM TWO. Stresses acquisition of basic skills: speaking, listening comprehension, reading, and writing. Five classes per week. *Prerequisite:* C- or better in FREN 1401, a minimum qualifying score on the SMU French placement exam, or permission of area chair.

FREN 1502 (5). BEGINNING FRENCH II WITH REVIEW. Extensive review of the first term of French, designed for students who have had French previously but who are not ready for FREN 1402.

FREN 1601 (6). ACCELERATED BEGINNER FRENCH. An accelerated, immersion beginner course taught in Paris that covers all the material in FREN 1401, 1402. By application. *Prerequisite:* Permission of program director. (SMU Abroad)

FREN 2101 (1). INTERMEDIATE CONVERSATION PRACTICE. Offered in the South of France, SMU-Abroad.

FREN 2102 (1). INTERMEDIATE CONVERSATION PRACTICE. Offered in the South of France, SMU-Abroad.

FREN 2201 (2). FRANCE TODAY: CULTURE, SOCIETY, AND DAILY LIFE. In conjunction with FREN 2401, a systematic exploration of diverse aspects of French life, involving classroom study and on-site investigation. Emphasis on contextual language acquisition, both written and oral. *Prerequisite:* Permission of program director. (SMU-in-the-South of France only)

FREN 2401 (4). SECOND-YEAR/INTERMEDIATE FRENCH. Continues to strengthen the four language skills, with added emphasis on reading and writing. Five classes per week. Completes the second-year language requirement in French. *Prerequisite:* C- or better in FREN 1402 or 1502 or a minimum qualifying score on the SMU French placement exam.

FREN 2455 (4). INTERMEDIATE FRENCH II. Refinement of all four language skills, with special emphasis on oral proficiency. Includes study of phonetics, oral presentations, viewing and discussion of films, vocabulary development, grammar review, short literary readings, and compositions. Five classes per week. *Prerequisite:* C- or better in FREN 2401.

FREN 3101 (1). FRENCH PHONICS. Perfecting French pronunciation: individual sounds, word groups, rhythmic patterns, intonation. Use of audiocassettes and interactive software. *Corequisite:* FREN 3355. *Prerequisite:* FREN 2401.

FREN 3102 (1). ADVANCED CONVERSATION PRACTICE.

FREN 3321 (3). SPECIAL TOPICS ABROAD IN FRENCH. Courses in SMU-approved international programs. Prior departmental approval required.

FREN 3322 (3). SPECIAL TOPICS ABROAD IN FRENCH. Courses in SMU-approved international programs. Prior departmental approval required.

FREN 3356 (3). ADVANCED FRENCH II. Refinement of all four language skills. Special emphasis on writing proficiency, particularly in the following areas: exposition, narration, description, correspondence, and literary analysis. Includes grammar review, oral presentations, dictionary research, and outside reading. *Prerequisite:* C- or better in FREN 2455 or permission of area chair.

FREN 4103 (1). ADVANCED READINGS IN FRENCH. Optional course open to students simultaneously enrolled in WL 3349 or HIST 3392. This class is for students proficient in

French who would like to have a 1-hour class per week to read some of the course materials in the original French, as well as to discuss and write about them in French. *Corequisite:* WL 3349/HIST 3392. *Prerequisites:* FREN 4370 or equivalent and permission of instructor.

FREN 4185 (1). INTERNSHIP IN FRENCH. Offers experience in organizations where knowledge of French and the cultures of French-speaking countries is relevant: corporations involved in international business, government agencies, health clinics, etc. *Prerequisites:* Junior or senior standing; an overall GPA of 3.000 or higher; GPA in French of 3.300 or higher; and sponsorship of a professor and of the organization, agency, or corporation.

FREN 4285 (2). INTERNSHIP IN FRENCH. Offers experience in organizations where knowledge of French and the cultures of French-speaking countries is relevant: corporations involved in international business, government agencies, health clinics, etc. *Prerequisites:* Junior or senior standing; an overall GPA of 3.000 or higher; GPA in French of 3.300 or higher; and sponsorship of a professor and of the organization, agency, or corporation.

FREN 4321 (3). SPECIAL TOPICS ABROAD IN FRENCH. Courses in SMU-approved international programs. Prior departmental approval required.

FREN 4322 (3). SPECIAL TOPICS ABROAD IN FRENCH. Courses in SMU-approved international programs. Prior departmental approval required.

FREN 4355 (3). ADVANCED SPOKEN FRENCH. Focuses on the development of oral and aural skills and topic-specific vocabulary. Includes readings and discussion of texts and commentaries on contemporary French society and culture, and viewing and discussion of feature films. *Prerequisite:* C- or better in FREN 3356 or permission of area chair.

FREN 4356 (3). ADVANCED COMMUNICATION SKILLS: THE FRENCH-LANGUAGE MEDIA. An exploration of the many countries and regions of the French-speaking world through the use of films, videos, and the Internet, as well as expository texts from the French-language press and other media. Development of listening and reading comprehension, advanced conversational skills, and writing of short expository texts. *Prerequisite:* C- or better in FREN 3356 or permission of area chair.

FREN 4357 (3). FRENCH STYLISTICS. Intensive hands-on study of advanced grammatical, syntactic, lexical, and rhetorical features of written (and formal spoken) French. Comparison of standard French and English styles. French–English and English–French translation. *Prerequisite:* C- or better in FREN 3356 or permission of area chair.

FREN 4365 (3). INTRODUCTION TO FRENCH CINEMA. Introduces French cinema's major works, filmmakers, and trends, with a continued emphasis on improvement of advanced French language skills. *Prerequisite:* C- or better in FREN 3356 or permission of area chair.

FREN 4370 (3). INTRODUCTION TO THE ANALYSIS OF FRENCH AND FRANCOPHONE TEXTS. Strategies for interpreting French and Francophone written and filmic texts. Focus on the principal genres: poetry, prose narrative, and essay. *Prerequisite:* C- or better in FREN 3356 or permission of area chair.

FREN 4371 (3). SURVEY OF FRENCH LITERATURE: FROM THE MIDDLE AGES TO THE REVOLUTION. Overview of French literary history from the beginning to the end of the 18th century. Selection of texts from major dramatists, poets, and prose writers. *Prerequisite:* C- or better in FREN 4370 or permission of area chair.

FREN 4372 (3). FRENCH LITERATURE, 1789–PRESENT: SHOW ME YOUR TEETH. Overview of French and Francophone literary history from the beginning of the 19th century to the present. Selection of texts from major dramatists, poets, and writers of prose fiction.

FREN 4373 (3). FRENCH CIVILIZATION. The evolution of French society, with emphasis on cultural, artistic, and intellectual trends. *Prerequisites:* C- or better in FREN 3455, 3356 or permission of area chair. (SMU-in-Paris and SMU-in-the-South of France only)

FREN 4374 (3). FRENCH CIVILIZATION. The evolution of French society, with emphasis on cultural, artistic, and intellectual trends. *Prerequisites:* C- or better in FREN 3455, 3356 or permission of area chair. (SMU-in-Paris and SMU-in-the-South of France only)

FREN 4375 (3). INTRODUCTION TO FRENCH HISTORY AND CULTURE. Survey of French political and cultural history from Roman Gaul to the Fifth Republic. Topics include characteristic institutions, social groups and individuals, and key cultural myths. *Prerequisite:* C- or better in FREN 3356 or permission of instructor and area chair.

FREN 4376 (3). INTRODUCTION TO FRANCOPHONE CULTURES. Introduction to cultures once colonized by France. An exploration of the history and impact of French colonization on North America, Africa, and the Caribbean and the relationship between these regions and France. *Prerequisite:* C- or better in FREN 4370 or permission of area chair.

FREN 4379 (3). INTRODUCTION TO FRENCH CULTURE AND LITERATURE I. Survey of French social, cultural, and literary histories from the time of Charlemagne to the end of the reign of Louis XIV. *Prerequisite:* FREN 4370.

FREN 4380 (3). INTRODUCTION TO FRENCH CULTURE AND LITERATURE II. Survey of French and Francophone social, cultural, and literary histories from the death of Louis XIV to the Dreyfus scandal. *Prerequisite:* FREN 4370.

FREN 4381 (3). INTRODUCTION TO FRENCH CULTURE AND LITERATURE III. Survey of French and francophone social, cultural, and literary histories from the beginning of the 20th century to the present. *Prerequisite:* FREN 4370.

FREN 4385 (3). INTERNSHIP IN FRENCH. This course offers students experience in organizations where knowledge of French and the cultures of French-speaking countries is relevant: corporations involved in international business, government agencies, health clinics, etc. *Prerequisites:* Junior or senior standing; an overall GPA of 3.000 or higher; GPA in French of 3.300 or higher; and sponsorship of a professor and of the organization, agency or corporation.

FREN 4391 (3). COMMERCIAL FRENCH FOR INTERNATIONAL TRADE. An advanced course for international trade and communication. *Prerequisite:* C- or better in FREN 3356 or permission of area chair.

FREN 5180 (1). INDEPENDENT STUDY.

FREN 5320 (3). LITERARY PERIODS. The study of a variety of authors and works with respect to the ways in which they define and reflect the literary, political and social aspects of a given historical period. Specific topics vary. *Prerequisites:* FREN 4370 and any two additional French courses at the 4000 or 5000 level.

FREN 5321 (3). LITERARY PERIODS. The study of a variety of authors and works with respect to the ways in which they define and reflect the literary, political and social aspects of a given historical period. Specific topics vary. *Prerequisites:* FREN 4370 and any two additional French courses at the 4000 or 5000 level.

FREN 5322 (3). FRANCE: CULTURE AND SOCIETY.

FREN 5325 (3). LITERATURE ON HUMAN RIGHTS: THINKING A BETTER WORLD. Dedicated to the reading, discussion, and analysis of a series of essays and fictions written in 19th-century France. The literature deals with the common thread of social justice and human rights through four specific themes: women, proletarian workers, slaves, and artists. Students explore the literature's engagement in the illustration and discussion of human rights in the aftermath of the French Revolution. *Prerequisites:* B- or better in FREN 4370 and in any two additional 4000-level FREN courses; consent of the French area chair.

FREN 5334 (3). GENRE STUDIES. Examines the works of several authors as a means of understanding the nature and evolution of a particular genre. Specific topics vary. *Prerequisites:* FREN 4370 and any two additional French courses at the 4000 or 5000 level.

FREN 5335 (3). GENRE STUDIES. Examines the works of several authors as a means of understanding the nature and evolution of a particular genre. Specific topics vary. *Prerequisites:* FREN 4370 and any two additional French courses at the 4000 or 5000 level.

FREN 5344 (3). LITERARY MOVEMENTS. Explores the conventions that shape a specific movement through a reading of representative texts by various authors. Topics vary. *Prerequisites:* FREN 4370 and any two additional French courses at the 4000 or 5000 level.

FREN 5345 (3). LITERARY MOVEMENTS. Explores the conventions that shape a specific movement through a reading of representative texts by various authors. Topics vary. *Prerequisites:* FREN 4370 and any two additional French courses at the 4000 or 5000 level.

FREN 5350 (3). PROBLEMS IN FRENCH LITERATURE. The definition of a particular theme as elaborated by a group of writers, usually covering different times and genres. Specific topics vary. *Prerequisites:* FREN 4370 and any two additional French courses at the 4000 or 5000 level.

FREN 5351 (3). PROBLEMS IN FRENCH LITERATURE. The definition of a particular theme as elaborated by a group of writers, usually covering different times and genres. Specific topics

vary. *Prerequisites:* FREN 4370 and any two additional French courses at the 4000 or 5000 level.

FREN 5361 (3). LITERARY TRANSLATION: THEORY AND PRACTICE. Exploring the relationship between interpretation and translation. Individual projects in a workshop setting. *Prerequisites:* Any two from FREN 4371, 4372, 4373, 4374 or permission of area chair.

FREN 5365 (3). TOPICS IN FRENCH AND FRANCOPHONE CINEMA. A seminar in French and Francophone film studies. Topics vary. *Prerequisites:* C- in FREN 3455, 3356 or permission of instructor and French area chair.

FREN 5366 (3). TOPICS IN FRENCH AND FRANCOPHONE CINEMA. A seminar in French and Francophone film studies. Topics vary. *Prerequisites:* C- in FREN 3455, 3356 or permission of instructor and French area chair.

FREN 5367 (3). MAJOR AUTHORS. Focused study of one especially important writer and/or thinker whose work has had a major impact on French and European literature and thought (e.g., Montaigne, Rousseau, Balzac, or Sartre). *Prerequisites:* C- or better in FREN 4370 and any two other courses at the 4000 level, or permission of area chair.

FREN 5368 (3). MAJOR AUTHORS. Focused study of one especially important writer and/or thinker whose work has had a major impact on French and European literature and thought (e.g., Montaigne, Rousseau, Balzac, or Sartre). *Prerequisites:* C- or better in FREN 4370 and any two other courses at the 4000 level, or permission of area chair.

FREN 5369 (3). FRENCH COLONIAL AND POSTCOLONIAL CINEMA. A study of the evolution of French attitudes toward colonialism and colonized peoples through film, with an emphasis on the colonization of North and West Africa. *Prerequisites:* FREN 3356 and 4375, or instructor permission.

FREN 5370 (3). SEMINAR IN FRENCH LITERATURE.

FREN 5371 (3). SEMINAR IN MYTH AND SYMBOLISM.

FREN 5380 (3). TUTORIAL FOR JUNIORS AND SENIORS. By invitation of the entire area only. Special project set up with the help of the area chair. *Prerequisite:* Permission of the department.

FREN 5381 (3). TUTORIAL FOR JUNIORS AND SENIORS. By invitation of the entire area only. Special project set up with the help of the area chair. *Prerequisite:* Permission of the department.

German

Bachelor of Arts With a Major in German

Proficiency in written and spoken German is demonstrated by coursework in GERM 3311. Study in the SMU-in-Weimar summer program or in an approved term or junior-year program in a German-speaking country is highly recommended. Suggested electives outside the German area are courses in a second world language; other world literature in translation; literary criticism; English and American literature; linguistics, semiotics or philology; and German art history, philosophy or history.

<i>Required Courses</i>	<i>Credit Hours</i>
GERM 3311, 3320	6
Electives (3000 level and above, approved by adviser)	18
	24

Minor in German

<i>Required Courses</i>	<i>Credit Hours</i>
GERM 2311, 2312, 3311	9
Three advanced GERM courses approved by adviser	9
	18

German Courses (GERM)

All courses are conducted in German.

GERM 1401 (4). BEGINNING GERMAN. Stresses acquisition of basic skills: speaking, aural comprehension, reading, and writing. Classes meet 5 hours a week.

GERM 1402 (4). BEGINNING GERMAN II. Stresses acquisition of basic skills: speaking, aural comprehension, reading, and writing. Classes meet 5 hours a week. *Prerequisite:* C- or better in GERM 1401 or permission of area chair.

GERM 2311 (3). CULTURE, GRAMMAR, AND LITERATURE. Discussions and compositions based on literary and cultural texts, and review of grammar. *Prerequisite:* C- or better in GERM 1402 or permission of area chair.

GERM 2312 (3). CULTURE, GRAMMAR, AND LITERATURE. Discussions and compositions based on literary and cultural texts, and review of grammar. *Prerequisite:* C- or better in GERM 2311 or permission of the area chair.

GERM 3311 (3). TALKING AND WRITING ABOUT MODERN GERMANY. An advanced course intended to increase active command of the language. Utilizes a variety of short modern texts. *Prerequisite:* GERM 2312 or the equivalent.

GERM 3312 (3). ADVANCED GERMAN COMPOSITION. Discussion of short contemporary texts; compositions on personal topics. Selective study of grammar. *Prerequisite:* GERM 3311 or permission of department.

GERM 3313 (3). GERMANY TODAY: PEOPLE, CULTURE, AND SOCIETY. Explores current German culture; readings in newspapers and magazines to acquaint students with today's German cultural and political scene; and conversations, oral presentations, and compositions. *Prerequisite:* C- or better in GERM 3311 or permission of instructor.

GERM 3320 (3). CONTEMPORARY GERMAN CULTURE. An exploration of the German cultural scene through magazine and newspaper articles, short stories, television, and films from the postwar era to the present. *Prerequisite:* C- or better in GERM 3311 or permission of instructor.

GERM 3321 (3). SPECIAL TOPICS ABROAD IN GERMAN. Courses in SMU-approved international programs. Prior departmental approval required.

GERM 3322 (3). SPECIAL TOPICS ABROAD IN GERMAN. Courses in SMU-approved international programs. Prior departmental approval required.

GERM 3325 (3). INTRODUCTION TO GERMAN LITERATURE. Includes works from major genres (lyric poetry, drama, narrative fiction), an overview of the history of German literature, and an introduction to analytical techniques and procedures. *Prerequisite:* C- or better in GERM 3311 or permission of instructor.

GERM 3330 (3). GREAT GERMAN STORIES: KAFKA, MANN, WOLF, AND OTHERS. Short narrative forms from the beginning of the 20th century to the present: Mann, Kafka, Brecht, Boll, Seghers, Bachmann, Wolf, and others. Includes consideration of two postwar German literatures (the German Democratic Republic and the Federal Republic of Germany). *Prerequisite:* GERM 3311 or permission of instructor.

GERM 3370 (3). ADVANCED GERMAN GRAMMAR AND USAGE. Intensive study of advanced grammatical forms, syntactical structures, and usage distinctions in modern German. Weekly short, written assignments. Not open to native speakers of the language. *Prerequisite:* C- or better in GERM 3311 or permission of instructor.

GERM 4185 (1). INTERNSHIP IN GERMAN. Offers experience in organizations where knowledge of German and the cultures of German-speaking countries is relevant: corporations involved in international business, government agencies, health clinics, etc. *Prerequisites:* Junior or senior standing; an overall GPA of 3.000 or higher; GPA in German of 3.000 or higher; and sponsorship of a professor and of the organization, agency, or corporation.

GERM 4285 (2). INTERNSHIP IN GERMAN. Offers experience in organizations where knowledge of German and the cultures of German-speaking countries is relevant: corporations involved in international business, government agencies, health clinics, etc. *Prerequisites:* Junior or senior standing; an overall GPA of 3.000 or higher; GPA in German of 3.000 or higher; and sponsorship of a professor and of the organization, agency, or corporation.

GERM 4310 (3). MIDDLE AGES TO PRESENT: GERMAN POETRY. Historical survey of poetic forms from medieval Minnesang through the Baroque and Sturm und Drang to Classicism, Romanticism, and 20th-century styles. *Prerequisites:* GERM 3320, 3313 or permission of instructor.

GERM 4320 (3). MODERN DRAMA. Critical reading of dramatic works by major German, Austrian, and Swiss authors (Büchner, Schnitzler, Brecht, Dürrenmatt, Aichinger, Bachman, Müller, Jelineck, and others), with some attention to critical theory. *Prerequisites:* GERM 3313, 3320 or permission of instructor.

GERM 4321 (3). SPECIAL TOPICS ABROAD IN GERMAN. Courses in SMU-approved international programs. Prior departmental approval required.

GERM 4322 (3). SPECIAL TOPICS ABROAD IN GERMAN. Courses in SMU-approved international programs. Prior departmental approval required.

GERM 4330 (3). 19TH-CENTURY STORIES. Short narrative forms from Romanticism through realism to fin-de-siècle Vienna: Grimm, Eichendorff, Kleist, Storm, Schnitzler, and others. *Prerequisite:* GERM 3320 or permission of instructor.

GERM 4340 (3). GREAT PLAYS FOR LISTENING. Selections from the golden age of the German Horspiel: Borchert, Boll, Dürrenmatt, Aichinger, Bachmann, Jandl, Mayröcker, and others. *Prerequisites:* GERM 3313, 3320 or permission of instructor.

GERM 4350 (3). HISTORY, CULTURE, AND IDENTITY IN POSTWAR GERMAN FILM. An examination of German films since 1945 from both German states, ending with the depiction of the unification in film, with continued emphasis on improvement of advanced German language skills. *Prerequisite:* GERM 3320 or permission of instructor.

GERM 4360 (3). CHILDHOOD AND YOUTH IN GERMAN LITERATURE AND FILM. Traces the representation of childhood and youth through German literature and film from the 19th century to the present. *Prerequisite:* GERM 3320, or 3330, or permission of instructor

GERM 4370 (3). MEMORY AND VICTIMIZATION DISCOURSES IN GERMANIC FILM AND LITERATURE SINCE 1945. Introduces students to discourses in German-speaking lands related to World War II and the Holocaust through film and literature, and explores major historical developments in coming to terms with the Nazi past. *Prerequisite:* C- or better in GERM 3320 or permission of instructor.

GERM 4385 (3). INTERNSHIP IN GERMAN. Offers experience in organizations where knowledge of German and the cultures of German-speaking countries is relevant: corporations involved in international business, government agencies, health clinics, etc. *Prerequisites:* Junior or senior standing; an overall GPA of 3.000 or higher; GPA in German of 3.000 or higher; and sponsorship of a professor and of the organization, agency, or corporation.

GERM 5310 (3). READING THE CLASSICS. Narrative, poetry, and drama representing the German Enlightenment, Sturm und Drang, Classicism and Romanticism: Lessing, Goethe, Schiller, Kleist, Novalis, and others. *Prerequisite:* Any 4000-level course or permission of instructor.

GERM 5326 (3). SPECIAL TOPICS ABROAD IN GERMAN. Courses in SMU-approved international programs. Prior departmental approval required.

GERM 5330 (3). PROBLEMS WITH THE SELF. Poems, essays, and novellas dealing with the perception of self, from the Middle Ages to modern times. Walther, Fleming, Lichtenberg, Kleist, Goethe, Hesse, Mann, and others. *Prerequisite:* Any 4000-level course or permission of instructor.

GERM 5380 (3). DIRECTED STUDIES. Permission of department.

GERM 5381 (3). DIRECTED STUDIES. Independent study in German literature and culture in selected topics, authors, and genres. *Prerequisite:* Permission of the department.

Italian

Minor in Italian

<i>Required Courses</i>	<i>Credit Hours</i>
ITAL 2401, 2402, 3355, and 3357 or 3373	14
Two 4000-level ITAL courses approved by adviser	6
	20

Minor in Italian Area Studies

<i>Required Courses</i>	<i>Credit Hours</i>
ITAL 2401, 2402, 3355, and 3357 or 3373	14
One 4000-level ITAL course approved by adviser	3
One from the following, with adviser's approval:	3
ARHS 3312, 3314, 3331, 3332	
HIST 3351, 3358, 3359, 3361, 3365, 3366, 3376	
WL 2395, 3390, 3391, 3392, 3393, 3394	
	20

Italian Courses (ITAL)

All courses are conducted in Italian.

Literature Courses	ITAL 4323, 4324, 4325, 4368, 4381, 4382
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ITAL 1401 (4). BEGINNING ITALIAN. Stresses acquisition of basic skills: speaking, aural comprehension, reading, and writing. Students attend three weekly foundations classes plus 2 hours of applications classes for practice in small groups. Computer, video, and audio assignments in the World Language Learning Center are required.

ITAL 1402 (4). BEGINNING ITALIAN: SECOND TERM. Stresses acquisition of basic skills: speaking, aural comprehension, reading, and writing. Students attend three weekly foundations classes plus 2 hours of applications classes for practice in small groups. Computer, video, and audio assignments in the World Language Learning Center are required. *Prerequisite:* C- or better in 1401 or permission of area chair.

ITAL 2401 (4). INTERMEDIATE ITALIAN: FIRST TERM. Continues to strengthen the four language skills, with added emphasis on reading and writing. Students attend three weekly foundations classes plus 2 hours of applications classes for practice in small groups. Computer, video, and audio assignments in the World Language Learning Center are required. *Prerequisite:* C- or better in ITAL 1402 or permission of area chair.

ITAL 2402 (4). INTERMEDIATE ITALIAN: SECOND TERM. Continued strengthening of all four language skills (listening, speaking, reading, writing). Computer, video, and audio assignments are required. *Prerequisite:* C- or better in ITAL 2401 or permission of area chair.

ITAL 3320 (3). SPECIAL TOPICS ABROAD IN ITALIAN. Courses in SMU-approved international programs. Prior departmental approval required.

ITAL 3321 (3). SPECIAL TOPICS ABROAD IN ITALIAN. Courses in SMU-approved international programs. Prior departmental approval required.

ITAL 3355 (3). ADVANCED ITALIAN CONVERSATION. An advanced course for majors and nonmajors intended to improve linguistic proficiency within the context of studying contemporary Italian movies and culture. *Prerequisite:* C- or better in ITAL 2402 or permission of the instructor.

ITAL 3357 (3). GRAMMAR AND COMPOSITION. Analysis and imitation of short contemporary texts: letters, film reviews, articles, criticism, narratives. Development of oral and written proficiency. Selective study of grammar. *Prerequisite:* ITAL 2401.

ITAL 3373 (3). ITALIAN CULTURE. The evolution of Italian society with emphasis on cultural, artistic, and intellectual trends. *Prerequisite:* ITAL 2401.

ITAL 4185 (1). INTERNSHIP IN ITALIAN. Offers experience in organizations where knowledge of Italian and the cultures of Italian-speaking countries is relevant: corporations involved in international business, government agencies, health clinics, etc. *Prerequisites:* Junior or senior standing; an overall GPA of 3.000 or higher; GPA in Italian of 3.300 or higher; and sponsorship of a professor and of the organization, agency, or corporation.

ITAL 4285 (2). INTERNSHIP IN ITALIAN. Offers experience in organizations where knowledge of Italian and the cultures of Italian-speaking countries is relevant: corporations involved in international business, government agencies, health clinics, etc. *Prerequisites:* Junior or senior standing; an overall GPA of 3.000 or higher; GPA in Italian of 3.300 or higher; and sponsorship of a professor and of the organization, agency, or corporation.

ITAL 4320 (3). SPECIAL TOPICS ABROAD IN ITALIAN. Courses in SMU-approved international programs. Prior departmental approval required.

ITAL 4321 (3). SPECIAL TOPICS ABROAD IN ITALIAN. Courses in SMU-approved international programs. Prior departmental approval required.

ITAL 4322 (3). MODERN ITALIAN LITERATURE I.

ITAL 4323 (3). MODERN ITALIAN LITERATURE II. Covers the latter half of the 19th century to World War I: realism, decadentism, and the grotesque and authors Verga, D'Annunzio, and Pirandello. *Prerequisite:* ITAL 2401.

ITAL 4324 (3). CONTEMPORARY ITALIAN LITERATURE. Covers the fascist period and World War II: introspection, society, and the problem of evil and authors Moravia, Pavese, Bassani, Buzzati, and Ginzburg. *Prerequisite:* ITAL 2401.

ITAL 4325 (3). ITALIAN POETRY SINCE DANTE. Historical survey of works of poetry presented in their original form, from the medieval Dolce Stil Novo movement to the poetic styles of the 20th century. *Prerequisite:* ITAL 3357 or permission of instructor.

ITAL 4367 (3). ITALIAN AUTHORS. Italian authors from the Middle Ages to the modern age.

ITAL 4368 (3). ITALIAN AUTHORS: CONTEMPORARY. *Prerequisite:* ITAL 2401.

ITAL 4381 (3). TUTORIAL FOR JUNIORS AND SENIORS: DIRECTED READINGS AND RESEARCH. Directed reading and research in specific literary topics or writers. *Prerequisite:* ITAL 3357 or permission of instructor.

ITAL 4382 (3). TUTORIAL FOR JUNIORS AND SENIORS: DIRECTED READINGS AND RESEARCH. Directed reading and research in specific literary topics or writers. *Prerequisite:* ITAL 3357 or permission of instructor.

ITAL 4385 (3). INTERNSHIP IN ITALIAN. Offers experience in organizations where knowledge of Italian and the cultures of Italian-speaking countries is relevant: corporations involved in international business, government agencies, health clinics, etc. *Prerequisites:* Junior or senior standing; an overall GPA of 3.000 or higher; GPA in Italian of 3.300 or higher; and sponsorship of a professor and of the organization, agency, or corporation.

Japanese

Minor in Japanese

<i>Required Courses</i>	<i>Credit Hours</i>
JPN 2401, 2402, 3311, 3312	14
One from the following:	3
ARHS 3394	
FILM 3359	
HIST 3395	
JPN 4381	
PLSC 3346	
WL 3398	

Japanese Courses (JAPN)

All courses are conducted in Japanese.

JAPN 1401 (4). BEGINNING JAPANESE. Focuses on oral and aural proficiency for daily communication situations, mastery of Japanese writing systems (hiragana, katakana, basic kanji), and foundational grammar.

JAPN 1402 (4). BEGINNING JAPANESE: SECOND TERM. Focuses on oral and aural proficiency for daily communication situations, mastery of Japanese writing systems (hiragana, katakana, basic kanji), and foundational grammar. *Prerequisite:* C- or better in 1401 or permission of area chair.

JAPN 1501 (5). JAPANESE AT KGU, LEVEL 1. Emphasis on understanding of basic Japanese grammar, mastery of fundamental sentence patterns, and acquisition of 170 new kanji. Provides basic reading skills.

JAPN 2201 (2). JAPANESE AT KGU, LEVEL 3.

JAPN 2401 (4). INTERMEDIATE JAPANESE. Focuses on developing and enriching literacy experience in Japanese through reading and writing narrative and descriptive texts, as well as conversing on personal topics in more complicated situations. *Prerequisite:* C- or better in JAPN 1402 or permission of area chair.

JAPN 2402 (4). INTERMEDIATE JAPANESE: SECOND TERM. Focuses on developing and enriching literacy experience in Japanese through reading and writing narrative and descriptive texts, as well as conversing on personal topics in more complicated situations. *Prerequisite:* C- or better in 2401 or permission of area chair.

JAPN 2500 (5). JAPANESE AT KGU, LEVEL 2.

JAPN 3311 (3). THIRD-YEAR JAPANESE. Emphasis on enhancing abilities in advanced reading and writing skills, and communicating with accuracy and grammatical complexity. Students also acquire the ability to use refined honorific forms in appropriate cultural contexts. *Prerequisite:* C- or better in JAPN 2402 or permission of area chair.

JAPN 3312 (3). THIRD-YEAR JAPANESE: SECOND TERM. Emphasis on enhancing abilities in advanced reading and writing skills, communicating with accuracy and grammatical complexity. Students also acquire the ability to use refined honorific forms in appropriate cultural contexts. *Prerequisite:* C- or better in JAPN 3311 or permission of area chair.

JAPN 3320 (3). SPECIAL TOPICS ABROAD IN JAPANESE. Courses in SMU-approved international programs. Prior departmental approval required.

JAPN 3321 (3). SPECIAL TOPICS ABROAD IN JAPANESE. Courses in SMU-approved international programs. Prior departmental approval required.

JAPN 3501 (5). JAPANESE AT KGU, LEVEL 2. Further development of basic reading skills, with emphasis on an adequate command of complex sentence patterns. Acquisition of 200 new kanji.

JAPN 3600 (6). STUDIES IN JAPAN. Selected coursework at KGU, chosen in consultation with adviser. Equivalent SMU course numbers to be determined upon receipt of grades after the end of the term.

JAPN 3900 (9). STUDIES IN JAPAN: SECOND TERM. Selected coursework at KGU, chosen in consultation with adviser. Equivalent SMU course numbers to be determined upon receipt of grades after the end of the term.

JAPN 4381 (3). READINGS IN JAPANESE CULTURE AND BUSINESS. Upper-level language course designed for students who have finished third-year Japanese. Students enhance their speaking, reading, and writing skills through a wide range of primary materials. *Prerequisite:* JAPN 3312 or approval of area chair.

JAPN 4501 (5). JAPANESE AT KGU, LEVEL 3. Grammar and reading, advanced. Vocabulary buildup and acquisition of reading and writing 200 new kanji.

JAPN 5501 (5). JAPANESE AT KGU, LEVEL 4. Students read a variety of selected materials for better understanding of the Japanese culture and ways of thinking. Acquisition of a larger vocabulary and 250 new kanji.

JAPN 6501 (5). JAPANESE AT KGU, LEVEL 5 AND 6. Emphasis on reading and discussions in Japanese; further improvement of reading and writing skills, 250 new Kanji.

Latin

Minor in Latin

<i>Required Courses</i>	<i>Credit Hours</i>
LATN 2311, 2312; three from LATN 3323, 3324, 3325, 3326, 3327	15
One from the following:	3
ARHS 3312, 3314, 3316, 3318 (CF 3392), 3319	
CLAS 2311; ENGL 3382	
HIST 3350, 3354, 3355 (CF 3325), 3356, 3361	
One 3000-level LATN course	
RELI 3352 (ARHS 3346), 3371 (CFA 3307)	

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Latin Courses (LATN)

LATN 1401 (4). BEGINNING LATIN I. Structures of the Latin language: vocabulary, grammar, and syntax. Also, introduction to Roman history and culture, and simple readings from Latin authors.

LATN 1402 (4). BEGINNING LATIN II. Structures of the Latin language: vocabulary, grammar, and syntax. Also, introduction to Roman history and culture, and simple readings from Latin authors. *Prerequisite:* C- or better in 1401.

LATN 2311 (3). SECOND-YEAR LATIN. Readings from Latin prose authors: Caesar, Livy, Eutropius. *Prerequisite:* C- or better in LATN 1402.

LATN 2312 (3). SECOND-YEAR LATIN: SECOND TERM. Readings from Roman prose and poetry (Caesar, Pliny, Ovid). *Prerequisite:* C- or better in LATN 2311 or consent of the area chair.

LATN 3185 (1). INTERNSHIP IN LATIN. Offers experience in organizations or institutions where knowledge of Latin is relevant: museums, libraries, historical archives, etc. *Prerequisites:* Junior or senior standing; an overall GPA of 3.000 or higher; GPA in Latin of 3.300 or higher; and sponsorship of a professor and of the organization, agency, or institution.

LATN 3285 (2). INTERNSHIP IN LATIN. Offers experience in organizations or institutions where knowledge of Latin is relevant: museums, libraries, historical archives, etc. *Prerequisites:* Junior or senior standing; an overall GPA of 3.000 or higher; GPA in Latin of 3.300 or higher; and sponsorship of a professor and of the organization, agency, or institution.

LATN 3323 (3). LATIN LITERATURE. A thematic approach to Roman literature incorporating excerpts from a variety of authors and genres. Topics include aspects of Roman life and culture, history and politics, and religion and philosophy. *Prerequisite:* C- or better in LATN 2312 or permission of the area chair.

LATN 3324 (3). ADVANCED LATIN GRAMMAR AND COMPOSITION. Development of skills in analyzing and translating complex grammatical structures; practice in writing Latin with correct syntax and usage. *Prerequisite:* C- or better in LATN 2312 or permission of instructor.

LATN 3325 (3). ADVANCED LATIN READINGS AND COMPOSITION. This course concentrates on the Latin language as a powerful vehicle for communication and artistry through reading and writing. Students will study Latin texts on universal themes from various authors and times.

LATN 3326 (3). ADVANCED LATIN READINGS: VERGIL. Students experience the integration of storytelling with the artistry of language in the Aeneid, through which Vergil creates a national epic with political and cultural impact. *Prerequisite:* C- or better in LATN 2312 or permission of instructor.

LATN 3327 (3). ADVANCED LATIN: MYTH VIA OVID. Students discover the classical inspiration for great works of Western civilization's art and literature through Ovid's recounting of mythological transformations and heroic tales in the poem "Metamorphoses." *Prerequisite:* C- or better in LATN 2312 or permission of instructor.

LATN 3330 (3). SPECIAL TOPICS ABROAD IN LATIN. Courses in SMU-approved international programs. Prior departmental approval required.

LATN 3331 (3). SPECIAL TOPICS ABROAD IN LATIN. Courses in SMU-approved international programs. Prior departmental approval required.

LATN 3335 (3). MEDIEVAL LATIN. Explores the rich heritage of medieval Latin literature from the fifth century to the 13th century: prose and poetry; texts of history; and philosophy, theology, and spiritual writings. (Medieval Studies Consortium course; permission of director required).

LATN 3385 (3). INTERNSHIP IN LATIN. Offers experience in organizations or institutions where knowledge of Latin is relevant: museums, libraries, historical archives, etc. *Prerequisites:* Junior or senior standing; an overall GPA of 3.000 or higher; GPA in Latin of 3.300 or higher; and sponsorship of a professor and of the organization, agency, or institution.

Russian

Minor in Russian Area Studies

<i>Required Courses</i>	<i>Credit Hours</i>
RUSS 2341, 2351	6
One from RUSS 3323, 3351, 3361, 3362	3
RUSS 3341, 3302	6
<i>or</i> RUSS 3304 and one supporting course	
<i>or</i> two from the list below	
HIST 3340, 3341, 5367	
PLSC 3351, 3358, 3359 (CFA 3359), 3365, 4358, 4384	
WL 3323	
	15

Russian Courses (RUSS)

All courses are conducted in Russian.

RUSS 1351 (3). RUSSIAN FOR READING KNOWLEDGE I: GRAMMAR AND SYNTAX. A comprehensive overview of the grammar and syntax of Russian for students who aim at reading proficiency only and for those who expect to use the course as a platform for developing conversational and writing skills later on.

RUSS 1401 (4). BEGINNING RUSSIAN. An overview of the structures of the Russian language, with emphasis on skills of comprehension, speaking, reading, and writing. Foundations sections (two 50-minute classes per week) aim at understanding concepts and grammatical structures. Applications sections (three 50-minute classes per week) concentrate on oral drill and conversation practice.

RUSS 1402 (4). BEGINNING RUSSIAN, SECOND TERM. An overview of the structures of the Russian language, with emphasis on skills of comprehension, speaking, reading, and writing. Foundations sections (two 50-minute classes per week) aim at understanding concepts and grammatical structures. Applications sections (three 50-minute classes per week) concentrate on oral drill and conversation practice. *Prerequisite:* C- or better in 1401 or permission of area chair.

RUSS 2312 (3). INTERMEDIATE RUSSIAN.

RUSS 2341 (3). RUSSIAN READING AND CONVERSATION. Russian language work beyond the first-year level is done in multilevel workshops, organized by target skills, each including students with varying levels of experience and background with the Russian language. Small classes permit an individualized approach, so that students completing varying assignments work together in the same classroom. Each workshop is completed twice, once at the second-year level, and once at the third-year level. Progress to higher levels will be measured by proficiency tests. This workshop targets skills of oral and textual comprehension and active conversational skill. *Prerequisite:* C- or better in RUSS 1402 or permission of area chair.

RUSS 2351 (3). RUSSIAN SYNTAX AND COMPOSITION. Students review grammatical and syntactic structures and employ them in writing, using text and materials from everyday life in today's Russia. Uses the multilevel workshop system also employed in RUSS 2341. *Prerequisite:* C- or better in RUSS 1402 or permission of area chair.

RUSS 3202 (2). PRACTICUM IN RUSSIAN CONVERSATION AND PHONETICS.

RUSS 3302 (3). PRACTICUM IN RUSSIAN CONVERSATION AND PHONETICS. (Russia, summer)

RUSS 3304 (3). RUSSIAN GRAMMAR PRACTICUM. Held in Russia.

RUSS 3311 (3). ADVANCED RUSSIAN CONVERSATION. Intensive training in Russian composition with a thorough study of grammatical structure. Continued work on conversation and reading. *Prerequisite:* RUSS 2312 or consent of instructor.

RUSS 3312 (3). ADVANCED RUSSIAN COMPOSITION. Continuation of advanced Russian grammar and syntax. *Prerequisite:* RUSS 3311 or consent of instructor.

RUSS 3321 (3). SPECIAL TOPICS ABROAD IN RUSSIAN. Courses in SMU-approved international programs. Prior departmental approval required.

RUSS 3322 (3). SPECIAL TOPICS ABROAD IN RUSSIAN. Courses in SMU-approved international programs. Prior departmental approval required.

RUSS 3323 (3). PRACTICUM IN RUSSIAN CULTURE. Held in St. Petersburg.

RUSS 3341 (3). RUSSIAN READING AND CONVERSATION. Continuation of RUSS 2341.

RUSS 3351 (3). RUSSIAN SYNTAX AND COMPOSITION. Continuation of RUSS 2351.

RUSS 3361 (3). COMPARATIVE GRAMMAR. For students who are fully bilingual in Russian and English. Provides a practical analysis of the similarities and differences between the two languages. Includes special problems of native speakers of Russian speaking English, translation in both directions, weekly compositions and translations, and essay exams. *Prerequisite:* 16 hours of Russian by examination.

RUSS 3362 (3). COMPARATIVE GRAMMAR. For students who are fully bilingual in Russian and English. Provides a practical analysis of the similarities and differences between the two languages. Includes special problems of native speakers of Russian speaking English, translation in both directions, weekly compositions and translations, and essay exams. *Prerequisite:* RUSS 3361 or permission of area chair.

RUSS 4185 (1). INTERNSHIP IN RUSSIAN. Offers experience in organizations where knowledge of Russian and the cultures of Russian-speaking countries is relevant: corporations involved in international business, government agencies, health clinics, etc. *Prerequisites:* Junior or senior standing; overall GPA of 3.000 or higher; GPA in Russian of 3.300 or higher; and sponsorship of a professor and of the organization, agency, or corporation.

RUSS 4285 (2). INTERNSHIP IN RUSSIAN. Offers experience in organizations where knowledge of Russian and the cultures of Russian-speaking countries is relevant: corporations involved in international business, government agencies, health clinics, etc. *Prerequisites:* Junior or senior standing; overall GPA of 3.000 or higher; GPA in Russian of 3.300 or higher; and sponsorship of a professor and of the organization, agency, or corporation.

RUSS 4301 (3). ADVANCED CONVERSATION. A term in Moscow or St. Petersburg.

RUSS 4302 (3). ADVANCED PHONETICS. A term in Moscow or St. Petersburg.

RUSS 4311 (3). ADVANCED READINGS IN RUSSIAN LITERATURE I. *Prerequisites or Corequisites:* RUSS 3341 and 3351, or permission of instructor.

RUSS 4312 (3). ADVANCED READINGS IN RUSSIAN LITERATURE II. *Prerequisite:* RUSS 4311 or permission of instructor.

RUSS 4313 (3). ADVANCED COMPOSITION. A term in Moscow or St. Petersburg.

RUSS 4314 (3). TRANSLATION. A term in Moscow or St. Petersburg.

RUSS 4380 (3). DIRECTED STUDIES. Independent study in Russian literature and culture, with selected topics, authors, and genres. *Prerequisite:* Permission of department.

RUSS 4381 (3). DIRECTED STUDIES. Independent study in Russian literature and culture, with selected topics, authors, and genres. *Prerequisite:* Permission of department.

RUSS 4385 (3). INTERNSHIP IN RUSSIAN. Offers experience in organizations where knowledge of Russian and the cultures of Russian-speaking countries is relevant: corporations involved in international business, government agencies, health clinics, etc. *Prerequisites:* Junior or senior standing; overall GPA of 3.000 or higher; GPA in Russian of 3.300 or higher; and sponsorship of a professor and of the organization, agency, or corporation.

Spanish

Bachelor of Arts With a Major in Spanish

Heritage and native speakers of Spanish follow a special course track. The distinction between heritage and native speakers is described on the Spanish page (“FAQs” tab) of the Dedman College website at smu.edu/dedman. Courses are selected in consultation with the major adviser. Students who do not place out need to complete the sequence of first-year courses (SPAN 1401 and 1402) and second-year courses (SPAN 2401 and 2302) before taking any 3000-level course. Proficiency in written and spoken Spanish is demonstrated by coursework in SPAN 3358 and proficiency in Spanish conversation by SPAN 3355, which may be taken concurrently. Study abroad in a Spanish-speaking country is strongly recommended. Suggested electives outside the Spanish area are courses in a second world language, other world literature in translation, literary criticism, English and American literature, and courses listed under the Latin American and Iberian studies major in the International and Area Studies section of this catalog. **Note:** Electives must be from the same level as the highest-level course the student is currently taking (e.g., a student taking a 5000-level course must then take a 5000-level elective).

Track for Heritage Speakers. Heritage speakers must replace SPAN 3355 with SPAN 4355 and SPAN 3358 with SPAN 4358.

Track for Native Speakers. Native speakers will start coursework at the 4000 level. Native speakers who have not had formal academic training in written Spanish may begin coursework with SPAN 4358.

<i>Required Courses</i>	<i>Credit Hours</i>
SPAN 3355 or equivalent (or 4355), 3358 (or 4358)	6
SPAN 4357	3
SPAN 4395	3
Four or more 5000-level literature and linguistics courses (at least one in Peninsular literature, one in Spanish-American literature, and one in linguistics)	12
Two Electives	6
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	30

Minor in Spanish

Heritage and native speakers of Spanish follow a special course track. The distinction between heritage and native speakers is described on the Spanish page (“FAQs” tab) of the Dedman College website at smu.edu/dedman. Students who do not place out need to complete the sequence of first-year courses (SPAN 1401 and 1402) and second-year courses (SPAN 2401 and 2302) before taking any 3000-level course. SPAN 3353 and 3358 may be taken concurrently.

Track for Heritage Speakers. Heritage speakers must replace SPAN 3355 with SPAN 4355 and SPAN 3358 with SPAN 4358.

Track for Native Speakers. Native speakers will start coursework at the 4000 level. Native speakers who have not had formal academic training in written Spanish may begin coursework with SPAN 4358.

<i>Required Courses</i>	<i>Credit Hours</i>
SPAN 2302 <i>or</i> equivalent	3
SPAN 3355 (<i>or</i> 4355), 3358 (<i>or</i> 4358)	6
Three advanced courses	9
	18

Spanish Courses (SPAN)
All courses are conducted in Spanish.

General Survey Courses	SPAN 5310, 5311, 5315, 5316, 5317
Period Survey Courses	SPAN 5320, 5321, 5323, 5324, 5325
Genre Studies	SPAN 5334, 5335, 5336, 5337, 5338, 5339
Advanced Courses in Linguistics	SPAN 5340, 5341, 5342, 5343
Thematic Courses	SPAN 5360, 5361, 5364, 5365, 5370, 5375
Other Literary Studies	SPAN 5380, 5381

SPAN 1401 (4). BEGINNING SPANISH I. Intensive course that develops insight into the interconnectedness of the fundamentals of language and its application to communication. Provides rudimentary linguistic skills (vocabulary and grammar) and an acquaintance with the Spanish-speaking world – tools that allow further study of the Hispanic culture. Attention is devoted to all four linguistic skills (listening, speaking, reading, and writing). Each course is comprised of a fundamentals (MWF) and an applications (TTH) module. Enrollment is required in both.

SPAN 1402 (4). BEGINNING SPANISH II. Intensive course that develops insight into the interconnectedness of the fundamentals of language and its application to communication. Provides rudimentary linguistic skills (vocabulary and grammar) and an acquaintance with the Spanish-speaking world – tools that allow further study of the Hispanic culture. Attention is devoted to all four linguistic skills (listening, speaking, reading, and writing). Each course is comprised of a fundamentals (MWF) and an applications (TTH) module. Enrollment is required in both. *Prerequisite:* C- or better in SPAN 1401.

SPAN 1502 (5). BEGINNING SPANISH WITH INTENSIVE REVIEW (TERM II). Provides an intensive review of the first term of Spanish. Designed for students who have had Spanish previously but are not ready for SPAN 1402. To varying degrees, attention is devoted to all four linguistic skills (listening, speaking, reading, and writing).

SPAN 2302 (3). INTERMEDIATE SPANISH II. For students who are comfortable expressing the seven communicative functions (i.e., describing, comparing, reacting and recommending, narrating, discussing likes and dislikes, creating hypotheses, and talking about the future). Designed to move students toward fluency, with a focus on development of written expression, significant vocabulary expansion, and increased grammatical accuracy. Although attention is devoted to listening, reading, and speaking, the course emphasizes development of writing skills. *Prerequisite:* C- or better in SPAN 2401 or equivalent.

SPAN 2311 (3). INTERMEDIATE SPANISH I. For students who are relatively comfortable expressing their personal needs and describing their immediate environment in Spanish. Moves students toward fluency by means of significant vocabulary expansion, mastery of the seven communicative functions (i.e., describing, comparing, reacting and recommending, narrating, discussing likes and dislikes, creating hypotheses, and talking about the future), and the application of these functions to authentic social contexts and cultural situations. Emphasis on development of speaking skills, although attention is also devoted to listening, reading, and writing. *Prerequisite:* C- or better in SPAN 1402 or equivalent. (SMU Abroad)

SPAN 2312 (3). INTERMEDIATE SPANISH II. For students who are comfortable expressing the seven communicative functions (i.e., describing, comparing, reacting and recommending, narrating, discussing likes and dislikes, creating hypotheses, and talking about the future). Designed to move students toward fluency, with a focus on development of written expression, significant vocabulary expansion, and increased grammatical accuracy. Although attention is

devoted to listening, reading, and speaking, the course emphasizes development of writing skills. *Prerequisite:* C- or better in SPAN 2401 or equivalent. (SMU Abroad)

SPAN 2401 (4). INTERMEDIATE SPANISH I. For students who are relatively comfortable expressing their personal needs and describing their immediate environment in Spanish. Moves students toward fluency by means of significant vocabulary expansion, mastery of the seven communicative functions (i.e., describing, comparing, reacting and recommending, narrating, discussing likes and dislikes, creating hypotheses, and talking about the future), and the application of these functions to authentic social contexts and cultural situations. Emphasis on development of speaking skills, although attention is also devoted to listening, reading, and writing. *Prerequisite:* C- or better in SPAN 1402 or equivalent.

SPAN 3310 (3). READINGS IN SPANISH AND SPANISH AMERICAN LITERATURE. Refinement of oral and written proficiency based on extensive reading and discussion of literary texts. *Prerequisite:* C- or better in SPAN 2302 or 2312. *Prerequisite or corequisite:* SPAN 3358.

SPAN 3311 (3). CULTURAL DIALOGUES: SPAIN. Students improve linguistic proficiency by surveying Spanish Peninsular culture and history. Course content varies and may cover topics such as Peninsular film, music, or art. *Prerequisite:* C- or better in SPAN 2302 or 2312. *Prerequisite or corequisite:* SPAN 3358. Not for heritage or native speakers of Spanish.

SPAN 3312 (3). CULTURAL DIALOGUES: MEXICO. Students improve their linguistic proficiency by surveying Mexican culture and history. Course content varies; may include Mexican film, music, art, etc. *Prerequisite:* C- or better in SPAN 2302 or 2312. *Prerequisite or corequisite:* SPAN 3358. Not for heritage or native speakers of Spanish.

SPAN 3313 (3). CULTURAL DIALOGUES: LATIN AMERICA. Improves linguistic proficiency by surveying Latin American culture and history. Course content varies; may include topics such as Latin American film, music, and art. *Prerequisite:* C- or better in SPAN 2302 or 2312. *Prerequisite or corequisite:* SPAN 3358.

SPAN 3321 (3). SPECIAL TOPICS ABROAD IN SPANISH. Courses in SMU-approved international programs. Prior departmental approval required.

SPAN 3322 (3). SPECIAL TOPICS ABROAD IN SPANISH. Courses in SMU-approved international programs. Prior departmental approval required.

SPAN 3355 (3). SPANISH CONVERSATION. An advanced course for majors and nonmajors intended to increase active command of the language. Not for heritage or native speakers. *Prerequisite:* C- or better in SPAN 2302 or 2312.

SPAN 3358 (3). ADVANCED SPANISH. By acquiring grammar through culture, students prepare for effective oral and written communication in Spanish. Not for heritage or native speakers of Spanish; heritage speakers should take SPAN 4358. *Prerequisite:* C- or better in 2302 or 2312.

SPAN 3373 (3). TOPICS IN SPANISH CIVILIZATION. Explores Spanish-American culture and societies, with emphasis on artistic and sociological aspects. Topics vary by instructor. *Prerequisite:* SPAN 4358 (or can be taken concurrently) or C- or better in SPAN 3358.

SPAN 3374 (3). TOPICS IN SPANISH-AMERICAN CIVILIZATION. Explores Spanish-American culture/societies, with emphasis on artistic/sociological aspects. Topic vary by instructor. *Prerequisite:* SPAN 4358 (or can be taken concurrently) or C- or better in SPAN 3358.

SPAN 3375 (3). TOPICS IN SPANISH-SPEAKING COMMUNITIES IN THE UNITED STATES. A survey of social and cultural issues surrounding Spanish-speaking communities in the U.S. that highlights selected topics. *Prerequisite:* SPAN 4358 (or can be taken concurrently) or C- or better in SPAN 3358.

SPAN 4321 (3). SPECIAL TOPICS ABROAD IN SPANISH. Courses in SMU-approved international programs. Prior departmental approval required.

SPAN 4322 (3). SPECIAL TOPICS ABROAD IN SPANISH. Courses in SMU-approved international programs. Prior departmental approval required.

SPAN 4352 (3). CONVERSATIONS AND COMMUNITY. Advanced Spanish course that brings oral and written language to the center of students' learning by bringing them in contact with native Spanish speakers from a variety of Dallas communities. Includes fieldwork and contact hours in the classroom. Aimed at improving oral and listening skills of non-native speakers of Spanish. *Prerequisite:* C- or better in SPAN 3358. Not for heritage or native speakers of Spanish.

SPAN 4355 (3). CULTURE AND COMMUNICATION FOR SPANISH SPEAKERS. An advanced course intended primarily for bilingual students whose home language is Spanish, but whose dominant intellectual language is English. Also, its emphasis on cultural readings and communication skills makes this course suitable for native speakers who would like to broaden their knowledge of the language, Hispanic culture, and the major Hispanic groups in the U.S. *Prerequisite:* C- or better in SPAN 4358 (formerly SPAN 3358 Heritage). Not for non-native speakers of Spanish. Non-native speakers should take SPAN 3355.

SPAN 4357 (3). INTRODUCTION TO SPANISH LINGUISTICS. What is language? How do languages function? How is human language different from other communication systems? This course focuses on Spanish and also explores language acquisition, language contact, and bilingualism. *Prerequisites:* C- or better in SPAN 3358/4358 and one of the following: SPAN 3310, 3311, 3312, 3313, 3355/4355, 3373, 3374, or 3375.

SPAN 4358 (3). ADVANCED SPANISH FOR HISPANIC SPEAKERS. For Spanish-English speakers who learned Spanish at home, without formal training in the language. Students reactivate their spoken Spanish and acquire skills in Spanish academic language and literacy. For heritage or native speakers of Spanish; nonheritage speakers should take SPAN 3358. *Prerequisite:* Placement test.

SPAN 4385 (3). INTERNSHIP IN SPANISH. Offers experience in organizations where knowledge of Spanish and the cultures of Spanish-speaking countries is relevant: corporations involved in international business, government agencies, health clinics, etc. *Prerequisites:* Junior or senior standing; overall GPA of 3.000 or higher; GPA in Spanish of 3.300 or higher; and sponsorship of a professor and of the organization, agency, or corporation.

SPAN 4391 (3). COMMERCIAL SPANISH FOR INTERNATIONAL TRADE. An advanced course in Spanish for international trade and communication. *Prerequisites:* Permission of instructor or C- or better in SPAN 3358/4358 and one of the following: SPAN 3311, 3312, 3313, 3355/4355.

SPAN 4395 (3). INTRODUCTION TO HISPANIC LITERATURE. A study of the tools necessary for analysis and understanding of literature, and the application of these tools through reading of Hispanic texts. Limited enrollment. *Prerequisites:* C- or better in SPAN 3358/4358 and one of the following: SPAN 3310, 3311, 3312, 3313, 3355/4355, 3373, 3374, or 3375.

SPAN 5310 (3). SPANISH LITERATURE BEFORE 1700. Introduces Spanish prose, drama, and lyric and narrative poetry through the Golden Age. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5311 (3). SPANISH LITERATURE SINCE 1700. Major writers and movements from 1700 to the present. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5315 (3). SPANISH-AMERICAN LITERATURE TO 1888. Literary figures and trends from the Spanish conquest to modernism. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5316 (3). SPANISH-AMERICAN LITERATURE SINCE 1888. Literary figures and trends from modernism to the present. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5320 (3). THE RENAISSANCE AND GOLDEN AGE: DRAMA. A study of the early development of Spanish drama and of the flourishing of the theatre with Lope de Vega and Calderon de la Barca, and their contemporaries. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5321 (3). THE RENAISSANCE AND GOLDEN AGE: PROSE FICTION. An exploration of the development of Spanish narrative through various modes of idealism, realism, and self-reflection. Readings include works from Cervantes and Zayas, their contemporaries, and their literary predecessors. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5323 (3). 19TH-CENTURY PROSE FICTION. Major prose writers of the realistic and naturalistic movements in the context of 19th-century political, social, and economic development. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5325 (3). 20TH-CENTURY PENINSULAR PROSE FICTION. Examination of significant individuals, movements, themes, and works of 20th-century Spanish prose fiction (e.g., generation of 1898, exile of 1939, Francoism, transition to democracy, social realism, and post-modernism). *Prerequisite:* C- or better in SPAN 4395.

SPAN 5326 (3). SPECIAL TOPICS ABROAD IN SPANISH. Courses in SMU-approved international programs. Prior departmental approval required.

SPAN 5327 (3). SPECIAL TOPICS ABROAD IN SPANISH. Courses in SMU-approved international programs. Prior departmental approval required.

SPAN 5334 (3). THE NOVEL, POST-CIVIL WAR. The development of the novel and short story in Spain from 1940 to the present. Readings from Cela, Delibes, Sanchez Ferlosio, Goytiso, etc. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5335 (3). GENRE STUDIES (SPAIN). A study of the evolution of contemporary Spanish theatre within the context of dominant historical, social, and cultural trends. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5336 (3). SPANISH-AMERICAN NOVEL. The evolution of the Spanish-American novel and analysis of master works of the 19th and 20th centuries. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5337 (3). SPANISH-AMERICAN ESSAY. Students explore the intellectual climate of Spanish America in the last two centuries as revealed in the works of famous essayists such as Jose Marti and Octavio Paz. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5338 (3). SPANISH-AMERICAN SHORT STORY. The evolution of the Spanish-American novel and analysis of master works of the 19th and 20th centuries. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5339 (3). SPANISH-AMERICAN POETRY. Major Spanish-American poets, with emphasis on the 20th century: Octavio Paz, Nicolas Guillen, Gabriela Mistral, Pablo Neruda, and others. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5340 (3). THE STRUCTURE OF SPANISH. Explanation of Spanish syntactic structures using conventional and more recent treatments of Spanish grammar and current developments in syntactic theory. Development of skills in analyzing Spanish syntax. *Prerequisite:* C- or better in SPAN 4357.

SPAN 5341 (3). SPANISH PHONETICS AND PHONOLOGY. Survey of phonetic (acoustic, physical) and phonological (distributional) properties of the Spanish sound system, and comparison with the English sound system. Introduces phonologically conditioned dialectal variation in the Spanish-speaking world. *Prerequisite:* C- or better in SPAN 4357.

SPAN 5342 (3). LINGUISTIC VARIATION IN THE SPANISH-SPEAKING WORLD. Introduction to language change and a panoramic overview of regionally and socially conditioned linguistic variation in Peninsular and Latin American Spanish, including topics such as language contact and bilingualism. *Prerequisite:* C- or better in 4357.

SPAN 5343 (3). SPANISH AS A SECOND LANGUAGE: PRINCIPLES OF SECOND-LANGUAGE ACQUISITION AND TEACHING. Provides a background in issues pertaining to the acquisition of Spanish as a second language and addresses how findings from Spanish second-language acquisition research are applicable to the teaching of Spanish. *Prerequisite:* C- or better in SPAN 4357.

SPAN 5361 (3). DON QUIXOTE: THE IDEA, THE CHARACTER, THE BOOK. Exploration of Cervantes' masterpiece "Don Quixote" and its influence on art and society. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5364 (3). HUMAN RIGHTS ISSUES IN CONTEMPORARY SPANISH LITERATURE. A study of human rights issues such as repression, torture, violence against women and the disabled, children's rights, genocide, and immigration as represented in contemporary Spanish literature. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5365 (3). CONTEMPORARY SPANISH WOMEN WRITERS. This course explores constructions of gender and identity in contemporary Spanish literature by women. Written texts, music, film, and documentary combine to offer multiple perspectives on the subject. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5370 (3). REWRITING DISCOVERY AND EXPLORATION IN THE SPANISH BORDERLANDS. An examination of shifts in the articulation of discovery and exploration in writings treating the northern frontier of New Spain during the mid-to-late 16th century. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5375 (3). CONTEMPORARY FICTION BY LATIN AMERICAN WOMEN WRITERS. Explores gender and identity constructions in 20th-century fiction by Latin American women. Examines novels, short stories, film, and critical texts. *Prerequisite:* C- or better in SPAN 4395.

SPAN 5380 (3), 5381 (3). TUTORIAL FOR JUNIORS AND SENIORS. Special project arranged by the student with the help of a faculty adviser and the approval of the chair of the department.

Linguistics and World Literatures and Languages

The Courses (WL/WLAN)

All WL/WLAN courses are conducted in English.

Chinese Culture and Literature	WL 3310, 3312, 3325, 3395
French Literature	WL 3361 (SMU-in-Paris only), 3365, 3366 (Electives that do not count toward the French major.)
German Culture	WL 3321, 3322, 4321, 4322, 5326
Italian Culture and Literature	WL 2201, 2395, 3390 (FILM 3390), 3391–94
Russian Culture	WL 2343, 3323 (HIST 2323)
Spanish Culture and Literature	WL 3303, 3305, 3306
Spanish Linguistics	WL 3308

WL 2201 (2). ITALY TODAY: CONTEMPORARY ITALIAN CULTURE AND INSTITUTIONS. Overview of contemporary Italian society, institutions, and traditions, from the role of the Church to the fashion industry. *Prerequisites or corequisites:* ITAL 1401, 1402, or 2401 and instructor approval.

WL 2343 (3). AFTER COMMUNISM. Examines changes in Russian and East European culture since the mid-1980s, when openness and restructuring prepared the ground for the fall of the Soviet Union.

WL 2395 (3). ITALIAN CULTURE. Significant aspects of Italian culture and thought, beginning with the age of Dante, are presented from poetry, prose, drama, journalism, architecture, the fine arts, music, and film.

WL 3301 (3). SPANISH CULTURE AND THOUGHT. Significant aspects of Spanish culture are presented and illustrated by examples from Spain's history, music, art, architecture, literature folklore, and contemporary life.

WL 3302 (3). ETHNOVIOLENCE: INTERDISCIPLINARY PERSPECTIVES. Introduces ethnoviolence (violence or the threat of violence based on one's race, ethnicity, religion, gender, or sexual orientation) from a comparative, global, and critical framework that synthesizes sociology; colonial studies; communications; and ethnic, religious, historical, and gender studies.

WL 3303 (3). TOPICS IN SPANISH CIVILIZATION. Explores Spanish culture and society, with emphasis on artistic and sociological aspects. The topic explored varies by instructor.

WL 3306 (3). CHICANO CULTURAL HERITAGE. A study of the Chicano/mestizo cultural identity in the Southwest. Includes readings from selected contemporary authors as well as from the early recorded contacts between Native Americans and their European conquerors.

WL 3307 (3). THE BELLE ÉPOQUE. Through a series of lectures, readings, and visits, the course presents an in-depth study of society, culture, art, and literature in Paris and in the provinces. (SMU-in-Paris)

WL 3308 (3). INTRODUCTION TO GENERAL LINGUISTICS. Introduction to the field of linguistics, which is concerned with the study of human language in the broadest sense.

WL 3309 (3). FRENCH CINEMA: 1945 TO THE PRESENT. Uses cultural studies theory to explore the evolution of the French national identity from the end of the Nazi occupation of France in 1945 to the present day.

WL 3310 (3). TRANSNATIONAL CHINESE CINEMA. Introduces films produced in the People's Republic, Taiwan, and Hong Kong. In considering cinema as a sign system for the construction of sociocultural and aesthetic meanings, this course examines different national identities and film genres. Students learn to understand non-Western cultural texts and to analyze cinematic representations.

WL 3312 (3). WOMEN IN MODERN CHINA. Critical examination, from literary and gender perspectives, of the lives and roles of the 20th century Chinese women, including works from major women writers.

WL 3320 (3). POSTWAR JAPAN: CULTURE AND SOCIETY. Students gain a critical knowledge of postwar Japanese society and culture by examining issues that have shaped contemporary Japan from the perspectives of such disciplines as history, sociology, anthropology, and cultural studies, including literary works and films.

WL 3322 (3). MODERN JAPANESE NOVELS IN TRANSLATION. Students study a number of Japanese novels, from Shimazaki Toson's "The Broken Commandment" (1906) to Yoshimoto Banana's "Kitchen" (1988). Each student is required to give a talk on at least one novel, which may be developed into the essay that is a major component of assessment. Students' presentation and participation in the discussion in class, together with short critical comments on other students' talks, form the basis for continuous assessment.

WL 3323 (3). RUSSIAN CULTURE. Significant aspects of Russian thought and culture at its various stages of development are presented and illustrated by examples from literature, folklore, prose, drama, journalism, architecture, the fine arts, and music.

WL 3325 (3). PERSPECTIVE ON MODERN CHINA. Survey of China in the 20th century in terms of cultural trends, literature, and cinema. Stresses the interactions between reality and representation, between author and reader and/or audience, and between text and interpretation. Emphasizes close reading of texts or viewing of films, followed by critical analysis.

WL 3330 (3). MIGRATION, OCCUPATION, AND INDEPENDENCE IN NORTH AFRICAN CINEMA. An introduction to the cinemas of Algeria, Tunisia, Morocco, Chad, and Mali. The course explores the themes of migration, occupation, and independence in both individual and national terms.

WL 3331 (3). SURVEY: RUSSIAN LITERATURE IN TRANSLATION. Russian literature from the 18th century to the present. Works by Tolstoy, Dostoevsky, Chekhov, Solzhenitsyn, and others.

WL 3332 (3). SPECIAL TOPICS: RUSSIAN LITERATURE IN TRANSLATION. Texts, periods, and thematic and critical approaches vary from term to term.

WL 3340 (3). SEMIOTICS AND INTERPRETATION. Semiotics is the study of how meaning is produced and communicated. This course explores semiotic approaches to the interpretation of the most complex of all human communications: literary texts.

WL 3341 (3). THE FAILURE OF HUMANITY IN RWANDA. An introduction to 1994 Rwanda genocide that seeks to understand not only its origins but also its sociological, ethical, and human rights implications.

WL 3349 (3). THE AFRICAN DIASPORA: LITERATURE AND HISTORY OF BLACK LIBERATION. Black literature played an important role in bringing on the collapse of the European colonial order, and it remains a major force in the struggle against neocolonialism today. The course explores links between literature and politics, literature and history, and thought and action in 20th-century Africa and the Caribbean. Readings and lectures are supplemented by class discussion, films, and videotapes about the Caribbean and Africa.

WL 3350 (3). EXISTENTIALISM AND LITERATURE. Existentialist perspectives on society, individual responsibility, politics, and war as presented in key literary texts by Kierkegaard, Dostoevsky, Malraux, Sartre, Camus, Ellison, and others.

WL 3351 (3). INTRODUCTION TO MEDIA LITERACY: SEMIOTICS AND CURRENT CULTURAL MYTHS. Students decode a variety of verbal/nonverbal languages in mass media (e.g., advertising, journalism, entertainment TV), focusing on the values/ideology they convey.

WL 3355 (3). TRADITION, COMMUNITY, AND IDENTITY IN AFRICAN CINEMA. Uses cultural studies theory to explore evolutions of African identity (individual, collective, and national) in the postcolonial period.

WL 3359 (3). MASCULINITIES: IMAGES AND PERSPECTIVES. The representation of male sex roles in Western literature, from Achilles to James Bond. Open to juniors and seniors; sophomores by permission of instructor.

WL 3360 (3). ETHICS OF COLONIZATION IN LATIN AMERICA. Through a study of literary, philosophical, historical, and religious texts, this course considers how the humanist ethics of the Renaissance were debated and carried out in the colonization of Latin America.

WL 3362 (3). POSTCOLONIAL FRANCE. A multidisciplinary course providing an introduction to, or better understanding of, some of the most passionate debates on assimilation, difference, and multiculturalism that have emerged in France in recent years.

WL 3363 (3). FIGURING THE FEMININE. The feminist inquiry in France from the Middle Ages to the present. Texts by women that bear witness to women's struggles for civil, social, and political adulthood.

WL 3365 (3). SPECIAL TOPICS FRENCH LITERATURE IN TRANSLATION. Texts, periods, and thematic and critical approaches will vary from term to term.

WL 3369 (3). PERSPECTIVES ON MODERN GERMANY. A multidisciplinary survey of the German heritage, with emphasis on Germany's quest for identity and unity. *Prerequisite:* Sophomore standing or permission of instructor.

WL 3370 (3). SHADOWS OF ENLIGHTENMENT: HUMAN RIGHTS IN GERMANY. Study of documents and debates on human rights, literature, and art from the Enlightenment to the present. Discussion of the Holocaust, human rights concerns in divided Germany, migration, and multiculturalism.

WL 3380 (3). CLASSICAL LATIN LITERATURE IN TRANSLATION.

WL 3390 (3). ITALIAN CINEMA. A chronological survey of Italian cinema from its beginnings to the present. Themes and cinematic styles of several internationally noted directors such as Rossellini, DeSica, Fellini, Antonioni, and Bertolucci, with attention to the Italian cinema as a reflection of sociopolitical trends.

WL 3391 (3). ITALIAN LITERATURE IN TRANSLATION: THE ITALIAN NOVEL. A close reading of five representative works. While the novels are considered in light of historical events, students give special attention to form and rhetoric in order to understand the novel's unique ability to express and create reality.

WL 3392 (3). ITALIAN LITERATURE IN TRANSLATION: EARLY HUMANISM. The course defines and characterizes the major aspects of 14th-century humanism by exploring the seminal works of Petrarch, Boccaccio, Salutati, Valla, and others.

WL 3393 (3). DANTE'S POETIC VISION. Students read "Inferno" and "Purgatory" in English translation and explore the cultural and poetic values that reflect a specific world vision strongly conditioned by religious and political philosophy.

WL 3394 (3). BOCCACCIO'S DECAMERON AND MEDIEVAL STORYTELLING. Stories from the Decameron in English translation along with such narrative predecessors as the Roman exempla, hagiography, monks' tales, sermons, and the bawdy "fabliaux" French tales.

WL 3395 (3). A CULTURAL JOURNEY TO CHINA. Suzhou, in China's cultural heartland, hosts this course on the development of Chinese culture: religion, literature, cinema, art, architecture, and history. Trips complement readings centered on self, family, and state.

WL 3397 (3). CHINA BEFORE 1850. Examines changes and continuities from Neolithic times to 1850 in Chinese state, society, and religion, and the relations among the three spheres, through scholarly writings and primary sources.

WL 3398 (3). MODERN EAST ASIA. A survey of modern East Asia emphasizing an outline of the traditional societies, the Western impact, Japanese industrialization and imperialism, Pearl Harbor, and the rise of Chinese communism.

WL 4185 (1). INTERNSHIP: WORLD LANGUAGES. Offers experience in organizations where knowledge of a foreign language and/or the culture of the language communities is relevant. *Prerequisites:* Rising sophomore, junior, or senior standing; an overall GPA of 3.000 or higher; and sponsorship of the organization, agency, or corporation. *Corequisite:* Beginning or intermediate world language course that is relevant to the internship.

WL 4285 (2). INTERNSHIP: WORLD LANGUAGES. Offers experience in organizations where knowledge of a foreign language and/or the culture of the language communities is relevant. *Prerequisites:* Rising sophomore, junior, or senior standing; an overall GPA of 3.000 or higher; and sponsorship of the organization, agency, or corporation. *Corequisite:* Beginning or intermediate world language course that is relevant to the internship.

WL 4385 (3). INTERNSHIP: WORLD LANGUAGES. Offers experience in organizations where knowledge of a foreign language and/or the culture of the language communities is relevant. *Prerequisites:* Rising sophomore, junior, or senior standing; an overall GPA of 3.000 or higher;

and sponsorship of the organization, agency, or corporation. *Corequisite:* Beginning or intermediate world language course that is relevant to the internship.

WLAN 1301 (3). BEGINNING LANGUAGE (LANGUAGES NOT TAUGHT AT SMU). Stresses the acquisition of basic skills: speaking, listening comprehension, reading, and writing. Three classes a week. For SMU Abroad students only.

WLAN 1302 (3). BEGINNING LANGUAGE TERM TWO. Stresses the acquisition of basic skills: speaking, listening comprehension, reading, and writing. Three classes a week. *Prerequisite:* C- or better in WLAN 1301 (same language) or permission of program director. For SMU Abroad students only.

WLAN 1401 (4). BEGINNING LANGUAGE TERM ONE (LANGUAGES NOT TAUGHT AT SMU). Stresses the acquisition of basic skills: speaking, listening comprehension, reading, and writing. Five classes a week. For SMU Abroad students only.

WLAN 1402 (4). BEGINNING LANGUAGE TERM TWO. Stresses the acquisition of basic skills: speaking, listening comprehension, reading, and writing. Five classes a week. *Prerequisite:* C- or better in WLAN 1401 (same language) or permission of the program director. For SMU Abroad students only.

WLAN 3311 (3). SPECIAL TOPICS ABROAD IN WORLD LANGUAGES. Courses in SMU-approved international programs. Prior departmental approval required.

WLAN 3313 (3). SPECIAL TOPICS ABROAD IN WORLD LANGUAGES. Courses in SMU-approved international programs. Prior departmental approval required.

COX SCHOOL OF BUSINESS

GENERAL INFORMATION

Vision Statement

The mission of the Edwin L. Cox School of Business is to improve the school's academic programs and reputation as a top-tier business school by providing a high-quality business education to students and the business community, conducting research that contributes to the understanding of business and management, and participating in the service activities of the University and professional organizations.

History

From its beginning as the Department of Commerce for Southern Methodist University, the Edwin L. Cox School of Business has been educating the country's business leaders for more than 90 years.

Named in 1978 in honor of Dallas businessman Edwin L. Cox, the Cox School has a rich heritage that began in 1920 when the SMU Board of Trustees established a Department of Commerce at the request of the Dallas business community. In 1921 the Department of Commerce was renamed the School of Commerce, and in 1941 the Board of Trustees established the School of Commerce as a separate entity within the University. At this point, the School of Commerce became the School of Business Administration, and the Bachelor of Business Administration degree was approved by the trustees.

The graduate program at the School of Business Administration began in 1949 with the authorization of a Master of Business Administration program. Both the undergraduate and the graduate degree programs are fully accredited by the Association to Advance Collegiate Schools of Business (AACSB International). The Cox School also grants a minor in business administration and a minor in business to undergraduates. The graduate programs include Full-Time M.B.A., Fast Track M.B.A., Professional M.B.A. and Executive M.B.A.; M.S. degrees in accounting, business analytics, finance, management and entrepreneurship; an M.A./M.B.A.; an M.S. in Sport Management, jointly with Simmons School of Education and Human Development; a Juris Doctor/M.B.A.; and custom and open enrollment Executive Education certificate programs.

In 1965, the SMU Foundation for Business Administration was established. This group of advisers has helped guide the Cox School throughout the years and today is known as the Executive Board. Also instrumental in supporting the Cox School are members of its two successful mentoring programs: the Associate Board for M.B.A. students and the BBA Mentoring Alliance. These two boards involve more than 350 area business leaders who volunteer their time and expertise to students who want to start making business connections for the future.

Cox School Complex

In 1952, ground was broken for the Joseph Wylie Fincher Memorial Building for the School of Business Administration. In 1987, two buildings were added to the Cox School complex: the Cary M. Maguire Building and the Trammell Crow Building. In 2005, the Cox School opened the James M. Collins Executive Education Center.

Today, the Fincher Building houses administrative and faculty offices as well as conference and meeting rooms, while the Maguire and Crow buildings primarily house classrooms and study rooms. The Collins Center is home to the region's premier resources for working professionals and executives and houses the Cox School's Executive Education programs, Executive M.B.A. program and M.B.A. Global Leadership Program Office (supported by the Norman E. Brinker Global Leadership Endowment Fund), as well as the Southwestern Graduate School of Banking.

Hailed as one of the most technologically advanced business learning facilities in the country, the Cox School complex has as its hub the Business Library, which combines many of the features of a traditional university library with the latest in online databases, search tools and presentation facilities. Through the Business Library, Cox School students, faculty and staff have access to instruction and research assistance from dedicated business librarians to enhance their use of current business news and financial, industry and market data from premier providers. In addition, the library contains a group presentation room, multimedia studio, personal computers, printers and scanners for student use. The Kitt Investing and Trading Center, added to the Business Library in 2011, is a state-of-the-art instructional and research facility designed to integrate financial data and technology into the finance curriculum, enhance innovative faculty research and teach students practical finance and investment applications.

Centers and Institutes

Edwin L. Cox Business Leadership Institute

Paula Hill Strasser, Director

The Edwin L. Cox Business Leadership Institute offers undergraduate courses designed to develop B.B.A. students' fundamental business communication and leadership skills. The BLI provides students with essential knowledge and experience through class discussions, self-assessments, team projects, simulations, corporate presentations and a comprehensive team capstone project. In addition, students sharpen their career management skills by perfecting their résumés and cover letters, and researching future career choices. The BLI helps students understand channels of communication and appropriate mediums within organizations, and understand how cultural diversity and global expansion affect business communication. Students use experiential learning and hands-on assignments to develop demonstrable communication skills and a communication package necessary for initiating and managing a business career.

The Executive Education Center

Frank R. Lloyd, Associate Dean of Executive Education

The Executive Education Center is located in the Collins Center. The center is Dallas' best resource for advanced leadership and business training, offering numerous open-enrollment certificate programs to managers and working professionals in the business community. The center also offers custom programs tailored to the specific needs of individual organizations and designed to improve organizational performance. In addition to offering general leadership and business topics, the center offers specialties in leadership skills for the energy industry and Latino leadership development. A distinctive offering is the Summer Business Institute, a four-week

business certificate for current nonbusiness students and recent graduates. The institute provides a solid foundation in accounting, marketing, finance and other key business topics, along with in-depth career guidance. This program, open to SMU and non-SMU students, provides a valuable credential in a competitive job market as it sets participants apart from other nonbusiness undergraduates.

The Center for Marketing Management Studies

Raj Sethuraman, Executive Director

The Center for Marketing Management Studies serves as a focal point for interaction among faculty, practitioners and students who share a common interest in applied marketing management research and education. The center sponsors research and educational programs in marketing management. Since 1989, the center has sponsored the Graduate Marketing Certificate Program, designed to provide current and aspiring business professionals with the latest in marketing thought and practice. The program is held at the Dallas campus and at the SMU-in-Plano campus, one night each week throughout the school year.

The Caruth Institute for Entrepreneurship

Jerry F. White, Director

Since its founding in August 1970, the Caruth Institute has continuously developed innovative courses and programs to help individuals keep pace with the dynamic, rapidly changing field of entrepreneurship. The institute currently offers undergraduate, graduate, and professional development courses to give students the skills and knowledge necessary to launch and manage successful entrepreneurial ventures. In addition to its academic courses, the institute sponsors entrepreneurship clubs, a business plan competition and an MBA Venture Fund, and has created a number of unique programs that enable students to experience and better understand the inner workings of entrepreneurial ventures. Programs include the Southwest Venture Forum and the Dallas 100™ Awards – an annual event that identifies and honors the 100 fastest-growing privately held companies in the Dallas area.

The Robert and Margaret Folsom Institute for Real Estate

Joseph D. Cahoon, Director

The Robert and Margaret Folsom Institute for Real Estate was established in 1984. The center is engaged in a number of initiatives to support applied research and the real estate academic programs at both the B.B.A. and M.B.A. levels. The institute also serves as a conduit between the commercial real estate industry and SMU students to support and foster industry knowledge, training, internships networking and community outreach.

Maguire Energy Institute

W. Bruce Bullock, Director

The Maguire Energy Institute promotes the study of policy, marketing and management issues that affect oil, natural gas and electricity. Founded by Cary M. Maguire, chairman, president and chief executive officer of Maguire Oil Company, the institute is a leading-edge resource for energy industry information and facilitates the exchange of ideas among students, businesses, the media and government officials.

Students can participate in courses, workshops and seminars. The institute also conducts research and analysis, publishes a quarterly newsletter on important policy issues and focuses on exploring innovative ways to improve management of the world's oil and gas resources.

JCPenney Center for Retail Excellence

Edward J. Fox, Executive Director

The JCPenney Center for Retail Excellence was endowed in 1999 through a gift from the J.C. Penney Company Inc. in order to promote, develop and integrate retail education and practice. Today, the center has become a leading source of academic expertise on consumer shopping behavior and the effects of marketing and merchandising decisions on retailer performance. Among its activities, the center works with SMU's undergraduate Retailing Club to foster student interest in retail careers and cosponsors a retail speaker series with the Dallas/Fort Worth Retail Executives Association.

***The EnCap Investments & LCM Group
Alternative Asset Management Center***

William F. Maxwell, Director

Made possible by gifts from EnCap Investments and LCM Group, the EnCap Investments & LCM Group Alternative Asset Management Center is designed to meet the increasing demand for investment professionals in the growing field of alternative assets, including hedge funds, private equity, venture capital, real estate, and oil and gas. The center offers courses leading to a specialization within the finance major at the undergraduate level and a course within the finance concentration for M.B.A. students. Selected course offerings are also open to M.S. in finance students. Undergraduate students interested in earning a specialization in alternative asset management apply for admission to the program during their junior year, and complete two courses under the direction of the EnCap Investments & LCM Group Alternative Asset Management Center.

William J. O'Neil Center for Global Markets and Freedom

W. Michael Cox, Director

The center was established in 2005 by William "Bill" J. O'Neil (BBA, '55) and his wife, Fay C. O'Neil, to study the impact of competitive market forces on freedom and prosperity in the global economy. The O'Neils created the center to offer education and training for today's forward-looking individuals and businesses that recognize the importance of globalization in changing the paradigm in which everyone is operating. More information is available at www.oneilcenter.org.

ADMISSION

The Cox School of Business offers three undergraduate programs. All Cox classes, unless otherwise noted in the course descriptions, are open only to students in the Bachelor of Business Administration or Minor in Business Administration programs. Students in the minor in business may enroll only in the classes listed in this minor's curriculum (Minor Requirements section). **Note:** Detailed information regarding SMU's admission requirements, regulations and procedures is found in the Admission to the University section of this catalog.

- The B.B.A. program offers eight academic majors within business. Admission is available to entering SMU students through the BBA Scholars Program, the Business Direct Program, or to continuing and transfer students through the process described in Admission of SMU Students to a Business Major or Admission of External Transfer Students to a Business Major below.
- The minor in business administration provides a comprehensive introduction to business for SMU students who have majors outside the Cox School. Courses in this minor are a subset of the B.B.A. core courses and are offered throughout the academic year. Admission to the minor in business administration follows the same requirements outlined in Admission of SMU Students to a Business Major or Admission of External Transfer Students to a Business Major below.
- The minor in business offers non-Cox students a foundation in business concepts to complement their primary areas of academic interest. Courses in this program are offered during summer and intersession terms at the three SMU campuses (Dallas and Plano in Texas and Taos, New Mexico). These courses are open to all non-Cox majors or students not enrolled in the minor in business administration. Cox majors and minors in business administration may take BUSE 3310 as free elective credit only; they may not take other minor in business courses.

Guidelines for In-class Requirement and Use of Electronic Devices

All B.B.A. majors and minors in business administration and all prebusiness students enrolled in ITOM 2308 and ACCT/ITOM 4307 are required to have laptop computers and bring them to each class session. **Note:** For ITOM 2308, 3306 and ACCT/ITOM 4307, students must have Windows *AND* the current version of Office for Windows installed on their laptops.

All instructors have the right and responsibility to set course policy, which should be included in the syllabus. Students are bound by the instructor's policy regardless of what other instructors or courses may accept and/or require. This policy may include (but is not restricted to) the following alternatives.

- The use of laptop computers is limited to one of the following levels:
 - Laptop use is restricted to course-related (and possibly session-related) content and applications only.
 - If there is no course-related content that students can reasonably be expected to need during class sessions, laptop use can be restricted to note-taking use only.
 - If in-class tests are provided in electronic form, students may be allowed to take the test on their laptops.
 - If none of the above uses is desired, the use of laptops can be prohibited during class sessions.

- Use of chat services during class sessions is prohibited.
- Unless there are course-related applications of mobile phones, PDAs and smart-phones, the use of such equipment during class sessions is prohibited. Mobile phones must be shut off or set to silent mode during class sessions, and answering telephone calls and text messages during class is prohibited.
- Use of cameras and video cameras on mobile phones and laptops during class sessions may be prohibited or allowed. For example, instructors may allow students to take photos of the whiteboard and/or projected materials in the session.

Admission of SMU Students to a Business Major/B.B.A. Degree Program

Admission to the Cox undergraduate program may be earned by current SMU students via the admission requirements below, or at the time a student is admitted to SMU via the BBA Scholars Program or the Business Direct Program (under Applying for Admission as a First-Year Applicant). *Regular admission to any B.B.A. major requires*

1. Completion of a minimum of 39 hours.
2. A minimum all-college cumulative GPA of 3.300.
3. A minimum 3.300 GPA in the business subset:
ACCT 2301
DISC 1312 *or* 2305
ECO 1311, 1312
ITOM 2305, *or* STAT 2301 *or* 2331, *or* EMIS 3340, *or* CSE/STAT 4340
MATH 1309 *or* 1337 *or* 1340

Notes

- After a student completes MATH 1340, the Mathematics Department may award credit for MATH 1337, depending on the grade earned in MATH 1340. When this occurs, the letter grade earned in MATH 1340 will count for the subset, not the MATH 1337 credit.
- For admission purposes to the Cox B.B.A. program, the all-college cumulative GPA is recorded at the end of the term the student completes the business subset AND has at least 39 cumulative credit hours. The all-college cumulative GPA includes all SMU coursework and courses completed at all other colleges if these courses have content-based equivalents at SMU. If credit is nontransferable because the grade earned is below C-, but the course is equivalent in content to an SMU course, the grade will count toward the all-college cumulative GPA.
- Once a student enrolls at SMU, all remaining subset courses must be completed through enrollment at SMU.
- With the exception of courses completed under the SMU first-year grade-repeat policy (under Grades for Repeated Courses in the Grade Policies section of this catalog), the subset GPA is calculated using the first graded attempt of these courses, even if the course was later repeated.
- The subset GPA for students who have Advanced Placement or International Baccalaureate credit is based on the remaining (graded) subset courses.
- All subset courses must be taken for a grade (not taken pass/fail), with the exception of those courses in which the student has test credit.

- Students must have passing grades in all subset courses before entering the Cox School.
- Current University grading policy, as summarized under Academic Forgiveness in the General Policies section of this catalog, permits forgiveness of academic work taken 10 or more years prior to the term of admission. Academic work forgiven under this policy will not be included in the subset or all-college cumulative GPA.

Admission via the Extended Subset

Students who do not achieve a 3.300 GPA in the business subset and/or a 3.300 all-college cumulative GPA and/or 39 hours completed may seek admission to Cox through the extended subset option by adding the first graded attempt of ACCT 2302 to the original subset. Students who have completed at least 39 credit hours and who earn both a minimum 3.300 GPA on the extended subset and a minimum 3.300 all-college cumulative GPA as of the term in which the extended subset is completed will be admitted to the Cox B.B.A. degree program. Once a student enrolls at SMU, ACCT 2302 must be completed through enrollment at SMU.

Applying for Admission as a First-Year Applicant

First-year applicants submit an application for admission to the SMU Division of Enrollment Services and follow the University requirements for admission (under the Admission to the University section in this catalog). Applicants who are admitted to SMU and who indicate business as their primary academic interest on the application for admission are automatically reviewed for admission to the Cox BBA Scholars Program or the Business Direct Program. More information is available in the BBA Scholars and Business Direct programs sections.

Admission to the Cox BBA Scholars Program and to the Business Direct Program is by invitation only to students entering SMU directly from high school. Transfer students are not considered for admission in either the BBA Scholars Program or the Business Direct Program. First-year students invited to join either program must accept their invitation no later than the University's deposit deadline (typically May 1) prior to SMU matriculation in the following fall. Students who accept admission to the Cox BBA Scholars Program may enter Cox during their first year at SMU. Students who accept admission to the Business Direct Program may enter Cox after completion of the subset courses with good academic standing.

Declaring a Business Major as a Current SMU Student

Students who meet the Cox admission requirements should complete a Change of Academic Program form at the records office of their current school. This form will be forwarded with the student's academic record to the Cox School. Business majors normally enter Cox after three terms of full-time enrollment; students who take longer to complete the admission requirements may need additional time to complete degree requirements.

Admission of External Transfer Students to a Business Major/B.B.A. Degree Program

Admission of external transfer students to a B.B.A. major requires

1. Admission to SMU.
2. Completion of a minimum of 39 hours of transferable college credit.
3. Minimum all-college cumulative GPA of 3.300.
4. A minimum GPA of 3.300 in the business subset:
ENGL 1301 *or* DISC 1312
ECO 1311, 1312
MATH 1309 *or* 1337 *or* 1340
ACCT 2301
ITOM 2305, *or* STAT 2301 *or* 2331, *or* EMIS 3340, *or* CSE/STAT 4340

Notes

- After a student completes MATH 1340, the Mathematics Department may award credit for MATH 1337, depending on the grade earned in MATH 1340. When this occurs, the letter grade earned in MATH 1340 will count for the subset, not the MATH 1337 credit.
- For admission purposes to the Cox B.B.A. program, the all-college cumulative GPA is recorded at the end of the term the student completes the business subset AND has at least 39 cumulative credit hours. The all-college cumulative GPA includes all SMU coursework and courses completed at all other colleges if these courses have content-based equivalents at SMU. If credit is non-transferable because the grade earned is below C-, but the course is equivalent in content to an SMU course, the grade will count toward the all-college cumulative GPA.
- The subset GPA is calculated using the first graded attempt of the subset courses, even if a course was later repeated.
- Current University grading policy, as summarized under Academic Forgiveness in the General Policies section of this catalog, permits forgiveness of academic work taken 10 or more years prior to the term of admission. Academic work forgiven under this policy will not be included in the subset or all-college cumulative GPA.
- The subset GPA for students who have Advanced Placement or International Baccalaureate credit is based on the remaining (graded) subset courses.
- Students must have passing grades in all subset courses before entering the Cox School.
- When evaluating courses taken at other colleges or universities, the Cox School will use the grades and credit hours designated by the school at which the courses were taken. The Cox School will not recalculate grades earned at schools that use grading systems different from SMU's nor change the number of credit hours for a course.

Transfer students who have not completed the business subset courses may be eligible for admission to SMU as prebusiness majors and will then follow the admission requirements outlined above for current SMU students. Those who have completed the subset but who do not meet Cox admission requirements may be eligible

for admission to SMU via the extended subset option or for admission to SMU to pursue a nonbusiness major.

Transfer Admission via the Extended Subset

Students who do not achieve a 3.300 GPA in the business subset and/or a 3.300 all-college cumulative GPA and/or 39 hours completed may seek admission to Cox through the extended subset option by adding the first graded attempt of ACCT 2302 to the original subset. Students who have completed at least 39 credit hours and who earn both a minimum 3.300 GPA on the extended subset and a minimum 3.300 all-college cumulative GPA as of the term in which the extended subset is completed will be admitted to the Cox B.B.A. degree program. Once a student enrolls at SMU, ACCT 2302 must be completed through enrollment at SMU.

Admission to Minors

SMU students who are NOT seeking a major in the Cox School may select from two business minors. The minor in business administration provides a comprehensive introduction to business for SMU students who have majors outside the Cox School. Students in this minor take specified B.B.A. core courses, which are offered throughout the academic year. The minor in business offers non-Cox students a foundation in business concepts to complement their primary areas of academic interest. Courses in this program are offered during summer and intersession terms at SMU's three campuses (Dallas and Plano in Texas and Taos, New Mexico). These courses are open to all non-Cox majors or students not enrolled in the minor in business administration.

Admission to the Minor in Business Administration

The minor in business administration operates concurrently with the B.B.A. degree program and includes seven courses that can apply toward either the B.B.A. degree or the minor in business administration (Minor Requirements section). Students in this minor must meet the same admission requirements as students in the Cox B.B.A. program as described above and will be enrolled in the same sections of business courses as business majors.

Admission to the Minor in Business

The minor in business is open to all SMU students who are NOT pursuing a B.B.A. major or the minor in business administration. The minor in business does not have prerequisite courses or GPA-based admission requirements. The minor in business offers courses designed to provide a general overview of business topics to complement a variety of academic interests. Students may pursue this minor by enrolling in the appropriate courses and completing a minor declaration form with the academic adviser for their major.

Statute of Limitations

If a student is readmitted to SMU after an absence of three years or longer, the student will be readmitted under the University catalog in effect at the time of readmission and will be subject to degree and admissions requirements in that current catalog.

Acceptance of Transfer Credit Prior to Enrollment

A prospective transfer student must present to the Division of Enrollment Services official transcripts containing a full record of all previous college work attempted. Failure to provide full records of all work is grounds for dismissal from the Cox School. To avoid delay, students should forward transcripts to the SMU Division of Enrollment Services no later than July 1 for the fall term and December 1 for the spring term.

In general, transfer credit will be accepted for business major or minor credit only if the courses completed are equivalent in content to those offered at SMU and if the university's school of business at which the courses were completed is accredited by The Association to Advance Collegiate Schools of Business (AACSB International). In the case of transfer credit completed at a junior/community college, only those courses with equivalents at the first-year and sophomore level at SMU (1000- and 2000-level courses) will be accepted for business major or minor credit.

Prior to matriculation, the Cox School will accept transfer business credit toward the B.B.A. degree from schools accredited by AACSB International regardless of the student's classification if there are equivalent/appropriate courses at SMU.

Courses completed with a grade of *D+* or less or those completed without letter grades (pass/fail or satisfactory/unsatisfactory) will not be transferred for any degree credit. Grades earned elsewhere will be considered for admission purposes and in determining graduation with honors. When evaluating courses taken at other colleges and universities, the Cox School will use the grades designated by the school at which the courses were taken. The Cox School will not recalculate grades earned at schools that use grading systems different from SMU's.

Transfer Credit for Current SMU Students

Students enrolled in the Cox School who are seeking to fulfill any portion of their degree requirements through transfer credit must file a petition for approval of their intentions with the B.B.A. Academic Advising and Records Office in 252 Maguire prior to enrollment for such courses. With the approval of the appropriate SMU departmental chair, SMU students may complete a maximum of 30 transfer hours for degree credit. Students are cautioned to check the current SMU catalog before enrolling in courses at other institutions and to verify transferability with the appropriate offices. Matriculated students must complete all required business courses through enrollment at SMU. Exceptions to this policy require concurrent approval of the associate dean for undergraduate studies, the appropriate department chair, and the director of B.B.A. academic advising and records.

Regardless of the number of acceptable transfer hours, at least 60 hours of the total 122 baccalaureate hours must be completed through enrollment at SMU. Of the required business hours, a minimum of 30 must be completed through enrollment at SMU or SMU-approved international programs.

Detailed information regarding Universitywide policies is provided in this catalog in the Admission to the University section and the Academic Records and General and Enrollment Standards section, and topics for the latter are listed in the table of contents.

ACADEMIC REGULATIONS

B.B.A. Degree Requirements

The Edwin L. Cox School of Business adheres to the Association to Advance Collegiate Schools of Business (AACSB International) standards of accreditation. Students will be awarded the Bachelor of Business Administration degree upon successful completion of the following requirements:

- **Admission.** Detailed information regarding admission to the Cox School of Business is found in the Admission section above.
- **Grade Requirements.** An overall GPA of at least 2.000 on all SMU work attempted and on all SMU business coursework attempted. Students must earn at least a 2.000 GPA in all business coursework attempted within the student's declared major to graduate with that major.
- **Minimum Hours and SMU Credit Requirement.** University policy requires a minimum of 122 term hours of approved credits. Detailed information is found in the Curriculum section below. Of the 122 minimum required term hours for a degree, at least 60 academic hours must be earned as SMU credit in SMU courses or SMU-approved international programs. No more than two hours of Wellness or PRW courses can count toward the 122 minimum hours. A minimum of 30 business hours must be completed through enrollment at SMU or SMU-approved international programs. The maximum number of business credit hours a student may take is the sum of the number of credit hours required to complete the student's major, plus up to 12 credit hours in one concentration if the student is pursuing a concentration (under Concentrations for Majors below), plus up to six credit hours of unrestricted business electives. Students may not exceed six credit hours of unrestricted business electives. Students are not required to take courses in a concentration or unrestricted business electives. The maximum limit on business hours does not include business courses taken abroad, business internship courses not required for a major, business-directed studies or hours needed to meet the business degree requirements related to the minimum credit hours taken at or through SMU. Business majors are limited to one major within the Cox School.

<i>Major</i>	<i>Minimum Number of Business Credit Hours</i>
Accounting	54
Finance	57
Financial Consulting	57
All other business majors	51

Application for Graduation

In order to graduate, students must file an application for candidacy to graduate with the B.B.A. Academic Advising and Records Office of the Cox School (in 252 Maguire) before the final term of coursework. Students should consult the Official University Calendar for graduation application deadlines.

In addition to requiring students to fulfill all academic requirements, the Cox School may consider any judicial or disciplinary matters before any degree may be conferred. Students must meet all financial obligations to the University in order to receive their diploma and transcript(s).

Commencement Activities Prior to Completion of Degree Requirements

Participation in May graduation activities is allowed for students who are August graduates provided they are enrolled to complete all graduation requirements during the summer following May graduation activities.

Curriculum Requirements

The requirements summarized below must be satisfied to earn the Bachelor of Business Administration degree. In addition to the Universitywide requirements, a core of required business fundamental courses has been designed by the faculty of the Cox School as specified below. Each core course must be passed for a student to be eligible for graduation. Generally, Discernment and Discourse, calculus, and economics courses should be completed in the student's first year; accounting, managerial statistics, business communications and information systems requirements in the sophomore year; finance, legal environment and ethics, marketing, management, and operations management requirements in the junior year; and the business strategy requirement (STRA 5370 or CISB 5397, also known as capstone courses) in the senior year.

Students are responsible for designing their own degree programs with assistance from the Cox academic advisers. Coordination with the Cox Career Center is highly advantageous for students who want to align major and course selection with their career aspirations. Close attention should be given to course and knowledge prerequisites as well as course content to maximize the value of each course and to avoid enrolling in a course for which a student has insufficient preparatory background. It is expected that students will consult with faculty and academic advisers in determining their course selections.

Business students may elect the pass/fail option in business elective courses only after satisfactory completion of the previous term and all requirements of the student's declared major. The exception is courses within Cox that are designated as pass/fail only.

Each student's file, reflecting his or her total academic record, is located in the B.B.A. Academic Advising and Records Office, 252 Maguire. Transcripts of the student's official record should be requested from the Office of the Registrar.

Minor in Business Administration

Undergraduates with majors outside the Cox School may complete the minor in business administration. *The minor in business administration requires*

- Admission to the Cox School through the same admission process as admission to the business majors. **Note:** Admission requirements are found under Admission of SMU Students to a Business Major/B.B.A. Degree Program in the Admission section of this catalog.
- A minimum 2.000 business and 2.000 minor in business administration GPA.
- Completion of the 21 hours specified for the minor in business administration below and all related prerequisite courses.

Course Requirements

Matriculated students must complete all hours toward the minor in business administration through enrollment at SMU. Students who transfer courses for this minor prior to SMU matriculation must still complete 21 hours in business through

enrollment at SMU or SMU-approved international programs, and will need additional business courses beyond the 21 hours specified below for the minor in business administration to meet the SMU credit requirement. To earn a minor in business administration, students must satisfy the following requirements:

	<i>Credit Hours</i>
ACCT 2301, 2302	6
FINA 3320	3
ITOM 2308, 3306	6
MKTG 3340 (or ADV 3362, for advertising majors and minors only)	3
MNO 3370	3

Note: Management science majors in the minor in business administration take ITOM 2308; however, they take EMIS 3360 and 5362 instead of ITOM 3306.

Grading

Regular grading standards will be used. None of the 21 hours may be completed pass/fail for the minor in business administration. A minimum 2.000 GPA on all business courses attempted is required for satisfactory completion of the minor in business administration.

Minor in Business

Undergraduates with majors outside the Cox School may complete the minor in business, which is an open-enrollment program with no grade-based admission requirements. The minor in business offers courses designed to provide a general overview of business topics to complement a variety of academic interests. The minor in business requires

- A minimum 2.000 business and 2.000 minor in business GPA.
- Completion of the 18 hours specified for the minor below.

Minor in business courses will be accepted in transfer prior to matriculation, but once a student has entered SMU, all remaining minor in business courses and a minimum of nine hours of business coursework must be completed through enrollment in courses offered by the faculty of the Cox School of Business.

Note: With the exception of BUSE 3310, no courses offered for the minor in business may be taken by B.B.A. majors or students enrolled in the minor in business administration. BUSE 3310 may be taken as free (nonbusiness) elective credit by B.B.A. majors and students enrolled in the minor in business administration.

Course Requirements

Students must complete all hours toward the minor in business through enrollment in courses at SMU (or a minimum of nine hours for transfer students). Courses in this program are offered during summer and intersession terms at SMU's three campuses (Dallas and Plano in Texas and Taos, New Mexico).

Students entering the minor in business with prior course credit for certain business courses may substitute the following credits toward the minor in business: ACCT 2301 for ACCT 2310, BL 3335 for BL 3310, FINA 3320 for FINA 3310, MKTG 3340 for MKTG 3310, and MNO 3370 for MNO 3310. No other course substitutions are approved, and all postmatriculation courses must be completed at SMU. Stu-

dents must complete all remaining courses and a minimum of nine hours toward the minor in business through enrollment in courses at SMU. Students must petition for course substitutions after having declared the minor in business.

With the exception of BUSE 3310, the courses offered as part of the minor in business may not be taken by students in the Cox B.B.A. program or in the minor in business administration. Cox B.B.A. majors and students enrolled in the minor in business administration may take BUSE 3310 as free elective credit; this course will not count as business hours toward any B.B.A. degree. To earn a minor in business, students must satisfy the following requirements:

	<i>Credit Hours</i>
Core Courses	15
ACCT 2310, or ACCT 2301 or 2311	
BUSE 3310 or BUSE 3311	
FINA 3310	
MKTG 3310 (or ADV 3362, for advertising majors and minors only)	
MNO 3310	
Elective (selected from the following)	3
BL 3310, CISB 2388, FINA 3312, or BUSE 2301	

Grading

Regular grading standards will be used. None of the courses may be completed pass/fail. A minimum 2.000 GPA on all business courses attempted is required for satisfactory completion of the minor in business.

Advising

The undergraduate program of the Cox School of Business is strongly committed to the academic advising process and believes that advising is effective only if the student actively participates in, and assumes responsibility for, the advising process. Cox academic advisers are available in 252 Maguire for student appointments. All students admitted to the Cox School are required to attend a two-part orientation session, which includes the B.B.A. Academic Advising and Records Office, the Cox Career Center and the Business Library. After the initial orientation, students are encouraged to consult with a B.B.A. adviser every term until graduation. Students are assigned to a specific adviser.

Prior to each advising appointment, students are expected to examine their electronic degree progress report carefully, as it is the student's responsibility to help assure the eDPR's accuracy. Students enroll, swap and drop courses on my.SMU. The director of B.B.A. academic advising and records will add a student to a closed class only if the student is a graduating senior and there are no other course options for completing a degree requirement.

Cox faculty members provide assistance in the areas of their professional expertise, offering guidance in selecting and sequencing courses appropriate for meeting specific academic and career goals.

Education Abroad

Cox students may take no more than six credit hours of B.B.A. business core courses (out of 33 total credit hours of business core courses) in SMU Abroad programs. Students may take no more than six credit hours of courses required for their business major in SMU Abroad programs. Students may take no more than six credit hours of business courses that do not count for the business core or for the major in SMU Abroad programs.

Career Education and Services

The undergraduate Cox Career Center fosters the development of lifelong career management skills, providing exposure to various careers and developing skills that will help students secure employment. Students learn career planning, personal marketing, resume and professional correspondence development, and interview and job search skills. Career management fundamentals are taught in the required BLI 3302 course. The career coaches meet with students one-on-one to develop individualized career plans and assist them with their internship or job search. Internships are strongly encouraged and are considered a key component of the undergraduate experience at Cox. SMU's location in Dallas allows students to pursue part-time internships during the academic year as well as part- and/or full-time internships during the summer worldwide. In addition, the Cox Career Center provides opportunities for B.B.A. students to interact with employers at career-related events such as career fairs, workshops, panels and seminars focused on specific industries, professions or companies. Students are encouraged to start this process early and make an appointment with a career coach during the term they are accepted to Cox. Ongoing meetings with career coaches are important for students to continue polishing the professional skill sets necessary for a successful job search. The Cox Career Center is located in 254 Maguire.

BBA Mentoring Alliance

The BBA Mentoring Alliance is a professional mentoring experience that pairs business undergraduates one-on-one with executives in the Dallas-area business community. The Mentoring Alliance enhances a student's collegiate experience by providing firsthand insights into the business world while teaching the value of effective networking. Eligibility for the mentoring program requires a declared major in business, junior or senior status, and good academic standing. B.B.A. students on academic probation are not eligible to participate. After acceptance into the program, students are matched with a mentor for an academic year.

Honors Program

The Cox B.B.A. Honors Program offers an enhanced curriculum to outstanding business students. B.B.A. students admitted to this program have the opportunity to take rigorous courses that challenge their intellectual abilities and sharpen their professional skills. These courses are taught by some of the outstanding professors at the Cox School and are similar to M.B.A. courses. Honors courses are structured to provide students with a greater understanding of current business practices and the academic theories that will help create the business practices of the future. In addition to honors courses, students in the Cox B.B.A. Honors Program have the opportunity to participate in extracurricular activities that complement their business education. Enrolling in the Cox B.B.A. Honors Program does not preclude participation in other honors programs at SMU.

Types of Honors Classes

The Cox School offers two types of undergraduate honors courses:

Core Courses. The B.B.A. program has 11 required core courses that introduce students to the basic disciplines in business, such as accounting, finance, marketing, management, communication, law and strategy. Honors sections of the B.B.A. core courses are open only to students in the B.B.A. Honors Program. It is expected that honors students will enroll in as many honors core courses as possible.

Electives. Business elective courses teach advanced concepts in one area of business. A number of honors sections of advanced electives are offered each year. Students in the B.B.A. Honors Program may apply to enroll in honors sections of elective courses. These sections are also open to students who are not in the B.B.A. Honors Program. Typically, all students in the honors electives may enroll only with the permission of the instructor. Students in the B.B.A. Honors Program are encouraged to enroll in electives related to their major.

Admission to the B.B.A. Honors Program

Students who are accepted into the B.B.A. Honors Program must maintain a minimum GPA of 3.500 in their B.B.A. Honors Program courses to remain in the program; this GPA requirement begins once a student has at least six credit hours of honors courses. Students whose GPA falls below 3.500 have a one term grace period to meet the requirement. There are two paths to entering the Cox B.B.A. Honors Program:

Entry by Invitation. High school students who apply for admission to SMU and who indicate business as their primary academic interest are automatically reviewed for admission to the Cox B.B.A. program as BBA Scholars. Admission to the Cox BBA Scholars Program is by invitation only. Selected BBA Scholars will be invited to join the B.B.A. Honors Program at the time of admission to SMU. There are no additional admissions materials that a student needs to complete to be considered for the B.B.A. Honors Program. BBA Scholars who are not selected for the B.B.A. Honors Program at the time of admission to SMU may apply to join the B.B.A. Honors Program at the time of completion of the business subset courses.

Entry by Application. All Cox students may apply for admission into the program at the end of the term in which the business subset courses are completed. In order to apply, students must have at least a 3.500 GPA in the six-course subset and have at least a 3.500 SMU GPA. Applications are available in the B.B.A. Academic Advising and Records Office. Admission criteria for the B.B.A. Honors Program are updated periodically and are based on academic achievements and potential. Admission may not be offered to all students who apply.

The Honors Curriculum

The following is a sample schedule of honors sections for an honors student:

First Year	ITOM 2305	BLI 3302		
Sophomore Year	ACCT 2301	ACCT 2302	ITOM 2308	
Junior Year	FINA 3320	ITOM 3306	MKTG 3340	MNO 3370
Senior Year	BL 3335	STRA 5370	Honors Electives	

Additional information about the courses is in the Course Descriptions section.

Honors Notation on the Diploma

Students who are in the Cox B.B.A. Honors Program will receive an honors notation (“Honors in Business”) on their transcript and diploma if they complete at least six honors courses (18 hours), at least four (12 hours) of which must be at the junior or senior level, and have both an SMU GPA and a Cox Honors Program GPA of at least 3.500. The Cox Honors distinction is separate from the cum laude distinctions awarded at graduation.

BBA Scholars Program

The BBA Scholars Program affords numerous special opportunities, including networking with Cox faculty and the Dallas business community, invitations to special events, and tailored academic advising and career services. Participation in this program enhances students’ educational experience and helps develop the skills and connections necessary for professional success. BBA Scholars are encouraged to participate in honors-level business courses to enhance their education experience in the Cox School.

Business Direct Program

The Business Direct Program offers admission to the Cox School by invitation only based on students’ high school performance and after completion of the Cox required subset courses with good academic standing (2.000 minimum GPA). The list of subset courses is found under Admission of SMU Students to a Business Major/B.B.A. Degree Program. Business Direct students may enter the Cox Honors Program if they qualify by their subset grades and SMU GPA; additional information is found under Entry by Application.

Directed Studies

Business students may pursue independent studies, a research-based project, in a specified department under the sponsorship of a full-time Cox faculty member. This project may involve further study by the student in some aspect not covered in regularly scheduled business courses. B.B.A. students must first complete the basic required course in the field of study. Business elective or free elective credit will be granted to a maximum of six hours and cannot be used to fulfill major requirements. Directed studies courses may be taken pass/fail without completion of the business major. Independent studies will be exempted from the maximum credit hour limit. Students on academic probation may not register for independent studies.

Internships

Business students may take up to three hours of general internship credit for work experience. With the exception of students in the marketing major, students cannot use the credit toward the B.B.A. major or minor requirements. Internships are for pass/fail credit only.

Concurrent Degrees

B.B.A. students may simultaneously complete additional major(s) and/or minor(s) outside of business. Interested students should contact the B.B.A. Academic Advising and Records Office in the Cox School in 252 Maguire and the appropriate representative of the dean of the school in which the additional major/minor will be earned.

PROGRAMS OF STUDY

The Cox School offers eight business majors, a specialization within one major, a minor in business administration and a minor in business. Declared business majors may also choose to add one of four concentrations.

Majors	Concentrations
Accounting	Energy Management
Finance	Entrepreneurship
Financial Consulting	Real Estate Finance
General Business Management	Risk Management and Insurance
Marketing	
Real Estate Finance	Specialization (Finance Major)
Risk Management and Insurance	Alternative Asset Management

The following business courses have been approved by the faculty of the Edwin L. Cox School of Business. It should be noted that not all courses described in this catalog are necessarily offered in any given academic year. Students should check published course schedules to see which courses are offered. From time to time, some courses may be changed and new courses added. Students should use caution in selecting courses to avoid repetition of courses previously taken.

Business Administration Core Requirements

In addition to the Universitywide requirements, the required term credit hours for the B.B.A. degree are distributed as follows:

	<i>Credit Hours</i>		
Business Core Requirements			
ACCT 2301, 2302	6		
BL 3335	3		
BLI 3302	3		
FINA 3320	3		
ITOM 2305, <i>or</i> STAT 2301 <i>or</i> 2331, <i>or</i> EMIS 3340, <i>or</i> CSE/STAT 4340	3		
ITOM 2308, 3306	6		
MKTG 3340	3		
MNO 3370	3		
STRA 5370 <i>or</i> CISB 5397	3		
Business Hours (toward major)	18–24		
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%; text-align: right;">Total</td> <td style="text-align: right;">51–57</td> </tr> </table>		Total	51–57
Total	51–57		

Note: Management science/business double majors take ITOM 2308 and either STRA 5370 or CISB 5397; however, they take EMIS 3360 and EMIS 5362 instead of ITOM 3306.

Concentrations for B.B.A. Students

SMU students who are declared business majors may choose to add one of four concentrations: energy management, entrepreneurship, real estate finance, or risk management and insurance. Each concentration consists of four courses (12 hours).

Courses for the concentrations will not double count toward the business core or the majors with the exception of the general business major. No courses may be substituted for concentration courses.

Grading

Regular grading standards will be used. Grades in concentration courses will count in the student's business GPA and cumulative GPAs. None of the concentration courses may be completed pass/fail unless all requirements for the business major have been successfully completed.

Energy Management

BUSE 3331 From Prospect to Production to Kilowatts: The Business of Energy

BUSE 4332 Energy and Environmental Law

BUSE 4333 Business Management, Planning, and Analysis in Energy

BUSE 4334 Global Energy Markets, Business, and Policy: Spikes, Myths, and Risks

Entrepreneurship

BL 4340 Law for the Entrepreneur

CISB 3380 Business Decision-Making

CISB 4398 Managing the Entrepreneurial Business

CISB 5397 Entrepreneurship (Starting a Business)

(STRA 5370 must be taken to complete B.B.A. core requirements)

Real Estate Finance

RE 3381 Real Estate Fundamentals

RE 4338 Real Estate Law

RE 4382 Real Estate Valuation

RE 4389 Real Estate Finance

Risk Management and Insurance

MNO 3373 Negotiations

RMI 3360 Principles of Risk Management and Insurance

RMI 4340 Employee Benefits

RMI 4360 Insurance and Corporate Risk Management

Bachelor of Business Administration With a Major in General Business

To earn the B.B.A. degree with a major in general business, students must comply with the core B.B.A. degree requirements and satisfy the following additional requirements:

Business electives (any combination of Cox departments): 18 total credit hours.

ACCOUNTING

Professor Hemang Desai, Department Chair

Professors: Hemang Desai, Joseph Magliolo, Wayne Shaw. **Associate Professors:** Nilabhra Bhattacharya, J. Douglas Hanna, Stanimir Markov. **Assistant Professors:** Gauri Bhat, Ruihao Ke, Zining Li, Hyungshin Park, Dimitris Vrettos, Kara Elyse Wells. **Professors of Practice:** Barry Bryan, Gregory Sommers. **Clinical Professor:** Susan Riffe.

Bachelor of Business Administration With a Major in Accounting

All B.B.A. degree-seeking students should take ACCT 2301 and 2302 during their sophomore year. Matriculated students must take these courses through enrollment in courses offered by the Cox School of Business.

Most accounting majors also complete an accounting internship, ACCT 5325 and 5326, which does not count toward the B.B.A. degree requirements but is completed using additional available business credit hours.

To earn the B.B.A. degree with a major in accounting, students must complete all Universitywide requirements and the core B.B.A. degree requirements, and satisfy the following additional requirements:

	<i>Credit Hours</i>
Accounting Core	15
ACCT 3311, 3312, 4311, 4315, 5314	
Electives (selected from the following)	6
ACCT 3391, 4307, 5317	

Note: The core accounting courses above must be taken through enrollment at SMU.

The Courses (ACCT)

ACCT 2301 (3). INTRODUCTION TO FINANCIAL ACCOUNTING. Develops an understanding of how the fundamental activities of a business enterprise are reflected in its financial statements, and how financial accounting information can be used effectively for external decision-making purposes (decisions such as investment, credit, risk management, and financing). *Prerequisites:* ECO 1311, 1312 and MATH 1309 or 1337.

ACCT 2302 (3). INTRODUCTION TO MANAGERIAL ACCOUNTING. Introduces the use of accounting information for management purposes, including decision-making, planning, and control of operations. Students learn to integrate topics in cost determination, economic analysis, budgeting, and management and financial control. *Prerequisite:* ACCT 2301.

ACCT 2310 (3). ACCOUNTING CONCEPTS. A broad introduction to financial, cost, and managerial accounting concepts and practices. Stresses the understanding of financial statements as contrasted to the preparation of these documents. Covers product cost, including estimating overhead and the underlying assumptions. Discusses using managerial accounting techniques for decision-making, including break-even analysis, relevant costing, and budgeting. Students who already have credit for ACCT 2301 will not receive credit for this course. Cox majors and minors in business administration will not receive credit for this course and may not enroll in it.

ACCT 3311 (3). INTERMEDIATE ACCOUNTING I. An overview of financial statements and revenue recognition that focuses on the left-hand side (assets) of the balance sheet. Provides the necessary foundation for comprehension by users and preparers of the information in financial statements. *Prerequisite:* ACCT 2302. Reserved for Cox majors.

ACCT 3312 (3). INTERMEDIATE ACCOUNTING II. Continuation of ACCT 3311. Focuses on items on the right-hand side (liabilities and stockholders' equity) of the balance sheet. *Prerequisite:* ACCT 3311. Reserved for Cox majors.

ACCT 3391 (3). ETHICS IN ACCOUNTING. Develops students' ability to identify and evaluate ethical issues related to accounting and business management in a corporate environment. Students who take CFB 3375 or MNO 3375 may not receive credit for ACCT 3391, nor may students taking ACCT 3391 take either CFB 3375 or MNO 3375 for credit. Students seeking accounting certification should note that ACCT 3391 is a gateway course for eligibility to take the CPA examination. *Prerequisite:* Accounting major with senior standing or ACCT 5325. Reserved for Cox majors.

ACCT 4307 (3). BUSINESS MODELING WITH SPREADSHEETS. Introduces advanced quantitative modeling techniques for business decision-making. Covers a variety of modeling techniques, business analytics concepts, and data analysis tools. Students learn to implement these techniques in spreadsheet models that assist businesses in understanding and managing risk and improving decision-making. Applications cover a broad range of functional areas, including accounting, finance, marketing, and operations. *Prerequisites:* ACCT 2302; ITOM 2308, 3306; FINA 3320. Reserved for Cox majors.

ACCT 4311 (3). COST ACCOUNTING I. Focuses on the measurement, accumulation, and control of costs. Topics include product cost accounting, cost behavior analysis, direct costing, standard cost variance analysis, and relevant cost analysis. *Prerequisite:* ACCT 2302. Reserved for Cox majors.

ACCT 4315 (3). FEDERAL INCOME TAX I. Covers the conceptual basis and structure for the determination of income taxes, including the tax research methods used in preparing tax returns, solving problems, and planning business decisions. *Prerequisite:* ACCT 2302. Reserved for Cox majors.

ACCT 5314 (3). AUDIT RISK AND CONTROLS. Covers understanding, developing, and analyzing financial and management accounting systems; applying fundamental concepts to contemporary issues; and analyzing management internal control functions. Presents the behavioral characteristics and mechanics of accounting fraud. *Prerequisite:* ACCT 3311. Reserved for Cox majors.

ACCT 5317 (3). ACCOUNTING THEORY. Study of selected topics and current issues in the area of accounting theory. *Prerequisite:* ACCT 3312. Reserved for Cox majors.

ACCT 5318 (3). INDEPENDENT STUDIES IN ACCOUNTING. Directed research in accounting. *Prerequisites:* ACCT 3311, junior standing, and instructor approval.

ACCT 5319 (3). INDEPENDENT STUDIES IN ACCOUNTING. Directed research in accounting. *Prerequisites:* ACCT 3311, junior standing, and instructor approval.

ACCT 5325 (3). ACCOUNTING INTERNSHIP. *Prerequisites:* Senior standing and departmental approval.

ACCT 5326 (3). ACCOUNTING INTERNSHIP. *Prerequisites:* Senior standing and departmental approval.

BUSINESS ADMINISTRATION AND BUSINESS LEADERSHIP

The Courses

Business Administration (BA)

BA 3200 (2). SPECIAL TOPICS: INTERNATIONAL BUSINESS ADMINISTRATION. Special topics in international business taught abroad.

BA 3300 (3). SPECIAL TOPICS: INTERNATIONAL BUSINESS ADMINISTRATION. Offered through SMU Abroad. *Prerequisite:* Junior standing.

BA 3301 (3). SPECIAL TOPICS: INTERNATIONAL BUSINESS II. Offered through SMU Abroad. *Prerequisite:* Junior standing.

BA 4111 (1). BUSINESS INTERNSHIP.

BA 4112 (1). BUSINESS INTERNSHIP.

BA 4113 (1). BUSINESS INTERNSHIP.

BA 4315 (3). EUROPEAN COMMON MARKET. Offered through SMU Abroad. *Prerequisite:* Junior standing.

BA 5180 (1). DIRECTED STUDY. Directed research in business. *Prerequisite:* Junior standing and permission of the instructor.

BA 5280 (2). DIRECTED STUDY. Directed research in business. *Prerequisites:* ACCT 2312, junior standing, and permission of the instructor.

BA 5380 (3). DIRECTED STUDY. Directed research in business. *Prerequisites:* ACCT 2312, junior standing, and permission of the instructor.

Business Leadership Institute (BLI)

BLI 1110 (1). SPECIAL TOPICS IN BUSINESS ADMINISTRATION: BBA SCHOLARS SEMINAR. Introduces various business topics, including an overview of business disciplines and careers in business. Restricted to BBA Scholars.

BLI 3302 (3). BUSINESS COMMUNICATIONS AND LEADER DEVELOPMENT. Promotes students' professional success as effective communicators and leaders. Covers interpersonal skills and the vital role that ethics, integrity, and trust play in leading a successful business. Students develop skills for effective career management, business presentations, business writing, and teamwork; enhance their ability to plan and manage projects individually and in a team setting; and increase their understanding of contemporary business topics. Reserved for Cox majors and BBA Scholars.

FINANCE

Professor James S. Linck, Department Chair

Professors: James S. Linck, William F. Maxwell, Darius P. Miller, Albert W. Niemi, James L. Smith, Rex W. Thompson, Kumar Venkataraman, Michel R. Vetsuypens. **Associate Professor:** Amar Gande. **Assistant Professors:** Indraneel Chakraborty, Weizhao Simon Huang, Stacey Elizabeth Jacobsen, Mattia Landoni, Andrew C. MacKinlay, Ravindra V. Sastry. **Professors of Practice:** Mukunathan Santhanakrishnan, Donald Shelly, Nathan G. Walcott. **Clinical Professors:** Jeffrey W. Allen, Michael L. Davis.

Bachelor of Business Administration With a Major in Finance

To earn the B.B.A. degree with a major in finance, students must complete all Universitywide requirements and the core B.B.A. degree requirements, and satisfy the following additional requirements:

	<i>Credit Hours</i>
Finance Core	18
FINA 4325, 4326, 4327, 4329 or 4335	
ACCT 3311, 3312	
Electives (selected from the following)	6
FINA 3330, 4328, 5132, 5232, 5340, 5341, 5348	

Note: The core finance courses above must be taken through enrollment at SMU.

Bachelor of Business Administration With a Major in Financial Consulting

To earn the B.B.A. degree with a major in financial consulting, students must complete all Universitywide requirements and the core B.B.A. degree requirements, and satisfy the following additional requirements:

	<i>Credit Hours</i>
Accounting Core	9
ACCT 3311, 3312, 4315	
Finance Core	9
FINA 4325, 4326, 4329 or 4335	
Electives (selected from the following)	6
ACCT 4307, 4311, 5317	
FINA 3330, 4327, 4328, 5132 and 5232, 5340, 5341	

Note: The core accounting and finance courses above must be taken through enrollment at SMU.

The Courses (FINA)

FINA 3300 (3). TOPICS IN INTERNATIONAL FINANCE. Offered through SMU Abroad. *Prerequisite:* Junior standing.

FINA 3310 (3). FINANCE CONCEPTS. Survey of concepts, practices, and problems surrounding financial markets, securities, and decision-making. Includes time value of money, market efficiency, evaluation of securities, and capital budgeting. Required for the minor in business. Students may not receive credit for this course and FINA 3320. Cox majors and minors in business administration will not receive credit for this course and may not enroll in it.

FINA 3312 (3). PERSONAL FINANCE. Covers personal financial planning. Topics include setting up financial accounts at banks and brokerages; investments in stocks and mutual funds; personal income taxation; auto, property, life, and health insurance; and employee benefit plans. Elective for minor in business. B.B.A. majors can take course for free elective credit only.

FINA 3320 (3). FINANCIAL MANAGEMENT. Survey of concepts, practices, and problems surrounding financial markets, securities, and decision-making. Includes time value of money, market efficiency, evaluation of securities, and capital budgeting. *Prerequisites:* ACCT 2301; ECO 1311 and 1312; MATH 1309 or 1337; STAT 2301 or one from the following: CSE 4340; EMIS 3340; ITOM 2305; STAT 2331, 4340. Reserved for Cox majors and minors in business administration. Students will not receive credit for this course and ECO 4368.

FINA 3330 (3). MONEY AND CAPITAL MARKETS. Analyzes the structural interrelationships among the important participants in the U.S. financial markets. Topics include flow of funds, determinants of interest rates, monetary policy and interest rates, money and capital market instruments, and problems in managing financial institutions. *Prerequisite:* FINA 3320. Reserved for Cox majors. Students may not receive credit for this course and ECO 3355.

FINA 3350 (3). ESSENTIALS OF PERSONAL FINANCE. Students focus on key elements of personal financial planning using life cycle economics as the foundation for financial health. Also, credit scores, credit cards, borrowing money for major purchases, investment history and prospects for individual securities and mutual funds, taxes, personal insurance, and common employee benefits. Tools include spreadsheet modeling and life cycle software. Counts as business elective credit only. Reserved for Cox majors. *Prerequisite or corequisite:* FINA 3320.

FINA 4325 (3). ADVANCED FINANCIAL MANAGEMENT. In-depth analysis of capital budgeting, cost of capital, sources of capital open to the firm, capital structure, dividend policy, mergers, and bankruptcy. Students may not receive credit for this course and ECO 4388. *Prerequisite:* FINA 3320. Reserved for Cox majors.

FINA 4326 (3). INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT. Evaluates the interactive effects of economic, industry, company, and market considerations on the risk and return of individual assets. Analyzes the interrelationships of risky assets when combined in portfolios; also asset pricing theory and implications. *Prerequisite:* FINA 3320. Reserved for Cox majors. Students may not receive credit for this course and ECO 4378.

FINA 4327 (3). DERIVATIVES. Introduces analysis of financial derivatives such as futures, swaps, and options. Covers the underlying theories explaining derivatives markets and discusses strategies such as hedging and arbitrage. *Prerequisite:* FINA 3320. Reserved for Cox majors.

FINA 4328 (3). MANAGEMENT OF FINANCIAL INSTITUTIONS. Management of assets, liabilities, and capital accounts of financial institutions in general and commercial banks in particular. Emphasis on understanding the interrelationship among profitability, liquidity, and capital adequacy. *Prerequisite:* FINA 3330. Reserved for Cox majors.

FINA 4329 (3). INTERNATIONAL FINANCE. Examines international financial markets and such issues as interest rate differences between countries' spot and forward transactions in international currencies, and the impact of international operations for the corporate financial manager. Students may not receive credit for this course and FINA 4335. *Prerequisite:* FINA 3320. Reserved for Cox majors.

FINA 4335 (3). GLOBAL BUSINESS. Specific topics of international finance, including foreign exchange markets, management of exchange rate risk, the balance of payments and the role of central banks in setting exchange rates, and multinational strategy. Instruction includes a week in Beijing and Shanghai to visit Chinese companies, multinational companies doing business in China, and cultural sites to gain other experiences of life in these cities. Students may not receive credit for this course and FINA 4329. *Prerequisite:* FINA 3320. Reserved for Cox majors.

FINA 5132 (1). PORTFOLIO MANAGEMENT PRACTICUM. Offers practical experience in investments through management of the Ann Rife Cox Investment Fund. Economic and industry analysis and determining how that analysis affects investment decisions. Topics include money and capital market forecasts, selection of individual securities, and development of a portfolio strategy. Honors section. *Prerequisite or corequisite:* FINA 4326. Application required.

FINA 5232 (2). HONORS PRACTICUM IN PORTFOLIO MANAGEMENT. Offers practical experience in investments by managing an investment fund. *Prerequisite:* FINA 5132. Reserved for Cox majors.

FINA 5325 (3). INDEPENDENT STUDY. Directed research in finance. *Prerequisites:* FINA 3320, junior standing, and permission of the instructor.

FINA 5326 (3). INDEPENDENT STUDY. Directed research in finance. *Prerequisites:* FINA 3320, junior standing, and instructor approval. Reserved for Cox majors.

FINA 5340 (3). ALTERNATIVE ASSETS I. Topics include portfolio construction, arbitrage pricing theory, controlled-risk strategies (e.g., event-driven, long-short equity; dedicated short bias; arbitrage), and performance measurement. Covers operational issues such as implementation costs, leverage, and the mechanics of security lending. *Prerequisites:* FINA 4326, 5341. Reserved for Cox majors.

FINA 5341 (3). ALTERNATIVE ASSETS II. Focuses on leveraged finance and the necessary skills to calculate total enterprise valuation. Also, the different segments of leveraged finance: high-yield bonds, leveraged loans, credit default swaps, collateralized debt obligation, debtor-in-possession financing, and distressed investing. *Prerequisites:* FINA 3320, ACCT 3311. *Prerequisites or corequisites:* FINA 3312, 4326. Application required. Reserved for Cox majors.

FINA 5345 (3). ENERGY PROJECT VALUATION AND FINANCE. Covers valuation, organization, and funding of major energy industry projects. Examines sources of external finance, energy banking, nonrecourse financing, the links between project structure and financial performance, and the volatility of energy prices. Also, master techniques needed to assess and manage commodity price risk, basis risk, and effective hedging strategies. Requires laptops in class with Microsoft Excel and advanced spreadsheet tools. *Prerequisites:* FINA 3320, finance or financial consulting major, and senior standing. Reserved for Cox majors.

FINA 5348 (3). FINANCIAL MODELING. Covers hands-on modeling of valuation of public and private companies, integrated cash flow models, leveraged buyout models, mergers and acquisitions models, and exposure to handling large financial databases. *Prerequisites:* FINA 4325, 4326. Reserved for Cox majors.

INFORMATION SYSTEMS

Professor Amit Basu, Department Chair

Professors: Amit Basu, Bezalel Gavish, John H. Semple. **Associate Professors:** Sreekumar R. Bhaskaran, R. Canan Savaskan-Ebert, Ulrike Schultze. **Assistant Professors:** Vishal Ahuja, Rajiv Mukherjee, Fangyun T. Tan. **Clinical Professors:** Ellen Parker Allen, Amy V. Puelz. **Senior Lecturer:** James C. Collins, Jr. **Executive-in-Residence:** Hettie Tabor.

All B.B.A. degree-seeking students should take ITOM 2305 (or STAT 2301) and ITOM 2308 during their sophomore year.

The Courses (ITOM)

ITOM 2305 (3). MANAGERIAL STATISTICS. Introduces probability and descriptive statistics, regression analysis, forecasting, decision-making under uncertainty, and use of data in decision-making. Includes problem-solving, case assignments, and the use of Excel in analyzing problems. Students may not receive credit for ITOM 2305 and STAT 2301 or 2331. Reserved for prebusiness and business students only.

ITOM 2308 (3). INFORMATION SYSTEMS FOR MANAGEMENT. Discusses computer technologies for the management of information resources in business. Covers spreadsheet analytical tools for data analysis, reporting, and forecasting. Also includes database design and implementation for data storage, retrieval, aggregation, and reporting as well as the creation of Web pages using HTML. Requires laptops equipped with the Windows operating system and Microsoft Office for use in class. *Prerequisite:* ITOM 2305 or one from the following: CSE 4340; EMIS 3340; STAT 2301, 2331, 4340. Reserved for Cox majors and minors in business administration only.

ITOM 3306 (3). OPERATIONS MANAGEMENT. Introduces several common business analytics models and their applications in solving operational business problems. Topics include optimization (particularly linear programming), decision analysis, computer simulation, and project scheduling. *Prerequisites:* ACCT 2301; ECO 1311 and 1312; ITOM 2308; MATH 1309 or 1337; and STAT 2301 or one from the following: CSE 4340; EMIS 3340; ITOM 2305; STAT 2331, 4340. Reserved for Cox majors and minors in business administration.

ITOM 3310 (3). BUSINESS DECISIONS AND PROCESSES. Focuses on two skill sets: developing spreadsheets to support decision-making in organizations and analyzing and improving business processes. Teaches relatively advanced Excel skills to format, manipulate, and visualize information in order to answer business questions; also how to represent business processes diagrammatically using flowcharts. Processes covered include sales, purchasing, and project management. Half of each class session takes place in the computer lab. Minor in business elective. Cox majors and minors in business administration receive free elective credit for this course.

ITOM 4307 (3). BUSINESS MODELING WITH SPREADSHEETS. Introduces advanced quantitative modeling techniques for business decision-making. Covers a variety of modeling techniques, business analytics concepts, and data analysis tools. Students learn to implement these techniques in spreadsheet models that assist businesses in understanding and managing risk and improving decision-making. Applications cover a broad range of functional areas, including accounting, finance, marketing, and operations. *Prerequisites:* ACCT 2302; ITOM 2308, 3306; FINA 3320. Reserved for Cox majors.

MANAGEMENT AND ORGANIZATIONS

Professor Miguel A. Quiñones, Department Chair

Professors: Robin L. Pinkley, Miguel A. Quiñones, Linda B. Stearns. Associate Professors: Mel Fugate, Maribeth Kuenzi, Ellen F. Jackofsky, Don VandeWalle. Assistant Professor: Robert W. Rasberry. Professor of Practice: Jay Carson. Visiting Professor of Practice: Sal Mistry.

Bachelor of Business Administration With a Major in Management

To earn the B.B.A. degree with a major in management, students must complete all Universitywide requirements and the core B.B.A. degree requirements, and satisfy the following additional requirements:

	<i>Credit Hours</i>
Management Courses (two from the following)	6
MNO 3371, 4361, 4371 <i>or</i> 4372	
Electives (selected from the following)	6
MNO 3373, 3375, 4330, 4340 (see RMI 4340 for class schedule), 4371 <i>or</i> 4372 (if not taken for core requirement)	
CISB 3380, 4398, 5397 (if senior core is completed with STRA 5370)	
ITOM 4307 (ACCT 4307 will not count for the major)	
STRA 5370 (if senior core is completed with CISB 5397)	
Other Business Electives	6

Note: The core management courses above must be taken through enrollment at SMU.

The Courses (MNO)

MNO 3300 (3). SPECIAL TOPICS IN INTERNATIONAL MANAGEMENT I. Offered through SMU Abroad.

MNO 3301 (3). SPECIAL TOPICS IN INTERNATIONAL MANAGEMENT II. Offered through SMU Abroad. *Prerequisite:* Junior standing.

MNO 3310 (3). MANAGEMENT CONCEPTS. Provides a broad survey of key issues, theories, and practices that underpin how organizations function, evolve, and perform. Topics include motivation, job design, organizational theory, leadership, organizational culture, competitive strategy, and competitive advantage. Required for the minor in business. Cox majors and minors in business administration will not receive credit for this course and may not enroll in it.

MNO 3370 (3). MANAGEMENT. Develops skills in managerial behavior that facilitate high performance and satisfaction as well as continued self-development for all organization members. *Prerequisites:* ACCT 2301; ECO 1311 and 1312; MATH 1309 or 1337; and STAT 2301 or one from the following: CSE 4340; EMIS 3340; ITOM 2305; STAT 2331, 4340. Reserved for Cox majors, minors in business administration, and management science majors.

MNO 3371 (3). HUMAN RESOURCES MANAGEMENT. Develops an understanding of how organizations recruit, develop, and retain high-performing talent and facilitate a high quality of life in an organization. Insights gained can help facilitate one's initial job search, career management, and personal effectiveness. *Prerequisite:* MNO 3370. Reserved for Cox majors.

MNO 3373 (3). NEGOTIATIONS. Presents theories and processes of negotiation as practiced in a variety of settings. Focuses on understanding the behavior of individuals, groups, and organizations in the context of competitive situations. Emphasizes simulations, role-playing, and cases. *Prerequisite:* MNO 3370. Reserved for Cox majors.

MNO 3375 (3). CORPORATE SOCIAL RESPONSIBILITY AND ETHICAL LEADERSHIP. Develops managerial decision-making and stakeholder analysis through a study of ethical dilemmas in contemporary business. Topics include whistle blowing, corruption, bribery,

human rights, crisis management, role of corporate boards, lobbying, philanthropy, externalities, and sustainability. Students who take CFB 3375 or MNO 3375 may not receive credit for ACCT 3391, nor may students taking ACCT 3391 take either CFB 3375 or MNO 3375 for credit. Students seeking accounting certification should note that ACCT 3391 is a gateway course for eligibility to take the CPA examination. *Prerequisite:* MNO 3370. Reserved for Cox majors.

MNO 4330 (3). INTRODUCTION TO CONSULTING AND CHANGE MANAGEMENT. Develops understanding of the consulting process and change management. Examines the behaviors of effective consultants: how to define and diagnose client needs and implement change. Also studies prominent change and consulting frameworks. As a final project, teams provide consulting services to an organization. *Prerequisite:* MNO 3370. Reserved for Cox majors.

MNO 4361 (3). PROJECT MANAGEMENT. Presents a set of practices and interpersonal skills designed to deliver business results that are on time and on budget and meet quality standards. Examines project management in modern industries and organizational structures as a preferred, standard process to achieve successful results. Discusses defining the project goals, developing a plan to achieve the goals, executing the plan, and evaluating progress. Covers interpersonal skills, including communication, collaboration, and team management. *Prerequisite:* MNO 3370. Reserved for Cox majors.

MNO 4371 (3). LEADERSHIP AND CULTURE. Enhances effectiveness and success as a leader. Emphasizes core theories of motivation, leadership, interpersonal relationships, culture, and communication. *Prerequisite:* MNO 3370.

MNO 4372 (3). LEADERSHIP AND CULTURE IN THE SOUTHWEST. Study of the psychological, behavioral economics, sociological, and organizational behavior foundations of leadership within the context of the human diversity factors of gender, ethnicity, and culture. *Prerequisite:* MNO 3370. (SMU-in-Taos)

MNO 4378 (3). INDEPENDENT STUDIES IN ORGANIZATIONAL BEHAVIOR I. Considers contemporary issues (theoretical, ethical, methodological, social, etc.) that are currently of interest to organizational theorists and behavioral scientists. *Prerequisite:* MNO 3370. Reserved for Cox majors.

MARKETING

Professor Raj Sethuraman, Department Chair

Professors: Thomas E. Barry, Richard A. Briesch, William R. Dillon, Daniel J. Howard, Raj Sethuraman, Glenn Voss, Zannie G. Voss. **Associate Professors:** Michael H. Braun, Edward J. Fox, Tasadduq Shervani, Jacquelyn S. Thomas. **Assistant Professor:** Morgan K. Ward. **Senior Lecturers:** Charles A. Besio, Judith H. Foxman.

Bachelor of Business Administration With a Major in Marketing

To earn the B.B.A. degree with a major in marketing, students must complete all University wide requirements and the core B.B.A. degree requirements, and satisfy the following additional requirements:

	<i>Credit Hours</i>
Marketing Core	9–10
MKTG 3342, 3343, 5050 or 5150, 5341	
Electives (selected from the following)	6
MKTG 3344, 3345, 3346, 3348, 3349, 4345, 5345	
Business Electives	3

Notes

- The core marketing courses above must be taken through enrollment at SMU.
- Students may choose to take zero or one credit for the required internship; if one credit is chosen, the required minimum hours for the major will be increased from 51 to 52.
- ADV 3362 substitutes for MKTG 3340 for advertising majors or minors only.

The Courses (MKTG)

MKTG 3300 (3). TOPICS IN INTERNATIONAL MARKETING. Offered through SMU Abroad. *Prerequisite:* Junior standing.

MKTG 3310 (3). MARKETING CONCEPTS. Covers the basic principles of consumer marketing and the role of each element of the marketing mix. Emphasizes creating a familiarity with the marketing strategy and planning processes and viewing marketing within a societal context. Required for the minor in business. Students who have already completed MKTG 3340 will not receive credit for this course. Cox majors and minors in business administration will not receive credit for this course and may not enroll in it.

MKTG 3340 (3). FUNDAMENTALS OF MARKETING. Examines the nature of marketing decisions; the environment in which these decisions are made; and the relationship of these decisions to the firm, business, and society. *Prerequisites:* ACCT 2301; ECO 1311 and 1312; MATH 1309 or 1337; and STAT 2301 or one from the following: CSE 4340; EMIS 3340; ITOM 2305; STAT 2331, 4340. Reserved for Cox majors, minors in business administration, or management science majors.

MKTG 3342 (3). MARKETING RESEARCH. Explores the role of information in marketing decisions, discusses research methods, and teaches students how to plan and execute a research project. *Prerequisite:* MKTG 3340 or ADV 3362. Reserved for Cox majors.

MKTG 3343 (3). CONSUMER BEHAVIOR. Helps students understand the motivation and behavior of buyers and consumers. Discusses consumer behavior within a marketing framework and relates it to marketing management. *Prerequisite:* MKTG 3340 and/or ADV 3362. Reserved for Cox majors.

MKTG 3344 (3). INTEGRATED COMMUNICATION ADVERTISING MANAGEMENT. Introduces students to key marketing communication concepts and management issues, including message strategy, advertising, sales promotion, direct marketing, social media, and media planning. *Prerequisite:* MKTG 3340 or ADV 3362. Reserved for Cox majors.

MKTG 3345 (3). SALES AND DISTRIBUTION MANAGEMENT. A multidisciplinary approach to the study of sales and sales force management. Focuses on the total sales process: selection, training, motivation, and compensation of personnel; sales forecasting; sales territory management; and analysis. Provides a fundamental understanding of the elements of the sales process and a management perspective to plan, organize, and direct a sales force. *Prerequisite:* MKTG 3340 and/or ADV 3362. Reserved for Cox majors.

MKTG 3346 (3). RETAILING. Focuses on the environment of retailing management, retail strategy, merchandise management, sales promotion and customer services, and expense and productivity management. *Prerequisite:* MKTG 3340 and/or ADV 3362. Reserved for Cox majors.

MKTG 3348 (3). INTERNATIONAL MARKETING. Examines international marketing from the underlying common nature of all humans in the global arena to the subtle nuances of localized marketing strategies in the subregions of international markets. Emphasizes novel problem-solving and an expanded worldview, with a focus on real-world approaches to understanding the global marketing environment. *Prerequisite:* MKTG 3340 or ADV 3362. Reserved for Cox majors.

MKTG 3349 (3). PRODUCT AND BRAND MANAGEMENT. Deals with the management of product development programs and the appraisal of the many factors that affect product decision-making. Examines policies concerning branding, product line strategy, and compliance with social and government restrictions. *Prerequisite:* MKTG 3340 and/or ADV 3362. Reserved for Cox majors.

MKTG 4345 (3). SPORTS MARKETING. Explores sports marketing from two perspectives: the marketing of sports and marketing through sports. Topics include fan segmentation, branding, licensing, and sponsorship. *Prerequisite:* MKTG 3340 and/or ADV 3362. Reserved for Cox majors.

MKTG 5050 (0). MARKETING INTERNSHIP. Requires students to work in a professional capacity in a marketing-oriented position within a company; the job and company to be approved by the Marketing Department. The internship must involve a minimum of 100 hours of work and meet the requirements determined by the internship adviser. Reserved for Cox majors. *Prerequisite:* MKTG 3340.

MKTG 5150 (1). MARKETING INTERNSHIP. Requires students to work in a professional capacity in a marketing-oriented position within a company. The internship must involve a minimum of 100 hours of work and meet the requirements as determined by the internship adviser. Students may choose to take zero credits (MKTG 5050) or one credit (MKTG 5150) for the required internship; if one credit is chosen, the required minimum hours for the major will be increased from 51 to 52. *Prerequisite:* MKTG 3340. Reserved for Cox marketing majors.

MKTG 5341 (3). MARKETING MANAGEMENT. Provides the student with a fundamental understanding of the marketing strategy planning process within the firm and develops the student's abilities to cope with marketing management problems encountered by senior marketing managers, general management executives, and marketing consultants. Viewed as the capstone course for marketing majors. Heavy emphasis is placed on case analysis and class projects. *Prerequisite:* MKTG 3340 and/or ADV 3362. Reserved for senior marketing majors.

MKTG 5342 (3). DIRECTED STUDIES IN MARKETING. Directed research in marketing. *Prerequisites:* MKTG 3340, junior standing, and permission of the instructor.

MKTG 5343 (3). DIRECTED STUDIES IN MARKETING II. Directed research in marketing. *Prerequisites:* MKTG 5342, junior standing, and instructor approval.

MKTG 5345 (3). HONORS MARKETING PRACTICUM. Students apply marketing concepts and theories learned in the classroom to a real-life business situation by working with a business entity where they are responsible for researching, designing, and presenting a comprehensive integrated marketing campaign. *Prerequisite:* By application only. Reserved for Cox majors.

REAL ESTATE, RISK MANAGEMENT AND BUSINESS LAW

Professor William B. Brueggeman, Department Chair

Professor: William B. Brueggeman. Associate Professor: Robert Puelz. Senior Lecturers: Barbara W. Kincaid, Catherine Weber.

Bachelor of Business Administration With a Major in Real Estate Finance

To earn the B.B.A. degree with a major in real estate finance, students must complete all Universitywide requirements and the core B.B.A. degree requirements, and satisfy the following additional requirements:

	<i>Credit Hours</i>
Real Estate Core	12
RE 3381, 4338, 4382, 4389	
Electives (selected from the following)	6
ACCT/ITOM 4307	
BUSE 3300, 4332	
CISB 5397 (if senior core is completed with STRA 5370)	
FINA 3330, 4325, 4326, 4327, 4328, 4329, 5132 and 5232, 5340, 5341	
MNO 3373, 4361	
RMI 3360	

Note: The core real estate courses above must be taken through enrollment at SMU.

Bachelor of Business Administration With a Major in Risk Management and Insurance

To earn the B.B.A. degree with a major in risk management and insurance, students must complete all Universitywide requirements and the core B.B.A. degree requirements, and satisfy the following additional requirements:

	<i>Credit Hours</i>
RMI Core	6
RMI 3360, 4360	
RMI Electives (selected from the following)	6
ACCT 3311, 3312, 4315	
FINA 4326, 4327	
MKTG 3345	
MNO 3373	
RMI 4335, 4340	
Other Electives (selected from the following courses, if not taken as RMI electives)	6
ACCT 3311, 3312, 4315	
FINA 4326, 4327	
ITOM 4307	
MKTG 3345	
MNO 3371, 3373	
RE 3381	
RMI 4335, 4340, 5325	

Note: The core RMI courses above must be taken through enrollment at SMU.

The Courses

Real Estate (RE)

RE 3381 (3). REAL ESTATE FUNDAMENTALS. Introduces various aspects of real estate, including location, financing, investment, and legal principles. Serves as the foundation for other courses in real estate. *Prerequisite:* ACCT 2302. *Prerequisite or corequisite:* FINA 3320. Reserved for Cox majors.

RE 4338 (3). REAL ESTATE LAW. Surveys real estate law with emphasis on real estate transactions, financing, syndication, and land use regulation. *Prerequisites:* BL 3335 and RE 3381. Reserved for Cox majors.

RE 4382 (3). REAL ESTATE VALUATION. Presents principles and techniques of estimating the value of residential and income producing properties. Considers the economic base, structure, and distribution of land use in urban areas. *Prerequisites:* RE 3381 and FINA 3320. RE 3381 may be taken concurrently with the permission of the instructor. Reserved for Cox majors.

RE 4389 (3). REAL ESTATE FINANCE. Students develop the technical competence necessary to finance and evaluate real estate investments. Covers computation of periodic payments, amortization schedules, and true borrowing costs. Also considers the secondary mortgage market, application of techniques for structuring real estate transactions, and financing real estate development. *Prerequisites:* RE 3381 and FINA 3320; RE 4382 recommended. Students cannot receive credit for RE 4381 and RE 4389. Reserved for Cox majors.

Business Law (BL)

BL 3300 (3). SPECIAL TOPICS: INTERNATIONAL BUSINESS LAW. Special topics in international business law taught abroad.

BL 3310 (3). LEGAL PERSPECTIVES AND BUSINESS LAW. Covers basic legal issues essential to working with attorneys in a business or personal environment. Topics include constitutional issues affecting business, litigation management, alternative dispute resolution, civil tort liability, contracts, intellectual property, white-collar crime, real estate acquisitions, land use, business formation, and employment law. Elective for minor in business. Cox majors and minors in business administration will not receive credit for this course and may not enroll in it.

BL 3335 (3). BUSINESS LAW. Emphasizes the nature, formation, and application of law with a macro view; also public law and regulation of business. *Prerequisites:* ACCT 2301; ECO 1311 and 1312; MATH 1309 or 1337; and STAT 2301 or one from the following: CSE 4340; EMIS 3340; ITOM 2305; STAT 2331, 4340. Reserved for Cox majors.

BL 4300 (3). SPECIAL TOPICS: INTERNATIONAL BUSINESS LAW. Offered through SMU Abroad. *Prerequisite:* Junior standing.

BL 4340 (3). LAW FOR THE ENTREPRENEUR. Examines critical legal issues encountered by private domestic enterprises during the first years of operation. Topics include the hiring of counsel, alternatives for entity formation, establishment of a board of directors, debt and equity financing, real estate leases, criminal and civil liabilities, and litigation and risk management strategies. *Prerequisite:* BL 3335. Reserved for Cox majors.

Risk Management and Insurance Area (RMI)

RMI 3360 (3). PRINCIPLES OF RISK MANAGEMENT. Focuses on the principles of risk and the role of insurance in handling risk. Topics include an introduction to corporate risk management, insurance markets and insurance operations, personal insurance contracts, and legal principles that reinforce insurance contracts. Reserved for Cox majors.

RMI 4340 (3). EMPLOYEE BENEFITS. Studies employee benefits as a strategic decision for employers and an important financial planning element for employees. Covers typical employee benefits, and contrasts qualified and nonqualified plans that are of critical importance to employers and employees. Also, analyzes the complexities of the Affordable Care Act (including its social and economic implications) and the dynamics of global employee benefits. For practical experience, examines details of benefit offerings from actual job offers to SMU students. *Prerequisite or corequisite:* MNO 3370. Reserved for Cox majors.

RMI 4360 (3). INSURANCE AND CORPORATE RISK MANAGEMENT. Explores the evolution of business risk management and offers insight into the risk management process by focusing on expense-inducing problems that exist for most businesses. Topics include risk management, enterprise risk management, the role of the commercial insurance market, and tools to evaluate risk management decision-making. *Prerequisite or corequisite:* RMI 3360. Reserved for Cox majors.

RMI 5325 (3). RISK MANAGEMENT AND INSURANCE RESEARCH. Directed study research project on a risk management and insurance topic of academic interest. Through independent research and interaction with faculty, the student tests hypotheses and reports research results with advice and consent of a sponsoring faculty member. Reserved for Cox majors.

STRATEGY, ENTREPRENEURSHIP AND BUSINESS ECONOMICS

Professor Gordon Walker, Department Chair

Associate Professor: David T. Lei. Assistant Professors: Bo Kyung Kim, Julian Kolev, Gordon Walker. Professors of Practice: Robert A. Lawson, Simon S. Mak, Gary T. Moskowitz, Harvey Rosenblum. Clinical Professor: David C. Croson. Executive-in-Residence: W. Michael Cox. Writer-in-Residence: Richard G. Alm.

The Courses

Business Economics (BUSE)

BUSE 2301 (3). LIFE CYCLE ECONOMICS: PERSONAL FINANCIAL PLANNING FOR TODAY AND TOMORROW. Students focus on personal life cycle economics as the foundation for financial planning. Topics include human capital estimation, credit scoring, stocks, mutual funds, taxes, personal insurance, and common employee benefits. Analysis undertaken with spreadsheet and life cycle software. Students must bring to each class a laptop that runs Microsoft Excel and Windows. Open to all SMU students. *Prerequisite:* sophomore standing. For Cox majors/minors in business administration, this course counts as free elective credit only. For minors in business, this course will substitute for FINA 3312. Students may not receive credit for BUSE 2301 and FINA 3312.

BUSE 3300 (3). EVOLUTION OF AMERICAN CAPITALISM. Discusses the evolution of capitalism in the American economy from the Colonial period to the present, focusing on the post-World War II era. Topics include government regulation of business, unions and their impact on competition, trends in inequality, discrimination in the workforce, structural changes and the disappearance of the middle class, the costs and benefits of free trade, the drift toward socialism, the intense competition among states for jobs, and global challenges to America's leadership in the world. *Prerequisites:* ECO 1311, 1312. Reserved for Cox majors.

BUSE 3310 (3). MARKETS AND FREEDOM. Discusses the indicators of economic freedom and the benefits of globalization. Explores how markets raise living standards, including the roles that technology, globalization, public policy, and economic growth play in a functioning market economy. This course can count as free elective credit for Cox majors; however, students cannot receive credit for both BUSE 3310 and STRA/FINA 4355.

BUSE 3331 (3). FROM PROSPECT TO PRODUCTION TO KILOWATTS: THE BUSINESS OF ENERGY. Provides an in-depth understanding of the petroleum, natural gas, coal, power generation, and alternative fuels market segments, with a focus on structure, key business drivers, and technologies. Explores key business issues facing the industry, including sustainability, globalization, and business and/or government relations. *Prerequisite:* FINA 3320. Reserved for Cox majors.

BUSE 4332 (3). ENERGY AND ENVIRONMENTAL LAW. Examines the legal and regulatory issues applicable to energy as they relate to finance, investment, and the economics of the business. Provides the basic tools of an energy professional to identify and analyze the legal and regulatory issues related to energy and resource development and operation, property acquisition and divestiture, and project valuation and financing. *Prerequisites:* BUSE 3331, BL 3335. Reserved for Cox majors.

BUSE 4333 (3). BUSINESS MANAGEMENT, PLANNING, AND ANALYSIS IN ENERGY. Examines analytical, economic, and financial concepts of the modern energy industry as they relate to planning and decision-making in the firm, with particular emphasis on oil and gas and power generation. Topics include capital structure, reserve valuation, royalties, production-sharing agreements, and management of risk and uncertainty. *Prerequisite:* BUSE 3331. Reserved for Cox majors.

BUSE 4334 (3). GLOBAL ENERGY MARKETS, BUSINESS, AND POLICY: SPIKES, MYTHS, AND RISKS. Examines the interrelationship among the economics of global energy markets, business profitability, and public policy as it relates to the energy business. Topics include the principles of exhaustible resource economics and their impact upon business decision-making, the impact of price shocks on the industry and the overall economy, and the global policy and regulatory environment faced by the industry. *Prerequisites:* Junior status and permission of BBA Advising Office. Reserved for Cox majors.

Entrepreneurship (CISB)

CISB 2379 (3). IDENTIFYING ENTREPRENEURIAL OPPORTUNITIES. Recognizing entrepreneurial opportunities in a variety of settings. Emphasizes identifying sources of ideas and entrepreneurial opportunities, aligning with personal goals, determining market and financial feasibility, and evaluating competitive issues. Reserved for BBA Scholars and business students only.

CISB 2388 (3). ENTREPRENEURSHIP CONCEPTS. Students are introduced to concepts at each stage of the entrepreneurial process, including opportunity identification, opportunity evaluation, acquiring resources, launching and managing the new venture, and exit strategies. Students also play the role of investors and learn to pitch to investors. Cox majors and minors in business administration will not receive credit for this course and may not enroll in it. Reserved for non-Cox majors and business minors only.

CISB 4398 (3). MANAGING THE ENTREPRENEURIAL BUSINESS. Explores the unique challenges and opportunities involved in the management and ownership of a closely held enterprise. Examines key business, personal, and interpersonal issues relevant to the continuity and management of these firms. Topics include strategic management and corporate governance, life cycle and systems analyses, and leadership. *Prerequisite:* MNO 3370. Reserved for Cox majors.

CISB 5397 (3). ENTREPRENEURSHIP: STARTING A BUSINESS. Covers planning for a new business. Topics include the personal characteristics of entrepreneurs, profit and cash flow forecasts, sources of information, sales forecasts and the importance of relevant experience, entrepreneurial marketing, financing, and the business plan. *Prerequisites:* FINA 3320, MKTG 3340 and/or ADV 3362, MNO 3370, ITOM 2308/3306. Reserved for Cox majors.

Strategy (STRA)

STRA 4355 (3). DOING BUSINESS IN A GLOBALIZED WORLD. This course focuses on how globalization is rapidly changing the operating manual for running a successful business. The course explores which market sectors are experiencing the most global product demand, the business opportunities offered by China and India, which jobs are being outsourced (and how to make outsourcing work for, and not against the organization), which employee skills and talents are rising on the value added high-paying ladder, as well as changes in capital markets and the optimal market structure of industry. Students will not receive credit for FINA 3311 and FINA/STRA 4355. *Prerequisite:* FINA 3320.

STRA 5370 (3). STRATEGIC MANAGEMENT IN A GLOBAL ECONOMY. Analyzes the processes of building competitive advantage and strategy execution in single- and multi-business firms, with emphasis on industry evolution, the boundaries of the firm, and global competition. *Prerequisites:* ACCT 2301 and 2302; FINA 3320; MKTG 3340 and/or ADV 3362; MNO 3370; ITOM 3306; and ITOM 2305 or one from the following: CSE 4340, EMIS 3340, STAT 2301/2331, 4340. Reserved for Cox majors.

LYLE SCHOOL OF ENGINEERING

GENERAL INFORMATION

The Lyle School of Engineering, named in 2008 in honor of Dallas entrepreneur and industry leader Bobby B. Lyle, traces its roots to 1925, when the Technical Club of Dallas, a professional organization of practicing engineers, petitioned SMU to fulfill the need for an engineering school in the Southwest. In response to the club's request, the school began one of the first cooperative education programs in the United States, a program that continues today to put engineering students to work on real technical projects.

Included in the Lyle School of Engineering curricula are programs in civil engineering, computer engineering, computer science, electrical engineering, environmental engineering, mechanical engineering and management science. In 2000, a variety of programs known as Engineering and Beyond were introduced to provide the combination of a traditional engineering curriculum and selected leadership coursework designed to train engineering students for futures in management, entrepreneurship and beyond.

The Dallas area's national prominence in high technology and research has been beneficial to the Lyle School of Engineering and its students. Corporate support for the Lyle School has generated a remarkable array of equipment and laboratories. Recent additions include the AT&T Mixed Signals Lab, the Texas Instruments Digital Signal Processing Lab, the Procter and Gamble Biomedical Research Lab, and the Nokia Wireless Communication Lab. Other laboratories include the Laser Micromachining Laboratory, the Nanoscale Electro-Thermal Sciences Laboratory and the Enterprise Systems Design Laboratory. In addition, the Lyle School is the home of the following facilities:

Research Center for Advanced Manufacturing. RCAM provides the intellectual foundation for industry to collaborate with faculty and students to resolve generic, long-range challenges, thereby producing the knowledge base for steady advances in technology and their speedy transition to the marketplace.

Center for Laser Aided Manufacturing. CLAM addresses a number of research and development issues related to laser-aided intelligent manufacturing processes.

Center for Lasers and Plasmas for Advanced Manufacturing. The center conducts research of interest to the industry and SMU as part of a multiple university team and with support from the Industry and University Cooperative Research Centers Program of the National Science Foundation.

National Science Foundation Industrial/University Cooperation Research Center for Net-Centric Software and Systems. The Center for Net-Centric Software and Systems addresses fundamental software and systems research for the modeling, analysis, design, implementation, testing, deployment and evolution of net-centric and embedded systems.

Darwin Deason Institute for Cyber Security. The institute advances the science, policy, application and education of cyber security through basic and problem-driven, interdisciplinary research, and conducts broad programs of research that

- Apply an interdisciplinary approach to challenging problems and incorporate elements from disciplines not traditionally associated with cyber security, such as law, business and the social sciences.

- Create a science of cyber security and address priorities in the national arena.
- Help close the skills gap in cyber security by tapping into the innovation capabilities of students to meet the demand for trained cyber professionals.

Caruth Institute for Engineering Education. The institute develops programs that increase the number and diversity of students who graduate from U.S. high schools with both the enthusiasm and knowledge to pursue the engineering careers necessary for the U.S. to compete in a global economy.

Hunter and Stephanie Hunt Institute for Engineering and Humanity. More than 1 billion people around the world live on less than \$1 per day; of those, 70 percent are women. The institute strives to change the standard of living for the world's poorest populations (including those in the U.S.), trains a new generation of engineers in modern engineering applications and provides a deep exposure to global economics, cultural awareness, collaborative leadership and principles of sustainability.

Hart Center for Engineering Leadership. The center was created in 2008 with the belief that the leadership and professional development of engineering students should not wait until after graduation. In fact, the Lyle School maintains that this development should coincide with students' technical training as they become aware of what it means to be ethical and credible professional engineers.

HCEL designs programs around the Lyle School's engineering leadership framework, which engages students in developing their personal, relational, positional and contextual leadership awareness and skills. HCEL training gives students the tools to grow personally and professionally their entire lives and includes the following curricula, programs and events:

Leadership Development

- Leadership assessment tools identify students' understanding of leadership attributes, leadership strengths and areas of interest.
- Leadership instruction developed in collaboration with Lyle faculty is imbedded in relational and experiential components of the Lyle School's engineering design courses.
- HCEL engineering ethics modules are infused in specific engineering classes.
- Leadership coaching is offered in group settings and is also available for individuals in some cases.
- The Student Engineering Joint Council holds retreats, events and leadership training.
- Lyle Engineering in the City offers community engagement and service learning activities.
- Partners in Leadership Mentoring pairs students with mid- to senior-level professionals.

Career Development

- Career coaching helps students research and prepare for interviews with engineering companies.
- MustangTRAK allows students to register for interviews and submit résumés online.
- Engineering Mock Interview Day acclimates students to the interviewing process in a riskless environment.

- The Lyle Engineering Connections career fair attracts globally recognized companies seeking to hire engineers for internship, co-op and full-time positions.
- Internships and co-ops integral to the Lyle School are directed by HCEL staff.

Professional Engineering Licensure

All senior-year engineering students are encouraged to take the first part of the examination for professional engineering licensure in the state of Texas. Information on the exam, testing locations, fees, materials and other exam-related information is available at www.ncees.org/exams/fe-exam.

Department Information

All programs of education and research in engineering are conducted through the Lyle School of Engineering. The school is organized into the following departments:

Civil and Environmental Engineering (CEE)

Computer Science and Engineering (CSE)

Electrical Engineering (EE)

Engineering Management, Information and Systems (EMIS)

Mechanical Engineering (ME)

Each curriculum is under the jurisdiction of the faculty of the department in which the program is offered.

The Lyle School of Engineering also offers graduate programs toward the degrees of Master of Science, Doctor of Engineering and Doctor of Philosophy.

The departments are the Lyle School of Engineering's basic operating and budgetary units. Each department is responsible for the development and operation of its laboratories at all levels of activity and for all purposes; for the content, teaching and scheduling of its academic courses; and for the conduct of research programs. The chief administrative officer of each department is the department chair, who reports directly to the dean. More information on the Lyle School of Engineering and its programs is available at www.smu.edu/lyle.

COOPERATIVE EDUCATION

The Lyle School of Engineering has a history of demonstrated commitment to the concept of cooperative education. The school was established in 1925 with a close relationship with the Technical Club of Dallas. Members of this group owned factories and engineering consulting firms and wanted to participate in the training and development of their incoming employees. The Technical Club asked SMU to include the Cooperative Education Program in the original design of the school.

SMU was one of the first universities in the Southwest to adopt this concept of practical education. From 1925 to 1965, all engineering undergraduate students participated in the SMU Co-op Program. Since 1965, the program has been optional.

The SMU Co-op Program is designed so each student can enhance his or her education and career by receiving professional training while alternating terms of classroom instruction. Participation in the program allows students to

- Confirm that they like working in their major.
- Discover the kind of work they like within their major.

- Establish a professional reputation.
- Earn the cumulative equivalent of one year of a new graduate's starting salary before graduation.
- Gain invaluable work experience when competing for full-time jobs upon graduation.

How the Cooperative Program Operates

Entry into the SMU Co-op Program is typically offered in the summer term after the sophomore year or the fall term of the junior year during the student's academic progression. Two sample terms of entry are shown below:

PLAN A	5 Work Terms			PLAN B	4 Work Terms		
	Fall	Spring	Summer		Fall	Spring	Summer
First Year	SMU	SMU	Free	First Year	SMU	SMU	Free
Sophomore	SMU	SMU	Industry	Sophomore	SMU	SMU	Free
Junior	Industry	SMU	Industry	Junior	Industry	SMU	Industry
Senior 4th	SMU	Industry	Industry	Senior 4th	SMU	Industry	Industry
Senior 5th	SMU	SMU		Senior 5th	SMU	SMU	

Students who want to participate in the SMU Co-op Program should begin the application process during their first year to allow for career preparation. The application process includes attending Co-op Orientation, receiving interview skills training, résumé review, learning the job search process, and completing the Co-op Program application. The program director guides students through each step of the process.

Each applicant receives quality advising from the program's director. A direct result of advising is that the student gains a better understanding of individual options and a strategy for pursuing those options. The application process requires one or two hours per week for almost two terms. The process normally results in an offer of employment beginning in the summer term following the sophomore year or the fall term of the junior year.

Who May Apply?

Any Lyle School of Engineering undergraduate student in good standing who has enough time remaining before graduation to alternate at least three times between terms of full-time work and terms of full-time school may apply for the Co-op Program. Transfer students must be admitted and accepted to SMU before applying.

When to Apply

Many students choose to begin the application process during the first term of their first year. This early start is especially beneficial for students planning to participate in fraternity/sorority recruitment during the second term of their first year. Students should apply two or more terms before the work term begins. The first of these terms is for preparation; the second is for applying and interviewing with companies.

Policies of the Cooperative Engineering Education Program

Since 1925, the school has created and maintained numerous corporate relationships. Many factors contribute to these relationships, including the quality of SMU's academics and research, the achievements of alumni, and SMU's close proximity to high-tech corporations. Each SMU Co-op Program student directly benefits from the program's strong corporate relationships and bears an obligation to preserve these relationships by following the Co-op Program Undergraduate Student Agreement. The agreement balances the student's individual needs with the long-term goal of maintaining the program's corporate relationships for future SMU students. The terms of the program include, but are not limited to, the following:

- Students must maintain good standing with SMU and their employer at all times.
- All training jobs must be approved in advance by the SMU Co-op Program director.
- Before each work term begins, undergraduate students in the program must enroll in the appropriate program course for the term when they work, including summer.
- SMU charges no fees or tuition for these courses. Each course is graded on a pass/fail basis by the program's director. The courses do not count toward graduation. The course numbers for each work term are, respectively, ENGR 1099, 2099, 3099, 4099, 5099, 6099.
- Students enroll at SMU each term, including summers, once they begin the program's rotation between work and school.
- Co-op students take full-time class loads at SMU during alternating school terms.
- Co-op students do not work part-time for the employer during school terms.
- Co-op students complete all work terms with the same company unless decided otherwise.
- Once a student accepts a Co-op Program position, the student may switch positions within the sponsoring company with the approval of the company.
- Each student in the program completes his or her originally planned number and sequence of alternating work terms. The term of graduation must be a term of full-time study at SMU.
- Each student in the program accepts responsibility for knowing and following all SMU Co-op Program regulations and those of the participating employer.
- Students agree to complete all of their University required paperwork even while participating in the Co-op Program (e.g., FAFSA, CSS Profile, enrolling for classes, enrolling for housing, applying for graduation in their last senior term).

Co-op Certificate

SMU Co-op Program students who complete all of their originally planned and scheduled Co-op Program work terms in good standing with the University and the SMU Co-op Program Office receive a noncredit Cooperative Education Program Certificate to coincide with graduation. For additional information, students should contact the director of the SMU Co-op Program: phone 214-768-1845; email smucoop@engr.smu.edu.

UNDERGRADUATE ENGINEERING INTERNSHIP PROGRAM

The internship program allows full-time students to include a minimum of three terms of professional work experience during their study. Students must have obtained junior-level class status prior to participating in the internship program. Students cannot simultaneously enroll in a full-time load of coursework and participate in a full-time work experience. A full-time course of study is defined as 12 or more credit hours per term, and a full-time work experience is defined as a minimum of 37.5 hours worked per week. In order to maintain satisfactory academic achievement, students enrolled in a full-time course load shall not work more than a maximum of 20 hours a week. Students who are actively participating in a full-time work experience shall not enroll in more than nine credit hours per term. Zero hours of credit will be awarded for each term of internship. Participation in this program will not jeopardize the full-time status of international students. Students who wish to participate in this program need to

- Receive an internship job offer relating to their major.
- Provide a job description to the Hart Center for Engineering Leadership.
- Complete the Undergraduate Engineering Internship Program Agreement form.
- Obtain the following approvals: faculty adviser, department chair, director of Undergraduate Professional Experience Programs in the Hart Center and the International Student Office (for all international students).

Once the necessary approvals are obtained, the student must register for the Undergraduate Internship Program course that is designated by the student's department (CEE 5050, CSE 5050, EE 5050, EMIS 5050, ME 5050).

Within two weeks of the end of the term or at the end of the internship, whichever comes first, the student must submit a report outlining the activities and duties of the internship. The student will submit a copy of the report to the faculty adviser, the International Office (if applicable) and the director of Undergraduate Professional Experience Programs of the Lyle School of Engineering. The director of Undergraduate Professional Experience Programs, in consultation with the student's adviser, will assess the report and recommend a grade of *S* (Satisfactory) or *U* (Unsatisfactory) to the associate dean for the Office of Academic Affairs within two weeks of receiving the report. The student's work experience will be validated and recognized on the permanent transcript.

ADMISSION

Note: Detailed information regarding SMU's admission requirements, regulations and procedures is found in the Admission to the University section of this catalog.

Prospective students interested in undergraduate degrees in engineering apply for undergraduate admission to SMU as first-year or transfer students through the Office of Admissions, Southern Methodist University, PO Box 750181, Dallas TX 75275-0181. All first-year applicants admitted to SMU initially enter Dedman College. For students interested in majoring in engineering, a personal interview with Lyle School of Engineering's Undergraduate Enrollment Office is highly recommended. The Lyle School of Engineering Office of Undergraduate Student Experience and Enrollment Management can be reached at 214-768-3041.

High School Preparation

Because of the high standards of the Lyle School of Engineering and the rigorous character of its curricula, it is essential that the entering student be well prepared in basic academic subjects in high school. To be successful in SMU engineering programs, the student should have the following academic strengths:

1. Academic success in an appropriate program of study in high school.
2. Strong evidence of aptitude for math and science demonstrated through the high school curriculum.
3. A minimum SAT math sectional score of 600 or a minimum ACT math of 27.

While these guidelines do not guarantee admission to SMU, they should assist students interested in studying engineering at SMU.

Admission to Advanced Standing

Admission From Dedman College and Other Schools Within SMU

After completion of the engineering subset, students are admitted to the Lyle School of Engineering through an interschool transfer. These transfers are approved by the appropriate department chair and the associate dean of the Lyle School of Engineering. For admission, a student must have completed 24 credit hours and must demonstrate the ability to achieve academic success in engineering or applied science by attaining a 2.000 or higher cumulative GPA. For admission into the civil engineering, computer engineering, computer science, electrical engineering, environmental engineering or mechanical engineering program, a 2.500 or higher GPA – and for management science, a 3.000 or higher GPA – is required in the following courses: DISC 1312/2305, 1313/2306 or equivalent, MATH 1337, 1338 or equivalent and the courses as follows for each Lyle major:

Civil Engineering	CEE 1302, CEE/ME 2310
Computer Engineering	CSE 1341 and 1342, KNW 2300, and C- or better in all subset courses
Computer Science	CSE 1341 and 1342, KNW 2300, and C- or better in all subset courses
Electrical Engineering	EE 1350, EE 2381, CSE 1341, CHEM 1303, PHYS 1303 (minimum of two)
Environmental Engineering	CEE 1302, CEE/ME 2310
Management Science	EMIS 1360, CSE 1341 and 1342, and C or better in all subset courses (Once a student enters SMU, all remaining subset courses must be completed through enrollment at SMU.)
Mechanical Engineering	ME 1302, ME 1305 or CSE 1341, ME/CEE 2310 (minimum of two)

With the exception of courses repeated using the First-Year Repeat Policy, all attempts of subset courses are used in computing the civil engineering, computer science, computer engineering, electrical engineering, environmental engineering and mechanical engineering subset GPA. For the management science subset GPA, only the first graded attempt is included in the subset GPA except for courses

repeated using the First Year Repeat Policy. The subset GPA for students who have Advanced Placement or International Baccalaureate credit is based upon the remaining graded subset courses. Current University grading policy, as summarized under Academic Forgiveness in the Grade Policies section of this catalog, permits forgiveness of academic work taken 10 or more years prior to the term of admission. Academic work forgiven under this policy will not be included in the subset GPA.

Admission by Transfer From Another Institution

Prospective transfer students interested in undergraduate degrees in engineering apply for undergraduate admission to SMU through the Office of Admissions, Southern Methodist University, PO Box 750181, Dallas TX 75275-0181. An undergraduate at a junior college, college or university may apply for transfer admission to SMU and the Lyle School of Engineering. Admission will be granted provided the prior academic records and reasons for transfer are acceptable to the Lyle School of Engineering. Transfer credit will be awarded in courses that have identifiable counterparts in curricula of the Lyle School of Engineering, provided they carry grades of C- or better. Transfer students will be expected to meet requirements equivalent to students admitted from Dedman College and other schools within SMU.

Transfer credit is awarded only for work completed at institutions that have regional or comparable accreditation. Because of the 60-term-hour SMU credit requirement for a bachelor's degree, there is a limit on the total amount of credit that may be applied toward a Lyle School of Engineering degree.

ACADEMIC REGULATIONS

Graduation Requirements for Baccalaureate Degrees

Graduation from the Lyle School of Engineering with a bachelor's degree requires the following standards of academic performance:

1. A passing grade must be received in every course in the prescribed curriculum.
2. An overall GPA of 2.000 or better must be attained in all college and university courses.
3. An overall GPA of 2.000 or better must be attained in all coursework attempted for the degree through enrollment at SMU.
4. An overall GPA of 2.000 or better must be attained in all coursework attempted for the degree in the major field of study.
5. A minimum of 122 term hours of credit must be attained, including the Universitywide requirements, and the requirements met for a major in engineering or applied science.

SMU and Lyle Credit Requirements

For graduation from the Lyle School of Engineering, 60 credit hours must be earned as SMU credit, including 30 credit hours in the major department or interdisciplinary program. Of the last 60 credit hours earned toward a degree, 45 must be completed through enrollment in courses offered by the faculty of the Lyle School of Engineering. Exceptions to this requirement will be made only under unusual circumstances at the discretion of the Lyle School of Engineering faculty.

The Major

A candidate for a degree must complete the requirements for a major in one of the departments of the Lyle School of Engineering. The applicable requirements of the major are those in effect during the academic year of matriculation, or those of a subsequent academic year. Coursework counting toward a major may not be taken pass/fail. Majors must be officially declared (or changed) through the Lyle Office of Undergraduate Studies.

Departmental Distinction Program

Students will be awarded departmental distinction by their major department upon successful completion of a special program of study, independent of their eligibility for Latin graduation honors or for graduation honors in the liberal arts. The special program of study leading to departmental distinction, undertaken in both the junior and senior years, requires independent reading and research beyond the regular departmental requirements for a degree. This award is conferred by the major department on the basis of criteria prescribed by the department, but all programs include the following requirements:

- A major GPA of 3.500 or higher.
- Successful completion of three hours of senior thesis approved by the academic adviser.
- Formation of a supervisory committee consisting of three members, with the chair being a resident tenured or tenure-track faculty member of the department, and a minimum of two full-time Lyle faculty members.
- Successful defense of the senior thesis, which consists of the presentation of the senior thesis in a public forum and subsequent oral examination by the supervisory committee to satisfy itself that the student performed the independent reading and conducted the research.

Currently, the Computer Science and Engineering Department and the Electrical Engineering Department offer departmental distinction programs.

Universitywide Requirements

All SMU undergraduate students share a common program of study designed to assure them of a broad liberal education regardless of their major. This requirement is designed to help each student learn to reason and think for oneself, become skilled in communicating and understanding, understand both the social and the natural worlds and one's own place and responsibilities in these environments, and understand and appreciate human culture and history in various forms, including religion, philosophy and the arts. Students should see the Universitywide Requirements section of this catalog for more information.

Dual Degree Programs

The Lyle School of Engineering offers concurrent dual degree programs with other SMU schools. Students may design and pursue a second major or minor degree program in consultation with their academic adviser.

PROGRAMS OF STUDY

The Lyle School of Engineering offers the following degrees:

- Bachelor of Science in Civil Engineering
- Bachelor of Science in Computer Engineering
- Bachelor of Science in Electrical Engineering
- Bachelor of Science in Environmental Engineering
- Bachelor of Science in Mechanical Engineering
- Bachelor of Science (Computer Science)
- Bachelor of Science (Management Science)
- Bachelor of Arts (Computer Science)

Engineering work can be classified by function, regardless of the branch, as follows: research, development, design, production, testing, planning, sales, service, construction, operation, teaching, consulting and management. The function fulfilled by an engineer results in large measure from personal characteristics and motivations, and only partially from his or her curriculum of study. Nonetheless, while engineering curricula may be relatively uniform, the modes of presentation tend to point a student toward a particular large class of functions. Engineering curricula at SMU focus generally on engineering functions that include research, development, design, management and teaching – functions ordinarily associated with additional education beyond the bachelor's degree.

The Lyle School of Engineering undergraduate programs in civil engineering, computer engineering, electrical engineering, environmental engineering and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET, www.abet.org. The undergraduate computer science program that awards the degree Bachelor of Science is accredited by the Computing Accreditation Commission of ABET. The undergraduate computer science program that awards the degree Bachelor of Arts is not accredited by a Commission of ABET. ABET does not provide accreditation for the discipline of management science.

Description of Courses

Courses offered in the Lyle School of Engineering are identified by a two-, three- or four-letter prefix code designating the general subject area of the course, followed by a four-digit number. The first digit specifies the approximate level of the course as follows: 1 – first year, 2 – sophomore, 3 – junior, 4 – senior and 5 – senior. The second digit denotes the credit hours associated with the course. The last two digits specify the course numbers. Thus, CSE 4381 denotes a course offered by the Department of Computer Science and Engineering at the senior (4) level, having three credit hours, and with the course number 81. The prefix codes are as follows:

CEE	Department of Civil and Environmental Engineering
CSE	Department of Computer Science and Engineering
EE	Department of Electrical Engineering
EMIS	Department of Engineering Management, Information and Systems
ENGR	Lyle School of Engineering Multidisciplinary Studies
ME	Department of Mechanical Engineering

CIVIL AND ENVIRONMENTAL ENGINEERING

Associate Professor Khaled F. Abdelghany, Chair

Professor: Halit Üster. **Associate Professors:** Khaled F. Abdelghany, Usama S. El Shamy, Andrew N. Quicksall, David A. Willis. **Assistant Professors:** S. Sevinc Sengor, Brett Story, Wenjie Sun. **Lecturer:** John H. Easton. **Adjunct Faculty:** Jane C. Ahrens, Samir Bougacha, Mark K. Boyd, Robert Casagrande, Weiping Dai, H. Elizabeth del Monte, Roger O. Dickey, Edward Forest, Hope Hagar, Anwar Hirany, Sina Iman, Kalpalatha (Latha) Kambham, Mehedy Mashnad, Steven D. McCauley, Mofid Nakhai, Sally R. Pinon, Jon D. Rauscher, Bennett Stokes, Patricia A. Taylor, Philip K. Turner, Rumanda K. Young, Jessie Marshall Zarazaga.

General Information

Undergraduate programs within the Department of Civil and Environmental Engineering educate and train leaders in the fields of environmental protection, resource management, construction and engineering design. Programs are tailored to the individual needs and interests of CEE students, so that students with interests in studying global climate change, protecting the quality of the drinking water, or designing the next generation of high-rise buildings or smart highways receive the training they need to excel in their careers. As part of their education, CEE students are paired with CEOs, business leaders, professional engineers, Environmental Protection Agency directors or corporate attorneys in a mentoring program designed to propel students into promising careers.

Civil and environmental engineering are inextricably linked. While civil engineering focuses on the infrastructure of modern society, environmental engineering is concerned with the well-being and health of the population and the environment. Civil and environmental engineering functioned as a single integrated discipline in the early 1900s when it was critical to address sanitary problems to protect public health and to develop regional water supplies and the civil infrastructure to support rapid urbanization and early industrialization. Separate disciplines gradually emerged, evolving and broadening to address the overall quality and function of modern society – preserving the environment while enabling the realization of an enriched life through technology.

Civil Engineering Program

Civil engineers are engaged in planning, design, construction, maintenance and management of the infrastructure of modern society. They are responsible for the design of water supply and wastewater treatment systems; transportation systems such as highways, railways, waterways, mass transit, airports, ports and harbors; dams, reservoirs and hydroelectric power plants; thermoelectric power plants; transmission and communication towers; high-rise buildings; and even aircraft and aerospace structures, shuttles and space stations. Every major structure critical to this country, and global society, depends on the work of civil engineers.

The mission of the civil engineering program is to prepare graduates for professional practice and advanced studies by focusing on the following areas: structural engineering, geotechnical engineering, transportation planning, environmental engineering and water resources. Graduates will be equipped with the skills and knowledge necessary to be fully participatory members of civil engineering teams and contributors to civil engineering efforts conducted within the evolving global economy.

The mission and educational objectives of the civil engineering program are consistent with the missions of the Civil and Environmental Engineering Department, the Lyle School of Engineering, and the overall institutional mission of SMU, and were determined based on the needs of the program's various constituencies. The program prepares graduates to achieve the following educational objectives during the medium term of their professional careers:

1. Assume important leadership positions in a globally competitive world.
2. Fully participate either as engineering designers or as managers in the public or private sectors.
3. Pursue advanced academic or professional degrees in engineering, medicine, law, business or public policy.
4. Licensing as professional engineers.

Environmental Engineering Program

The environmental field is dynamic and wide-ranging, comprising many different disciplines and professional roles. Environmental engineering and science involve not only traditional water and wastewater management, but also the management of hazardous and radioactive materials, pollution prevention and waste minimization, innovative hazardous waste treatment and site remediation processes, environmental and occupational health, resource conservation and recovery, sustainable development of natural resources, and air quality management and pollution control. In addition, modern manufacturing, both domestic and worldwide, focuses on using recycled and natural materials to fabricate products that are competitive in the marketplace and harmlessly degraded in the environment. The trend toward global manufacturing will grow stronger in the years ahead. Environmental challenges presented by this movement must be overcome if the economic and lifestyle benefits of globalization are to be extended to all peoples of the world.

The educational objectives of the environmental engineering program are consistent with the missions of the Civil and Environmental Engineering Department, the Lyle School of Engineering, and the overall institutional mission of SMU, and were determined based on the needs of the program's various constituencies. The program prepares graduates to achieve the following educational objectives during the medium term of their professional careers:

1. Assume important leadership positions in a globally competitive world.
2. Fully participate either as engineering designers or as managers in the public or private sectors.
3. Pursue advanced academic or professional degrees in engineering, medicine, law, business or public policy.
4. Licensing as professional engineers.

The environmental engineering program prepares graduates for professional practice and advanced study through a focus in the following areas: 1) water supply and resources, 2) environmental systems and process modeling, 3) environmental chemistry, 4) wastewater management, 5) solid waste management, 6) hazardous waste management, 7) atmospheric systems and air pollution control, and 8) environmental and occupational health.

Degrees Offered

The CEE Department offers undergraduate degrees as follows:

Bachelor of Science in Civil Engineering

Bachelor of Science in Civil Engineering
and Bachelor of Science with a major in mathematics (dual degrees)

Bachelor of Science in Environmental Engineering

Bachelor of Science in Environmental Engineering
and Bachelor of Science with a major in mathematics (dual degrees)

Bachelor of Science in Environmental Engineering with a premedical specialization

The Engineering Accreditation Commission of ABET, www.abet.org, has accredited the undergraduate programs in civil engineering and environmental engineering. Both the civil and environmental engineering programs are designed to prepare students for the Fundamentals of Engineering Examination, the first step toward licensure as a professional engineer. Engineering design is integrated throughout the civil and environmental engineering curricula, each culminating in a major design experience based on the knowledge and skills acquired in earlier coursework. In their senior year, the department's engineering students are required to take two terms of design where teams of two to four students work closely on practical projects sponsored by industry and government. Senior design projects incorporate engineering standards and realistic constraints including most of the following considerations: economic, environmental, sustainability, manufacturability, ethical, health and safety, social, and political. The department's engineering curricula ensure that students develop an understanding of the concepts of professional engineering practice, including ethical responsibilities, effective oral and written communication, engineering management and entrepreneurship, participation on multidisciplinary teams, procurement, bidding, the interaction of design and construction professionals, professional licensing, and the need for lifelong learning.

Departmental Facilities

CEE departmental offices and instructional and research laboratories are located in the new, state-of-the-art J. Lindsay Embrey Engineering Building, which is certified as a Leadership in Energy and Environmental Design Gold Building in LEED's internationally recognized green building certification program. Environmental teaching and research laboratories include dedicated space for air quality and meteorology, industrial hygiene, environmental microbiology, soil and water quality, and contaminant modeling. The air quality and meteorology laboratory includes modern airflow, pressure and volume measurement instrumentation. The industrial hygiene laboratory includes an inventory of the latest personal monitoring equipment for assessing occupational exposure to a variety of industrial process stressors including asbestos, noise, total and respirable dust, metals, radiation, and heat stress. The contaminant modeling laboratory provides space to conduct experiments for water quality assessment, to develop innovative biological and chemical treatment processes that remove and degrade potentially harmful contaminants, to develop multi-component reactive transport modeling of contaminants in the groundwater and subsurface environments, and to analyze groundwater flow regimes and fate and transport of contaminants in the subsurface.

The environmental teaching and research laboratories have sophisticated analytical capabilities for performing chemical analyses of air samples and for assessing the quality of water supplies and wastes and the effectiveness of water and waste treatment procedures. Major equipment includes a Thermo Scientific ozone analyzer, a Dynamax absorbance detector, a Hach DR 2500 scanning spectrophotometer for water quality analysis of numerous parameters, a Thermo Scientific inductively coupled plasma mass spectrometer, a PerkinElmer Fourier transform infrared spectrometer with attenuated total reflectance, a Dionex ion chromatography unit, a Cary bio UV-visible spectrometer with temperature control, and an Agilent gas chromatography and mass spectrometry unit for identifying and measuring numerous organic and inorganic compounds in environmental samples. Other miscellaneous equipment includes continuous ambient air monitoring devices, a UV-visible spectrophotometer, pH and other specific ion meters, incubating ovens, microscopes, furnaces, centrifuges, dissolved oxygen meters, a Mettler titrator for chemical and acid/base surface experiments, several temperature control baths, and a tumbler for constant temperature studies. An autoclave, microscopes and a UV light reader support basic engineering microbiological work.

Civil engineering teaching and research laboratories include dedicated space for mechanics of materials and structural engineering, hydraulics and hydrology, geotechnical engineering and transportation materials, and intelligent transportation systems. The Structural and Mechanics of Materials Laboratory is equipped for instruction and research on the behavior of materials under various loading conditions such as fatigue, impact, hardness, creep, tension, compression and flexure. This lab is equipped with an Instron 5582 universal materials testing machine, a Tinius-Olsen tension and compression test machine, a Didactec and a Tecquipment torsion test machine, a deflection test machine for simply supported beams, and a cantilever beam bending and deflection test apparatus. Major hydraulics and hydrology laboratory equipment includes a 5-meter open channel flume with various accessories (e.g., undershot weir, rotary undershot gate, and sharp and broad-crested weirs), a basic hydraulics bench for fundamental fluid mechanics experiments (e.g., hydrostatic pressure forces, Bernoulli's theorem and pipe friction losses), and a hydrology study system for hydrology experiments (e.g., simulating rainfall over watersheds and measuring resulting outflow hydrographs, and ground-water flow profiles). The geotechnical engineering and transportation materials laboratory has a Geocomp soil testing equipment automated set, a Geocomp direct residual shear test system automated set, a pocket penetrometer and the torvane shear device, and liquid and plastic limit devices. Traditional geotechnical testing equipment such as sieve analysis, hydrometer, constant head/falling head permeameter, liquid and plastic limits, compaction, and relative density are also available.

The Embrey Building also houses a dedicated computer-aided design laboratory with AutoCAD software and a general-use computer laboratory with personal computers, high-resolution color monitors and laser printers for use by the department's students. Computers in the CAD and general-use laboratories are connected through a high-speed network to the computer systems of the Lyle School of Engineering and SMU, as well as to off-campus systems via the Internet. The computer network provides access to general applications software and specialized software for engineering problems, including air dispersion modeling, AutoCAD, ArcGIS, hydrologic and hydraulic modeling for water resource systems, statistical analysis and stochas-

tic modeling, structural analysis and design, transportation systems planning and analysis, and water quality modeling.

Bachelor of Science in Civil Engineering

Curriculum Notes. In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the term credit hours within the civil engineering curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Mathematics and Science	34
MATH 1337, 1338, 2339, 2343 STAT 4340 <i>or</i> 5340 CHEM 1303/1113, 1304/1114 GEOL 1301 <i>or</i> 1315 <i>or</i> ANTH 2363 PHYS 1303/1105, 1304/1106	
Engineering Science and Design	10
CEE 2320, 2331, 2342/2142	
Civil Engineering and Design	46
CEE 1302, 2304, 2310, 2340/2140, 2372, 3310, 3323, 3350, 3385, 4350, 4351, 4380, 4381, 5354, 5378	
Civil Engineering Technical Electives	6
Selected with adviser's approval.	
Engineering Leadership	6
CEE 3302; one from CSE 4360; EMIS 3308, 3309	
	102

Bachelor of Science in Civil Engineering and Bachelor of Science With a Major in Mathematics

Curriculum Notes. In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the term credit hours within this curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Mathematics and Science	46
MATH 1337, 1338, 2339, 2343, 3315 <i>or</i> 3316, 3337 Two advanced MATH electives approved by math adviser STAT 4340 <i>or</i> 5340 CHEM 1303/1113, 1304/1114 GEOL 1301 <i>or</i> 1315 <i>or</i> ANTH 2363 PHYS 1303/1105, 1304/1106	
Engineering Science and Design	10
CEE 2320, 2331, 2342/2142	
Civil Engineering and Design	46
CEE 1302, 2304, 2310, 2340/2140, 2372, 3310, 3323, 3350, 3385, 4350, 4351, 4380, 4381, 5354, 5378	
Advanced Civil Engineering/Mathematics	6
Two from CEE 5361, 5364; ME 5322	
	108

Bachelor of Science in Environmental Engineering

Curriculum Notes. In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the term credit hours within the environmental engineering curriculum are distributed as follows:

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Mathematics and Science	38
MATH 1337, 1338, 2339, 2343 STAT 4340 <i>or</i> 5340 CEE 1331 <i>or</i> 2322, 5418 CHEM 1303/1113, 1304/1114 PHYS 1303/1105, 1304/1106	
Engineering Science and Design	9
CEE 2310, 2331, 2342	
Environmental Engineering and Design	42
CEE 1302, 2304, 2421, 2372, 3310, 3323, 3341, 3431, 3451, 4380, 4381, 5317, 5354	
Environmental Technical Electives	6
Selected with adviser's approval.	
Engineering Leadership	9
CEE 3302; two from CSE 4360; EMIS 3308, 3309	
	104

Bachelor of Science in Environmental Engineering and Bachelor of Science With a Major in Mathematics

Curriculum Notes. In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the term credit hours within this curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Mathematics and Science	50
MATH 1337, 1338, 2339, 2343, 3315 <i>or</i> 3316, 3337 Two advanced MATH electives approved by math adviser STAT 4340 <i>or</i> 5340 CEE 1331 <i>or</i> 2322, 5418 CHEM 1303/1113, 1304/1114 PHYS 1303/1105, 1304/1106	
Engineering Science and Design	9
CEE 2310, 2331, 2342	
Environmental Engineering and Design	42
CEE 1302, 2304, 2372, 2421, 3310, 3323, 3341, 3431, 3451, 4380, 4381, 5317, 5354	
Advanced Environmental/Mathematics Electives	6
Two from CEE 5331, 5332, 5334; ME 5336	
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**Bachelor of Science in Environmental Engineering
With a Premedical Specialization**

Curriculum Notes. In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the term credit hours within this curriculum are distributed as follows:

<i>Requirements for the Specialization</i>	<i>Credit Hours</i>
Mathematics and Science	56
MATH 1337, 1338, 2339, 2343 STAT 4340 <i>or</i> 5340 BIOL 1401, 1402, 3304, 3350 CEE 1331 <i>or</i> 2322 CHEM 1303/1113, 1304/1114, 3371/3117, 3372/3118 PHYS 1303/1105, 1304/1106	
Engineering Science and Design	9
CEE 2310, 2331, 2342	
Environmental Engineering and Design	39
CEE 1302, 2304, 2372, 2421, 3310, 3323, 3341, 3431, 3451, 4380, 4381, 5354	
Environmental Technical Electives	6
Selected with adviser's approval.	
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Minor in Civil Engineering

For approval of a minor in civil engineering, the student should consult the Civil and Environmental Engineering Department. A minimum of 15 term credit hours in civil engineering courses are required. The following is an example of an approved set of courses, totaling 16 term credit hours, that provides an emphasis on structural analysis and design: CEE 2310, 2340/2140, 3350, 3385, 4350. Based on the student's interests and background, other sets of civil engineering courses may be substituted with the approval of the Civil and Environmental Engineering Department.

Minor in Environmental Engineering

For approval of a minor in environmental engineering, the student should consult the Civil and Environmental Engineering Department. A minimum of 15 term credit hours in environmental engineering courses are required. The following is an example of an approved set of courses that provides a broad introduction to environmental engineering: CEE 2304, 2421, 3323, 3431, 5354. Based on the student's interests and background, other sets of environmental engineering courses may be substituted with the approval of the Civil and Environmental Engineering Department.

Minor in Global Development

Students may earn a minor in global development through the Civil and Environmental Engineering Department, supported by the Hunter and Stephanie Hunt Institute for Engineering and Humanity. A total of 18 term credit hours are required, with a minimum of six term credit hours at or above the 3000 level. All students are required to complete the introductory course CEE 1326. A depth component of six term credit hours must be completed in one of the following concentration areas:

Environmental Resources: CEE 2304, 2421, 3323, 3341, 3353, 5321, 5322

Political, Cultural and Economic Issues: EMIS 3309; CEE 3355, 5311, 5325, 5328

Technology and Innovation: CEE 1302; ME 1303; CEE 5327, 5329–30, 5378, 5384

An additional six hours of breadth are required, satisfied by taking one course from each of the two remaining concentrations. Students complete the capstone experience requirement by taking CEE 5391. The primary intent of the capstone experience is to incorporate site-based service learning opportunities for students through internships arranged by the Hunter and Stephanie Hunt Institute for Engineering and Humanity at the Lyle School of Engineering. Other opportunities, such as research, may also be accommodated based on individual student interests and career goals.

The Courses (CEE)

CEE 1301 (3). ENVIRONMENT AND TECHNOLOGY: ECOLOGY AND ETHICS. Introduces the economic, engineering, ethical, political, scientific, and social considerations of environmental decision-making and management. Examines local, regional, and global topics. Students take off-campus field trips.

CEE 1302 (3). INTRODUCTION TO CIVIL AND ENVIRONMENTAL ENGINEERING. Introductory course that emphasizes fundamental science, engineering, and ecological principles. Students develop their analytical and critical thinking skills with real-world problem-solving. Many of the hallmarks of modern society (e.g., high-rise office buildings, increased life span, the virtual elimination of numerous diseases, and reliable long-distance and public transportation systems) are the result of work by environmental and civil engineers. Likewise, environmental and civil engineers are at work on the many problems currently confronting developing nations: housing supply, food production, air and water pollution, spread of disease, traffic congestion, and flood control.

CEE 1326 (3). INTRODUCTION TO GLOBAL DEVELOPMENT. An interdisciplinary approach in addressing issues of international development. Explores the role and impact of economic, sociopolitical, and scientific principles on issues of the developing world. Lectures focus on the historical underpinning of current trends, theory, and practice of multidisciplinary development, modern issues facing the developing world, and potential courses of action.

CEE 1331 (3). METEOROLOGY. Meteorology is the science and study of the earth's atmosphere and its interaction with the earth and all forms of life. Meteorology seeks to understand and predict the properties of the atmosphere, weather, and climate from the surface of the planet to the edge of space. Appropriate for all interested undergraduates.

CEE 1378 (3). TRANSPORTATION INFRASTRUCTURE. An overview and definitions of infrastructure elements, with a focus on transportation. Also, principals of infrastructure planning and management, and congestion and performance measures. Includes relationships with the economy, the environment, safety, homeland security, and technology.

CEE 2140 (1). MECHANICS OF MATERIALS LABORATORY. Experiments in mechanics of deformable bodies, to complement CEE 2340. Simple tension tests on structural materials, simple shear tests on riveted joints, stress and strain measurements, engineering and true stress, engineering and true strain, torsion testing of cylinders, bending of simple supported beams, deflection of simply supported beams, buckling of columns, strain measurements of pressure vessels, Charpy impact tests, and the effect of stress concentrators. *Prerequisite or corequisite:* CEE/ME 2340.

CEE 2142 (1). FLUID MECHANICS LABORATORY. One 3-hour laboratory session per week. Experiments in fluid friction, pumps, boundary layers, and other flow devices to complement lecture material of CEE 2342. *Corequisite or prerequisite:* CEE/ME 2342.

CEE 2304 (3). INTRODUCTION TO ENVIRONMENTAL ENGINEERING AND SCIENCE. Introduction to a scientific and engineering basis for identifying, formulating, analyzing, and understanding various environmental problems, with a focus on material and energy balances for modeling environmental systems and processes. Examines traditional materials in air and water pollution, and emphasizes contemporary topics such as hazardous waste, risk assessment, groundwater contamination, global climate change, stratospheric ozone depletion, and acid deposition. Where appropriate, describes pertinent environmental legislation, derives and

applies engineering models, and introduces treatment technologies. *Prerequisites:* CHEM 1303, MATH 1338.

CEE 2310 (3). STATICS. Equilibrium of force systems, computations of reactions and internal forces, determinations of centroids and moments of inertia, and introduction to vector mechanics. *Prerequisite:* MATH 1337 or equivalent.

CEE 2320 (3). DYNAMICS. Introduction to kinematics and dynamics of particles and rigid bodies; Newton's laws; kinetic and potential energy; linear and angular momentum; and work, impulse, and inertia properties. *Prerequisite:* CEE/ME 2310 or equivalent.

CEE 2322 (3). FIELD METHODS FOR SOIL AND WATER ANALYSIS. Covers topics related to environmentally relevant fieldwork and field data analysis, with emphasis on field and lab practical experiences that are supplemented with necessary lecture. Addresses surface water and groundwater collection as well as the analysis of coliform bacteria, basic water quality parameters, and inorganic contaminants. Topics also include soil collection and analysis, sanitation and water systems in the field, mapping, basic GIS, and systems planning. *Prerequisite:* Sophomore or above standing.

CEE 2331 (3). FUNDAMENTALS OF THERMAL SCIENCE (THERMODYNAMICS). The first and second laws of thermodynamics and thermodynamic properties of ideal gases, pure substances, and gaseous mixtures are applied to power production and refrigeration cycles. *Prerequisites:* MATH 2339, CHEM 1303, CEE/ME 2310, PHYS 1303.

CEE 2340 (3). MECHANICS OF DEFORMABLE BODIES. Introduction to analysis of deformable bodies, including stress, strain, stress-strain relations, torsion, beam bending and shearing stresses, stress transformations, beam deflections, statically indeterminate problems, energy methods, and column buckling. *Prerequisite:* CEE/ME 2310.

CEE 2342 (3). FLUID MECHANICS. Fluid statics, fluid motion, systems and control volumes, basic laws, irrotational flow, similitude and dimensional analysis, incompressible viscous flow, boundary layer theory, and an introduction to compressible flow. *Prerequisites:* CEE/ME 2310, MATH 2339, PHYS 1303. *Prerequisite or corequisite:* MATH 2343.

CEE 2372 (3). INTRODUCTION TO CAD. Provides hands-on, state-of-the-art experience with computer-aided drafting using AutoCAD to produce drawings used for engineering presentations and construction. Students draw lines and curvilinear lines, use blocks and external references, write text, create plot files, and apply many other commands necessary to produce engineering drawings as used to construct environmental, civil, and structural engineering projects.

CEE 2421 (4). AQUATIC CHEMISTRY. Examines aspects of chemistry that are particularly valuable to the practice of environmental engineering. Provides basic groundwork for the quantitative analysis of water and wastewater systems, and covers fundamental methods of instrumental analysis. Presents elements of thermodynamics, acid-base, redox, and colloidal chemistry as appropriate. Laboratory sessions emphasize design, hands-on conduct of experimental procedures, and interpretation and statistical analysis of derived data. *Prerequisites:* CHEM 1303, 1304.

CEE 3302 (3). ENGINEERING COMMUNICATIONS. Both oral and written communications skills for engineers: engineering documents, writing standards, and presentations. Includes audience analysis, graphics, collaborative skills, and ethical issues. Students prepare several documents and presentations common in engineering practice. *Prerequisite:* Junior or senior standing in engineering.

CEE 3310 (3). COMPUTATIONAL METHODS FOR CIVIL AND ENVIRONMENTAL ENGINEERING APPLICATIONS. Applications of numerical analysis and computer programming techniques to civil and environmental engineering problems. Review of mathematical background is presented with emphasis on numerical modeling and computer-oriented solutions for engineering applications. Topics covered include precision and accuracy, errors, roots of equations, solution of linear algebraic equations, statistics and curve fittings, and numerical integration and differentiation. Also reviews examples from different areas of practice in civil and environmental engineering, including stress transformation, numerical integration to obtain beam deflection, numerical solution of Euler's buckling equation, roots of the equation for fluid flow in frictional pipe, optimization techniques applied to minimum potential energy, and solutions to the system of equations representing force-displacement relationship of a structure or the concentration of carbon monoxide in a space. *Corequisite:* MATH 2343.

CEE 3323 (3). WATER RESOURCES ENGINEERING. Introduces the hydrologic cycle and associated atmospheric processes through derivation and practical application of the hydrologic budget equation, encompassing precipitation, evaporation, transpiration, groundwater flow, and surface water runoff. Examines unit hydrographs and flood hydrograph routing through application of hydrologic simulation models. Exposes students to probabilistic analysis and extreme value theory for determination of flood and drought hazard. Interpretation and statistical analysis of climatologic, hydrologic, and other environmental data are emphasized. Introduces concepts of professional engineering practice, with emphasis on the need for professional licensing and project management through all phases of a typical project, including conception, planning, preparation of design drawings and specifications for bidding and procurement purposes, the interaction of design and construction professionals, and water resource systems operation. *Prerequisite:* CEE 2304. *Prerequisite or corequisite:* CEE/ME 2342.

CEE 3325 (3). GROUNDWATER HYDROLOGY. Introduces the hydrologic cycle and the subjects of porosity and permeability. Examines flow theory and its applications, storage properties, the Darcy equation, flow nets, mass conservation, the aquifer flow equation, heterogeneity and anisotropy, regional vertical circulation, unsaturated flow, and recharge. Considers well hydraulics, stream-aquifer interaction, and distributed- and lumped-parameter numerical models, as well as groundwater quality, mixing cell models, contaminant transport processes, dispersion, decay and adsorption, and pollution sources. *Prerequisites:* MATH 2343, CEE/ME 2342.

CEE 3327 (3). PRINCIPLES OF SURFACE WATER HYDROLOGY AND WATER QUALITY MODELING. Examines the theory and applications of the physical processes of the hydrologic cycle. Reviews different types of water bodies (streams, rivers, estuaries, bays, harbors, and lakes). Examines the principal quality problems associated with bacteria, pathogens, viruses, dissolved oxygen and eutrophication, toxic substances, and temperature. Emphasizes theoretical model approaches. *Prerequisites:* CEE 2421, MATH 2343.

CEE 3341 (3). INTRODUCTION TO SOLID AND HAZARDOUS WASTE MANAGEMENT. Examines technology, health, and policy issues associated with solid waste and hazardous materials. Introduces methods of managing solid and hazardous waste and presents regulations where appropriate. Also, the definition and characteristics of hazardous and solid waste materials, health frameworks, and the distribution of contaminants in the environment. *Prerequisites:* CEE 2304, 2421.

CEE 3350 (3). STRUCTURAL ANALYSIS. Emphasis on the classical methods of analysis of statically determinate and indeterminate structural systems. Also, computation of reactions, shears, moments, and deflections of beams, trusses, and frames. Students use computers as an analytical tool. *Prerequisites:* CEE/ME 2340, 2140.

CEE 3353 (3). INTRODUCTION TO ENVIRONMENTAL TOXICOLOGY. The physiological and biochemical effects of physical, chemical, and biological processes are linked to factors present in the environment. Describes natural phenomena in terms of the carbon, oxygen, sulfur, phosphorus, and heavy metal cycles. Examines the processes by which anthropogenic chemicals enter the environment and their complex effects on living organisms. *Prerequisite:* BIOL 1401. *Prerequisite or corequisite:* CHEM 3371.

CEE 3355 (3). ENVIRONMENTAL IMPACT EVALUATION, POLICY, AND REGULATION. Reviews methods for evaluating engineering projects on environmental quality. Also, environmental legislation, environmental quality indices, and the strengths and weaknesses of government methodologies to protect the environment. Considers pollution standards, marketable rights, taxes, citizen empowerment, and economic analysis and other policy perspectives. *Prerequisite:* CEE 2304.

CEE 3385 (3). SOIL MECHANICS AND FOUNDATIONS. Introduction to the basic principles governing the behavior of soils, foundations, and other geotechnical engineering works. Central concepts include the index properties and classification of soils, soil permeability and pore water movement, stress distribution in soil and the effective stress concept, bearing capacity, compressibility, consolidation, settlement, shear strength, and soil engineering properties and their measurement. Geotechnical facilities introduced include foundations, retaining walls, tunnels, excavations, earth-fill dams, pavements, stable earth slopes, sanitary landfills, and environmental remediation projects. *Prerequisite:* CEE/ME 2340. *Prerequisite or corequisite:* CEE/ME 2342.

CEE 3431 (4). FUNDAMENTALS OF AIR QUALITY I. Covers the science of air quality and its engineering, public health, and economic aspects. Topics include the sources of air pollutants, transport of pollutants in the environment, and atmospheric chemistry. Reviews the important properties and behavior of airborne particles and gases. Also, the science and national and international policies relating to greenhouse gas emissions, global climate change, and stratospheric ozone depletion. *Prerequisites:* CHEM 1303, MATH 1337 or equivalent, and PHYS 1303 or equivalent.

CEE 3451 (4). INDUSTRIAL HYGIENE AND OCCUPATIONAL HEALTH. Presents the recognition, evaluation, and control of health hazards in the working environment. Examines principles of industrial toxicology, risk assessment and/or management, occupational diseases, and occupational health standards. Also, the application of industrial hygiene principles and practice and the measurement and control of atmospheric contaminants. Introduces the design and evaluation of occupational exposure controls. Lecture and 3 hours of laboratory. *Prerequisite:* CHEM 1304.

CEE 4329 (3). DESIGN OF WATER AND WASTEWATER SYSTEMS. Covers physical, chemical, and biological concepts and processes that are specific to public water supplies and municipal wastewater management. Reviews fluid mechanics, and introduces hydraulic modeling for the design of water distribution networks and wastewater collection networks. Also, covers the design and operation of treatment systems for drinking water and for municipal wastewater pollution control. Students visit a public water supply treatment plant and a municipal wastewater treatment plant, and they employ process modeling to complete a design project for each type of plant. *Prerequisites:* CHEM 1303, CEE 2304, CEE/ME 2342.

CEE 4333 (3). FUNDAMENTALS OF AIR QUALITY II. Covers fundamental and advanced topics in air quality, building upon CEE 3431. Examines atmospheric dispersion of pollutants and uses modern computer models to predict transport. Presents a thorough review of energy technology and energy policy, focusing on the economics and environmental impacts of conventional and alternative methods of energy generation. Discusses the importance of indoor air quality, including the risks from radon and biological aerosols. Presents additional topics of current interest. Each student prepares a term paper related to energy policy and the environment. *Prerequisites:* CEE/ME 2331 or equivalent, CEE 3431.

CEE 4350 (3). DESIGN OF STEEL STRUCTURES. Study of strength, behavior, and design of metal structures; flexural and axial members; bolted and welded connections; and composite beams. *Prerequisite:* CEE/ME 3350.

CEE 4351 (3). DESIGN OF CONCRETE STRUCTURES. Study of strength, behavior, and design of reinforced concrete structures; members subjected to flexure; shear and axial loads; and design of one-way slabs. *Prerequisite:* CEE/ME 3350.

CEE 4380 (3). CIVIL AND ENVIRONMENTAL ENGINEERING DESIGN I. Students complete a term-long environmental or civil engineering project for an industrial or regulatory client, and they examine the nature of design problems, constraints, and analytical tools in an applied setting. Employs an integrated design process that includes problem identification and formulation, project planning, the evaluation of alternatives, internal peer review and design iterations, the preparation of design drawings and specifications for bidding and procurement purposes, the interaction of design and construction professionals, and the implementation of the completed project. *Prerequisites:* Senior standing and CEE 3302.

CEE 4381 (3). CIVIL AND ENVIRONMENTAL ENGINEERING DESIGN II. Students complete a term-long environmental or civil engineering project for an industrial or regulatory client. The client and faculty assess the completed design project. Multidisciplinary design teams stress the need for personal and written communication skills, leadership, effective group participation, and creative problem-solving. Reinforces concepts of professional engineering practice through student participation in applied design problems. Also, the need for professional licensing, the ethical responsibilities of licensed engineers, and the need for lifelong learning to stay abreast of changing technology and public policy through active participation in professional societies, self-study, and continuing education. Students prepare and present periodic progress reports, reviews, and a final report. *Prerequisite:* CEE 4380.

CEE 5050 (0). UNDERGRADUATE INTERNSHIP. This course represents a term of industrial work experience for noncooperative education students. The course designates a student as full time for the term, but it carries no academic credit. Registration for the course is the same as for

other SMU courses except that no tuition is charged. The course grade is determined by a written report submitted by the student at the end of the term and graded by the student's adviser.

CEE 5090 (0). CEE SEMINAR. Lectures by invited speakers from industry and academia, including SMU faculty and students, dealing with engineering practice and research topics of current interest in environmental and civil engineering. All students, staff, and faculty are invited.

CEE 5191 (1). SPECIAL PROJECTS. Intensive study of a particular subject or design project, not available in regular course offerings, under the supervision of a faculty member approved by the department chair.

CEE 5192 (1). SPECIAL PROJECTS. Intensive study of a particular subject or design project, not available in regular course offerings, under the supervision of a faculty member approved by the department chair.

CEE 5291 (2). SPECIAL PROJECTS. Intensive study of a particular subject or design project, not available in regular course offerings, under the supervision of a faculty member approved by the department chair.

CEE 5292 (2). SPECIAL PROJECTS. Intensive study of a particular subject or design project, not available in regular course offerings, under the supervision of a faculty member approved by the department chair.

CEE 5311 (3). ENVIRONMENTAL AND HAZARDOUS WASTE LAWS. Federal environmental laws, with emphasis on laws dealing with hazardous substances, such as the Comprehensive Environmental Response, Compensation, and Liability Act and the Resource Conservation and Recovery Act. Also, regulations and the regulatory framework, definitions and substantive requirements, roles of the states and the federal Environmental Protection Agency, compliance and enforcement, and case studies.

CEE 5312 (3). RISK ASSESSMENT AND HEALTH EFFECTS. Introduction to toxicology as it relates to environmental and health effects of hazardous materials. Covers risk management factors, including the legal aspects. Also, toxicology methodology, human health and ecological risk assessment, risk communication, emergency response, and computer databases.

CEE 5313 (3). ENVIRONMENTAL CHEMISTRY AND BIOLOGY. Covers chemical and biochemical processes, chemical thermodynamics, acid-base equilibria, precipitation and dissolution, oxidation-reduction processes, environmental transformations of organic materials, introductory taxonomy, microbial growth and kinetics, energy transfer, and microbial ecosystems. Also, controlling fate and transport of hazardous materials, with emphasis on chemical equilibria.

CEE 5314 (3). ENVIRONMENTAL REGULATIONS AND COMPLIANCE. Practical knowledge of federal and state environmental permitting processes and procedures is provided. Regulatory requirements are reviewed with emphasis on the 40 CFR regulations for water, air, and solid hazardous waste. Air, water, storm water, and waste permits are reviewed, as well as permits-by-rule. Also explored are the consequences of non-compliance with regulations by presenting enforcement options available to government agencies.

CEE 5315 (3). INTEGRATED WASTE MANAGEMENT. Comprehensive introduction to the fundamentals of the complex interdisciplinary field of hazardous waste management. Covers current management practices, treatment and disposal methods, and site remediation. Includes detailed case studies and design examples to evaluate the effectiveness of different treatment and containment technologies in addressing today's hazardous waste situations.

CEE 5317 (3). ENVIRONMENTAL ORGANIC CHEMISTRY. Examines the fundamental processes that govern the transformation of organic chemicals in natural and engineering systems. Includes an overview of organic chemistry, with a focus on the basic properties of organic compounds, such as nomenclature and structures. Covers the physical transformations of organic compounds to provide an understanding of processes (e.g., sorption and volatilization) that control the distribution of organic chemicals between different phases such as air, water, and soil. Also, organic chemical reactions in the environment, with an emphasis on environmentally mediated reactions (e.g., hydrolysis and photolysis) that control the breakdown of organic chemicals.

CEE 5319 (3). SOIL CHEMISTRY AND MINERALOGY. Examines soil solution chemistry and reactivity. Covers distribution and significance of common soil minerals, weathering, and gen-

eral solid phase reactivity. Lab covers mineral structures, techniques of mineral identification, and solution-solid phase partitioning. *Prerequisite:* CEE 2421 or permission of instructor.

CEE 5321 (3). PHYSICAL AND CHEMICAL WASTE TREATMENT. Introduces waste minimization techniques and objectives, and thoroughly reviews chemical equilibrium and chemical reaction kinetics. Design and analysis equations and procedures are rigorously derived for chemical reactors and physical unit operations. The treatment objectives examined include 1) solids-liquid separation accomplished by coagulation and flocculation, sedimentation, filtration, flotation, and solids handling processes; 2) immiscible liquid separation brought about by emulsion-breaking chemicals and gravity and flotation oil-water separators; 3) phase and species transformations through pH neutralization, chemical precipitation, chemical oxidation and/or reduction, air stripping, and solidification and/or stabilization; and 4) solute separation and concentration achieved with activated carbon absorption, synthetic ion exchange resins, and membrane separation techniques.

CEE 5322 (3). BIOLOGICAL WASTE TREATMENT. Topics include an overview of microbiology and microbial metabolism, the kinetics of biological growth, and aerobic suspended growth processes, including the various modifications of the activated sludge process, aerated lagoons, and sequencing batch reactors. Also, aerobic attached growth processes such as trickling filters, biofilter towers, and rotating biological contactors. Covers anaerobic processes, including sludge digestion and liquid waste treatment with the anaerobic contact process and anaerobic filters. Examines biosolids handling and disposal, composting, land treatment, in situ biotreatment, and biotreatment of contaminated soils.

CEE 5323 (3). PROJECT MANAGEMENT. Covers the role of the project officer, and the systems and techniques for planning, scheduling, monitoring, reporting, and completing environmental projects. Also, total quality management, project team management and development of winning proposals, and contract management and logistics. Includes case study application of project management to all environmental media and programs, community relations, risk communication, crisis management, consensus building, media, and public policy.

CEE 5324 (3). GEOGRAPHICAL INFORMATION SYSTEMS AND MAPPING. Introduces modern GIS software and tools, including map design, geodatabases, geospatial and attribute data, geocoding, and simple spatial analysis. Students use research-based projects to explore GIS as a tool for innovative spatial thinking and as a catalyst for sustainable strategies.

CEE 5325 (3). DISASTER MANAGEMENT. Introduction to basic concepts in disaster management and to key methods in the field, including simulation modeling, consequence analysis tools, design criteria, statistical and case study methods (lessons learned), and risk analysis. Students draw on a range of sources (the textbook, the U.S. National Response Plan, research papers, etc.) to explore the fundamentals of preparedness, mitigation, response, and recovery. An all-hazards approach is taken, providing analysis of natural, technological, and man-made disasters.

CEE 5326 (3). SUSTAINABLE TRANSPORTATION. Covers planning and operations management of sustainable transportation systems with a focus on energy efficiency. Provides an integrated overview of main concepts and issues related to developing sustainable transportation systems for urban areas, freight transportation, and aviation. Also, advanced topics related to vehicle technologies, alternative energy, and smart cities. Presents findings from national and international case studies. *Prerequisite:* Senior standing or permission of instructor.

CEE 5327 (3). OPTIMIZATION AND RELIABILITY FOR INFRASTRUCTURE AND ENVIRONMENTAL SYSTEMS. Introduces the concepts of engineering systems optimization, reliability, and risk assessment and applies them to civil and environmental engineering systems. Topics include an introduction to engineering systems definition, classical methods of optimization, linear programming, integer programming, dynamic programming, nonlinear optimization, and reliability and risk concepts in engineering planning and design. Engineering applications include transportation networks, fleet assignment, supply chain management, environmental engineering systems, fluid transport and water reservoir operation, and structural engineering systems. Advanced topics include an introduction to chance-constrained optimization and basic decomposition approaches

CEE 5328 (3). INTRODUCTION TO SUSTAINABILITY. Introduces basic concepts in sustainability. Students draw on a range of sources, including selected books and readings, to explore the idea of total connectedness of resource use globally, with particular emphasis on the situation in North Texas. Addresses the issues of air quality and energy supply, sustainable construc-

tion, water use, transit and other related areas of resource use, and waste generation. Guest lecturers provide a series of multiple viewpoints and areas of specific expertise. *Prerequisite:* Graduate standing or permission of instructor.

CEE 5329 (3). METHODS AND TECHNOLOGY FOR SUSTAINABILITY. Covers technologies and methods used in sustainable design and analysis. Topics include the scientific understanding of alternative energy systems, water reuse and supply, and state-of-the-art materials created for sustainability. Also, methods for assessing sustainability, including life cycle assessment and the development of sustainable indicators. *Prerequisite:* Graduate standing or permission of instructor.

CEE 5330 (3). DESIGN FOR SUSTAINABILITY. Introduces the issues involved in creating a sustainable built environment. Addresses issues of resource use at the regional and project-specific level, specific techniques for designing and constructing sustainable buildings, and the USGBC's LEED system. Students discuss systems of measurement for sustainable properties on a comparative level. *Prerequisite:* Graduate standing or permission of instructor.

CEE 5331 (3). AIR POLLUTION MANAGEMENT AND ENGINEERING. Covers the science, engineering, public health, and economic aspects of air quality. Students develop an in-depth understanding and broad knowledge of the sources and properties of air pollutants, air quality management, fate and transport of pollutants in the environment, regulations of air quality, and the operation and design of air pollution control systems. Reviews the status of science, policy, and regulations on several selected topics such as urban smog, regional haze, greenhouse gas and global climate change, stratospheric ozone depletion, and mercury emissions and control. *Prerequisites:* CHEM 1304, MATH 1337 or equivalent, and PHYS 1303 or equivalent.

CEE 5332 (3). GROUNDWATER HYDROLOGY AND CONTAMINATION. Groundwater hydrology, aquifer and well hydraulics, flow equations and models, implications for landfill design, sources and nature of groundwater contaminants, monitoring and analysis, contaminant fate and transport, transport model for hazardous substances, groundwater pollution control measures, containment and treatment, and groundwater quality management. *Prerequisite:* MATH 2343.

CEE 5333 (3). LABORATORY METHODS IN ENVIRONMENTAL ENGINEERING. Provides hands-on, state-of-the-art experience with important experimental methods in environmental systems, evaluating the reliability and significance of parameter determinations. Covers instrumental and statistical methods used for characterization of water, air, and soil quality. Also, introduces treatability studies, including reactor dynamics. Provides 2 hours of lecture and 3 hours of laboratory component. *Prerequisite:* CEE 5313 or two terms of undergraduate chemistry.

CEE 5334 (3). FATE AND TRANSPORT OF CONTAMINANTS. Covers the development and application of fate and transport models for waterborne contaminants, with a focus on the material balance principle. Includes mass transport and transformation processes, lake and reservoir modeling, stream modeling, general flow case, groundwater models, multiphase and integrated modeling approaches, and case studies. Also, water-sediment, water-soil, and water-air interfaces.

CEE 5335 (3). AEROSOL MECHANICS. Fundamental and advanced principles of airborne particles, including their physical properties; aerodynamic behavior; and collection, measurement, and analysis. Emphasizes the origins and properties of atmospheric aerosols and the design of air pollution control equipment. *Prerequisite:* CEE 3431, CEE/ME 2342, or equivalent.

CEE 5340 (3). INTRODUCTION TO SOLID MECHANICS. Three-dimensional stress and strain, failure theories, introduction to two-dimensional elasticity, torsion of prismatic members, beams on elastic foundation, introduction to plates and shells, and energy methods. *Prerequisites:* CEE/ME 2340, MATH 2343.

CEE 5350 (3). INTRODUCTION TO ENVIRONMENTAL MANAGEMENT SYSTEMS. An in-depth introduction to environmental management systems. Includes systems such as EMAS, Responsible Care, OHSAS 18000, ISO 14000, and the Texas EMS program. Takes a step-by-step look at the ISO 14002 standard, from the policy statement to the management review, and allows students to fully understand the plan, do, check, act approach of the system. Also introduces management system auditing, the requirements of a system auditor, and the certification process.

CEE 5351 (3). INTRODUCTION TO ENVIRONMENTAL TOXICOLOGY. Presents toxicology as it relates to environmental and health effects of hazardous materials. Examines toxicological methodologies, pharmacokinetics, mechanisms of action to toxicants, origin response to toxic substances, and relevant aspects of the occupational and regulatory environment. Topics include toxicology of metals, radiation, industrial solvents and vapors, pesticides, teratogens, mutagens, and carcinogens. Also, risk communication and risk assessment as they relate to toxic substance exposure.

CEE 5352 (3). MANAGEMENT OF RADIOACTIVE HAZARDS. Presents principles of radioactive material production, uses, and hazards, with emphasis on their safe control and management. Examines topics in health physics and radiation protection related to the commercial nuclear industry, including uranium fuel production, light water reactor technologies, and industrial and medical uses of radioactive byproduct materials. Develops risk assessment methods and hazard management connected to the fuel cycles. Studies the regulation of radioactive materials, with a focus on the licensing of regulated industries, radioactive material transportation, radioactive waste management and disposal, radiological emergency preparedness, and decommissioning. *Prerequisite:* CEE 5313.

CEE 5353 (3). ENVIRONMENTAL EPIDEMIOLOGY. Introduction to the science of epidemiology. Covers the design and conduct of studies examining the health effects of environmental exposures, and the strengths and limitations of research strategies and interpretation of study results. Includes air and water pollution, lead, and biological marker outcomes.

CEE 5354 (3). ENVIRONMENTAL ENGINEERING PRINCIPLES AND PROCESSES. Introduces waste minimization and pollution prevention techniques and objectives. Includes a comprehensive study of biological, chemical, and physical principles and treatment strategies for controlling pollutant emissions, with equal emphasis on underlying theory and practical engineering application of both common and innovative water and wastewater treatment processes. Includes rigorous derivation of design equations, procedures, and process models for chemical and/or biological reactors and physical unit operations. Places emphasis on engineering analysis and application of process modeling techniques for design of unit processes to achieve specific treatment objectives. *Prerequisites:* CHEM 1303, CEE 2304, CEE/ME 2342, and MATH 2343.

CEE 5361 (3). MATRIX STRUCTURAL ANALYSIS AND INTRODUCTION TO FINITE ELEMENT METHODS. A systematic approach to the formulation of force and displacement method of analysis, the representation of structures as assemblages of elements, and computer solution of structural systems. *Prerequisite:* CEE/ME 3350 or permission of instructor.

CEE 5362 (3). ENGINEERING ANALYSIS WITH NUMERICAL METHODS. Applications of numerical and approximate methods in solving a variety of engineering problems. Examples include equilibrium, buckling, vibration, fluid mechanics, thermal science, and other engineering applications. *Prerequisite:* Permission of instructor.

CEE 5363 (3). ARCHITECTURAL AND STRUCTURAL ENGINEERING. Introduces the basic principles of structural analysis and mechanics of deformable bodies. Presents structural systems and principles, with an emphasis on architectural design. Provides students with a conceptual introduction to structures, emphasizing the integration of structural and architectural design. Discusses case studies of buildings. *Prerequisites:* CEE/ME 2310, 2320.

CEE 5364 (3). INTRODUCTION TO STRUCTURAL DYNAMICS. Examines the dynamic responses of structures and the behavior of structural components to dynamic loads and foundation excitations. Also, single- and multidegree-of-freedom systems response and its applications to analysis of framed structures. Introduces systems with distributed mass and flexibility. *Prerequisite:* MATH 2343.

CEE 5365 (3). INTRODUCTION TO CONSTRUCTION MANAGEMENT. Examines construction practice techniques, current technological tools, and building codes and regulations. Includes cost estimating, bidding, contracts and contract bonds, risk and umbrella excess insurance, labor law, and labor relations. Addresses business methods with respect to managing project time and cost, including the typical forms used in construction.

CEE 5366 (3). INTRODUCTION TO FACILITIES ENGINEERING SYSTEMS. Examines the interrelationships of fire protection, HVAC, electrical, plumbing, lighting, telecommunications, and energy management systems for buildings. Uses a life cycle approach to examine the cost

durability, maintainability, operability, and safety of each system. Also, facility operations, facility maintenance and testing, and assessments.

CEE 5367 (3). TELECOMMUNICATIONS IN FACILITY PLANNING. Presents a thorough description of telecommunications technology, and provides the student with a working knowledge of its fundamental concepts for voice and data. Topics include digital communications, standards and protocols, Ethernets, local area networks, fiber optics, and voice technologies.

CEE 5368 (3). FACILITIES CONTRACT MANAGEMENT. Provides a critical foundation and understanding of the terminology, arts, and skills of contracts and contract negotiation, review, and preparation, as well as insurance and risk management. Also, lease analysis, licensing and permits, when and how bidding contracts are warranted, how to prepare specifications and their role in contract creation, and supplier and vendor management in the postcontractual process.

CEE 5369 (3). ELECTRICAL, MECHANICAL, AND PIPING SYSTEMS FOR BUILDINGS. Examines mechanical and electrical systems for buildings, with emphasis on practical aspects of the subjects. Presents space planning and architectural considerations, including cost and environmental impact of the mechanical and electrical systems. *Prerequisites:* Undergraduate introduction to electrical circuits, classical mechanics, and fluid dynamics or instructor consent.

CEE 5370 (3). FACILITY PLANNING. Covers the overall planning process for construction projects and presents the three divisions of planning (program planning, project planning, and activity planning) in an integrated manner. Includes different modeling approaches for the planning process.

CEE 5371 (3). FACILITY FINANCIAL AND ASSET MANAGEMENT. Examines financial analysis and reporting, concepts and methods of accounting, budgeting, and evaluation of projects. Presents the role of facility managers in affecting corporate earnings and valuations. Includes the management of the facility over its entire life cycle, extending from planning and budgeting to the management of its assets and construction projects.

CEE 5373 (3). PRESTRESSED CONCRETE. Theory and application of prestressed concrete members' time-dependent deflections. Also, continuous prestressed beams. *Prerequisite:* CEE/ME 4350.

CEE 5375 (3). ADVANCED CONCRETE DESIGN. Behavior, analysis, and design of concrete slender columns, two-way slab systems, and deep beams; yield line analysis for slabs; and design and behavior of shear walls, retaining walls, and foundation systems. *Prerequisite:* CEE/ME 4350.

CEE 5377 (3). ADVANCED STEEL DESIGN. The behavior and design of steel structures, including general methods of plastic analysis, plastic moment distribution, steel frames, unbraced and braced frames, and composite construction. *Prerequisite:* CEE/ME 4350.

CEE 5378 (3). TRANSPORTATION PLANNING AND TRAFFIC ENGINEERING. Focuses on the analysis and modeling of urban transportation systems. Includes an overview of main definitions and terminologies involved in the planning and modeling of urban transportation systems. Introduces the concept of urban transportation planning systems along with an overview of various models used in travel demand forecasting. Describes the principles of traffic operations, analysis, and control. *Prerequisite:* Knowledge of the principles of probability and statistics.

CEE 5379 (3). HIGHWAYS DESIGN AND SAFETY. Provides an overview of the principals of highways design and traffic safety. Topics include highways functional classification, design control and criteria, driver performance, sight distance, horizontal and vertical alignments, cross section elements, design of freeways, intersections and interchanges, traffic safety, and environmental impact assessment.

CEE 5380 (3). MANAGEMENT OF INDUSTRIAL AND MISSION-CRITICAL FACILITIES. Efficient industrial centers require balanced consideration with respect to facility design and function. Mission-critical component management and information technology systems are designed for exceptionally reliable performance and efficient operation. This course emphasizes the component systems that are designed to maintain a high level of function. Covers electrical and mechanical reliability, efficiency, readiness, robustness, and flexibility, and the management of the information technology systems. Explores strategies designed to eliminate costly downtimes, with emphasis on standby generators; automatic transfer switches; uninterruptable power supplies; fuel, fire, and battery systems; energy security; and environmental and cooling

technologies. Presents the implementation of sustainable technology, green certifications, and alternative energy strategies that are compatible with the mission-critical requirements of the facility. Includes operational approaches to reduce energy requirements for power and cooling, mandated safety standards, and environmental codes.

CEE 5381 (3). SITE SELECTION FOR INDUSTRIAL AND MISSION-CRITICAL FACILITIES. Efficient industrial centers and facilities with mission-critical subsystems such as data-centers require balanced considerations with respect to facility design and site location. Site location plays an integral role in creating successful projects that especially support high reliability and promote sustainable design. While the important factors may vary from site to site, in any given instance a single factor can undermine the success of an otherwise excellent project. Ready availability and proper site selection that minimizes risk of disruption are particularly important factors for successful operation. Covers siting considerations, including power needs, electrical mix, weather patterns, building codes, proximity to the workforce and transportation, and other topics that bear on reliable operation. Emphasizes strategies of site selection to adequately safeguard hardware and mission-critical data.

CEE 5383 (3). HEATING, VENTILATING, AND AIR CONDITIONING. Examines the science and practice of controlling environmental conditions through the use of thermal processes and systems. Specific applications include refrigeration, psychometrics, solar radiation, heating and cooling loads in buildings, and design of duct and piping systems. Emphasizes theory and analysis. *Prerequisites:* CEE/ME 2331, 2342; ME 3332.

CEE 5384 (3). ENERGY MANAGEMENT FOR BUILDINGS. Examines procedures to select energy savings options for buildings, with emphasis on the practical aspects of the subject. Considers space planning, architectural considerations, cost, and environmental impact of the mechanical and electrical systems along with optimizing the life cycle cost of the proposed alternative. Software for life cycle cost and energy analysis is used to calculate energy consumption and compare energy features of proposed, audit-determined feasible changes to a building.

CEE 5385 (3). ADVANCED SOIL MECHANICS. Physicochemical properties of soil and soil stabilization, advanced theories of soil deformation and failure as applied to slope stability and lateral loads, and soil and water interaction in earthen dams. *Prerequisite:* CEE 3385.

CEE 5386 (3). FOUNDATION ENGINEERING. Covers the application of soil mechanics principles to the design and construction of shallow and deep foundations. Topics include subsurface investigation procedures to obtain soil parameters for design and construction of structure foundations, bearing capacity and settlement analyses, construction procedures, and soil improvement techniques. *Prerequisite:* CEE 3385.

CEE 5387 (3). GEOTECHNICAL EARTHQUAKE ENGINEERING. Provides fundamental knowledge and practical application of soil dynamics and geotechnical earthquake engineering. Includes an overview of seismic hazards, the fundamentals of vibration, wave propagation in an elastic medium, the properties of dynamically loaded soils, earthquake-induced ground motion, ground response analysis, lateral earth pressure on retaining walls, the liquefaction of soils, and seismic stability of earth embankments. *Prerequisite:* CEE 5364 or approval of instructor.

CEE 5388 (3). GROUNDWATER AND SEEPAGE. Examines fundamental principles of flow through porous media and related engineering problems. Topics include the saturated seepage theory and flow nets, the unsaturated flow theory, suction-saturation and saturation-hydraulic conductivity relationships, the principle of effective stress, laboratory and field testing methods for determining material characteristics, and numerical models for flow-related engineering problems. *Prerequisite:* CEE 3385 or equivalent.

CEE 5391 (3), 5392 (3), CEE 5491 (4), CEE 5492 (4). SPECIAL PROJECTS. Intensive study of a particular subject or design project, not available in regular course offerings, under the supervision of a faculty member approved by the department chair. *Prerequisite:* Junior or senior standing required.

CEE 5418 (4). ENGINEERING MICROBIOLOGY. Examines aspects of microbiology that are particularly valuable to the practice of environmental engineering. Specific areas of focus include enzyme and growth kinetics, cell structure and physiology, process of biotransformation, microbial and/or environmental interactions, and biogeochemical cycles. Elements of molecular biology and biotechnology are also presented as appropriate. Students gain a basic understanding and appreciation of microbial processes that are applicable in the field of environmental engineering. *Prerequisites:* CHEM 1303 and 1304, or equivalent.

COMPUTER SCIENCE AND ENGINEERING

Professor Sukumaran V.S. Nair, Chair

Professors: Frederick R. Chang, David W. Matula, Sukumaran V.S. Nair, Stephen A. Szygenda, Mitchell A. Thornton, Jeff Tian. **Associate Professors:** Jennifer A. Dworak, Daniel W. Engels, Ira Greenberg, LiGuo Huang. **Assistant Professors:** Eric C. Larson, Tyler W. Moore. **Senior Lecturer:** Frank P. Coyle. **Lecturers:** Donald E. Evans, Theodore W. Manikas. **Clinical Technical Professor:** Mark Fontenot. **Adjunct Faculty:** Jeffrey D. Alcantara, Eduardo Blanco, Andrew W. Blanton, Timmothy Boyd, William A. Bralick, Jr., Ben A. Calloni, Hakki C. Cankaya, Christian P. Christensen, Darin DeRita, Maya El Dayeh, Aaron L. Estes, Dennis J. Frailey, Manal Hourri, Kenneth R. Howard, Mihaela Iridon, Bhanu Kapoor, Mohamed M.I. Khalil, Kamran Z. Khan, R. Mallik Kotamarti, Paul Krier, Karl C. Lewis, Lun Li, D. Kall Loper, Matthew R. McBride, Lee D. McFearin, Freeman L. Moore, Anurag Nagar, Padmaraj M.V. Nair, Robert S. Oshana, John J. Pfister, Leonid Popokh, Sohail Rafiqi, Mohamed O. Rayes, Luis G. Resendis, Gheorghe M. Spiride, Raymond E. Van Dyke.

General Information

The Department of Computer Science and Engineering at SMU offers academic programs in computer engineering and computer science. Faculty specializations include computer architecture, data mining, knowledge engineering, software engineering, design and analysis of algorithms, parallel processing, database management, very large-scale integration computer-aided design methods, bioinformatics, computer networks, data and network security, mobile computing, theory of computation, and computer arithmetic. The educational objectives of the undergraduate programs in the CSE Department are to produce graduates who become productive professionals in an information technology discipline, pursue graduate or professional degrees, are successful entrepreneurs and managers, have a broad knowledge and wide range of interests, are valuable members of their general community and take a leadership role in their chosen field. As such, the programs are designed to ensure that graduates have the following abilities:

For graduates with degrees in computer science

- a) The ability to apply knowledge of computing and mathematics to software design and computing problems.
- b) The ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.
- c) The ability to design, implement and evaluate a computer-based system, process, component or program to meet desired needs.
- d) The ability to function effectively on teams to accomplish a common goal.
- e) An understanding of professional, ethical, legal, security and social issues and responsibilities.
- f) The ability to communicate effectively with a range of audiences both in an oral and written form.
- g) The broad liberal arts education necessary to analyze the local and global impact of computing on individuals, organizations and society.
- h) The recognition of the need for and the ability to engage in continuing professional development and lifelong learning.

- i) The ability to use the techniques, skills and modern computing and software engineering tools necessary for computing practice.

For graduates with degrees in computer engineering

- a) The ability to apply knowledge of mathematics, science and engineering to software and hardware design problems.
- b) The ability to design and conduct experiments and to analyze and interpret data related to software and hardware design solutions.
- c) The ability to design a system, component or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- d) The ability to function on multidisciplinary teams using current computer engineering tools and technologies.
- e) The ability to identify, formulate and solve engineering problems based on a fundamental understanding of concepts of computer engineering topics.
- f) An understanding of personal, professional and ethical responsibility.
- g) The ability to communicate effectively both in an oral and written form.
- h) The broad liberal arts education necessary to understand the impact of engineering solutions in a global, economic, environmental and societal context.
- i) The recognition of the need for and the ability to engage in lifelong learning.
- j) A knowledge of contemporary issues in computer engineering.
- k) The ability to use the techniques, skills and modern engineering tools necessary for computer engineering practice.

The CSE Department is engaged in an ongoing assessment process that evaluates the success in meeting these outcomes and enhances the development of the program.

Degrees

The CSE Department offers undergraduate degrees as follows:

Bachelor of Science – major in computer science

Bachelor of Science – major in computer science with a premedical specialization

Bachelor of Science in Computer Engineering

Bachelor of Arts – major in computer science

The undergraduate program in computer engineering is accredited by the Engineering Accreditation Commission of ABET, www.abet.org. The undergraduate computer science program that awards the degree Bachelor of Science is accredited by the Computing Accreditation Commission of ABET. The undergraduate computer science program that awards the degree Bachelor of Arts is not accredited by a Commission of ABET.

Dual Degree Program

The Lyle School of Engineering offers a dual degree with the Meadows School of the Arts that leads to the degrees of B.A. in music and B.A. in computer science. Students should contact the department for additional details. Other dual majors can be arranged in consultation with an adviser.

4 + 1 Master's Degree Program

The 4+1 Program allows students to complete both B.S. and M.S. degrees in five years. In the CSE Department, students may participate in the 4+1 Program in either the computer science or computer engineering area. Up to nine total credit hours of graduate courses may be applied toward fulfilling the student's undergraduate program requirements. For additional information, students should contact the undergraduate program director.

Teaching Certification

Computer science majors interested in earning a teaching certificate should contact the Simmons School of Education for information on additional course and student teaching requirements.

Computer Facilities

Students in the CSE Department have access to a wide range of facilities and equipment. The department's computing environment has evolved into an Ethernet-based network of personal computers and servers. General-use UNIX servers that run OSF1 and Linux are available. A wireless network is also available throughout the CSE facilities. Windows-based PC labs are used during the first two years of coursework.

Curriculum in Computer Science

Computers play an ever-increasing role in society. Their use permeates all other academic disciplines and industrial arenas. Computer science is the study of the concepts and theory surrounding computer design and software construction. The SMU undergraduate program in computer science is designed to give students a solid understanding of these concepts, providing them with the technical knowledge needed to pursue either an advanced degree or a challenging career in the computer industry. The diversity of the Lyle School of Engineering computer environment exposes undergraduate computer science students to many different hardware and software systems.

To study and use computers, one must communicate with them through a variety of software interfaces, including programming languages. At SMU, the student will study several high-level languages – such as C++ and Java – that simplify the use of computers. In addition, students are exposed to a variety of computer-aided software engineering tools. Assembly languages and operating systems (such as Linux/UNIX) for microcomputers, mainframes and supercomputers are studied to provide an understanding of the architecture and organization of a digital computer. Mathematical topics such as discrete mathematics, graph theory, and Boolean and linear algebra are included in required undergraduate classes so that students may better understand the internal structure of the computer and the effective utilization of its languages.

Knowledge of the computer's internal structure is important to understanding its capabilities. Thus, computer science students take courses in assembly language, computer logic and computer organization. Courses in systems programming and operating systems extend this structural study into the "software" of the computer. A required sequence of software engineering courses prepares students for advanced systems and software applications.

Many of the computer science core courses (CSE 2341, 3345, 3353, 4345, 4351 and 4352) contain major project-oriented components to prepare students for applying their theoretical knowledge in teams.

The free electives in the B.A. in computer science program can be used to individually tailor a student's study plan. For example, students who want a program even more intensive than the computer science major could satisfy their free electives with more computer science courses. Students interested in a broader education could satisfy these electives with courses offered by any department in the University.

The B.S. degree allows students to major in any of five concentration tracks or to pursue a general program where they can choose nine hours of computer science electives. The research track allows students to participate in an undergraduate research project of their choice. Like graduate students, undergraduate students majoring in research are required to perform independent research in an area of their choice (with a tenure-track faculty member as an adviser), document the research results and present the results of the research in a presentation open to the entire University community. The security track facilitates a more in-depth study of software security issues. The data-intensive computing track introduces concepts of data storage and analysis necessary for many modern applications. The software engineering track focuses on software design and testing. The game development track is provided in collaboration with SMU Guildhall.

Curriculum in Computer Engineering

Computer engineering deals with computers and computing systems. Computer engineers must be capable of addressing problems in hardware, software and algorithms, especially those problems whose solutions depend upon the interaction of these elements. Career opportunities for computer engineers require a broad range of knowledge. The design and analysis of logical and arithmetic processes that are the basis of computer science provide basic knowledge. Computer engineering courses are concentrated on the interacting nature of hardware and software. Basic electrical engineering is a clear foundation for computer engineers.

Bachelor of Science With a Major in Computer Science

Curriculum Notes. In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, term credit hours within this curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Mathematics and Science	32
MATH 1337, 1338, 3353	
CSE 2353, 3365 (MATH 3315) or MATH 3316, CSE 4340 (Students may fulfill the CSE 4340 requirement by taking any one of CSE/STAT 4340, EMIS 3340, or STAT 5340.)	
PHYS 1303/1105, 1304/1106	
<i>6 credit hours from the following:</i>	
ANTH 2315, 2363	
BIOL 1401, 1402	
CHEM 1303/1113, 1304/1114	
GEOL 1301, 1305, 1307, 1308, 1313, 1315	
PHYS 3305	

<i>Requirements for the Major (continued)</i>	<i>Credit Hours</i>
Computer Science Core	47
CSE 1341, 1342, 2240, 2341, 3330, 3339, 3342, 3345, 3353, 3381, 4344, 4345, 4351, 4352, 4381, 5343	
Tracks and Electives	9–18
<i>Research (9 credit hours)</i>	
CSE 4397, 5350	
3 credit hours of track electives approved by adviser	
<i>Data-Intensive Computing (9 credit hours)</i>	
CSE 5330, 5331	
3 credit hours of track electives approved by adviser	
<i>Software Engineering (9 credit hours)</i>	
CSE 5314, 5319	
3 credit hours of track electives approved by adviser	
<i>Game Development (18 credit hours)</i>	
CSE 4051 (but not CSE 4351, 4352 from the list above)	
HGAM 5200, 5201, 5202, 5221, 5222, 5292, 5311, 5312	
(Must be admitted to Guildhall Professional Certificate program and attend class at SMU Guildhall.)	
<i>Security (9 credit hours)</i>	
CSE 5339, 5349	
3 credit hours of track electives approved by adviser	
<i>General (9 credit hours)</i>	
Three 3-hour, 4000-level or above CSE courses approved by adviser	
Engineering Leadership	6
CSE 4360 and CEE 3302, EMIS 3308, or CSE 5317	
Electives	6
Advanced electives in the Lyle School of Engineering.	
	100–103

Note: All computer science majors must earn a grade of *C-* or better in the computer science core courses and CSE 2353 in fulfillment of the requirements for the major. Students choosing the game development track do not take CSE 4351 and 4352 and have a total degree requirement of 103 hours.

Bachelor of Science With a Major in Computer Science (Premedical Specialization)

Curriculum Notes. In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the term credit hours within this curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Mathematics and Science	56
MATH 1337, 1338, 3353	
CSE 2353, 3365 (MATH 3315) or MATH 3316, CSE 4340	
(Students may fulfill the CSE 4340 requirement by taking any one of CSE/STAT 4340, EMIS 3340, or STAT 5340.)	
BIOL 1401, 1402, 3304, 3350	
CHEM 1303/1113, 1304/1114, 3371/3117, 3372/3118	
PHYS 1303/1105, 1304/1106	

<i>Requirements for the Major (continued)</i>	<i>Credit Hours</i>
Computer Science	44
CSE 1341, 1342, 2240, 2341, 3330, 3342, 3345, 3353, 3381, 4344, 4345, 4351, 4352, 4381, 5343	
Engineering Leadership	6
CEE 3302 CSE 4360	
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Bachelor of Arts With a Major in Computer Science

Curriculum Notes. In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the term credit hours within this curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Mathematics and Science	18
MATH 1337, 1338 CSE 2353 PHYS 1301 <i>or</i> 1303 STAT 2331 <i>3 credit hours from the following:</i> ANTH 2315, 2363 BIOL 1303, 1304, 1308, 1401, 1402 CHEM 1301, 1303, 1304 GEOL 1301, 1305, 1307, 1308, 1313 PHYS 1303, 1304, 1314, 3305	
Computer Science	47
CSE 1341, 1342, 2240, 2341, 3330, 3342, 3345, 3353, 3381, 4344, 4345, 4351, 4352, 4381, 5343 <i>3 credit hours from the following:</i> CSE 5314, 5320, 5330, 5339, 5341, 5342, 5344, 5345, 5348, 5349, 5350, 5359, 5376, 5380, 5381, 5382, 5385, 5387	
Engineering Leadership	9
CEE 3302 CSE 4360 EMIS 3308 <i>or</i> CSE 5317	
Free Electives	19
Must be approved by adviser.	
	93

Bachelor of Science in Computer Engineering

Curriculum Notes. In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the term credit hours within this curriculum are distributed as follows:

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Mathematics and Science	34
MATH 1337, 1338, 2343, 3353 CSE 2353, 3365 (MATH 3315) <i>or</i> MATH 3316, CSE 4340 (Students may fulfill the CSE 4340 requirement by taking any one of CSE/STAT 4340, EMIS 3340, <i>or</i> STAT 5340.)	

Mathematics and Science (continued)	
CHEM 1303	
PHYS 1303, 1304/1106	
<i>3 credit hours from the following:</i>	
ANTH 2315, 2363	
BIOL 1401, 1402	
CHEM 1113, 1304/1114	
GEOL 1301, 1305, 1307, 1308, 1313, 1315	
PHYS 3305	
Computer Engineering Core	49
CSE 1341, 1342, 2240, 2341, 3339, 3353, 3381, 4344, 4351, 4352, 4381, 5343, 5387	
EE 2322/2122, 2350, 2370/2170	
Tracks	9
<i>Hardware</i> (three of the following)	
CSE 5380, 5381; CSE 5385 or EE 5385; CSE 5356 or EE 5356	
<i>Software Engineering</i> (three of the following)	
CSE 3345; 4345; 5314, or 5316, or 5319	
<i>Networking</i> (three of the following)	
CSE 5344, 5348, 5349; EE 5376	
<i>Security</i>	
CSE 5339, 5349	
3 credit hours of track electives approved by adviser	
<i>General</i>	
Three 3-hour, 4000-level or above CSE courses approved by adviser	
Engineering Leadership	6
CEE 3302, EMIS 3308, or CSE 5317	
CSE 4360	
Electives	6
Advanced electives in the Lyle School of Engineering.	
	104

Note: All computer engineering majors must earn a grade of C- or better in the computer engineering CSE core courses and CSE 2353 in fulfillment of the requirements for the major.

Minor in Computer Science

A student majoring in computer engineering may not minor in computer science. The following computer science courses are required: CSE 1341, 1342, 2341, 2353. Elective courses can be any six hours of CSE courses numbered 3000 or above as approved by the computer science minor adviser.

Minor in Computer Engineering

A student majoring in computer science may not minor in computer engineering. The following computer science courses are required: CSE 1341, 1342, 2240, 2341, 2353, 3381.

The Courses (CSE)

CSE 1340 (3). INTRODUCTION TO COMPUTING CONCEPTS. Introduction to computer concepts, program structures, object-oriented programming, and interactive application development. Extensive programming projects emphasizing logical control structures and the use of libraries.

CSE 1341 (3). PRINCIPLES OF COMPUTER SCIENCE. Introduces the fundamental concepts of computer science and object-oriented design of reusable modules. Covers basic object-oriented concepts of composition, inheritance, polymorphism, and containers. First course for computer science and computer engineering majors and minors.

CSE 1342 (3). PROGRAMMING CONCEPTS. Introduces the constructs provided in the C/C++ programming language for procedural and object-oriented programming. Computation, input and output, flow of control, functions, arrays and pointers, linked structures, use of dynamic storage, and implementation of abstract data types. *Prerequisite:* C- or better in CSE 1341 or equivalent, a grade of at least 4 on the AP Computer Science A Exam, or departmental consent.

CSE 2240 (2). ASSEMBLY LANGUAGE PROGRAMMING AND MACHINE ORGANIZATION. Computer-related number systems, machine arithmetic, computer instruction set, low-level programming, addressing modes, and internal data representation. *Prerequisite or corequisite:* C- or better in CSE 1341.

CSE 2341 (3). DATA STRUCTURES. Emphasizes the object-oriented implementation of data structures and associated algorithms, including sorting algorithms, linked lists, stacks, queues, binary trees, and priority queues. Introduces graphs and algorithm analysis, and covers object-oriented software engineering strategies and approaches to programming. *Prerequisite:* C- or better in CSE 1342 or equivalent.

CSE 2353 (3). DISCRETE COMPUTATIONAL STRUCTURES. Logic, proofs, partially ordered sets, and algebraic structures; introduction to graph theory and combinatorics; and applications of these structures to various areas of computer science. *Prerequisite:* C- or better in CSE 1341.

CSE 3330 (3). DATABASE CONCEPTS. Covers fundamental information management and database systems concepts, including information models and systems, data modeling, relational database design, query languages, and various language APIs for accessing database systems. Contains a major design and implementation project. May include topics from information privacy and security, information retrieval, data mining, and multimedia information systems. *Prerequisites:* C- or better in CSE 2341, 2353.

CSE 3339 (3). INFORMATION ASSURANCE AND SECURITY. Provides a broad introduction to information assurance and security. Students gain a foundational understanding of the protection of information assets and explore a broad spectrum of topics in the field. Covers a range of technical topics (e.g., network security, systems security, access control, cryptography) as well as nontechnical topics (e.g., management, legal issues, policy, ethics, history). *Prerequisite:* C- or better in CSE 2341 or equivalent.

CSE 3342 (3). PROGRAMMING LANGUAGES. Provides an understanding of how advances in hardware and networks have influenced the design and capabilities of programming languages from the 1950s to the present. Covers major programming paradigms (procedural, declarative, object-oriented, and functional) and requires problem-solving using a variety of languages. Topics include the history of programming languages, the Chomsky language hierarchy, the development of formal models for specifying languages, data structures for programming language implementation, and the ways different languages deal with problem of concurrency in a world of multicore and distributed computing. *Prerequisite:* C- or better in CSE 2341.

CSE 3345 (3). GRAPHICAL USER INTERFACE DESIGN AND IMPLEMENTATION. Introduction to the concepts underlying the design and implementation of graphical user interfaces, with emphasis on the psychological aspects of human-computer interaction. Structured around lectures, case studies, and student projects. Introduces event-driven programming concepts, including the Java API, applications, applets, interfaces, graphics, basic and advanced GUI components, HTML, and multithreading. *Prerequisite:* C- or better in CSE 2341 or equivalent.

CSE 3353 (3). FUNDAMENTALS OF ALGORITHMS. Introduces algorithm analysis; big-Oh, omega, and theta notation; and algorithm classification by efficiency. Also, basic algorithm design strategies and approaches to problem-solving (e.g., greedy, divide and conquer, and dynamic programming), an introduction to graph algorithms, and intractability. *Prerequisites:* C- or better in CSE 2341, 2353.

CSE 3365 (3). INTRODUCTION TO SCIENTIFIC COMPUTING. An elementary survey course that includes techniques for root-finding, interpolation, functional approximation, linear equations, and numerical integration. Gives special attention to MATLAB programming, algorithm implementations, and library codes. Students registering for this course must also register for an associated computer laboratory. *Prerequisites:* C- or better in MATH 1338 or 1340, and in CSE 1341 or 1342. *Corequisite:* MATH 3353.

CSE 3381 (3). DIGITAL LOGIC DESIGN. Covers the history of logic and its application to digital switching circuitry. Topics include algebraic, combinational, and sequential circuitry. Emphasizes programmable logic and hardware description languages for modeling, synthesis, and simulation. Introduces the controller plus datapath architecture present in the majority of modern information processing circuits. Requires a weekly corequisite laboratory. *Prerequisites:* C- or better in CSE 2240, 2353 or permission of instructor.

CSE 4051 (0). GAMING DESIGN PROJECT. Requires students enrolled in HGAM 5292 to produce appropriate reports and other design documentation material resulting from their HGAM 5292 design experience, including design requirements, specifications, test plans, and other relevant documentation as required for assessing the design experience. *Corequisite:* HGAM 5292.

CSE 4090 (0). SENIOR PROJECT.

CSE 4190 (1). UNDERGRADUATE PROJECT. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4191 (1). UNDERGRADUATE PROJECT. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4192 (1). UNDERGRADUATE PROJECT. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4193 (1). UNDERGRADUATE PROJECT. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4194 (1). UNDERGRADUATE PROJECT. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4197 (1). RESEARCH EXPERIENCE FOR UNDERGRADUATES. Provides research experience for junior/senior undergraduate students. Permission from the advising CSE faculty member is required before registration. *Prerequisites:* Junior/senior standing; computer science or computer engineering major with GPA above 3.000.

CSE 4290 (2). UNDERGRADUATE PROJECT. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4291 (2). UNDERGRADUATE SEMINAR. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4292 (2). UNDERGRADUATE SEMINAR. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4293 (2). UNDERGRADUATE SEMINAR. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4294 (2). UNDERGRADUATE SEMINAR. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4297 (2). RESEARCH EXPERIENCE FOR UNDERGRADUATES. Provides research experience for junior/senior undergraduate students. Permission from the advising CSE faculty member is required before registration. *Prerequisites:* Junior/senior standing; computer science or computer engineering major with GPA above 3.000.

CSE 4340 (3). STATISTICAL METHODS FOR ENGINEERS AND APPLIED SCIENTISTS. Basic concepts of probability and statistics useful in the solution of engineering and applied science problems. Topics include probability, probability distributions, data analysis, sampling distributions, estimation, and simple tests of hypothesis. *Prerequisites:* C- or better in MATH 1337, 1338.

CSE 4344 (3). COMPUTER NETWORKS AND DISTRIBUTED SYSTEMS. Introduces network protocols, layered communication architecture, wired and wireless data transmission, data link protocols, network routing, TCP/IP and UDP, email and the World Wide Web, distributed computing, mutual exclusion, linearizability, locks, and multithreaded computing. *Prerequisite:* C- or better in CSE 2341.

CSE 4345 (3). SOFTWARE ENGINEERING PRINCIPLES. Introduction to software system development and an overview of development models and their stages. Also, system feasibility and requirements engineering, architecture and design, validation and verification, maintenance, and evolution. Includes project management and a review of current software engineering literature. Student teams design and implement small-scale software systems. Contains class presentations and a major design experience. *Prerequisite:* C- or better in CSE 2341.

CSE 4351 (3). SENIOR DESIGN I. First part of a project course, with a major design component. Students participate in a multidisciplinary group project team. Topical, project-related discussions include project team organization, project planning and scheduling, management, testing and validation methods, and the importance of lifelong learning. *Prerequisite:* CSE senior standing.

CSE 4352 (3). SENIOR DESIGN II. Second part of a project course, with a major design component. Students participate in a multidisciplinary group project team. Topical, project-related discussions include project team organization, project planning and scheduling, management, testing and validation methods, and the importance of lifelong learning. *Prerequisite:* CSE 4351.

CSE 4360 (3). TECHNICAL ENTREPRENEURSHIP. Demonstrates the concepts involved in the management and evolution of rapidly growing technical endeavors. As part of a team, the student participates in active learning by doing, by making mistakes and developing solutions, and by observing mistakes and approaches made by other teams. Credit will not be given for both CSE 4360 and EMIS 8358. *Prerequisite:* Senior standing or permission of instructor.

CSE 4381 (3). DIGITAL COMPUTER DESIGN. Machine organization, instruction set architecture design, memory design, control design: hardwired control and microprogrammed control, algorithms for computer arithmetic, microprocessors, and pipelining. *Prerequisite:* C- or better in CSE 3381.

CSE 4386 (3). HARDWARE DESIGN PROJECT. A project course with a major design component. Students participate in a multidisciplinary group project team. Topical, project-related discussions include the hardware design and manufacturing process, hardware description languages, modular design principles, quantitative analysis, industrial standards and interfaces, and the importance of lifelong learning. The group project provides the major design experience for students in the hardware track of the computer engineering program. *Prerequisite:* C- or better in CSE 4381.

CSE 4391 (3). UNDERGRADUATE PROJECT. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4392 (3). UNDERGRADUATE PROJECT. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4393 (3). UNDERGRADUATE PROJECT. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4394 (3). UNDERGRADUATE PROJECT. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4397 (3). RESEARCH EXPERIENCE FOR UNDERGRADUATES. Provides research experience for junior/senior undergraduate students. Permission from the advising CSE faculty

member is required before registration. *Prerequisites:* Junior/senior standing; computer science or computer engineering major with GPA above 3.000.

CSE 4490 (4). UNDERGRADUATE PROJECT. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4491 (4). UNDERGRADUATE PROJECT. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4492 (4). UNDERGRADUATE PROJECT. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4493 (4). UNDERGRADUATE PROJECT. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 4494 (4). UNDERGRADUATE PROJECT. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

CSE 5050 (0). UNDERGRADUATE INTERNSHIP.

CSE 5096 (0). SENIOR THESIS. *Prerequisite:* Admission to the departmental distinction program.

CSE 5111 (1). INTELLECTUAL PROPERTY AND INFORMATION TECHNOLOGY. Presents fundamentals in the nature, protection, and fair use of intellectual property, including patent, copyright, trademark, trade secret, and antitrust principles, with an emphasis on Internet, software, databases, and digital transmission technologies. Investigates the open source and creative commons alternatives for disseminating intellectual property. Examines the professional and ethical responsibilities of the engineer, scientist, manager, and creative artist, and their opportunities regarding intellectual property. Also, investigates the rapid change in types and uses of intellectual property spawned by computers, digital media, e commerce, and biotechnology.

CSE 5190 (1). SPECIAL TOPICS. Individual or group study of selected topics in computer science. *Prerequisite:* Permission of instructor.

CSE 5191 (1). SPECIAL TOPICS. Individual or group study of selected topics in computer science. *Prerequisite:* Permission of instructor.

CSE 5192 (1). SPECIAL TOPICS. Individual or group study of selected topics in computer science. *Prerequisite:* Permission of instructor.

CSE 5193 (1). SPECIAL TOPICS. Individual or group study of selected topics in computer science. *Prerequisite:* Permission of instructor.

CSE 5194 (1). SPECIAL TOPICS. Individual or group study of selected topics in computer science. *Prerequisite:* Permission of instructor.

CSE 5196 (1). SENIOR THESIS. *Prerequisite:* Admission to the departmental distinction program.

CSE 5290 (2). SPECIAL TOPICS. Individual or group study of selected topics in computer science. *Prerequisite:* Permission of instructor.

CSE 5291 (2). SPECIAL TOPICS. Individual or group study of selected topics in computer science. *Prerequisite:* Permission of instructor.

CSE 5292 (2). SPECIAL TOPICS. Individual or group study of selected topics in computer science. *Prerequisite:* Permission of instructor.

CSE 5293 (2). SPECIAL TOPICS. Individual or group study of selected topics in computer science. *Prerequisite:* Permission of instructor.

CSE 5294 (2). SPECIAL TOPICS. Individual or group study of selected topics in computer science. *Prerequisite:* Permission of instructor.

CSE 5296 (2). SENIOR THESIS. *Prerequisite:* Admission to the departmental distinction program.

CSE 5311 (3). FUNDAMENTALS OF COMPUTER SCIENCE. A comprehensive foundation course covering the major aspects of computer science. Covers hardware and software fundamentals, operating systems concepts, data structures, discrete structures, algorithms, and programming languages. Also, addresses issues related to software engineering and object-oriented programming. Prepares students without a computer science background for the master's program in software engineering at SMU.

CSE 5313 (3). SOFTWARE CONFIGURATION MANAGEMENT. Successful software development and maintenance requires an understanding and application of many activities and functions throughout the software engineering process. One of the key areas is software configuration management. Students explore the principles and practices of the software configuration management function and mandatory role, including how CM is defined, planned, implemented, and measured over the life cycle of any development or maintenance project. Focuses on understanding specific roles of project team members and the tasks they plan and execute: managers who must support the CM efforts; project managers who must plan and design the CM system for their projects; those who implement the system; those who manage and administer the system; and the testers, engineers, and quality assurance personnel who are affected by the system. *Prerequisites:* CSE major and junior, senior, or graduate-level standing.

CSE 5314 (3). SOFTWARE TESTING AND QUALITY ASSURANCE. Examines the relationship of software testing to quality, with an emphasis on testing techniques and the role of testing in the validation of system requirements. Topics include module and unit testing, integration, code inspection, peer reviews, verification and validation, statistical testing methods, error prevention and detection, project metrics selection and implementation, testing principles, formal models of testing, and performance monitoring, and measurement. Also, defining test plans and strategies that map to system requirements. *Prerequisites:* C- or better in all previous CSE courses and senior standing. It is strongly recommended that students have software engineering experience.

CSE 5316 (3). SOFTWARE REQUIREMENTS. Focuses on defining and specifying software requirements that can be used as the basis for designing and testing software. Topics include use cases for describing system behavior, formal methods, specifying functional versus non-functional requirements, and the relationship of requirements to software testing. *Prerequisites:* C- or better in all previous CSE courses and senior standing.

CSE 5317 (3). LEADERSHIP FOR ARCHITECTING SOFTWARE SYSTEMS. Principles of leadership and software architecture in building large software systems or leading large teams. Involves a mix of personal assessment, reflection, and the development of leadership and influence skills and concepts unique to each student. Examines the process of developing large software systems in a constantly changing commercial environment. *Prerequisite:* Junior standing or higher.

CSE 5319 (3). SOFTWARE ARCHITECTURE AND DESIGN. Software development requires both an understanding of software design principles and a broader understanding of software architectures that provide a framework for design. The course explores the role of design in the software life cycle, including different approaches to design, design trade-offs, and the use of design patterns in modeling object-oriented solutions. It also focuses on important aspects of a system's architecture, including the division of functions among system modules, synchronization, asynchronous and synchronous messaging, interfaces, and the representation of shared information. *Prerequisites:* C- or better in all CSE courses and senior standing.

CSE 5320 (3). ARTIFICIAL INTELLIGENCE. Introduces basic principles and current research topics in artificial intelligence. Formal representation of real-world problems; search of problem spaces for solutions; and deduction of knowledge in terms of predicate logic, nonmonotonic reasoning, and fuzzy sets. Application of these methods to important areas of artificial intelligence, including expert systems, planning, language understanding, machine learning, neural networks, computer vision, and robotics. *Prerequisites:* C- or better in CSE 3342, 3353.

CSE 5323 (3). MOBILE APPLICATIONS FOR SENSING AND LEARNING. Equips students with the practical skills necessary to develop mobile applications that take advantage of the myriad sensing and control capabilities of modern smartphones. Focuses on interfacing with phone hardware, efficient computing on the phone and in the cloud using virtualized servers, and efficient analysis of the peripheral sensor streams of today's smartphones. Students integrate real-time control and/or automation using a third-party hardware platform to interface with the mobile platform. *Prerequisite:* CSE 1342.

CSE 5330 (3). FILE ORGANIZATION AND DATABASE MANAGEMENT. Surveys current database approaches and systems, principles of design, and use of these systems. Includes query language design, implementation constraints, applications of large databases, survey of file structures and access techniques, and use of a relational DBMS to implement a database design project. *Prerequisite:* C- or better in CSE 3330.

CSE 5331 (3). AN INTRODUCTION TO DATA MINING AND RELATED TOPICS. Introduces various data mining and related concepts. Reinforces all material covered through hands-on implementation exercises and uses a high-level, applied study of data mining techniques. *Prerequisite:* C- or better in CSE 3330.

CSE 5333 (3). QUANTIFYING THE WORLD. In the global information age, data can be leveraged to rapidly answer previously unanswerable questions. Students explore how to make sense of the large amounts of data frequently available, from hypothesis formation and data collection to methods of analysis and visualization. Includes ways to set up Internet-level measurements and formulate testable hypotheses; ways to automatically gather, store, and query large datasets; and ways to apply statistical methods (descriptive and predictive) and information visualization to collected datasets. Students learn to use Python and R programming languages to carry out data collection, analysis, and visualization. Culminates in a final project using real data of the students' choosing.

CSE 5337 (3). INFORMATION RETRIEVAL AND WEB SEARCH. Introduces the field of information retrieval, with an emphasis on its application in Web search, and the basic concepts of stemming, tokenizing and inverted indices, text similarity metrics, and the vector-space model. Students study popular Web search engines and apply the concepts in several Java-based programs. *Prerequisite:* CSE 3353.

CSE 5338 (3). SECURITY ECONOMICS. Introduces 1) economics as a tool for understanding and managing information security and 2) the techniques of analytic and empirical modeling. Students review key information security challenges and technologies in order to reason about the topics economically, and they explore economic concepts such as rationality, markets, and information. Presents models and metrics of security investment, cost-benefit analysis techniques, and techniques for empirical investigation and measurement of cybercrime. Students design security games to capture the strategic interaction between defenders and between attackers and defenders. Includes the implications for public policy. *Prerequisite:* CSE 3353 or junior standing if not a declared CSE major.

CSE 5339 (3). COMPUTER SYSTEM SECURITY. Students investigate a broad selection of contemporary issues in computer security, including an assessment of state-of-the-art technology used to address security problems. Topics include sources for computer security threats and appropriate reactions, basic encryption and decryption, secure encryption systems, program security, trusted operating systems, database security, network and distributed systems security, administering security, and legal and ethical issues. *Prerequisite:* CSE 5343.

CSE 5340 (3). SERVICE-ORIENTED COMPUTING. Service-oriented computing is the computing paradigm that utilizes services as fundamental elements for developing applications. Service providers expose capabilities through interfaces. Service-oriented architecture maps these capabilities and interfaces so they can be orchestrated into processes. Fundamental to the service model is the separation between the interface and the implementation, such that the invoker of a service need only (and should only) understand the interface; the implementation can evolve over time, without disturbing the clients of the service. *Prerequisites:* Senior or graduate standing. Programming experience is required.

CSE 5341 (3). COMPILER CONSTRUCTION. Reviews programming language structures, loading, execution, and storage allocation; compilation of simple expressions and statements; organization of a compiler, including compile- and run-time symbol tables, lexical analysis, syntax analysis, code generation, error diagnostics, and simple code optimization techniques; and use of a recursive high-level language to implement a complete compiler. *Prerequisites:* C- or better in CSE 3342, 3353.

CSE 5342 (3). CONCEPTS OF LANGUAGE THEORY AND THEIR APPLICATIONS. Formal languages and their relation to automata; introduction to finite-state automata, context-free languages, and Turing machines; theoretical capabilities of each model; applications in terms of grammars, parsing, and operational semantics; and decidable and undecidable problems about computation. *Prerequisite:* C- or better in CSE 3342 or permission of instructor.

CSE 5343 (3). OPERATING SYSTEMS AND SYSTEMS SOFTWARE. Theoretical and practical aspects of operating systems: overview of system software, timesharing and multiprogramming operating systems, network operating systems and the Internet, virtual memory management, interprocess communication and synchronization, file organization, and case studies. *Prerequisites:* C- or better in CSE 2240, 3353.

CSE 5344 (3). COMPUTER NETWORKS AND DISTRIBUTED SYSTEMS II. Introduces network protocols, layered communication architecture, multimedia applications and protocols, quality of service, congestion control, optical networks, DWDM, network survivability and provisioning, and wireless networks. An interdisciplinary project requires the use of currently available network design and simulation tools. *Prerequisite:* C- or better in CSE 4344.

CSE 5345 (3). ADVANCED APPLICATION PROGRAMMING. Advanced programming techniques that span a range of programming languages and technologies. Includes server-side application development, client GUI implementation, application frameworks, design patterns, model-based development, and multithreading. The specific programming language or languages covered may vary from term to term. *Prerequisite:* CSE 3345 or consent of instructor.

CSE 5346 (3). CLOUD COMPUTING. Explores architectures for cloud computing, and provides hands-on experience with virtualization technologies. Topics include cloud computing architectures such as infrastructure as a service, platform as a service, and software as a service. Covers programming models for cloud computing, the fundamentals of virtualization technologies that enable scalability, and an introduction to the security and energy efficiency challenges of cloud computing. *Prerequisite:* CSE 4381.

CSE 5347 (3). XML AND THE ENTERPRISE. XML, the Extensible Markup Language, is used to define vocabularies for a wide range of applications such as software configuration, data exchange, and Web-based protocols. Provides a detailed examination of XML as an enterprise technology, with a focus on APIs, interfaces, and the standards that drive this technology, including DTDs and XML Schema to structure XML data, XSLT to transform XML, XML protocols for distributed computing, and XML security initiatives. Students gain a broad understanding of XML and the technical issues and trade-offs among different alternatives for processing XML. *Prerequisites:* An understanding of object-oriented concepts and familiarity with Java and/or C++.

CSE 5348 (3). INTERNETWORKING PROTOCOLS AND PROGRAMMING. Processing and interprocess communications, UNIX domain sockets, fundamentals of TCP/IP, Internet domain sockets, packet routing and filtering and firewall, SNMP and network management, client-server model and software design, remote procedure call (XDR, RPC, DCE), design of servers and clients, networking protocols for the World Wide Web, and internetworking over new networking technologies. *Prerequisites:* C- or better in CSE 4344, 5343 and C programming.

CSE 5349 (3). DATA AND NETWORK SECURITY. Covers conventional and state-of-the-art methods for achieving data and network security. Private key and public key encryption approaches are discussed in detail, with coverage of popular algorithms such as DES, Blowfish, and RSA. In the network security area, the course covers authentication protocols, IP security, Web security, and system-level security. *Prerequisite:* C- or better in CSE 4344.

CSE 5350 (3). ALGORITHM ENGINEERING. Algorithm design techniques; methods for evaluating algorithm efficiency; data structure specification and implementation; applications to fundamental computational problems in sorting and selection, graphs and networks, scheduling and combinatorial optimization, computational geometry, and arithmetic and matrix computation; introduction to parallel algorithms and to computational complexity; and a survey of NP-complete problems. Emphasizes developing the student's facility to design efficient algorithms. *Prerequisite:* C- or better in CSE 3353.

CSE 5356 (3). VLSI DESIGN AND LABORATORY. Explores the design aspects involved in the realization of CMOS integrated circuits from device up to the register subsystem level. Addresses major design methodologies, with emphasis on structured, full-custom design. Also, the MOS device, CMOS inverter static characteristics, CMOS inverter dynamic characteristics, CMOS transistor fabrication technology, combination logic circuit, alternative static logic circuit, sequential logic circuit, dynamic logic circuit, propagation delay and interconnect, power dissipation and design for low power, memory device (DRAM, SRAM, ROM), ESD protection, packaging, testing, and VLSI design flow. Students use state-of-the-art CAD tools to verify designs and develop efficient circuit layouts. *Prerequisites:* C- or better in EE 2181, 2381, 3311.

CSE 5359 (3). SOFTWARE SECURITY. As software is delivered across networks and Web-based environments, security is critical to successful software deployment. This course focuses on software security issues that pertain to the network application layer in the classic OSI model. At the network application layer, issues related to encryption, validation, and authentication are handled programmatically rather than at the network level. Students work with APIs for cryptography, digital signatures, and third-party certificate authorities. The course also explores issues related to XML and Web services security by examining standards and technologies for securing data and programs across collaborative networks. *Prerequisite:* Programming experience in Java and/or C++.

CSE 5360 (3). INTRODUCTION TO 3-D ANIMATION. Introduces computer graphics, with an emphasis on the popular software package Maya. Focuses on the user interface, creation of 3-D geometry using polygonal techniques, materials and textures, kinematics, animation, and camera and lighting techniques. Explores the various aspects and fundamentals of computer graphics. Students gain a core understanding of the workflow necessary to create 3-D imagery. Assignments require students to combine a variety of techniques to become familiar with the computer animation production process. *Prerequisite:* Junior standing or higher. May not be used for credit in a graduate degree program in CSE without adviser's approval.

CSE 5369 (3). HARDWARE SECURITY AND TROJAN DETECTION. Introduces several contemporary topics in hardware security, with a particular emphasis on hardware Trojans. Other topics include physically unclonable functions, the problem of counterfeiting, security implications of design for testability in hardware, intellectual property protection, and secure coprocessors and smart cards. *Prerequisite:* C or better in CSE 3381 or equivalent.

CSE 5376 (3). INTRODUCTION TO TELECOMMUNICATIONS. Overview of public and private telecommunications systems; traffic engineering; switching; transmission; signaling; channel capacity; media characteristics; Fourier analysis and harmonics; modulation; electromagnetic wave propagation and antennae, modems, and interfaces; digital transmission systems; T1 carriers; digital microwave; satellites; fiber optics and synchronous optical networking; and integrated services digital networks.

CSE 5380 (3). VLSI ALGORITHMS. Introduces problems, algorithms, and optimization techniques used in the design of high-performance VLSI design. Emphasis on algorithms for partitioning, placement, floor planning, wire routing, and layout compaction. *Prerequisites:* C- or better in CSE 3353, 3381.

CSE 5381 (3). COMPUTER ARCHITECTURE. Introduces the state of the art in uniprocessor computer architecture, with a focus on the quantitative analysis and cost-performance trade-offs in instruction set, pipeline, and memory design. Topics include quantitative analysis of performance and hardware costs, instruction set design, pipeline, delayed branch, memory organization, and advanced instruction-level parallelism. *Prerequisite:* C- or better in CSE 4381.

CSE 5382 (3). COMPUTER GRAPHICS. Hardware and software components of computer graphics systems: display files, 2-D and 3-D transformations, clipping and windowing, perspective, hidden-line elimination and shaping, interactive graphics, and applications. *Prerequisite:* C- or better in CSE 3353.

CSE 5385 (3). MICROCONTROLLER ARCHITECTURE AND INTERFACING. Emphasizes the design of embedded systems using microcontrollers. Briefly reviews microcontroller architecture. Includes hierarchical memory systems and interfacing of memory and peripherals, industry standard bus interfaces and other applicable standards, and topics in real-time operating systems and system-level design considerations. The corequisite laboratory requires students to develop software using assembler and high-level languages. *Prerequisite:* CSE 3381 or EE 3181, 3381.

CSE 5387 (3). DIGITAL SYSTEMS DESIGN. Modern topics in digital systems design, including the use of HDLs for circuit specification and automated synthesis tools for realization. Programmable logic devices are emphasized and used throughout the course. Includes heavy laboratory assignment content and a design project. *Prerequisite:* C- or better in CSE 3381 or in EE 2381.

CSE 5390 (3). SPECIAL TOPICS. Individual or group study of selected topics in computer science. *Prerequisite:* Permission of instructor.

CSE 5391 (3). SPECIAL TOPICS. Individual or group study of selected topics in computer science. *Prerequisite:* Permission of instructor.

CSE 5392 (3). SPECIAL TOPICS. Individual or group study of selected topics in computer science. *Prerequisite:* Permission of instructor.

CSE 5393 (3). SPECIAL TOPICS. Individual or group study of selected topics in computer science. *Prerequisite:* Permission of instructor.

CSE 5394 (3). SPECIAL TOPICS. Individual or group study of selected topics in computer science. *Prerequisite:* Permission of instructor.

CSE 5396 (3). SENIOR THESIS. *Prerequisite:* Admission to the departmental distinction program.

ELECTRICAL ENGINEERING

Professor Dinesh Rajan, Chair

Professors: Jerome K. Butler, Marc P. Christensen, Scott C. Douglas, Delores M. Etter, Gary A. Evans, W. Milton Gosney, Alireza Khotanzad, Panos E. Papamichalis, Behrouz Peikari, Dinesh Rajan, Mitchell A. Thornton. **Associate Professors:** Gyungsu Byun, Joseph D. Camp, Carlos E. Davila, James G. Dunham, Ping Gui, Choon S. Lee. **Assistant Professor:** Mohammad Khodayar. **Senior Lecturer:** M. Scott Kingsley. **Adjunct Faculty:** Hakki C. Cankaya, Sudipto Chakraborty, Joseph R. Cleveland, John Fattaruso, Hossam H. H'mimy, Kaushik Josiam, Shantanu Kangude, Clark D. Kinnaird, Christopher Pilcher, Kaiser Saeed, Kamakshi Sridhar, Jennifer Webb.

General Information

The discipline of electrical engineering is at the core of today's technology-driven society. Personal computers, computer-communications networks, integrated circuits, optical technologies, digital signal processors and wireless communications systems have revolutionized the way people live and work, and extraordinary advances in these fields are announced every day. Because today's society truly is a technological one, a degree in electrical engineering offers exceptional opportunities for financial security, personal satisfaction and an expansion of the frontiers of technology. The Department of Electrical Engineering at SMU offers a full complement of courses at the bachelor's degree level in communications, networks, digital signal processing, optoelectronics, electromagnetics, microelectronics, and systems and control.

The mission of the department is as follows:

Through quality instruction and scholarly research, to engage each student in a challenging electrical engineering education that prepares graduates for the full range of career opportunities in the high-technology marketplace and enables them to reach their fullest potential as a professional and as a member of society.

Departmental goals include the following:

- Becoming one of the nation's leading electrical engineering departments by building peaks of excellence in the fields of communications/signal processing and micro/optoelectronics and by being a leader in innovative educational programs.
- Offering undergraduate curricula that equips graduates for careers that require ingenuity, integrity, logical thinking, and the ability to work and communicate in teams, and for the pursuit of graduate degrees in engineering or other fields such as business, medicine and law.
- Offering world-class Ph.D. programs that prepare graduates for academic careers, for research careers in the high-technology industry or for technical entrepreneurship.
- Promoting lifelong learning animated by a passion for the never-ending advance of technology.

The educational objectives of the Electrical Engineering Department undergraduate program are to enable graduates to do the following:

- Be successful in understanding, formulating, analyzing and solving a variety of electrical engineering problems.
- Be successful in designing a variety of engineering systems, products or experiments.

- Be successful in careers and/or graduate study in engineering or other areas such as business, medicine and law.
- Have the ability to assume leadership and entrepreneurial positions.
- Successfully function and effectively communicate both individually and in multidisciplinary teams.
- Understand the importance of lifelong learning, ethics and professional accountability.

The Electrical Engineering Department undergraduate student outcomes as related to the above educational objectives are as follows:

All graduates of the electrical engineering program are expected to have the following:

- The ability to apply knowledge of mathematics, science and engineering.
- The ability to design and conduct experiments, as well as to analyze and interpret data.
- The ability to design a system, component or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- The ability to function on multidisciplinary teams.
- The ability to identify, formulate and solve engineering problems.
- An understanding of professional and ethical responsibility.
- The ability to communicate effectively.
- The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and societal context.
- The recognition of the need for and the ability to engage in lifelong learning.
- A knowledge of contemporary issues.
- The ability to use the techniques, skills and modern engineering tools necessary for engineering practice.

The Electrical Engineering Department is engaged in an ongoing assessment process that evaluates the success in meeting the educational objectives and outcomes and enhances the development of the program.

The undergraduate program in electrical engineering is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

The Electrical Engineering Department emphasizes the following major areas of research interest:

- **Biomedical Engineering.** Overview of biomedical engineering, biomedical devices and instrumentation, biomedical signal capture, processing, and modeling.
- **Communications and Information Technology.** Detection and estimation theory, digital communications, computer networks, spread spectrum, cellular communications, coding, encryption, compression, and wireless and optical communications.
- **Control Systems.** Linear and nonlinear systems control, robotics, and computer and robot vision.
- **Digital Signal Processing.** Digital filter design, system identification, spectral estimation, adaptive filters, neural networks and DSP implementations.
- **Image Processing and Computer Vision.** Digital image processing, computer vision and pattern recognition.

- **Lasers, Optoelectronics, Electromagnetic Theory and Microwave Electronics.** Classical optics, fiber optics, laser recording, integrated optics, dielectric waveguides, antennas, transmission lines, laser diodes and signal processors, and superconductive microwave and optoelectronic devices.
- **Solid State Circuits, Computer-Aided Circuit Design and VLSI Design.** Electronic circuits, computer-aided design, very-large-scale integration design and memory interfaces.
- **Electronic Materials and Solid State Devices.** Fabrication and characterization of devices and materials, device physics, noise in solid state devices, infrared detectors, AlGaAs and GaAs devices and materials, superconductivity, superconductive devices and electronics, thin films, hybrid superconductor-semiconductor devices, ultrafast electronics, and applications of a scanning tunneling microscope.
- **Telecommunications.** Overview of modern telecommunications components and systems, data communications, digital telephony, and digital switching.
- **Power Engineering.** Power system operation and planning, renewable energy integration, smart grid, transportation electrification, and resilient energy networks.

Department Facilities

The department has access to the Lyle School of Engineering academic computing resources, consisting of shared-use computer servers and desktop client systems connected to a network backbone. All of the servers in the Lyle School of Engineering are running some variant of UNIX or Microsoft Windows. There is one primary file server that exports files using FNS or CIFS protocols. Each user, whether faculty, staff or student, has a "home" directory on the central file server. This directory is exported to other servers or desktop computers, regardless of operating systems, as needed. There are more than 40 servers whose purposes include the following: file service, UNIX mail, Exchange mail, firewall, UNIX authentication, NT authentication, printer management, lab image download, classroom-specific software, X windows service, news, domain name service, computational resources and general use. This primary file server allows a user's files to be used as a resource in both the UNIX and Microsoft PC environments. Almost all computing equipment within the Lyle School of Engineering is connected to the engineering network at 100 megabits and higher. The network backbone is running at a gigabit per second over fiber. Most servers and all engineering buildings are connected to this gigabit backbone network. The backbone within the Engineering School is connected to both the Internet 2 and the campus network that is then connected to the Internet at large. In addition to servers and shared computational resources, the Lyle School of Engineering maintains a number of individual computing laboratories associated with the departments. Specific department laboratory facilities for instruction and research include the following:

Antenna Laboratory. This laboratory consists of two facilities for fabrication and testing. Most of the antennas fabricated at the SMU antenna lab are microstrip antennas. Small and less complex antennas are made with milling machines, and a photolithic/chemical etching method is used to make more complex and large antennas. Fabricated antennas are characterized with a Hewlett-Packard 5810B network analyzer. Workstations are available for antenna design and theoretical

computation. Radiation characteristics are measured at the Dallas-SMU Antenna Characterization Lab located in Richardson, Texas.

Biomedical Engineering Laboratory. This laboratory contains instrumentation for carrying out research in electrophysiology, psychophysics and medical ultrasound. Four Grass physiographs permit the measurement of electroencephalograms as well as visual and auditory evoked brain potentials. The lab also contains a state-of-the-art dual Purkinje eye tracker and image stabilizer made by Fourward Technologies Inc., a Vision Research Graphics 21-inch Digital Multisync Monitor for displaying visual stimuli, and a Cambridge Research Systems visual stimulus generator capable of generating a variety of stimuli for use in psychophysical and electrophysiological experiments. Ultrasound data can also measure with a Physical Acoustics apparatus consisting of a water tank, radio frequency pulser/receiver and radio frequency data acquisition system. Several PCs are also available for instrumentation control and data acquisition.

Multimedia Systems Laboratory. This facility includes an acoustic chamber with adjoining recording studio to allow high-quality sound recordings to be made. The chamber is sound-isolating with double- or triple-wall sheet rock on all four sides, as well as an isolating ceiling barrier above the drop ceiling. The walls of the chamber have been constructed to be nonparallel to avoid flutter echo and dominant frequency modes. Acoustic paneling on the walls of the chamber are removable and allow the acoustic reverberation time to be adjusted to simulate different room acoustics. The control room next to the acoustic chamber includes a large, 4-foot-by-8-foot acoustic window and an inert acoustic door facing the acoustic chamber. Up to 16 channels of audio can be carried in or out of the chamber to the control room. Experiments conducted in the Multimedia Systems Laboratory include blind source separation, deconvolution and dereverberation. Several of the undergraduate courses in electrical engineering use sound and music to motivate system-level design and signal processing applications. The Multimedia Systems Laboratory can be used in these activities to develop data sets for use in classroom experiments and laboratory projects for students to complete.

Wireless Systems Laboratory. This laboratory contains an array of infrastructure for experimentation across a number of wireless frequency bands, platforms and environments for research and instruction in lab-based courses on wireless communications and networking. The infrastructure includes 1) state-of-the-art test equipment for repeatability, control and observability of wireless channels, including complex channel emulators, fixed and mobile spectrum analyzers, wide-band oscilloscopes, and signal generators; 2) a wide range of reprogrammable wireless testbeds that operate from 400 MHz to 6 GHz for IEEE 802.11, cellular, and Bluetooth network and protocol development; and 3) diverse mobile phones and tablets that enable participatory sensing, context-aware applications and large-scale deployment in the field. The in-lab infrastructure is also enhanced by multiple outdoor antennas deployed on campus buildings and buses for understanding real wireless channels.

Semiconductor Processing Cleanroom. The 2,800 square-foot cleanroom, consisting of a 2,400 square-foot, class 10,000 room and a class 1,000 lithography area of 400 square feet, is located in the Jerry R. Junkins Engineering Building. A partial list of equipment in this laboratory includes acid and solvent hoods, photoresist spinners, two contact mask aligners, a thermal evaporator, a plasma asher, a plasma etcher, a turbo-pumped methane hydrogen reactive ion etcher, a four-target sputter-

ing system, a plasma-enhanced chemical vapor deposition reactor, a diffusion-pumped four pocket e-beam evaporator, an ellipsometer, and profilometers. Other equipment includes a boron-trichloride reactive ion etcher, a chemical-assisted ion-beam etcher and a four-tube diffusion furnace. The cleanroom is capable of processing silicon, compound semiconductors and piezo materials for microelectronic, photonic and nanotechnology devices.

Submicron Grating Laboratory. This laboratory is dedicated to holographic grating fabrication and has the capability of sub 10th-micron lines and spaces. Equipment includes a floating air table, an argon ion laser (ultraviolet lines) and an Atomic Force Microscope. This laboratory is used to make photonic devices with periodic features, such as distributed feedback, distributed Bragg reflector, grating-outcoupled and photonic crystal semiconductor lasers.

Photonic Devices Laboratory. This laboratory is dedicated to characterizing the optical and electrical properties of photonic devices. Equipment includes an optical spectrum analyzer, an optical multimeter, visible and infrared cameras, an automated laser characterization system for edge-emitting lasers, a manual probe test system for surface-emitting lasers, a manual probe test system for edge-emitting laser die and bars, and a near- and far-field measurement system.

Photonics Simulation Laboratory. This laboratory has specific computer programs that have been developed and continue to be developed for modeling and designing semiconductor lasers and optical waveguides, couplers and switches. These programs include WAVEGUIDE (calculates near-field, far-field, and effective indices of dielectric waveguides and semiconductor lasers with up to 500 layers, and each layer can contain gain or loss), GAIN (calculates the gain as a function of energy, carrier density and current density for strained and unstrained quantum wells for a variety of material systems), GRATING (uses the Floquet Bloch approach and the boundary element method to calculate reflection, transmission and outcoupling of dielectric waveguides and laser structures with any number of layers), and FIBER (calculates the fields, effective index, group velocity and dispersion for fibers with a circularly symmetric index of refraction profiles). Additional software is under development to model the modulation characteristics of photonic devices.

Photonic Architectures Laboratory. This laboratory is a fully equipped optomechanical and electrical prototyping facility, supporting the activities of faculty and graduate students in experimental and analytical tasks. The lab is ideally suited for the packaging, integration and testing of devices, modules and prototypes of optical systems. It has three large vibration isolated tables, a variety of visible and infrared lasers, single element 1-D and 2-D detector arrays, and a large complement of optical and optomechanical components and mounting devices. In addition, the laboratory has extensive data acquisition and analysis equipment, including an IEEE 1394 Fire-Wire-capable image capture and processing workstation, specifically designed to evaluate the electrical and optical characteristics of smart pixel devices and FSOI fiber-optic modules. Support electronics hardware includes various test instrumentation, such as arbitrary waveform generators and a variety of CAD tools for optical and electronic design, including optical ray trace and finite difference time domain software.

Curriculum in Electrical Engineering

The undergraduate curriculum in electrical engineering provides the student with basic principles through required courses, and specialization through a guided choice of elective courses.

Areas of Specialization

Due to the extensive latitude in course selection and to the wide variety of courses available within the Department of Electrical Engineering and within the University as a whole, it is possible for the electrical engineering student to concentrate his or her studies in a specific professional area such as biomedical, computer engineering, engineering leadership, or smart wireless and embedded systems.

Each student may select one specialization or may personalize his or her degree by a particular choice of advanced major electives. Students should choose a specialization as soon as possible; however, for many students, this process continues from term to term as the individual becomes better acquainted with the discipline of electrical engineering and with the choices available.

Bachelor of Science in Electrical Engineering

The electrical engineering curriculum is administered by the Department of Electrical Engineering.

Curriculum Notes. In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the credit hours within the electrical engineering curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Mathematics and Science	28
MATH 1337, 1338, 2339, 2343 One of MATH 3308 (or CSE 2353), 3315 (or CSE 3365), 3337, 3353 CHEM 1303 PHYS 1303, 1304; 1105 or 1106 One elective from PHYS 3305, 3344, 3374; CHEM 1304	
Core Electrical Engineering	21
EE 1350, 2322/2122, 2350, 2370/2170, 2381/2181, 3360	
Junior Electrical Engineering Courses	20
EE 3322/3122, 3381/3181, 3311, 3330, 3352, 3372	
Senior Design Sequence	6
EE 4311, 4312	
General Sequence or Specialization	27
General Sequence: CSE 1341, 1342 One of EMIS 3308, 3309; CEE 3302; CSE 4360 One of ME 2310, 2320, 2331, 2342; CSE 2341, 2353; or any 5000-level EE course approved by adviser One of EE 5356, 5357, 5381, 5385, 5387 One of EE 5310, 5312, 5314, 5321, 5330, 5332, 5333 One of EE 5352, 5360, 5362, 5370, 5371, 5372, 5373, 5374, 5375, 5376, 5377, 5378, 5379 6 hours from any EE 5000-level course listed above	

Engineering Leadership Specialization:

CSE 1341, 1342

Three of EMIS 3308, 3309; CEE 3302; CSE 4360

One of EE 5356, 5357, 5381, 5385, 5387

One of EE 5310, 5312, 5314, 5321, 5330, 5332, 5333

One of EE 5352, 5360, 5362, 5370, 5371, 5372, 5373, 5374,
5375, 5376, 5377, 5378, 5379

3 hours from any EE 5000-level course listed above

Computer Engineering Specialization:

CSE 1341, 1342, 2341, 2353, 3353

EE 5381, 5385

One of EE 5357, 5387 or CSE 5343

3 hours from EE 5000-level courses chosen with adviser's
approval**Smart Wireless and Embedded Systems Specialization:**

CSE 1341, 1342, 2341, 2353

Two of EE 5330, 5333, 5357, 5378, 5379, 5381, 5387

EE 5377, 5385 (or CSE 5385)

3 hours from EE 5000-level courses chosen with adviser's
approval

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Note: EE 8000-level courses are primarily for graduate students but may be taken by highly qualified undergraduates with the approval of the adviser and the instructor. Special topics courses also are available.

Each student is expected to complete and file a plan of study with his or her academic adviser. The plan should state specific choices to meet the foregoing requirements and develop an area of specialization when specialization is desired.

***Bachelor of Science in Electrical Engineering
and Bachelor of Science With a Major in Mathematics***

The Electrical Engineering Department and the Mathematics Department offer an integrated curriculum that enables a student to obtain both a B.S.E.E. degree and a B.S. degree with a major in mathematics.

Curriculum Notes. In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the credit hours within this curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Mathematics and Science	34
MATH 1337, 1338, 2339, 2343, 3315, 3337, 3353	
One of MATH 5315, 5325, 5331, 5332, 5334	
CHEM 1303	
PHYS 1303, 1304; 1105 or 1106	
Computer Science	6
CSE 1341, 1342	
Core Electrical Engineering	21
EE 1350, 2322/2122, 2350, 2370/2170, 2381/2181, 3360	

<i>Requirements for the Major (continued)</i>	<i>Credit Hours</i>
Junior Electrical Engineering Courses	20
EE 3311, 3322/3122, 3330, 3352, 3372, 3381/3181	
Advanced Electives	15
One of EE 5352, 5360, 5362, 5370, 5371, 5372, 5373, 5374, 5375, 5376, 5377, 5378, 5379	
One of EE 5356, 5357, 5381, 5385, 5387	
One of EE 5310, 5312, 5314, 5321, 5330, 5332, 5333	
6 hours from any EE 5000-level course listed above	
Senior Design Sequence	6
EE 4311, 4312	
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***Bachelor of Science in Electrical Engineering
and Bachelor of Science With a Major in Physics***

The Electrical Engineering Department and the Physics Department offer an integrated curriculum that enables a student to obtain both a B.S.E.E. degree and a B.S. degree with a major in physics.

Curriculum Notes. In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the credit hours within this curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Mathematics and Science	48
MATH 1337, 1338, 2339, 2343, 3353	
CHEM 1303	
PHYS 1303/1105, 1304, 3305, 3344, 3374, 4211, 4321, 5337, 5382, 5383	
Computer Science	3
CSE 1341 or 1342	
Core Electrical Engineering	24
EE 1350, 2322/2122, 2350, 2370/2170, 2381/2181, 3360, 3372	
Junior Electrical Engineering Courses	17
EE 3311, 3322/3122, 3381/3181	
EE 3330 (or PHYS 4392), 3352	
Advanced Electrical Engineering Electives	9
Three of EE 5310, 5312, 5314, 5321, 5330, 5332, 5333, 5356, 5357, 5360, 5370–74, 5376–78, 5381, 5385, 5387	
Senior Design Sequence	6
EE 4311, 4312	
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***Bachelor of Science in Electrical Engineering
(Biomedical Specialization)***

The Department of Electrical Engineering offers a B.S.E.E. degree with a specialization in biomedical engineering. This program enables students to satisfy requirements for admission to medical school.

Curriculum Notes. In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the credit hours within this curriculum are distributed as follows:

<i>Requirements for the Specialization</i>	<i>Credit Hours</i>
Mathematics and Science	53
MATH 1337, 1338, 2339, 2343 3-hour elective MATH course at the 3000 level or above BIOL 1401, 1402, 3304, 3350 CHEM 1303/1113, 1304/1114, 3371/3117, 3372/3118 PHYS 1303/1105, 1304/1106	
Computer Science	3
CSE 1341 <i>or</i> 1342	
Core Electrical Engineering	28
EE 1350, 2322/2122, 2350, 2370/2170, 2381/2181, 3360, 3372, 3381/3181	
Junior Electrical Engineering	9–10
Three from EE 3311, 3322/3122, 3330, 3352	
Advanced Electrical Engineering Elective	3
Any EE 5000-level course approved by adviser	
Biomedical Engineering	6
EE 5340, 5345	
Senior Design Sequence	6
EE 4311, 4312	
	108–109

Minor in Electrical Engineering

For information on a minor in electrical engineering, the student should consult the department. A total of 18 credit hours in electrical engineering courses are required: EE 2322, 3322, 2350, 2370 and six credit hours of elective electrical engineering courses at the 3000 level or above.

Electrical Engineering Courses (EE)

The third digit in a course number designator represents the subject area of the course. The following designators are used:

- XX1X Electronic Materials
- XX2X Electronic Devices
- XX3X Quantum Electronics and Electromagnetic Theory
- XX4X Biomedical Science
- XX5X Network Theory and Circuits
- XX6X Systems
- XX7X Information Science and Communication Theory
- XX8X Computers and Digital Systems
- XX9X Individual Instruction, Research, Seminar and Special Project

EE 1301 (3). MODERN ELECTRONIC TECHNOLOGY. A lecture and laboratory course examining a number of topics of general interest, including the fundamentals of electricity, household electricity and electrical safety, an overview of microelectronics, concepts of frequency and spectrum, the phonograph and the compact disc, bar codes, and communication by radio and TV. Designed for nontechnical students who want to be more knowledgeable. Not open to EE majors.

EE 1350 (3). INTRODUCTION TO ELECTRICAL ENGINEERING. Introduces contemporary electrical and electronic devices, concepts, and systems. Includes principles of engineering design; electrical components and systems such as generators, motors, relays, transistors, and integrated circuits; physical laws; signals and systems for audio and images; signal conversion and manipulation; digital logic; binary representation and coding; radio transmission; and electrical power.

EE 2122 (1). EE LABORATORY: ELECTRONIC CIRCUITS I. Experimental study of basic MOS and bipolar transistors in analog and digital applications. Logic gates and linear and nonlinear applications of operational amplifiers. *Prerequisite:* C- or better in EE 2350. *Corequisite:* EE 2322.

EE 2170 (1). EE LABORATORY: DESIGN AND ANALYSIS OF SIGNALS AND SYSTEMS. Introduces various techniques for analyzing real signals and designing various linear time-invariant systems. Incorporates software-based simulations and actual circuit implementations, and uses Web authoring tools for the production of multimedia lab reports. *Prerequisite:* CSE 1341. *Corequisite:* EE 2370.

EE 2181 (1). LABORATORY: DIGITAL COMPUTER LOGIC. Analysis and synthesis of combinational and sequential digital circuits. Basic digital computer logic circuits are designed, simulated using Verilog HDL, and implemented using DigiDesigner kit and integrated circuits. *Corequisite:* EE 2381.

EE 2190 (1). SOPHOMORE PROJECT.

EE 2290 (2). SOPHOMORE PROJECT.

EE 2322 (3). ELECTRONIC CIRCUITS I. Introduces nonlinear devices used in electronic circuits. Covers the DC and AC analysis of circuits employing diodes, bipolar junction transistors, and MOSFETs. Topics include device I–V characteristics, biasing, transfer characteristic, gain, power dissipation, and the design of amplifier circuits and logic circuits. Also, introduces SPICE simulation for DC and transient simulations. *Prerequisite:* C- or better in EE 2350. *Corequisite:* EE 2122.

EE 2350 (3). CIRCUIT ANALYSIS I. Analysis of resistive electrical circuits, basic theorems governing electrical circuits, power consideration, analysis of circuits with energy storage elements, and transient and sinusoidal steady-state analysis of circuits with inductors and capacitors. *Corequisites:* MATH 2343, PHYS 1304.

EE 2370 (3). DESIGN AND ANALYSIS OF SIGNALS AND SYSTEMS. Introduces standard mathematical tools for analyzing and designing various continuous-time signals and systems. Studies frequency domain design and analysis techniques, the Fourier and Laplace transforms, and applications such as modulation and demodulation in communications and processing of audio signals. *Prerequisites:* MATH 2343, C- or better in EE 2350. *Corequisite:* EE 2170.

EE 2381 (3). DIGITAL COMPUTER LOGIC. Covers digital computers and information, combinational logic circuits, combinational logic design, sequential circuits (e.g., finite-state machines), registers and counters, and memory and programmed logic design. Studies design and simulation of digital computer logic circuits. *Corequisite:* EE 2181.

EE 2390 (3). SOPHOMORE PROJECT.

EE 2490 (4). SOPHOMORE PROJECT.

EE 3122 (1). EE LABORATORY: ELECTRONIC CIRCUITS II. Experiments in analog electronic circuit design. *Prerequisites:* C- or better in EE 2122, 2322. *Corequisite:* EE 3322.

EE 3181 (1). EE LABORATORY: MICROCONTROLLERS AND EMBEDDED SYSTEMS. Fundamentals of microprocessor design, assembly language programming, and embedded system implementation. Students study a widely used family of microprocessors for microcontroller-based system design, assembly-level programming, and hardware interfacing. *Prerequisites:* C- or better in EE 2181, 2381. *Corequisite:* EE 3381.

EE 3190 (1). JUNIOR PROJECT.

EE 3290 (2). JUNIOR PROJECT.

EE 3311 (3). SOLID-STATE DEVICES. A laboratory-oriented elective course that introduces the working principles of semiconductor devices by fabricating and testing silicon MOSFET transistors and III–V based semiconductor lasers in the SMU cleanroom. Lectures explain the basic operation of diodes, bipolar transistors, field effect transistors, light-emitting diodes, semiconductor lasers, and other photonic devices. Additional lectures discuss the basics of device processing, which include photolithography, oxidation, diffusion, ion-implantation, metalization, and etching. Laboratory reports describing the fabrication and testing of devices account for a major portion of the course grade. *Prerequisites:* CHEM 1303, C- or better in EE 2350.

EE 3322 (3). ELECTRONIC CIRCUITS II. Introduction to MOSFET analog electronic circuits. Provides a background for understanding modern electronic circuits such as digital-to-analog and analog-to-digital converters, active filters, switched-capacitor circuits, and phase-locked loops. Topics include MOSFET SPICE models, basic MOSFET, single-stage amplifiers, current-mirrors, differential amplifier stages, source-follower buffer stages, high-gain common-source stages, operational amplifier, frequency response, and negative feedback. *Prerequisites:* C- or better in EE 2122, 2322, and 2350. *Corequisite:* EE 3122.

EE 3330 (3). ELECTROMAGNETIC FIELDS AND WAVES. Vector analysis applied to static electric and magnetic fields, development of Maxwell's equations, elementary boundary-value problems, and determination of capacity and inductance. Introduction to time-varying fields, plane waves, and transmission lines. *Prerequisites:* EE 2350, MATH 2339.

EE 3352 (3). FUNDAMENTALS OF ELECTRIC POWER ENGINEERING. Introduction to electric power generation and distribution. Topics include energy resources such as fossil, hydraulic, wind, solar, and nuclear energies. Also, three-phase power generators and transformers, and electric machines such as induction motors, synchronous generators, DC and stepper motors, and power converters. *Prerequisite:* EE 2350 or permission of instructor.

EE 3360 (3). STATISTICAL METHODS IN ELECTRICAL ENGINEERING. An introduction to probability, elementary statistics, and random processes. Topics include fundamental concepts of probability, random variables, probability distributions, sampling, estimation, elementary hypothesis testing, basic random processes, stationarity, correlation functions, power-spectral-density functions, and the effect of linear systems on such processes. *Prerequisites:* C- or better in EE 2170, 2370.

EE 3372 (3). INTRODUCTION TO SIGNAL PROCESSING. Gives juniors a thorough understanding of the techniques needed for the analysis of discrete-time systems. Topics include Fourier methods and Z transform techniques, discrete Fourier transform, fast Fourier transform and applications, and digital filters. *Prerequisites:* C- or better in EE 2170, 2370.

EE 3381 (3). MICROCONTROLLERS AND EMBEDDED SYSTEMS. An introduction to microcontrollers and embedded systems. Students study a widely used family of microprocessors as an introduction to architecture, software, and interfacing concepts. Topics include number systems and arithmetic operations for computers, assembly and C language programming, microprocessor organization and operation, memory and I/O port interfacing, and microprocessor-based controller design. Students write, assemble, and execute embedded programs designed for various applications. *Prerequisites:* C- or better in EE 2381. *Corequisite:* EE 3181.

EE 3390 (3). JUNIOR PROJECT.

EE 3490 (4). JUNIOR PROJECT.

EE 4090 (0). SENIOR PROJECT.

EE 4096 (0). SENIOR THESIS. *Prerequisite:* Admission to the departmental distinction program.

EE 4196 (1). SENIOR THESIS. *Prerequisite:* Admission to the departmental distinction program.

EE 4296 (2). SENIOR THESIS. *Prerequisite:* Admission to the departmental distinction program.

EE 4311 (3). SENIOR DESIGN I. Areas covered are tailored to the student's area of specialization. The student chooses a specific senior design project in electrical engineering from the available projects proposed by the faculty. Depending upon the specifics of the project, each

student designs, constructs, and tests a solution and then submits a formal report to the faculty in charge of the project. *Prerequisites:* EE 2322, 3381 and EE senior standing.

EE 4312 (3). SENIOR DESIGN II. Areas covered are tailored to the student's area of specialization. The design project selected may be a continuation of the project undertaken in EE 4311, a new project selected from the list of available projects offered by the faculty, or a project proposed by the student and approved by the faculty. Depending upon the specifics of the project, a team designs, constructs, and tests a solution and then submits a formal report to the faculty in charge of the project. *Prerequisite:* EE 4311.

EE 4396 (3). SENIOR THESIS. *Prerequisite:* Admission to the departmental distinction program.

EE 4490 (4). SENIOR PROJECT.

EE 5050 (0). UNDERGRADUATE INDUSTRIAL INTERNSHIP. Represents a term of industrial work experience for noncooperative education students. Designates a student as full time for the term but carries no academic credit. Students register for the course in the same manner as for other SMU courses except that no tuition is charged. The course grade is determined by the grading of a written report by the student's adviser at the end of the term.

EE 5176 (1). NETWORK SIMULATION LABORATORY. An introductory, hands-on course in simulations of computer networks intended to be taken simultaneously with EE 5376 or other networks courses. Lab exercises use OPNET and other simulation software to visualize network protocols and performance. Students run a number of simulation exercises, which are designed to complement classroom instruction, to set up various network models, specify protocols, and collect statistics on network performance. General familiarity with PCs is recommended. *Corequisites:* EE 5376 and senior standing.

EE 5190 (1). SPECIAL TOPICS. This special topics course must have a section number associated with a faculty member. The department offers special topics courses with a range of credit hours; the last digit in the course number represents courses with different topics.

EE 5290 (2). SPECIAL TOPICS. This special topics course must have a section number associated with a faculty member. The department offers special topics courses with a range of credit hours; the last digit in the course number represents courses with different topics.

EE 5310 (3). INTRODUCTION TO SEMICONDUCTORS. Studies the basic principles in physics and chemistry of semiconductors that have direct applications on device operation and fabrication. Topics include basic semiconductor properties, elements of quantum mechanics, energy band theory, equilibrium carrier statistics, carrier transport, and generation-recombination processes. Applies these physical principles to semiconductor devices. Devices studied include metal-semiconductor junctions, p n junctions, LEDs, semiconductor lasers, bipolar junction transistor, field-effect transistors, and integrated circuits. Emphasizes obtaining the governing equations of device operation based on physical properties. *Prerequisite:* EE 3311.

EE 5312 (3). COMPOUND SEMICONDUCTOR DEVICES AND PROCESSING. This laboratory-oriented elective course for upper-level undergraduates and graduate students provides in-depth coverage of processing of InP- and GaAs-based devices in addition to silicon integrated circuit processing. Students without fabrication experience fabricate and characterize MOSFETs and semiconductor lasers. Students with some previous fabrication experience (such as EE 3311) fabricate and test an advanced device mutually agreed upon by the student(s) and instructor. Examples of such devices include high electron mobility transistors, heterojunction bipolar transistors, phase shifters, distributed Bragg reflector lasers, grating-assisted directional couplers, and semiconductor lasers from developing materials such as GaInNAs. The governing equations of photolithography, oxidation, diffusion, ion-implantation, metallization, and etching are derived from fundamental concepts. Silicon process modeling uses the CAD tool SUPREM. Optical components modeling uses the SMU-developed software WAVEGUIDE, GAIN, and GRATING. Includes peer review before final submission of a laboratory report describing the projects. *Prerequisite:* EE 3311 or equivalent.

EE 5313 (3). SOLAR CELLS AND APPLICATIONS. This laboratory-oriented course explores the sun's energy as a source of electrical power and the working principles of silicon and III-V solar cells. Covers characteristics of the sun, semiconductor properties, p n junctions, solar cell fabrication, and photovoltaic system design. Students fabricate and test silicon solar cells in the SMU cleanroom. Lectures and class discussions explain the basic operation of p-n junction

diodes and solar cells along with the basics of device processing, including photolithography, oxidation, diffusion, ion implantation, metallization, and etching. *Prerequisite:* EE 3311 or permission of instructor.

EE 5314 (3). INTRODUCTION TO MICROELECTROMECHANICAL SYSTEMS. Develops the basics for MEMS, including microactuators, microsensors, and micromotors; principles of operation; micromachining techniques (surface and bulk micromachining), IC-derived micro-fabrication techniques; and thin film technologies as they apply to MEMS. *Prerequisite:* EE 3311.

EE 5321 (3). SEMICONDUCTOR DEVICES AND CIRCUITS. A study of the basics of CMOS integrated analog circuits design. Topics include MOSFET transistor characteristics, DC biasing, small-signal models, different amplifiers, current mirrors, single- and multi-stage electronic amplifiers, frequency response of electronic amplifiers, amplifiers with negative feedback, and stability of amplifiers. Each student completes one or more design projects by the end of the course. *Prerequisites:* EE 3122, 3322.

EE 5330 (3). ELECTROMAGNETICS: GUIDED WAVES. Application of Maxwell's equations to guided waves. Transmission lines, plane wave propagation and reflection, hollow waveguides, dielectric waveguides, fiber optics, and cavity and dielectric resonators. *Prerequisite:* EE 3330.

EE 5332 (3). ELECTROMAGNETICS: RADIATION AND ANTENNAS. Covers polarization, reflection, refraction, and diffraction of EM waves; dipole, loop, slot and reflector antennas; array analysis and synthesis; self and mutual impedance; and radiation resistance. *Prerequisite:* EE 3330.

EE 5333 (3). ANTENNAS AND RADIO WAVE PROPAGATION FOR PERSONAL COMMUNICATION. Covers three important aspects of telecommunications: fixed site antennas, radio wave propagation, and small antennas proximate to the body. Topics include electromagnetics fundamentals; general definitions of antenna characteristics; electromagnetic theorems for antenna applications; various antennas for cellular communications, including loop, dipole, and patch antennas; wave propagation characteristics as in earth satellite communications, radio test sites, urban and suburban paths, and multipath propagation; and radio communication systems. *Prerequisite:* EE 3330.

EE 5336 (3). INTRODUCTION TO INTEGRATED PHOTONICS. Covers the issues of integrated photonics, fundamental principles of electromagnetic theory, waveguides, simulation of waveguide modes, and photonic structures, with a focus on optical waveguides and numerical simulation techniques because advances in optical communications will be based on nano-structure waveguides coupled with new materials. Topics include Maxwell's equations; slab, step index, and rectangular and graded index wave guides. Also, dispersion, attenuations, nonlinear effects, numerical methods, coupled mode theory, and extensive use of mathematical packages such as MATLAB and Mathematica. *Prerequisites:* C- or better in EE 3311, 3330 or permission of instructor.

EE 5340 (3). BIOMEDICAL INSTRUMENTATION. Application of engineering principles to solving problems encountered in biomedical research. Topics include transducer principles, electrophysiology, and cardiopulmonary measurement systems. *Prerequisites:* C- or better in EE 2122, 2322 and junior standing.

EE 5345 (3). MEDICAL SIGNAL ANALYSIS. Looks at the analysis of discrete-time medical signals and images. Topics include the design of discrete-time filters, medical imaging and tomography, signal and image compression, and spectrum estimation. The course project explores the application of these techniques to actual medical data. *Prerequisite:* EE 3372.

EE 5351 (3). POWER SYSTEM OPERATION AND ELECTRICITY MARKETS. An overview of power generation systems, economic operation of power systems, and electricity market operation. Introduces mathematical optimization methods used to solve practical problems in power system operation addressing economic and technical aspects of power generation and transmission. Topics include power generation characteristics; economic dispatch; unit commitment and proposed solution methodologies; the effect of transmission systems on unit commitment and economic dispatch of power systems; restructuring in power systems; power pools and bilateral contracts; pricing in electricity markets; day-ahead, real-time, and ancillary service markets; financial transmission rights; competition between market participants; congestion management; and demand response.

EE 5352 (3). POWER SYSTEMS ANALYSIS. Provides an overview of the power systems, including complex power calculation; theory of balanced three-phase circuits; per-unit system;

transmission line characteristics for short, medium, and long lines; power flow analysis; three-phase balance fault; unbalanced fault and sequence impedances; and transient stability analysis in power systems. *Prerequisites:* Basic knowledge of electric power systems, fundamentals of electric power engineering (EE 3352) or equivalent.

EE 5356 (3). VLSI DESIGN AND LABORATORY. Explores the design aspects involved in the realization of CMOS integrated circuits from device up to the register subsystem level. Addresses major design methodologies, with emphasis placed on structured, full-custom design. Also, the MOS device, CMOS inverter static characteristics, CMOS inverter dynamic characteristics, CMOS transistor fabrication technology, combination logic circuit, alternative static logic circuit, sequential logic circuit, dynamic logic circuit, propagation delay and interconnect, power dissipation and design for low power, memory device (DRAM, SRAM, ROM), electrostatic discharge protection, packaging, testing, and VLSI design flow. Students use state-of-the-art CAD tools to verify designs and develop efficient circuit layouts. *Prerequisites:* C- or better in EE 2181, 2322, 2381.

EE 5357 (3). CAE TOOLS FOR STRUCTURED DIGITAL DESIGN. Concentrates on the use of CAE tools for the design and simulation of complex digital systems. Discusses and uses Verilog hardware description language for behavioral and structural hardware modeling. Emphasizes structured modeling and design. Design case studies include a pipelined processor, cache memory, UART, and a floppy disk controller. *Prerequisites:* C- or better in EE 2381 and junior standing, or permission of instructor.

EE 5360 (3). ANALOG AND DIGITAL CONTROL SYSTEMS. Feedback control of linear continuous and digital systems in the time and frequency domain. Topics include plant representation, frequency response, stability, root locus, linear state variable feedback, and design of compensators. *Prerequisite:* EE 3372.

EE 5370 (3). COMMUNICATION AND INFORMATION SYSTEMS. An introduction to communication in modulation systems in discrete and continuous time, information content of signals, and the transition of signals in the presence of noise. Also, amplitude, frequency, phase and pulse modulation, and time and frequency division multiplexing. *Prerequisite:* EE 3360.

EE 5371 (3). ANALOG AND DIGITAL FILTER DESIGN. Covers approximation and analog design of Butterworth, Chebyshev, and Bessel filters; basic frequency transformations for designing low-pass, band-pass, band-reject, and high-pass filters; concept of IIR digital filters using impulse-invariant and bilinear transformations; design of FIR digital filters using frequency sampling and window methods; canonical realization of IIR and FIR digital filters; wave digital filters; and an introduction to two-dimensional filters. *Prerequisite:* EE 3372.

EE 5372 (3). TOPICS IN DIGITAL SIGNAL PROCESSING. Provides an extended coverage of processing of discrete-time signals. Reviews discrete-time signals and the analysis of systems in both the time and frequency domains. Topics include multirate signal processing, digital filter structures, filter design, and power spectral estimation. *Prerequisite:* EE 3372.

EE 5373 (3). DSP PROGRAMMING LABORATORY. Utilizes a hands-on approach that focuses on the essentials of programming digital signal processors (programmable semiconductor devices used extensively in digital cellular phones, high-density disk drives, and high-speed modems) while minimizing signal processing theory. Focuses on programming the Texas Instruments TMS320C50, a fixed-point processor. Emphasizes assembly language programming, and Topics include implementation of FIR and IIR filters, the FFT, and a real-time spectrum analyzer. *Recommended:* Basic knowledge of discrete-time signals and digital logic systems. *Prerequisite:* EE 3372.

EE 5374 (3). DIGITAL IMAGE PROCESSING. Introduces the basic concepts and techniques of digital image processing. Topics include characterization and representation of images, image enhancement, image restoration, image analysis, image coding, and reconstruction. *Prerequisite:* EE 5372.

EE 5375 (3). RANDOM PROCESSES IN ENGINEERING. An introduction to probability and stochastic processes as used in communication and control. Topics include probability theory, random variables, expected values and moments, multivariate Gaussian distributions, stochastic processes, autocorrelation and power spectral densities, and an introduction to estimation and queuing theory. *Prerequisite:* EE 3360.

EE 5376 (3). INTRODUCTION TO COMPUTER NETWORKS. Surveys basic topics in communication networks, with an emphasis on layered protocols and their design. Topics include OSI

protocol reference model, data link protocols, local area networks, routing, congestion control, network management, security, and transport layer protocols. Network technologies include telephony, cellular, Ethernet, Internet protocol, TCP, and ATM. Assignments may include lab exercises involving computer simulations. *Corequisites:* EE 5176 and senior standing.

EE 5377 (3). EMBEDDED WIRELESS DESIGN LABORATORY. A wide variety of real-world experiences in wireless communications and networking using FPGAs equipped with embedded microprocessors. Covers basic wireless concepts of scheduled and random access as well as modulation and power control via labs that enable implementation of cellular and 802.11-based wireless protocols such as TDMA, Aloha, CSMA, and CSMA/CA. Also, broader topics such as embedded programming, interrupt-driven operation, and FPGA-based design. In a course project, student teams design novel wireless protocols and carry out experiments to measure the performance. *Prerequisite:* C- or better in EE 3360 or equivalent, or permission of instructor.

EE 5378 (3). MOBILE PHONE EMBEDDED DESIGN. Students learn to develop embedded software for the most widely used smartphone platforms, with emphasis on wireless and sensing applications. Topics include user interface design such as multitouch and basic HCI design tenets, storing and fetching data with local networked systems and databases, localization via GPS and wireless signal triangulation, sensing environmental and user characteristics, networking with various wireless protocols, graphics rendering, multimedia streaming, and designing for performance (e.g., controlling memory leaks, object allocation, and multithreading). Draws from various fields, including wireless communications and networking, embedded programming, and computer architecture.

EE 5379 (3). OPTIMIZATION IN WIRELESS NETWORKS. Covers a wide variety of optimization problems in the design and operation of wireless networks. Introduces basic linear programming and integer linear programming concepts and explains these concepts using examples from wired and wireless networks. Also, the basic structure and design of various wireless networks, including cellular networks (such as GSM) and wireless LANs (e.g., those based on 802.11g/n). *Prerequisite:* EE 2170 or equivalent, or permission of instructor.

EE 5381 (3). DIGITAL COMPUTER DESIGN. Emphasizes design of digital systems and register transfer. Design conventions, addressing modes, interrupts, input-output, channel organization, high-speed arithmetic, and hardwired and microprogrammed control. Also, central processor organization design and memory organization. Each student completes one or more laboratory projects. *Prerequisites:* C- or better in EE 2181, 2381 and junior standing.

EE 5385 (3). MICROCONTROLLER ARCHITECTURE AND INTERFACING. Emphasizes the design of embedded systems using microcontrollers. Briefly reviews microcontroller architecture. Includes hierarchical memory systems and interfacing of memory and peripherals, industry standard bus interfaces and other applicable standards, and topics in real-time operating systems and system-level design considerations. The corequisite laboratory requires students to develop software using assembler and high-level languages. *Prerequisite:* CSE 3381 or EE 3181, 3381.

EE 5387 (3). DIGITAL SYSTEMS DESIGN. Modern topics in digital systems design, including the use of HDLs for circuit specification and automated synthesis tools for realization. Programmable logic devices are emphasized and used throughout the course. Includes heavy laboratory assignment content and a design project. *Prerequisite:* C- or better in EE 2381 or in CSE 3381.

EE 5390 (3). SPECIAL TOPICS. This special topics course must have a section number associated with a faculty member. The department offers special topics courses with a range of credit hours; the last digit in the course number represents courses with different topics.

EE 5391 (3). SPECIAL TOPICS. This special topics course must have a section number associated with a faculty member. The department offers special topics courses with a range of credit hours; the last digit in the course number represents courses with different topics.

EE 5392 (3). SPECIAL TOPICS. This special topics course must have a section number associated with a faculty member. The department offers special topics courses with a range of credit hours; the last digit in the course number represents courses with different topics.

EE 5393 (3). SPECIAL TOPICS. This special topics course must have a section number associated with a faculty member. The department offers special topics courses with a range of credit hours; the last digit in the course number represents courses with different topics.

EE 5395 (3). SPECIAL TOPICS. This special topics course must have a section number associated with a faculty member. The department offers special topics courses with a range of credit hours; the last digit in the course number represents courses with different topics.

EE 5490 (4). SPECIAL TOPICS. This special topics course must have a section number associated with a faculty member. The department offers special topics courses with a range of credit hours; the last digit in the course number represents courses with different topics.

Telecommunication Courses (EETS)

EETS 5301 (3). INTRODUCTION TO TELECOMMUNICATIONS. Overview of public and private telecommunications systems, traffic engineering, switching, transmission, and signaling. Also, channel capacity, media characteristics, Fourier analysis and harmonics, modulation, electromagnetic wave propagation and antennas, modems and interfaces, digital transmission systems, T1 carriers, digital microwave, satellites, fiber optics and SONET, and integrated services digital networks.

EETS 5302 (3). TELECOMMUNICATIONS MANAGEMENT AND REGULATION. Managerial sequel to EETS 5301 that provides a historical review of the most significant regulation and management issues affecting the telecommunications industry over the past 100 years. Students explore the regulatory environment the industry operates in today through the study of current events, articles, and recent state and federal legislation. *Prerequisite:* EETS 5301 (formerly EE 5301) or experience in the telecommunications industry.

EETS 5303 (3). FIBER OPTIC TELECOMMUNICATIONS. Introduction to the practical concepts involved in optical fiber communications systems. Covers basic optical principles, dielectric slab-waveguides, fiber waveguides, integrated optics devices, and the major components of a fiber communications link, including optical sources, detectors, and fibers.

EETS 5304 (3). NETWORK PROTOCOLS. Introduction to the protocol architecture of the Internet, following a bottom-up approach to the protocol layers. Provides an understanding of the internetworking concepts in preparation for advanced networking courses. Covers networking technologies (e.g., local area networks, packet switching, and ATM), Internet protocol and TCP/UDP in-depth, and an overview of important application protocols (e.g., HTTP, client/server computing, SMTP, FTP, and SNMP). *Prerequisite:* EETS 5301 or equivalent.

ENGINEERING MANAGEMENT, INFORMATION AND SYSTEMS

Professor Sila Çetinkaya, Chair

Professors: Sila Çetinkaya, Jeff Tian, Halit Üster. **Associate Professors:** Richard S. Barr, Eli V. Olinick. **Professor of Practice:** Jerrell T. Stracener. **Assistant Professor:** Michael Hahsler. **Senior Lecturers:** Leslie-Ann Asmus, Thomas F. Siems. **Lecturers:** Gretchen H. Coleman, Rachel P. Goodman. **Adjunct Faculty:** Karl J. Arunski, Charles W. Beall, Robert L. Bell, William D. Bell, George W. Chollar, Randall Clendening, Howard S. Cowin, Christopher M. Davis, John R. Graham, III, Michael E. Hopper, Robert H. Jones, John I. Lipp, James K. McCloud, William H. Muto, William P. Nanry, Robert S. Oshana, Oscar K. Pickels, James B. Rodenkirch, Christopher A. Rynas, Mark E. Sampson, Nandlal M. Singh, Stephen C. Skinner, George M. Spiride, Russell A. Vacante, John W. Via, III, Timothy D. Woods, John R. Yarrow, Hossam A. Zaki.

General Information

The EMIS Department brings together the school's technical management and operations areas to offer a Bachelor of Science with a major in management science. This program focuses on computer models for decision-making and the application of engineering principles and techniques to enhance organizational performance. Faculty specializations include optimization, advanced analytics, telecommunications network design and management, supply-chain systems, systems engineering, logistics, quality control, reliability engineering, data science, information engineering, benchmarking, operations planning and management, network optimization, and mathematical programming.

The same systems-oriented, mathematical-model-based approach that is the cornerstone of engineering also has powerful application within organizations and their operations. This is the field of management science – also termed “the science of better” – the discipline of applying advanced analytical methods to help make better decisions.

Additional Majors and the 4+1 Program

Because of the flexibility of the curriculum, the majority of management science majors choose to receive a second major or one or more minors from a wide range of other disciplines. Examples include a Bachelor of Science, a major in management science or a second bachelor's degree in economics, mathematics, business, computer science, history, psychology, Spanish or French.

Other management science majors continue their studies to obtain a Master of Science in Engineering Management, systems engineering, information engineering or operations research. The 4+1 Program allows students to accelerate progress toward completion of a graduate degree.

More information on these and other options available to management science majors is available at www.smu.edu/Lyle/Departments/EMIS. EMIS faculty and advisers are also available to answer questions about the program.

Computing Facilities

Students in the EMIS Department have access to a wide range of computing facilities and networking equipment. The department manages three PC-based computing labs, including the Enterprise Systems Design Laboratory created for students in the senior design course. General-use UNIX and Linux machines (including eight-processor 64-bit Xeon workstations) provide advanced computing, analytical soft-

ware and Web hosting to all engineering students. Windows- and Linux-based PCs and workstations are the primary desktop equipment. All computing facilities are networked via high-speed Ethernet, with Gigabit Ethernet connections to Internet 1, Internet 2 and the National Lambda Rail research network. Open computing labs and wireless services provide additional facilities access points for students.

Curriculum in Management Science

Management science deals with the development of mathematically based models for planning, managing, operating and decision-making. In the EMIS curriculum, these methods are also applied to the design and management of efficient systems for producing goods and delivering services.

A management scientist at a major airline would be concerned with building mathematical models to decide the best flight schedules, plane routes, and assignments of pilots and crews to specific flights and of flights to specific gates, as well as the best number of planes to own and operate, cities to fly to, cities to use as major hubs, layout for an airport terminal, overbooking policy and location to refuel aircraft. Optimal and good usable solutions for such issues can be uncovered through analysis with computer-based mathematical models. The management scientist develops an understanding of a practical decision problem, then designs and constructs a model that incorporates data from the MIS department and produces a high-quality solution.

Because of its generality, management science has broad applications in all engineering disciplines and in the fields of computer science, economics, finance, marketing, medicine, logistics, production, information engineering and statistics. Management science methods are used extensively in industry and government, and SMU's EMIS program prepares the technically oriented student to excel in today's competitive business environment. ABET, www.abet.org, does not provide accreditation for the discipline of management science.

Bachelor of Science With a Major in Management Science

Curriculum Notes. In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the credit hours within this curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Mathematics	12
MATH 1337, 1338, 3315 or 3316, 3353	
Science/Social Science	15
ECO 1311, 1312	
3 hours in natural science from group 1	
3 hours in natural science or technology from groups 1 and 2	
3 hours from groups 1, 2, and 3	
Group 1:	
BIOL 1401, 1402	
CEE 1331	
CHEM 1303/1113, 1304/1114	
GEOL 1301, 1305, 1307, 1308, 1313, 1315, 2320	
PHYS 1303/1105, 1304/1106, 1307/1105, 1308/1106, 1320	

Science/Social Science (continued)

Group 2:

ANTH 2315, 2363
 CEE 1301, 1378
 CSE 1331
 EE 1301, 1382
 ME 1301, 1202/1102, 1303
 PHYS 1403, 1404

Group 3: Other courses in ANTH, ECO, PSYC, or SOCI**Major Concentration**

45

EMIS 1360, 2360, 3308 (or MNO 3370), 3309, 3340, 3360,
 3361, 4395, 5362
 CEE 3302
 CSE 1341, 1342, 4360
 6 hours from EMIS courses at the 5000 level or above

Business

6

ACCT 2301
 MKTG 3340

Electives

15

Adviser must approve electives.

 93

Note: All management science majors must earn a grade of at least *C-* in all courses taken in fulfillment of the requirements for the major; however, a grade of *C* or better is required in all subset classes. All courses must be taken for a grade (not pass/fail), with the exception of those courses for which the student has received test credit.

Minor in Management Science

For information on a minor in management science, the student should consult the department. The minor in management science operates concurrently with the B.S. degree. Students seeking a minor in management science must meet the same admission and subset requirements as students seeking a B.S. degree as described in the Admission to Advanced Standing section of this catalog, and they will be enrolled in the same sections of courses as B.S. management science majors. A total of 15 credit hours (in addition to the required subset courses) are required for the minor in management science: EMIS 1360, 2360, 3340, 3360 and MATH 3353.

The Courses (EMIS)

EMIS 1305 (3). COMPUTING TECHNOLOGY: HISTORICAL AND ETHICAL PERSPECTIVES. Introduces historical and ethical implications of computer architecture, software, hardware, telecommunications, and artificial intelligence. Develops business software skills and Internet concepts for research and communication applications. Credit is not allowed for a computer science, computer engineering, or management science major or minor.

EMIS 1307 (3). INFORMATION TECHNOLOGY FOR BUSINESS. Focuses on the use of information technology in business; explains computer systems and component parts, terms used by technologists, and use of business software packages. No credit for EMIS majors or minors.

EMIS 1360 (3). INTRODUCTION TO MANAGEMENT SCIENCE. Management science is the application of mathematical modeling and scientific principles to solve problems and improve life in society. Students learn to develop plans, manage operations, and solve problems encountered in business and government. *Prerequisite:* Knowledge of college-level algebra. *Corequi-*

sites: MATH 1337, CSE 1341. Students are limited to a maximum of two enrollments in the course; medical withdrawals will be reviewed on a case by case basis.

EMIS 2360 (3). ENGINEERING ECONOMY. Evaluation of engineering alternatives by equivalent uniform annual cost, present worth, and rate-of-return analysis. Use of a computerized financial planning system. Credit not allowed for both EMIS 2360 and EMIS 8361. *Prerequisites*: C- or better in MATH 1337 and knowledge of introductory probability and statistics. *Corequisites*: MATH 1338 and CSE 1342 (must enroll in lab).

EMIS 2375 (3). CULTURAL AND ETHICAL IMPLICATIONS OF TECHNOLOGY. Explores the pervasive use of technology in today's society, the impact of technology on daily life, and the tie between technology and ethical responsibility. Students learn how their lives are being shaped by technology and how they in turn help shape technology.

EMIS 3150 (1). ETHICS IN COMPUTING. Computer professionals have a special responsibility to ensure ethical behavior in the design, development, and use of computers and computer networks. This course focuses on the education of the undergraduate through the study of ethical concepts and the social, legal, and ethical implications involved in computing. Issues to be studied include computer crimes, software theft, hacking and viruses, intellectual property, unreliable computers, technology issues in the workplace, and professional codes of ethics. *Prerequisite*: Junior standing.

EMIS 3308 (3). ENGINEERING MANAGEMENT. Examines planning, financial analysis, organizational structures, management of the corporation (including its products, services, and people), transfer of ideas to the marketplace, and leadership skills. Credit is not allowed for both EMIS 3308 and the same course offered by another department; credit is not allowed for both EMIS 3308 and EMIS 7351. *Prerequisite*: Junior standing. Lyle undergraduate majors only.

EMIS 3309 (3). INFORMATION ENGINEERING AND GLOBAL PERSPECTIVES. Examines global and information aspects of technology- and information-based companies. Credit is not allowed for the same course offered by another department. Credit is not allowed for both EMIS 3309 and EMIS 7357. *Prerequisite*: Junior standing. Lyle undergraduate majors only.

EMIS 3340 (3). STATISTICAL METHODS FOR ENGINEERING AND APPLIED SCIENTISTS. Basic concepts of probability and statistics useful in the solution of engineering and applied science problems. Topics include probability, probability distributions, data analysis, sampling distributions, estimations, and simple tests of hypothesis. Credit is not allowed for both EMIS 3340/STAT/CSE 4340 and EMIS 5370. *Prerequisite*: C- or better in MATH 1338 or equivalent.

EMIS 3360 (3). OPERATIONS RESEARCH. A survey of models and methods of operations research. Covers deterministic and stochastic models in a variety of areas. Credit is not allowed for both EMIS 3360 and 8360. Must enroll in lab. *Prerequisite*: C- or better in EMIS 1360. Management science majors, management science minors, or math operations research specialization majors only.

EMIS 3361 (3). STOCHASTIC MODELS IN OPERATIONS RESEARCH. Covers the formulation, solution, and application of models for decision-making under uncertainty. Probabilistic and statistical methodologies (e.g., decision analysis, queuing theory, stochastic process, Markov chains, and simulation models) address problems in the design, management, and usage of efficient systems for producing goods and delivering services. Students use specialized software and spreadsheet add-ins for model-building and problem-solving. Weekly 1-hour, 20-minute laboratory. *Prerequisite*: C- or better in EMIS 3340. *Corequisite*: MATH 3353. Management science majors only.

EMIS 4390 (3). UNDERGRADUATE PROJECT. An opportunity for the advanced undergraduate student to undertake independent investigation, design, or development. Written permission of the supervising faculty member is required before registration.

EMIS 4395 (3). SENIOR DESIGN. Consists of a large project involving the design of a management system, model building, data collection and analysis, and evaluation of alternatives. *Prerequisites*: C- or better in EMIS 5362 and senior standing.

EMIS 5050 (0). UNDERGRADUATE INTERNSHIP.

EMIS 5190 (1). SPECIAL TOPICS. Individual or group study of selected topics in management science. *Prerequisite*: Permission of instructor.

EMIS 5290 (2). SPECIAL TOPICS. Individual or group study of selected topics in management science. *Prerequisite:* Permission of instructor.

EMIS 5300 (3). SYSTEMS ANALYSIS METHODS. Introduction to modeling and analysis concepts, methods and techniques used in systems engineering, design of products and associated production, and logistics systems and analysis of operational system performance. Specific topics include probabilistic and statistical methods, Monte Carlo simulation, optimization techniques, applications of utility and game theory, and decision analysis.

EMIS 5301 (3). SYSTEMS ENGINEERING PROCESS. Examines the discipline, theory, economics, and methodology of systems engineering. Reviews the historical evolution of the practice of systems engineering and the principles that underpin modern systems methods. Emphasizes the economic benefits of investment in systems engineering and the risks of failure to adhere to sound principles. Develops an overview perspective distinct from the traditional design- and analytical-specific disciplines.

EMIS 5303 (3). INTEGRATED RISK MANAGEMENT. Introduction to risk management based upon integrated trade studies of program performance, cost, and schedule requirements. Topics include risk planning, risk identification and assessment, risk handling and abatement techniques, risk impact analysis, management of risk handling and abatement, and subcontractor risk management. Examines integrated risk management methods, procedures, and tools.

EMIS 5305 (3). SYSTEMS RELIABILITY, SUPPORTABILITY, AND AVAILABILITY ANALYSIS. Introduction to systems reliability, maintainability, supportability, and availability modeling and analysis, with an application to systems requirements definition and systems design and development. Covers both deterministic and stochastic models. Emphasizes RMS/A analyses to establish a baseline for systems performance and to provide a quantitative basis for systems trade-offs. *Prerequisite:* EMIS 5300.

EMIS 5307 (3). SYSTEMS INTEGRATION AND TEST. Examines the process of successively synthesizing and validating larger and larger segments of a partitioned system within a controlled and instrumented framework. System integration and test is the structured process of building a complete system from its individual elements and is the final step in the development of a fully functional system. Stresses the significance of structuring and controlling integration and test activities. Presents formal methodologies for describing and measuring test coverage, as well as sufficiency and logical closure for test completeness. Discusses interactions with system modeling techniques and risk management techniques. Based upon principles of specific engineering disciplines and best practices, which form a comprehensive basis for organizing, analyzing, and conducting integration and test activities.

EMIS 5310 (3). SYSTEMS ENGINEERING DESIGN. Introduces system design of complex hardware and software systems. Includes design concept, design characterization, design elements, reviews, verification and validation, threads and incremental design, unknowns, performance, management of design, design metrics, and teams. Centers on the development of real-world examples.

EMIS 5315 (3). SYSTEMS ARCHITECTURE DEVELOPMENT. A design-based methodological approach to system architecture development using emerging and current enterprise architecture frameworks. Covers structured analysis, object-oriented analysis and design approaches, enterprise architecture frameworks (e.g., Zachman framework, FEAR, DoDAF, and ANSI/IEEE-1471) executable architecture model approaches as tools for system-level performance evaluation and trade-off analyses, case studies in enterprise architecture development, and the integration of architecture design processes into the larger engineering-of-systems environment. *Prerequisite:* EMIS 5301.

EMIS 5320 (3). SYSTEMS ENGINEERING LEADERSHIP. Augments the management principles embedded in the systems engineering process with process design and leadership principles and practices. Places emphasis on leadership principles by introducing the underlying behavioral science components, theories, and models. Demonstrates how the elements of systems engineering, project management, process design, and leadership integrate into an effective leadership system. *Prerequisite:* EMIS 5301.

EMIS 5330 (3). SYSTEMS RELIABILITY ENGINEERING. In-depth coverage of tasks, processes, methods, and techniques for achieving and maintaining the required level of system reliability considering operational performance, customer satisfaction, and affordability. Includes establishing system reliability requirements, reliability program planning, system

reliability modeling and analysis, system reliability design guidelines and analysis, system reliability test and evaluation, and maintaining inherent system reliability during production and operation.

EMIS 5332 (3). DATA MINING FOR ANALYTICS. Analytics is based on collecting, managing, exploring, and acting on large amounts of data, and it has become a source of competitive advantage for many organizations. This course introduces data mining techniques (classification, association analysis, and cluster analysis) used in analytics. Reinforces all material covered through hands-on experience using state-of-the-art tools to design and execute data mining processes. *Prerequisite:* Background in descriptive statistics and probability.

EMIS 5335 (3). HUMAN SYSTEMS INTEGRATION. Advances the understanding and application of cognitive science principles, analysis-of-alternatives methods, and engineering best practices for addressing the role of humans within the design of high-technology systems. Presents and discusses HSI-specific processes such as task-centered design; human factors engineering; manpower, personnel, and training; process analysis; and usability testing and assessment. *Prerequisite:* EMIS 5301.

EMIS 5340 (3). LOGISTICS SYSTEMS ENGINEERING. Utilizes system engineering principles and analyses to introduce concepts, methods, and techniques for engineering and development of logistics systems associated with product production and manufacturing; product order and service fulfillment; and product, service, and customer support. Topics include logistics systems requirements, logistics systems design and engineering concurrently with product and service development, transportation and distribution, supply and material support, and supply Web design and management. Also, product, service, and customer support.

EMIS 5347 (3). CRITICAL INFRASTRUCTURE PROTECTION AND SECURITY SYSTEMS ENGINEERING. Presents SE concepts as applied to the protection of the United States' critical infrastructure. A top-level systems viewpoint provides a greater understanding of this system of systems. Topics include the definition and advantages of SE practices and fundamentals; system objectives that include the viewpoint of the customer, users, and other stakeholders; the elements of the critical infrastructure and their interdependencies; the impact transportation system disruptions; and system risk analysis. *Prerequisites:* EMIS 5301, 5303.

EMIS 5352 (3). INFORMATION SYSTEM ARCHITECTURE. The architecture of an IS defines that system in terms of components and interactions among those components. Addresses IS hardware and communications elements for information engineers, including computer networking and distributed computing. Also, the principles, foundation technologies, standards, trends, and current practices in developing an appropriate architecture for Web-based and non-Internet information systems.

EMIS 5353 (3). INFORMATION SYSTEM DESIGN STRATEGIES. Surveys the fundamentals of software engineering and database management systems for information engineers. Covers the principles, foundation technologies, standards, trends, and current practices in data-centric software engineering and systems design, including object-oriented approaches and relational DBMS. Focuses on system design, development, and implementation aspects and not the implementation in code.

EMIS 5355 (3). ENGINEERING OPERATIONS. The management of a technical organization's operations can contribute to the strategic goals and objectives of the enterprise. By analyzing and managing operations as systems, strategic choices are shown to drive design and operating decisions. The course covers the tools and techniques for solving problems to achieve the overall goals and strategies of manufacturing and services organizations.

EMIS 5359 (3). INFORMATION ENGINEERING SEMINAR. Topics in management of information in specific industries or application areas. May be repeated for credit when the topics vary. *Prerequisite:* EMIS 5360.

EMIS 5360 (3). MANAGEMENT OF INFORMATION TECHNOLOGIES. Defines the management activities of the overall computer resources within an organization or government entity. Consists of current topics in strategic planning of computer resources, budgeting and fiscal controls, design and development of information systems, personnel management, project management, rapid prototyping, and system life cycles.

EMIS 5361 (3). COMPUTER SIMULATION TECHNIQUES. Introduction to the design and analysis of discrete probabilistic systems using simulation. Emphasizes model construction and

a simulation language. *Prerequisites:* Programming ability and knowledge of introductory probability or statistics.

EMIS 5362 (3). PRODUCTION SYSTEMS ENGINEERING. Applies the principles of engineering, or “design under constraint,” to modern production systems. Topics include production systems analysis and design considerations, system design and optimization models and methods, pull- and push-based production systems, quality engineering, and process improvement. Also, techniques for engineering and managing systems with specific architectures: batch-oriented, continuous-flow, projects, and just-in-time. *Prerequisite:* C- or better in EMIS 3360. Management science or math operations research specialization majors only.

EMIS 5364 (3). STATISTICAL QUALITY CONTROL. A comprehensive introduction to the statistical quality control methods that underlie the modern quality revolution. Uses statistics and simple probability to develop control charts to monitor and improve the quality of an ongoing process, and for acceptance-sampling plans (including MIL-STD). Defines control charts for attributes, variables, and CUSUM procedures and applies them to everyday problems in manufacturing and service businesses. *Prerequisite:* EMIS 3340 (STAT/CSE 4340), EMIS 5370, or STAT 5373.

EMIS 5365 (3). PROGRAM AND PROJECT MANAGEMENT. Development of principles and practical strategies for managing projects and programs of related projects for achieving broad goals. Topics include planning, organizing, scheduling, resource allocation, strategies, risk management, quality, communications, tools, and leadership for projects and programs.

EMIS 5366 (3). MARKETING ENGINEERING. Marketing engineering moves beyond traditional conceptual approaches to embrace the use of analytics, data, information technology, and decision models to help organizations effectively reach customers and make marketing decisions. Designed for technical individuals, the course applies engineering problem-solving approaches and computer tools to solve marketing problems from today’s competitive work environment. *Prerequisites:* EMIS 3360 or equivalent, and EMIS 3340 (STAT/CSE 4340) or EMIS 5370.

EMIS 5369 (3). RELIABILITY ENGINEERING. Introduction to reliability engineering concepts, principles, techniques, and methods required for design and development of affordable products and services that meet customer expectations. Topics include reliability concepts and definitions, figures of merit, mathematical models, design analysis and trade studies, reliability testing and types of tests, test planning and analysis of test results, and statistical analysis of reliability data. *Prerequisite:* C- or better in EMIS 4340 or 5370.

EMIS 5377 (3). STATISTICAL DESIGN AND ANALYSIS OF EXPERIMENTS. Introduces statistical principles in the design and analysis of industrial experiments. Covers completely randomized, randomized complete and incomplete block, Latin square, and Plackett-Burman screening designs; complete and fractional factorial experiments; descriptive and inferential statistics; analysis of variance models; and mean comparisons. *Prerequisites or corequisites:* C- or better in EMIS 4340 and senior standing with a science or engineering major, or permission of instructor.

EMIS 5380 (3). MANAGING INFORMATION TECHNOLOGY CONTROLS. Surveys current practices in IT governance and controls, with approaches for balancing business needs with technology controls for high-risk processes. Topics include introduction to technology controls, the process of IT governance, systems and infrastructure life cycle management, IT delivery and support, and records management.

EMIS 5382 (3). INFORMATION TECHNOLOGY SECURITY AND RISK MANAGEMENT. For nontechnical managers and executives with decision-making responsibility in information security governance and risk management. Topics include information security organizations and policies, governance, program development and management, information risk management, legal and regulatory compliance, and business continuity planning.

EMIS 5390 (3). SPECIAL TOPICS. Individual or group study of selected topics in management science. *Prerequisite:* Permission of instructor.

MECHANICAL ENGINEERING

Professor Ali Beskok, Chair

Professors: Ali Beskok, Xin-Lin Gao, Yildirim Hürmüzü, Radovan B. Kovacevic, Paul S. Krueger, José L. Lage, M. Volkan Otugen, Peter E. Raad, Wei Tong. **Associate Professors:** Charles M. Lovas, Edmond Richer, David A. Willis. **Assistant Professors:** Tindaro Ioppolo, Jeong Ho You. **Senior Lecturers:** Elena V. Borzova, Dona T. Mularkey. **Clinical Associate Professor:** Adam L. Cohen. **Adjunct Faculty:** Bogdan V. Antohe, Eric B. Cluff, Theodore A. Dumas, M. Wade Meaders, David J. Nowacki, Allen D. Tilley, Andrew K. Weaver, James R. Webb.

General Information

Mechanical engineering is a diverse, dynamic and exciting field. Mechanical engineers have wide-ranging technical backgrounds and a high potential for employment with mobility and professional growth. They apply creative knowledge to solve critical problems in many areas, including bioengineering (e.g., drug delivery and artificial organs), construction, design and manufacturing, electronics, energy (e.g., production, distribution and conservation), maintenance (individual machinery and complex installations), materials processing, medicine (diagnosis and therapy), national security and defense, packaging, pollution mitigation and control, robotics and automation, sensors, small-scale devices, and all aspects of transportation, (e.g., space travel and exploration).

The Mechanical Engineering Department at SMU has a long tradition of offering a superb engineering education within an environment fostering creativity and innovation. Small classes not only provide for strong mentoring but also help achieve academic excellence through cooperation and teamwork. Leading by example, through encouragement and dedication, the faculty is committed to the success of every student. In addition to offering introductory and advanced courses in their areas of specialization, faculty members teach courses that address the critical issues of technology and society.

The program prepares students by providing a solid background in fundamentals of science and engineering without compromising the practical aspects of mechanical engineering. Essential entrepreneurial know-how, interpersonal skills and the importance of lifelong learning complement the educational experience of students. The department stimulates professional and social leadership by providing, among others, opportunities for students to participate in the SMU Student Section of the American Society of Mechanical Engineers and in the SMU Tau-Sigma Chapter of Pi-Tau-Sigma, the National Honorary Mechanical Engineering Fraternity.

The curriculum consists of three major areas: thermofluids; dynamics and controls; and solid mechanics, materials and manufacturing. Practical mechanical engineering design is interlaced throughout the curriculum. In the senior year, student teams are guided through a complete design project, from concept to construction to testing, with support from industries, foundations and volunteer professionals. State-of-the-art software, computers and laboratory equipment support the high-quality education provided to students. Undergraduate students are encouraged to participate in research projects conducted by faculty and to consider extending their studies to include graduate work in mechanical engineering at SMU or elsewhere.

In combination with a solid liberal arts foundation, the program prepares students for graduate studies not only in engineering but also in other professional fields such as business, medicine and law. SMU mechanical engineering graduates

have found success in graduate school and in employment, and regularly attain graduate degrees in engineering, medicine, business and law. Graduates are employed as engineers or consulting engineers for major engineering, pharmaceutical, environmental, financial, banking and real estate companies.

The undergraduate program in mechanical engineering is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

The program's mission is to educate mechanical engineers who are innovative, entrepreneurial and equipped to become global leaders in research and technology. Specific educational objectives of the mechanical engineering undergraduate program are to produce graduates who meet the following:

1. The ability to be innovative problem solvers and critical thinkers addressing technical and societal issues.
2. The ability to embrace professional development and lifelong learning relevant to their careers.
3. The ability to have entrepreneurial and leadership roles in industry, government and academia.

The Mechanical Engineering Undergraduate Program Outcomes and their relationships to the discipline-specific criteria are as follows:

- a) The ability to apply knowledge of mathematics, science and engineering.
- b) The ability to design and conduct experiments, as well as analyze and interpret data.
- c) The ability to design a system, component or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- d) The ability to function on multidisciplinary teams.
- e) The ability to identify, formulate and solve engineering problems.
- f) An understanding of professional and ethical responsibility.
- g) The ability to communicate effectively.
- h) The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and societal context.
- i) The recognition of the need for and the ability to engage in lifelong learning
- j) A knowledge of contemporary issues.
- k) The ability to use the techniques, skills and modern engineering tools necessary for engineering practice.

An outstanding cooperative education program is also available for students. For further information on the SMU Co-op Program, students should see Cooperative Education at the beginning of the Lyle School of Engineering section.

The department offers the following undergraduate degrees. In addition, a minor in mechanical engineering is available to interested students.

Bachelor of Science in Mechanical Engineering

Bachelor of Science in Mechanical Engineering
and Bachelor of Science with a major in math (dual degrees)

Bachelor of Science in Mechanical Engineering
and Bachelor of Science with a major in physics (dual degrees)

Bachelor of Science in Mechanical Engineering
(with a minor in business administration)

Bachelor of Science in Mechanical Engineering
(with a premedical/biomedical specialization)

Bachelor of Science in Mechanical Engineering
(with an engineering management and entrepreneurship specialization)

Departmental Facilities

In support of the teaching and research endeavors of the department, several research laboratories are available.

Laboratory for Porous Materials Applications. This laboratory is concerned with modeling; numerical simulation; and experimental testing of mass, energy and momentum transport in heterogeneous and porous media.

Nanoscale Electro-Thermal Sciences Laboratory. This facility focuses on non-invasive characterization of the thermal properties of thin-film materials.

Laser Micromachining Laboratory. This lab conducts fundamental studies of thermal processes during short-pulse laser-material interactions and applied studies of laser-assisted microfabrication, including high-power laser ablation, laser micromachining, and laser-induced forward transfer. Current research applies these techniques to the fabrication of microfluidic devices and superhydrophobic surfaces.

Experimental Fluid Mechanics Laboratory. This facility focuses on pulsed jet micropropulsion and flow-through porous media.

Micro, Nano and Biomechanics of Materials Laboratory. This laboratory supports research primarily in the area of solid mechanics and materials engineering, with a focus on the combined experimental characterization as well as the computational analysis of mechanical properties, stress/strain, and microstructure of engineering and biological materials. Applications in advancing manufacturing and materials processing technologies, engineering design analyses, and biomedical sciences and engineering are also studied in this facility.

Systems, Measurement and Control Laboratory. This facility is equipped for instruction in the design and analysis of analog and digital instrumentation and control systems. Modern measurement and instrumentation equipment is used for experimental control engineering, system identification, harmonic analysis, simulation and real-time control applications. Equipment also exists or microprocessor interfacing for control and instrumentation.

Micro-Sensor Laboratory. This laboratory focuses on research in the development of micro-optical sensors for a wide range of aerospace and mechanical engineering applications, including temperature, pressure, force, acceleration and concentration. A major research component in this lab is concentrated on the study of the optical phenomenon called the “whispering gallery modes” and its exploitation for sensor development in the microsize level with a nanolevel measurement sensitivity.

Systems Laboratory. This facility is dedicated to analysis and modeling of bipedal gait dynamics, rigid body impact mechanics and the pneumatically operated haptic interface system.

Research Center for Advanced Manufacturing. The RCAM center supports research and development activities in areas of rapid prototyping and manufacturing (laser-based and welding-based deposition), laser materials processing (welding, forming, surface modification), welding (including electrical arc welding, variable polarity plasma arc welding, friction stir welding, and micro plasma arc welding),

waterjet/abrasive waterjet materials processing, sensing and control of manufacturing processes, and numerical modeling of manufacturing processes.

Center for Laser Aided Manufacturing. This facility, which is housed in the Research Center for Advanced Manufacturing facility, collaborates with RCAM.

Energy Harvesting Materials Laboratory. Due to the limited reserves of fossil fuels like coals, oil and natural gas, finding an efficient way to produce renewable energy from natural resources is in great demand. In the Energy Harvesting Materials Laboratory, research focuses on the investigation and design of materials to generate electricity from solar light (solar cells), from mechanical vibration (piezoelectric power generators) and from temperature difference (thermoelectric systems). Research focuses on small-scale materials (nanomaterials) to improve energy conversion efficiency in those systems based on atomic-scale and continuum approaches.

Biomedical Instrumentation and Robotics Laboratory. This laboratory's research activities promote strong interdisciplinary collaboration between several branches of engineering and biomedical sciences. The research interests are centered on two areas:

- Medical robotics, especially novel robotic applications in minimally invasive, natural orifice, and image-guided and haptic-assisted surgery.
- In vivo measurement of mechanical properties of biological tissue.

These areas of concentration touch upon fundamentals in analytical dynamics, nonlinear control of mechanical systems, computer-aided design and virtual prototyping, applied mathematics, data acquisition, signal processing, and high-performance actuators.

Microsystems Research Laboratory. The research carried out in this laboratory focuses in the area of optical actuators and sensors, micro-optofluidics, energy conversion, and smart materials.

Multiscale Modeling and Simulations Laboratory. This research group performs modeling and simulations of materials and structures.

BioMicrofluidics Laboratory. In this laboratory, students design, build and test lab-on-a-chip devices for biomedical, environmental monitoring, and food and water safety applications and perform numerical simulations of mass momentum and energy transport in micro- and nano-scales, using continuum-based and atomistic methods.

Laboratory for Additive Manufacturing, Robotics and Automation. This laboratory is engaged in research sponsored by the National Science Foundation's National Robotics Initiative. It is dedicated to the development of advanced, multi-material 3-D printing technology as applied to the manufacturing of soft robotic components. Other future research areas include robotic technologies for minimally invasive medical procedures and automated construction systems.

Instructional Laboratories

In support of the teaching and research endeavors of the department, several instructional laboratories are available. They include the following:

Information Technology Computer Laboratory. The laboratory features 25 computer workstations, printers, scanners and an overhead projector with an Internet connection used to support mechanical engineering and non-Lyle School of Engineering undergraduates in meeting the SMU-wide IT requirement for all students.

Computational/Design Laboratory. Dedicated computational facilities that include personal computers and high-resolution color X-terminals, all connected through a high-speed network that allows communication with the school's and University's computers, as well as with off-campus systems via NSFNet. Available Lyle School of Engineering computational facilities include several high-speed, multiprocessor workstations and servers. Educational software includes Parametric Technologies Pro-Engineer CAD system, MATLAB, ANSYS structural analysis package, MacroFlow and Fluent CFD packages.

Graphics Laboratory. Used primarily for first-year graphics, this facility is available for students working on design projects. A special design projects library is located adjacent to the drafting room.

Mechanics of Materials (Structures) Laboratory. This laboratory is equipped for instruction and research on the behavior of materials under various loading conditions such as fatigue, impact, hardness, creep, tension, compression and flexure.

Systems, Measurement and Control Laboratory. This facility is equipped for instruction in the design and analysis of analog and digital instrumentation and control systems. Modern measurement and instrumentation equipment is used for experimental control engineering, system identification, harmonic analysis, simulation and real-time control applications. Equipment also is used for microprocessor interfacing for control and instrumentation.

Thermal and Fluids Laboratory. Equipment in this laboratory is used for instruction in experimental heat transfer, thermodynamics and fluid mechanics. Modern equipment is available for conducting experiments on energy conservation; aerodynamics; internal combustion engines; heating, ventilation and air conditioning systems; convective cooling of electronics; heat exchangers; and interferometric visualization. State-of-the-art systems support automatic control and data acquisition. A partial list of the equipment in this lab includes a refrigeration training unit, heat transfer test unit with water boiler, airflow bench, kinematic viscosity bath, forced convection heat transfer experiment bench, low-pressure board, dead weight tester, vortex tube, free and forced heat transfer unit, hydraulic trainer and pneumatic trainer.

Shared Laboratory Space

Laboratories shared with the Civil and Environmental Engineering Department include the following:

Hydraulics/Hydrology, Thermal and Fluids Laboratory

CAD Computer Laboratory

Structural and Mechanics of Materials Laboratory

Project construction area

Curriculum in Mechanical Engineering

Mechanical engineering offers the broadest curriculum in engineering to reflect the wide range of mechanical engineering job opportunities in government and industry. The mechanical engineer is concerned with creation, research, design, analysis, production and marketing of devices for providing and using energy and materials. The major concentration areas of the program include the following:

Solid and Structural Mechanics. Concerned with the behavior of solid bodies under the action of applied forces. The solid body may be a simple mechanical link-

age, an aerodynamic control surface, an airplane or space vehicle, or a component of a nuclear reactor. The applied forces may have a variety of origins, such as mechanical, aerodynamic, gravitational, electromotive and magnetic. Solid mechanics provides one element of the complete design process and interacts with all other subjects in the synthesis of a design.

Fluid Mechanics. Deals with the behavior of fluid under the action of forces applied to it. The subject proceeds from a study of basic fundamentals to a variety of applications, such as flow-through compressors, turbines and pumps, around an airplane or missile. Fluid mechanics interacts with solid mechanics in the practice of mechanical engineering because the fluid flow is generally bounded by solid surfaces. Fluid mechanics is also an element in the synthesis of a design.

Thermal Sciences. Concerned with the thermal behavior of all materials – solid, liquid and gaseous. The subject is divided into three important branches, namely, thermodynamics, energy conversion and heat transfer. Thermodynamics is the study of the interaction between a material and its environment when heat and/or work are involved. Energy conversion is a study of the transformation of one form of energy to another, such as the conversion of solar energy to electrical energy in a solar cell. Heat transfer is a study of the processes by which thermal energy is transferred from one body of material to another. Since energy is required to drive any apparatus and since some of the energy is thermal energy, the thermal sciences interact with all other areas of study as an integral part of the design process.

Materials Science and Engineering. Pertains to the properties of all materials – solid, liquid and gaseous. It deals with mechanical, fluid, thermal, electrical and other properties. Properties of interest include modulus of elasticity, compressibility, viscosity, thermal conductivity, electrical conductivity and many others. The study of materials proceeds from the characteristics of individual atoms of a material, through the cooperative behavior of small groups of atoms, up to the behavior and properties of the bulk material. Because all mechanical equipment is composed of materials, works in a material environment and is controlled by other material devices, it is clear that the materials sciences lie at the heart of the design synthesis process.

Control Systems. Provides necessary background for engineers in the dynamics of systems. In the study of controls, both the transient and steady-state behaviors of the system are of interest. The transient behavior is particularly important in the starting and stopping of propulsion systems and in maneuvering flight, whereas the steady-state behavior describes the normal operating state. Some familiar examples of control systems include the flight controls of an airplane or space vehicle and the thermostat on a heating or cooling system.

Design Synthesis. The process by which practical engineering solutions are created to satisfy a need of society in an efficient, economical and practical way. This synthesis process is the culmination of the study of mechanical engineering and deals with all elements of science, mathematics and engineering.

Areas of Specialization

Mechanical engineering is a diverse field, and advanced major electives may be selected from a variety of advanced courses in mechanical engineering. In addition, specializations are offered in premedical/biomedical and engineering management and entrepreneurship, which includes required courses in engineering management,

information engineering and global perspectives, technical entrepreneurship, and technical communications.

A student may also personalize his or her degree with the addition of a minor in business administration within the Bachelor of Science in Mechanical Engineering. In addition to satisfying the required core mathematics, science and engineering courses, students must satisfy the minor in business administration requirements (listed in the Cox School of Business section of this catalog); three hours of ME courses at the 3000 level or higher approved by the student's adviser are also required. Admission requirements to the Cox School must also be satisfied and may include additional coursework.

Bachelor of Science in Mechanical Engineering

In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the credit hour requirements within the mechanical engineering curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Mathematics and Science	31
MATH 1337, 1338, 2339, 2343, 3353 STAT 4340 <i>or</i> equivalent CHEM 1303 PHYS 1303/1105, 1304 <i>One from the following:</i> BIOL 1401, 1402 CHEM 1304 GEOL 1301, 1305, 1307, 1308, 1313 PHYS 3305, 3340, 4321 Math course, 3000 level or higher, approved by adviser	
Engineering	56
ME 1302, 2310, 2320, 2331/2131, 2340/2140, 2342/2142, 2350, 2372, 3332/3132, 3340, 3370, 4360/4160, 4380, 4381, 4370 EE 2350 CEE 3302	
Tracks (choose one)	18
<i>Distributed Track</i> One from thermofluids required courses below One from dynamics and controls required courses below One from solid mechanics, materials, and manufacturing required courses below Three additional ME courses from any track's required or elective courses	
<i>Thermofluids Track</i> Required: ME 4338, 5371 Electives: Two from ME 3360, 5332, 5333, 5383 One from dynamics and controls required or elective courses One from solid mechanics, materials, and manufacturing required or elective courses	

Tracks (continued)***Dynamics and Controls Track***

Required: ME 5320, 5322

Electives: Two from ME 3360, 5302, 5326

One from thermofluids required or elective courses

One from solid mechanics, materials, and manufacturing required or elective courses

Solid Mechanics, Materials, and Manufacturing Track

Required: ME 5374, 5338

Electives: ME 5361, 5364

One from thermofluids required or elective courses

One from dynamics and controls required or elective courses

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Any deviation from the mechanical engineering curriculum requires approval of a petition submitted by the student to the Mechanical Engineering Department faculty prior to the beginning of the term during which the student expects to complete the requirements for graduation.

Bachelor of Science in Mechanical Engineering With Engineering Management and Entrepreneurship Specialization

In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the credit hour requirements within the mechanical engineering curriculum are distributed as follows:

<i>Requirements for the Specialization</i>	<i>Credit Hours</i>
Mathematics and Science	31
MATH 1337, 1338, 2339, 2343, 3353	
STAT 4340 <i>or</i> equivalent	
CHEM 1303	
PHYS 1303/1105, 1304	
<i>One from the following:</i>	
BIOL 1401, 1402	
CHEM 1304	
GEOL 1301, 1305, 1307, 1308, 1313	
PHYS 3305, 3340, 4321	
Math course, 3000 level or higher, approved by adviser	
Engineering	53
ME 1302, 2310, 2320, 2331/2131, 2340/2140, 2342/2142, 2350, 2372, 3332/3132, 3340, 3370, 4360/4160, 4370, 4380, 4381	
EE 2350	
Engineering Leadership	12
CEE 3302, CSE 4360, EMIS 3308, 3309	
Advanced Major Electives	9
ME courses, 3000 level or higher, from the thermofluids; dynamics and controls; and solid mechanics, materials, and manufacturing tracks in the B.S. in mechanical engineering degree plan above	
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Any deviation from the mechanical engineering curriculum requires approval of a petition submitted by the student to the Mechanical Engineering Department faculty prior to the beginning of the term during which the student expects to complete the requirements for graduation.

***Bachelor of Science in Mechanical Engineering
and Bachelor of Science With a Major in Mathematics***

The Mechanical Engineering Department and the Mathematics Department offer a curriculum that enables a student to obtain both a B.S.M.E. degree and B.S. with a major in mathematics.

In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the credit hour requirements within this curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Mathematics and Science	37
MATH 1337, 1338, 2339, 2343, 3315, 3337, 3353 STAT 4340 <i>or</i> equivalent One advanced elective as defined in the description of the mathematics major CHEM 1303 PHYS 1303/1105, 1304	
Engineering	56
ME 1302, 2310, 2320, 2331/2131, 2340/2140, 2342/2142, 2350, 2372, 3332/3132, 3340, 3370, 4360/4160, 4370, 4380, 4381 CSE 1341 EE 2350	
Advanced Major Electives	9
ME courses, 3000 level or higher, from the thermofluids; dynamics and controls; and solid mechanics, materials, and manufacturing tracks in the B.S. in mechanical engineering degree plan above	
Engineering Leadership	3
<i>One from the following:</i> CEE 3302 CSE 4360 EMIS 3308 <i>or</i> 3309	
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Any deviation from the mechanical engineering curriculum requires approval of a petition submitted by the student to the Mechanical Engineering Department faculty prior to the beginning of the term during which the student expects to complete the requirements for graduation.

***Bachelor of Science in Mechanical Engineering
and Bachelor of Science With a Major in Physics***

The Mechanical Engineering Department and the Physics Department offer a curriculum that enables a student to obtain both a B.S.M.E. degree and a B.S. degree with a major in physics.

In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the credit hour requirements within this curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Mathematics and Science	58
MATH 1337, 1338, 2339, 2343, 3353 STAT 4340 <i>or</i> equivalent CHEM 1303 PHYS 1303/1105, 1304/1106, 3305, 3344, 3374, 4211, 4321, 4392, 5382, 5383 Two advanced physics electives	
Engineering	50
ME 1302, 2310, 2331/2131, 2340/2140, 2342/2142, 2350, 2372, 3332/3132, 3340, 3370, 4360/4160, 4370, 4380, 4381 EE 2350	
Advanced Major Elective	3
ME course, 3000 level or higher, from the thermofluids; dynamics and controls; and solid mechanics, materials, and manufacturing tracks in the B.S. in mechanical engineering degree plan above	
	111

Note: The B.S. in physics requires CSE 1341 or 1342.

Any deviation from the mechanical engineering and/or physics curricula requires approval of a petition submitted by the student to the appropriate faculty prior to the beginning of the term during which the student expects to complete the requirements for graduation.

***Bachelor of Science in Mechanical Engineering
(Premedical/Biomedical Specialization)***

The Mechanical Engineering Department offers a B.S.M.E. degree with a premedical/biomedical specialization. This program enables students to satisfy the premedical or predental requirements for admission to medical or dental school, while at the same time satisfying the requirements for an accredited degree in mechanical engineering. In addition to the Universitywide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the credit hour requirements within this curriculum are distributed as follows:

<i>Requirements for the Specialization</i>	<i>Credit Hours</i>
Mathematics and Science	56
MATH 1337, 1338, 2339, 2343, 3353 STAT 4340 <i>or</i> equivalent BIOL 1401, 1402, 3304, 3350 CHEM 1303/1113, 1304/1114, 3371/3117, 3372/3118 PHYS 1303/1105, 1304/1106	
Engineering	52
ME 1302, 2310, 2320, 2331/2131, 2340/2140, 2342/2142, 2350, 2372, 3332/3132, 3340, 3370, 4360, 4370, 4380, 4381 EE 2350	

Advanced Major Elective**3**

ME course, 3000 level or higher, from the thermofluids; dynamics and controls; and solid mechanics, materials, and manufacturing tracks in the B.S. in mechanical engineering degree plan above

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Any deviation from the mechanical engineering curriculum requires approval of a petition submitted by the student to the Mechanical Engineering Department faculty prior to the beginning of the term during which the student expects to complete the requirements for graduation.

Minor in Mechanical Engineering

For approval of a minor in mechanical engineering, the student should consult the department. The five courses represent a minor that provides a broad introduction to mechanical engineering. Based on the student's interests and background, other sets of mechanical engineering courses may be substituted with the department's approval.

*Requirements for the Minor**Credit Hours*

Four from ME 2310, 2320, 2331, 2340, 2342

12

One from ME 3340, 3370

3

15**The Courses (ME)**

ME 1301 (3). MACHINES AND SOCIETY. Introduces engineering systems to nonengineering students. Defines engineering, what engineers do, and what mechanical engineers do. Topics include the historical perspective on engineering design, principles of design engineering, energy conversion processes, engineered products, what mechanical engineers produce, the basic principles of converting science to technology, and the development of technology for society and humanity. Also, the laboratory and workshop experience, including computer animation and simulation.

ME 1302 (3). INTRODUCTION TO MECHANICAL ENGINEERING. Introduction to mechanical engineering and the engineering profession. Topics include forces in structures and fluids, conservation laws and thermal systems, motion of machinery, engineering design, and basic concepts in intellectual property for mechanical engineers. Also, topics in mechanical engineering as appropriate for current events.

ME 1303 (3). ENERGY, TECHNOLOGY, AND THE ENVIRONMENT. An elementary introduction to the ways energy is produced and distributed, energy resources, electrical power, heating and cooling, solar energy applications, and other topics related to people and the environment.

ME 1304 (3). GREEN ENGINEERING: DESIGNING TOMORROW TODAY. Presents how design choices for materials, manufacturing processes, energy usage, and end-of-life disposal affect economic and natural environments. Also, case studies in design for the environment for various industries. In lab, students use computer modeling to create designs and then analyze and compare the designs' total life cycle impact through eco-audits of energy and carbon footprints. Students also use software to compare and select materials best suited for a particular design and its constraints.

ME 1305 (3). INFORMATION TECHNOLOGY AND SOCIETY. A comprehensive survey of information technologies and the growing interconnectivity between them as currently utilized throughout society. Students acquire portable IT skills in the use of word processing, spreadsheets, presentation tools, graphics applications, and the Internet that will prepare them for success in the workplace and beyond. Discusses issues surrounding IT, including history, ethics, legal questions, use in producing and maintaining a competitive advantage, effects on society, and associated costs and benefits.

ME 2131 (1). THERMODYNAMICS LABORATORY. One 3-hour laboratory session per week. Basic thermal-property and power-device measurements to complement lecture material of ME 2331. Offered parallel to ME 2331. *Prerequisites:* MATH 1337 and sophomore standing.

ME 2140 (1). MECHANICS OF MATERIALS LABORATORY. Experiments in mechanics of deformable bodies, to complement ME 2340. Simple tension tests on structural materials, simple shear tests on riveted joints, stress and strain measurements, engineering and true stress, engineering and true strain, torsion testing of cylinders, bending of simply supported beams, deflection of simply supported beams, buckling of columns, strain measurements of pressure vessels, Charpy impact tests, and the effect of stress concentrators. *Prerequisite or corequisite:* ME/CEE 2340.

ME 2142 (1). FLUID MECHANICS LABORATORY. One 3-hour laboratory session per week. Experiments in fluid friction, pumps, boundary layers, and other flow devices to complement lecture material of ME 2342. *Prerequisite or corequisite:* ME/CEE 2342.

ME 2310 (3). STATICS. Equilibrium of force systems, computations of reactions and internal forces, and determinations of centroids and moments of inertia. Also, introduction to vector mechanics. *Prerequisite:* MATH 1337.

ME 2320 (3). DYNAMICS. Introduction to kinematics and dynamics of particles and rigid bodies. Also, Newton's laws, kinetic and potential energy, linear and angular momentum, work, impulse, and inertia properties. *Prerequisite:* ME/CEE 2310 or equivalent.

ME 2331 (3). THERMODYNAMICS. The first and second laws of thermodynamics and thermodynamic properties of ideal gases, pure substances, and gaseous mixtures are applied to power production and refrigeration cycles. *Prerequisites:* CHEM 1303, ME/CEE 2310, and MATH 2339.

ME 2340 (3). MECHANICS OF DEFORMABLE BODIES. Introduction to analysis of deformable bodies, including stress, strain, stress-strain relations, torsion, beam bending and shearing stresses, stress transformations, beam deflections, statically indeterminate problems, energy methods, and column buckling. *Prerequisite:* ME/CEE 2310. *Corequisite:* ME/CEE 2140.

ME 2342 (3). FLUID MECHANICS. Fluid statics, fluid control volume, and applications; irrotational flow; Bernoulli's and Euler's equations; similitude and dimensional analysis; differential analysis of fluid flow; incompressible viscous flow; and boundary layer theory. *Prerequisites:* ME/CEE 2310, MATH 2339, PHYS 1303. *Corequisite:* MATH 2343. ME/CEE 2320 is recommended but not required.

ME 2350 (3). ELEMENTS OF MECHANICAL ENGINEERING MEASUREMENTS. Introduces basic engineering experimentation and measurements, including techniques for measurement and experimentation; data acquisition; signal processing; and analysis, interpretation, and reporting of results. *Prerequisite:* ME 2310. *Prerequisite or corequisite:* ME 2320.

ME 2372 (3). INTRODUCTION TO CAD. Introduces mechanical computer-aided design. Surveys technical topics related to CAD and computer-aided manufacturing, with emphasis on the hands-on use of interactive computer graphics in modeling, drafting, assembly, and analysis using a state-of-the-art CAD system.

ME 3132 (1). HEAT TRANSFER LABORATORY. One 3-hour laboratory session per week. Experiments in conduction, convection, and radiation to complement lecture material of ME 3332. *Prerequisite or corequisite:* ME 3332.

ME 3332 (3). HEAT AND MASS TRANSFER. Fundamental principles of heat transmission by conduction, convection, and radiation; mass transfer; and application of these principles to the solution of engineering problems. *Prerequisites:* ME/CEE 2331, 2342.

ME 3340 (3). ENGINEERING MATERIALS. A study of the fundamental factors influencing the structure and properties of structural materials, including metals, polymers, and ceramic. Covers phase diagrams, heat treatment, metallography, mechanical behavior, atomic bonding, and corrosion. *Prerequisites:* CHEM 1303 (or equivalent), ME/CEE 2310.

ME 3341 (3). INTERMEDIATE THERMAL SCIENCES. Application of the laws of thermodynamics, availability, irreversibility, real gases and mixtures, generalized thermodynamics relations and charts, and chemical equilibrium. *Prerequisite:* ME/CEE 2331.

ME 3350 (3). STRUCTURAL ANALYSIS. Emphasis on the classical methods of analysis of statically determinate and indeterminate structural systems. Also, computation of reactions,

shears, moments, and deflections of beams, trusses, and frames. Students use computers as an analytical tool. *Prerequisites:* ME/CEE 2140, 2340.

ME 3360 (3). FLUID POWER SYSTEMS. Principles of operations, design criteria, and performance characteristics of fluid power systems' components such as pumps, motors, valves, and cylinders. Also, goals-oriented circuit design and analysis, industrial standards, and circuit representation and maintenance. Includes practical and/or demo lectures, a design project based on specialized software, industry speakers, and site visits. *Prerequisites:* ME 2342, 2320.

ME 3370 (3). MANUFACTURING PROCESSES. Comprehensive, balanced, and up-to-date coverage of the relevant fundamentals and real-world applications of manufacturing processes (e.g., casting, forming, machining, high-power laser beam materials processing, electrical discharge machining, abrasive water-jet machining). Also, rapid prototyping and manufacturing. A set of laboratories introduces students to the basics of manufacturing processes and reinforces lecture material. *Prerequisite:* ME 3340.

ME 3390 (3). GERMAN TECHNOCULTURE. Fundamentals of German contemporary culture within the context of technology and study abroad experience. Emphasis is placed on reading and communication (writing and oral) skills. Field trips are an integral part of the course.

ME 4090 (0). SENIOR PROJECT.

ME 4160 (1). CONTROL LABORATORY. Experiments in control engineering, digital and analog simulation of feedback control systems, actuator saturation, and design and implementation of simple control systems on various laboratory equipment. *Corequisite:* ME 4360.

ME 4338 (3). THERMAL SYSTEMS DESIGN. Prepares, presents, and critiques thermal systems designs. Solves associated problems of simulation, optimization, and economics. Includes solving problems and design with a thermal network analyzer. *Prerequisite:* ME 3332.

ME 4350 (3). DESIGN OF STEEL STRUCTURES. Study of strength, behavior, and design of metal structures; flexural and axial members, bolted and welded connections, and composite beams. *Prerequisite:* ME/CEE 3350.

ME 4351 (3). ETHICAL DECISION-MAKING IN APPLIED SCIENCE AND ENGINEERING AND TECHNOLOGY. The ethical issues, hard choices, and human failures in notorious, historical cases such as the Space Shuttle Challenger, Grand Teton Dam, and Union Carbide Bhopal disasters. Principles, methods, and bases for ethical decision-making and action. Application of classical ethical philosophy to hypothetical, modern problems and dilemmas in the business of control and implementation of technology.

ME 4360 (3). DESIGN AND CONTROL OF MECHANICAL SYSTEMS. Covers block modeling of mechanical systems, mathematical models of linear systems, and solution of differential equations by use of Laplace transforms. Also, feedback control systems, time domain analysis, stability, frequency response, and root locus plots. Includes Bode diagrams, performance criteria, system compensation, and design of control systems for mechanical systems. *Prerequisite:* ME 5322 or equivalent.

ME 4370 (3). ELEMENTS OF MECHANICAL DESIGN. Application of the principles of mechanics and physical properties of materials to the proportioning of machine elements, including consideration of fatigue, functioning, productivity, and economic factors. Also, computer applications. *Prerequisites:* ME/CEE 2340, ME 3370.

ME 4380 (3). MECHANICAL ENGINEERING DESIGN I. A study of design methodology and development of professional project-oriented skills, including communication, team management, creative problem-solving, interpersonal management, and leadership skills. Uses team-project activities to apply project-oriented skills to solution of design problems. Investigates nontechnical considerations in design, including patents, ethics, aesthetics, safety, and economics. *Prerequisite or corequisite:* ME 3370.

ME 4381 (3). MECHANICAL ENGINEERING DESIGN II. Student design teams have full responsibility for conducting a full-term design project for an industrial client. Periodic design reports and design reviews are presented to and critiqued by the industrial client, the faculty, and the design team. *Prerequisite:* ME 4380. *Prerequisite or corequisite:* ME 4370.

ME 5050 (0). UNDERGRADUATE INTERNSHIP.

ME 5190 (1). UNDERGRADUATE SEMINAR: ETHICS IN ENGINEERING AND TECHNOLOGY. Covers ethical issues, hard choices, and human failures in life. Discusses practical, ethical issues with examples from everyday life. Presents ethical issues encountered in copyright

law and intellectual property, along with issues involved in telephone communications and email. Discusses principles, methods, and bases for ethical decision-making and action.

ME 5290 (2). UNDERGRADUATE SEMINAR. An opportunity for the advanced undergraduate student to undertake independent investigation, design, and development. The project and the supervising faculty must be approved by the chair of the department in which the student expects to receive the degree.

ME 5302 (3). LINEAR SYSTEM ANALYSIS. Introduces topics within the domain of modern control theory, with emphasis on the application of the developed concepts in designing linear systems and casting their responses in prescribed forms. Includes state representation of linear systems, controllability, observability, minimal representation, linear state variable feedback, observers, and quadratic regulator theory.

ME 5303 (3). ORGANIZATIONAL LEADERSHIP. This course in personnel and organizational leadership covers the scientific structure of organizations and methods used to improve the productivity and quality of life of people working in the organization. Introduces industrial organizational psychology as applied to the manufacturing organization, with a focus on understanding individual behavior and experiences in industrial and organizational settings. Also introduces industrial psychology as it addresses the human resource functions of analyzing jobs and appraising, selecting, placing, and training people. Addresses the psychology of work, including employee attitudes, behavior, emotions, health, motivation, and well-being, as well as the social aspects of the workplace.

ME 5314 (3). INTRODUCTION TO MICROELECTROMECHANICAL SYSTEMS AND DEVICES. Develops the basics for MEMS and devices, including microactuators, microsensors, and micromotors; principles of operation; micromachining techniques (surface and bulk micromachining); IC-derived microfabrication techniques; and thin film technologies as they apply to MEMS.

ME 5319 (3). ADVANCED MECHANICAL BEHAVIOR OF MATERIALS. A senior-graduate course that relates mechanical behavior on a macroscopic and microscopic level to design. Topics include macroscopic elasticity and plasticity, viscoelasticity, yielding, yield surfaces, work hardening, geometric dislocation theory, creep, and temperature- and environment-dependent mechanical properties. *Prerequisites:* ME/CEE 2340, ME 3340.

ME 5320 (3). INTERMEDIATE DYNAMICS. Emphasizes methods of formulation and solution of the kinematical, dynamical, and motion constraint equations for three-dimensional, lumped-parameter, dynamical systems. Detailed discussions on differentiation of vectors, kinematics, inertia properties, momentum and energy principles, generalized forces, holonomic and non-holonomic constraints, constrained generalized coordinates, and Newton-Euler and Lagrange formulations of the equations of motion. The symbolic software Mathematica is used to reduce the time and effort required to derive the kinematical and dynamical equations. Practical examples of detailed motion analysis of mechanisms using CAD software to augment the theoretical formulations. *Prerequisites:* ME/CEE 2320 and MATH 2339, 2343.

ME 5321 (3). FAILURE ANALYSIS AND PREVENTION. A senior or graduate course in the evaluation of the failure of structural materials and components. Topics include site examination, macroscopic examination, optical microscopy, transmission electron and SEM interpretation, examination and interpretation of failure surfaces, failure modes, and causes of failure. *Prerequisite:* ME 3340.

ME 5322 (3). VIBRATIONS. Review of fundamentals of vibrations with application of simple machine and structural members. Topics include harmonic motion, free and forced vibration, resonance, damping, isolation, and transmissibility. Single, multiple, and infinite degree-of-freedom systems are also examined. *Prerequisites:* ME/CEE 2320, MATH 3353, and MATH 2343 or equivalent.

ME 5323 (3). INTRODUCTION TO FRACTURE MECHANICS. Linear elastic fracture mechanics and application of theory to design and evaluation of critical components: elastic stress intensity calculations, plane strain fracture toughness, plane stress and transitional behavior, crack opening displacements, fracture resistance, fatigue crack propagation, transition temperature approach to fracture control, microstructure of fracture, and fracture control programs. *Prerequisite:* ME/CEE 2340.

ME 5324 (3). FATIGUE THEORY AND DESIGN. A senior or graduate course that includes continuum, statistical, and fracture mechanics treatments of fatigue, stress concentrators,

planning and analysis of probit, SNP and response tests, mechanisms of fatigue design, fail-safe versus safe-life design, and crack propagation. Emphasizes engineering design aspects of fatigue rather than theoretical mechanisms. *Prerequisite:* ME 3340.

ME 5326 (3). VEHICLE DYNAMICS. Covers modeling of wheeled vehicles to predict performance, handling, and ride. Explores the effects of vehicle center of mass, tire characteristic traction and slip, engine characteristics, and gear ratios of performance. Includes suspension design and steady-state handling models of four-wheeled vehicles and car trailer systems to determine oversteer and understeer characteristics, critical speeds, and stability. Also, multi-degree-of-freedom ride models (including tire and suspension compliance) and computer animation and simulations. *Prerequisite:* ME/CEE 2320 or permission of instructor.

ME 5329 (3). FLUID POWER SYSTEMS. Develops the fundamentals of a fluid power system design by introducing the basic building blocks such as pumps, motors, hydraulic cylinders, accumulators, multiposition directional valves, and other related components. Studies properties of the common hydraulic fluids to ascertain their influence on the behavior of typical fluid power system. Includes mathematical models of the individual components to aid in the simulation of a hydraulic system for a desired function. Also, introduces commercially available software for system simulation. The 1-hour lab allows students to gain hands-on experience with hydraulic systems.

ME 5330 (3). HEAT TRANSFER. Application of the principles of conduction, convection, and radiation heat transfer. Topics include steady and unsteady state, special configurations, numerical and analytical solutions, and design. *Prerequisite:* ME 3332 or equivalent.

ME 5331 (3). ADVANCED THERMODYNAMICS. Laws of thermodynamics, availability, irreversibility, real gases and mixtures, thermodynamic relations and generalized charts, combustion, chemical and phase equilibrium, and computational combustion. *Prerequisites:* ME/CEE 2331, 2342.

ME 5332 (3). HEAT TRANSFER IN BIOMEDICAL SCIENCES. Fundamentals of heat transfer in medicine and biology, biothermal properties, thermal regulation processes, and biomedical heat transfer processes with applications in tissue laser radiation, freezing and thawing of biological materials, cryosurgery, and others. *Prerequisites:* ME/CEE 2342 and ME 3332, or consent of instructor.

ME 5333 (3). TRANSPORT PHENOMENA IN POROUS MEDIA. Covers fractals and their role in characterizing complex structures and the fundamental concepts of momentum, heat, and mass transport through heterogeneous (e.g., composite, porous) materials, with emphasis on the mathematical modeling of heat and mass transfer in heterogeneous and fully saturated systems. Presents relevant industrial and natural applications throughout the course. *Prerequisites:* ME/CEE 2342 and ME 3332, or consent of instructor.

ME 5334 (3). FUNDAMENTALS OF ELECTRONIC PACKAGING. Introduces microsystems packaging and covers the role of packaging in microelectronics, the role of packaging in microsystems, electrical package design, design for reliability, thermal management, single- and multichip packaging, IC assembly, passive devices, optoelectronics, RF packaging, MEMS, sealing and encapsulation, system-level PWBs, PWB assembly, packaging materials and processes, and microsystem design for reliability.

ME 5335 (3). CONVECTIVE COOLING OF ELECTRONICS. Reviews the fundamental concepts of convection heat transfer and applications of these principals to the convective cooling of electronic components and systems, with emphasis on the design of natural and forced convection heat sinks with air and liquid cooling, fan and pump selection procedures (e.g., piezoelectric fans and micropumps), acoustic fan noise and noise measurement techniques, augmentation of convection heat transfer in the form of plate-fin and pin-fin extended surfaces, spray cooling, jet impingement cooling, microchannel cooling, heat pipes, and capillary pumped loops. Covers pool boiling and flow boiling as applied to the thermal management of electronics, and the design of electronic chassis with flow through coldwalls and edge-cooled PWBs. Uses several industry-related applications as examples. *Prerequisite:* ME 3332.

ME 5336 (3). INTERMEDIATE FLUID DYNAMICS. Reviews fundamental concepts of undergraduate fluid mechanics and introduces advanced fluid dynamics, including irrotational flow, tensor notation, and the Navier-Stokes equations. *Prerequisite:* ME/CEE 2342 or equivalent.

ME 5337 (3). INTRODUCTION TO COMPUTATIONAL FLUID DYNAMICS. Concepts of stability, convergence, accuracy, and consistency; applications to linear and nonlinear model

partial differential equations; curvilinear grid generation; and advanced topics in grid generation. Also, the Beam-Warming factored implicit technique; MacCormack techniques; and solution methods for the Reynolds equation of lubrication, the boundary layer equations, and the Navier-Stokes equations. *Prerequisites:* ME 2342 or equivalent, MATH 2343 or equivalent, or permission of instructor.

ME 5338 (3). NONTRADITIONAL MANUFACTURING PROCESSES. Explores difficult-to-machine materials and the increased geometrical complexity of components that have resulted in the development of nontraditional manufacturing processes based on the application of electrical, chemical, ultrasonic, magnetic, and photonic sources of energy. Introduces fundamentals of materials processing by laser beam, electron beam, ion beam, abrasive waterjet, ultrasonic machining, electro-discharge machining, chemical and electrochemical machining, and hybrid machining (laser beam, plasma arc, and waterjet assisted machining). Emphasizes the additive manufacturing processes as one of the fastest developing disciplines in materials processing. Covers theoretical problems and practical considerations related to the nontraditional manufacturing processes. *Prerequisites:* ME 3340, 3370; a basic understanding of manufacturing processes, mechanical and physical properties of materials, and physics.

ME 5340 (3). INTRODUCTION TO SOLID MECHANICS. Three-dimensional stress and strain, failure theories, introduction to two-dimensional elasticity, torsion of prismatic members, beams on elastic foundation, introduction to plates and shells, and energy methods. *Prerequisites:* ME/CEE 2340, MATH 2343.

ME 5341 (3). STRUCTURAL PROPERTIES OF SOLIDS. Develops an understanding of the structural aspect of solids and their relationship to properties and applications. Topics include structural defects, bonding and crystal structure, solid-state reactions and phase transformations, degradation, and deformation. *Prerequisite:* ME 3340 or permission of instructor.

ME 5342 (3). INTRODUCTION TO THERMAL MANAGEMENT OF ELECTRONICS. Emphasizes the thermal design of electronic packages and systems. Topics include the basics of conduction, convection (natural and forced), and radiation heat transfer. Also, pool boiling and flow boiling, extended surfaces as applied to the design of heat exchangers and cold plates, and thermal interface resistance as applied to the design of electronic packages. Introduces modern cooling technologies such as single-phase cooling and two-phase cooling, heat pipes, and thermoelectric coolers. *Prerequisite:* ME 3332.

ME 5343 (3). ELECTRONIC PACKAGING MATERIALS: PROCESSES, PROPERTIES, AND TESTING. Focuses on an overview of materials used in electronic packaging. Examines solderability, microscopic processes, and alloy selection. Also, composites and applying conducting polymer matrix composites, metal films, and vacuum processes. Covers the importance of encapsulation, temperature humidity bias testing, and temperature cycle testing, as well as the measurement of properties of material in electronic packaging, thermal properties, physical properties, manufacturing properties, and materials selection. *Prerequisite:* ME 3340.

ME 5344 (3). CONDUCTIVE COOLING OF ELECTRONICS. Reviews the fundamental concepts of conduction heat transfer and applications of these principals to the conductive cooling of electronic components and systems, with emphasis on contact conductance, interface thermal resistance, heat spreaders, thermal interface materials, phase change materials, thermoelectric devices, Stirling cycle refrigerators, and the cooling of special electronic components such as multichip modules, power modules, high-density power supplies, and printed wiring boards. Features the thermal management by conduction of GaAs and GaN monolithic microwave integrated circuits). Employs steady-state and transient analyses, including transient junction-to-case thermal resistance measurements. *Prerequisite:* ME 3332.

ME 5346 (3). APPLICATION OF COMPUTATIONAL TECHNIQUES TO THE MECHANICAL AND THERMAL DESIGN OF ELECTRONIC SYSTEMS. Develops the student's capability to characterize the mechanical and thermal performance of electronic devices and systems through the use of computational techniques. Commercial codes are used to create a thermal model of a fan-cooled, rectangular geometry, electronics chassis using direct air-cooling. Features additional computer codes for thermal modeling of heat transfer and fluid flow systems, and utilizes codes for the design of cold plates and heat exchangers. Students are exposed to concepts of structural modeling of components mounted on printed wiring boards in a vibration environment, and they analyze a number of industry-related problems, including first-level packages, printed wiring boards, and system-level electronics. At the end of the class, a student

is expected to formulate and model a complex industry-based problem. *Prerequisites:* ME/CEE 2320, 2340 and ME 3332, 3340.

ME 5348 (3). THERMAL, FLUID, AND MECHANICAL MEASUREMENTS IN ELECTRONICS. Includes the following thermal and fluid measurement topics: the need for experimentation in electronic design; the use of similitude in electronics cooling, velocity, temperature, and pressure measurements; thermal conductivity and thermal diffusivity measurements; heat flux measurements; design of wind tunnels; flow visualization techniques; and characterization of electronic components. Also, experimental procedures used for vibration and shock testing of electronic equipment. Describes the instrumentation and test procedures used for complex environmental testing to commercial and military specifications. Covers the basic principles of acoustics and the measurement techniques used to evaluate noise levels generated by electronic systems. *Prerequisites:* ME/CEE 2140, 2142, 2340, 2342, 3132, 3332.

ME 5355 (3). INTEGRATED DESIGN AND MANUFACTURING. Industrial performance is strongly correlated to success in integrating design and manufacturing. Examines the inter-relationships between the total product realization cycle, product generation, and manufacturing, with the objective of improving industrial performance.

ME 5356 (3). HUMAN FACTORS IN DESIGN AND MANUFACTURING. Deals with human factors or ergonomics relating to designing for human use. Covers the empirical and analytic aspects of design and manufacturing as affected by the need to accommodate human use and abilities. Topics include visual displays of static and dynamic information, text, graphics, symbols, and codes. Also, auditory, tactual, and olfactory displays, as well as speech and nonverbal communications, physical work and materials handling, motor skills, and hand tool devices and controls. Explores workplace design, anthropometry, component arrangement in space, lighting, sound, climate, and motion. *Recommended:* Knowledge of simple statistical analysis. *Prerequisite:* Senior or graduate standing, or permission of instructor.

ME 5357 (3). OPTIMIZED MECHANICAL DESIGN. Covers principles and methods for optimal design of machine elements (e.g., springs, shafts, gears, weldments of joints), mechanical systems (e.g., transmissions, cam systems, inertia loads and balancing), and computer applications. *Prerequisite:* ME 4370 or equivalent.

ME 5358 (3). DESIGN OF ELECTRONIC PACKAGING. A focus on thermal and mechanical design of electronic packaging. Fundamentals of heat transfer and fluid flow are applied to electronic packages and systems, including selection of fans, heat sinks, and other hardware important to good design. Mechanical designs of equipment that operates in more severe shock and vibration environments are developed using classical methods, with consideration given to selecting appropriate hardware. *Prerequisites:* ME/CEE 2320; MATH 2343, 3337.

ME 5359 (3). ANALYSIS AND DESIGN OF OPTOELECTRONIC PACKAGING. Provides an overview of optical fiber interconnections in telephone networks, packaging for high-density optical back planes, and selection of fiber technologies. Also, semiconductor laser and optical amplifier packaging, optical characteristics and requirements, electrical properties, mechanical properties, waveguide technologies, optical alignment and packaging approaches, passive device fabrication and packaging, array device packaging, hybrid technology for optoelectronic packaging, and flip-chip assembly for smart pixel arrays.

ME 5360 (3). ELECTRONIC PRODUCT DESIGN AND RELIABILITY. Investigates the failures, failure modes, and failure mechanisms in electronic systems. Covers failure detection, electrical simulation, and environmental stress tests. Also, failure analysis, including the use of X rays, thermal imaging and infrared microscopy, acoustical imaging, scanning laser acoustic microscopy, infrared spectroscopy, differential scanning calorimeter, thermomechanical analyzer, and other testing procedures. Discusses solder joint reliability of ball grid array assemblies, plastic ball grid array assemblies, flip chip assemblies, and chip scale package assemblies, as well as fine pitch, surface mount technology assemblies. Explores temperature as a reliability factor, an overview of high-temperature electronics, the use of silicon devices at high temperatures, and the selection of passive devices for use at high temperatures. *Prerequisite:* ME 3340 or graduate student standing.

ME 5361 (3). MATRIX STRUCTURE ANALYSIS. A systematic approach to the formulation of force and displacement method of analysis, the representation of structures as assemblages of elements, and computer solution of structural systems. *Prerequisite:* ME/CEE 3350 or permission of instructor.

ME 5362 (3). ENGINEERING ANALYSIS WITH NUMERICAL METHODS. Application of numerical and approximate methods in solving a variety of engineering problems. Examples include equilibrium, buckling, vibration, fluid mechanics, thermal science, and surveying problems. *Prerequisite:* Senior standing.

ME 5363 (3). ELECTRONIC MANUFACTURING TECHNOLOGY. Covers the complete field of electronics manufacturing. Topics include an introduction to the electronics industry; electronic components; the theory and methods of manufacture of solid-state devices; packaging techniques such as wire bonding, flip chip, and TAB; printed wiring board; soldering and solderability; leaded and surface-mounted components; electromagnetic interference; electrostatic discharge prevention; testability; and electronic stress screening. In each area, current technology as well as leading-edge tools are discussed.

ME 5364 (3). INTRODUCTION TO STRUCTURAL DYNAMICS. Covers dynamic responses of structures and behavior of structural components to dynamic loads and foundation excitations, single- and multidegree-of-freedom systems response and applications to analysis of framed structures, and an introduction to systems with distributed mass and flexibility. *Prerequisite:* MATH 2343.

ME 5368 (3). PROJECT AND RISK MANAGEMENT. Focuses on specific concepts, techniques, and tools for managing projects successfully, including network planning techniques, resource allocation, models for multiproject scheduling, methods of controlling costs, determining schedules, and performance parameters. Covers the basics of risk management, including hard analysis, risk analysis, risk control, and risk financing. Focuses on integrating risk assessment with managerial decision-making. Emphasizes examples and case studies.

ME 5371 (3). INTRODUCTION TO GAS DYNAMICS AND ANALYSIS OF PROPULSION SYSTEMS. Introduction to the mechanics and thermodynamics of high-speed compressible flows with application to the design of propulsion systems. Focus is on one-dimensional and quasi one-dimensional compressible flow, normal shocks, oblique shocks, and two-dimensional flow method of characteristics. Also includes analysis of air-breathing propulsion systems and design of air-breathing propulsion systems components such as inlets and nozzles. *Prerequisites:* ME 2342, 2331.

ME 5372 (3). INTRODUCTION TO CAD. Introduces mechanical computer-aided design. Surveys technical topics related to CAD and computer-aided manufacturing, with emphasis on the hands-on use of interactive computer graphics in modeling, drafting, assembly, and analysis using a state-of-the-art CAD system. *Prerequisite:* Junior standing or consent of instructor.

ME 5374 (3). ADVANCED CAD/CAE. Focuses on advanced modeling techniques, structural analysis and optimization, kinematic and dynamical analysis, mechanism design and virtual prototyping, and thermal analysis and flow simulation. Emphasis on hands-on use of state-of-the-art CAD/CAE systems. *Prerequisite:* ME 2372 or consent of instructor.

ME 5376 (3). ROBOTICS: INTRODUCTION TO COMPUTER-AIDED MANUFACTURING. Introduction to industrial robotics and numerically controlled machines, economics of CAM, applications of robotics in industry, robot safety, addition of senses and intelligence, and research in CAM flexible manufacturing cells and systems. Hands-on laboratory work with industrial robots and NC machines. Independent study and report on a specific robot application. *Prerequisites:* CSE 1341, PHYS 1403, and MATH 2343 or equivalent.

ME 5377 (3). ADVANCED STEEL DESIGN. The behavior and design of steel structures, including general methods of plastic analysis, plastic moment distribution, steel frames, unbraced and braced frames, and composite construction. *Prerequisite:* ME/CEE 4350.

ME 5383 (3). HEATING, VENTILATING, AND AIR CONDITIONING. Covers the selection and design of basic refrigeration, air conditioning, and heating systems. Includes load calculations, psychometrics, cooling coils, cooling towers, cryogenics, solar energy applications, and special topics. *Prerequisites:* ME/CEE 2331, ME 3332.

ME 5386 (3). CONVECTION HEAT TRANSFER. Advanced topics in forced convection heat transfer using analytical methods and boundary-layer analysis. Also, laminar and turbulent flow inside smooth tubes and over external surfaces, convection processes in high-speed flows. *Prerequisite:* ME 3332 or equivalent.

ME 5390 (3). UNDERGRADUATE SEMINAR. An opportunity for the advanced undergraduate student to undertake independent investigation, design, and development. The project and the

supervising faculty must be approved by the chair of the department in which the student expects to receive the degree.

ME 5391 (3). SPECIAL PROJECTS. Intensive study of a particular subject or design project not available in regular course offerings and under the supervision of a faculty member approved by the department chair.

ME 5392 (3). SPECIAL PROJECTS. Intensive study of a particular subject or design project not available in regular course offerings and under the supervision of a faculty member approved by the department chair.

ME 5393 (3). SPECIAL PROJECTS. Intensive study of a particular subject or design project not available in regular course offerings and under the supervision of a faculty member approved by the department chair.

ME 5394 (3). SPECIAL PROJECTS. Intensive study of a particular subject or design project not available in regular course offerings and under the supervision of a faculty member approved by the department chair.

ME 5395 (3). SPECIAL PROJECTS. Intensive study of a particular subject or design project not available in regular course offerings and under the supervision of a faculty member approved by the department chair.

ME 5490 (4). UNDERGRADUATE SEMINAR. An opportunity for the advanced undergraduate student to undertake independent investigation, design, and development. The project and the supervising faculty must be approved by the chair of the department in which the student expects to receive the degree.

ME 5491 (4). SPECIAL PROJECTS. Intensive study of a particular subject or design project not available in regular course offerings and under the supervision of a faculty member approved by the department chair.

MULTIDISCIPLINARY STUDIES

General Information

The multidisciplinary studies designation accommodates academic programs and courses that do not typically fit within the departments of the Lyle School of Engineering. Included in this area are courses designed for the Engineering Cooperative Education Program, engineering special topics and first-year students exploring engineering degree programs.

Engineering Courses (ENGR)

ENGR 1099 (0). ENGINEERING INTERNSHIP. Represents a term of industrial work activity in connection with the Engineering Cooperative Program. Internship courses are taken in numerical sequence. Students register for this course in the same manner as for other SMU courses except that no tuition is charged. Each course grade is determined by the student's written report and from the scoring of the employer's evaluation form.

ENGR 1101 (1). ENGINEERING AND BEYOND. Explores the five engineering departments at SMU and how the areas work together. Includes case studies, departmental presentations, industry panels, and industry tours.

ENGR 1199 (1). ENGINEERING INTERNSHIP. Represents a term of practicum experience in the student's field of study. For students taking more than one internship course, internship courses are taken in numerical sequence. Tuition is charged for the course. The course grade is based on the student's written report due within 2 weeks of the final day of employment.

ENGR 2099 (0). ENGINEERING INTERNSHIP. Represents a term of industrial work activity in connection with the Engineering Cooperative Program. Internship courses are taken in numerical sequence. Students register for this course in the same manner as for other SMU courses except that no tuition is charged. Each course grade is determined by the student's written report and from the scoring of the employer's evaluation form.

ENGR 2199 (1). ENGINEERING INTERNSHIP. Represents a term of practicum experience in the student's field of study. For students taking more than one internship course, internship courses are taken in numerical sequence. Tuition is charged for the course. The course grade is based on the student's written report due within 2 weeks of the final day of employment.

ENGR 2315 (3). ENGINEERING AND DESIGN FOR THE DEVELOPING WORLD. Engineering design in the developed world takes for granted the availability of several key resources such as construction material, water, and electricity. This course examines engineering design in the absence of these resources, with a focus on the development of shelter and sanitation in an efficient manner. Emphasis on understanding the total energy cycle of a structure and multiple alternative energy solutions. Additional topics include developing solutions for extreme low-cost, high-population densities and ecological sustainability. Students work in interdisciplinary teams to design and build energy-efficient homes and sustainable sanitation options and to investigate alternative energy systems. *Prerequisite:* PHYS 1303. *Corequisites:* ENGR 2320 and sophomore or above standing.

ENGR 3099 (0). ENGINEERING INTERNSHIP. Represents a term of industrial work activity in connection with the Engineering Cooperative Program. Internship courses are taken in numerical sequence. Students register for this course in the same manner as for other SMU courses except that no tuition is charged. Each course grade is determined by the student's written report and from the scoring of the employer's evaluation form.

ENGR 3199 (1). ENGINEERING INTERNSHIP. Represents a term of practicum experience in the student's field of study. For students taking more than one internship course, internship courses are taken in numerical sequence. Tuition is charged for the course. The course grade is based on the student's written report due within 2 weeks of the final day of employment.

ENGR 4099 (0). ENGINEERING INTERNSHIP. Represents a term of industrial work activity in connection with the Engineering Cooperative Program. Internship courses are taken in numerical sequence. Students register for this course in the same manner as for other SMU courses except that no tuition is charged. Each course grade is determined by the student's written report and from the scoring of the employer's evaluation form.

ENGR 4199 (1). ENGINEERING INTERNSHIP. Represents a term of practicum experience in the student's field of study. For students taking more than one internship course, internship courses are taken in numerical sequence. Tuition is charged for the course. The course grade is based on the student's written report due within 2 weeks of the final day of employment.

ENGR 5090 (0). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5091 (0). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5092 (0). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5093 (0). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5094 (0). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5095 (0). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5096 (0). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5097 (0). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5098 (0). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5099 (0). ENGINEERING INTERNSHIP. Represents a term of industrial work activity in connection with the Engineering Cooperative Program. Internship courses are taken in numerical sequence. Students register for this course in the same manner as for other SMU courses except that no tuition is charged. Each course grade is determined by the student's written report and from the scoring of the employer's evaluation form.

ENGR 5190 (1). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5191 (1). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5192 (1). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5193 (1). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5194 (1). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5195 (1). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5196 (1). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5197 (1). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5198 (1). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5199 (1). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5290 (2). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5291 (2). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5292 (2). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5293 (2). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5294 (2). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5295 (2). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5296 (2). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5297 (2). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5298 (2). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5299 (2). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5390 (3). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5391 (3). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5392 (3). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5393 (3). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5394 (3). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5395 (3). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5396 (3). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5397 (3). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5398 (3). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

ENGR 5399 (3). SPECIAL TOPICS. Individual or group study of selected topics in engineering. *Prerequisite:* Permission of instructor.

Ways of Knowing Courses (KNW)

KNW 2300 (3). INTRODUCTION TO ENGINEERING DESIGN. Introduces engineering design methodologies and basic teaming skills. Students participate on a team in a term-long, multidisciplinary design experience in which each student provides basic engineering capabilities in mechanical, software, electronic, civil, and/or environmental systems. Each team designs a robot that achieves stated design objectives while operating autonomously, with as little human interaction as possible. Teams submit group design memos documenting the evolution of the design. Each team makes a preliminary design presentation and report and a final design presentation and report. A competition is held at the end of the term. *Prerequisites or corequisites:* MATH 1337 and one of CEE 1302, CSE 1341, EE 1322, EE 1382, EMIS 1360, or ME 1302.

ARMY RESERVE OFFICERS' TRAINING CORPS

General Information

While Army ROTC courses are not offered on the SMU campus, students can participate in the Army ROTC program at the University of Texas at Arlington by enrolling as they enroll for other SMU courses. Further program information and application procedures may be obtained by contacting the UTA Department of Military Science at 817-272-3281. Students who participate in the UTA Army ROTC program are responsible for their own travel and other physical arrangements.

Army ROTC offers students the opportunity to graduate as officers and serve in the U.S. Army, the Army National Guard or the U.S. Army Reserve. Army ROTC scholarships are awarded on a competitive basis. Each scholarship pays for tuition and required educational fees, and provides a specified amount for textbooks, supplies and equipment. Each scholarship also includes a subsistence allowance of up to \$1,000 for every year the scholarship is in effect.

Students can enroll in the Army ROTC on-campus program as they enroll for other SMU courses. Army ROTC courses are listed under ROTC in the my.SMU schedule of classes, and permission to enroll must be obtained from Betsy Willis at bwillis@lyle.smu.edu or 214-768-1732.

The Courses (ROTC)

ROTC 1141 (1). FOUNDATIONS OF LEADERSHIP. Fundamental concepts of leadership in a profession, with classroom and outdoor laboratory environments. Studies time management skills, basic drill, ceremony, physical fitness, repelling, leadership reaction, first aid, presentations, and marksmanship. *Corequisite:* ROTC 1180. Includes mandatory participation in independent physical fitness training, plus optional participation in a weekend field training exercise.

ROTC 1142 (1). INTRODUCTION TO LEADERSHIP. Application of principles of leadership through participation in physically and mentally challenging exercises with upper-division ROTC students, with a focus on communication skills, organizational ethics, and time management techniques. *Corequisite:* ROTC 1180. Includes mandatory participation in individual physical fitness training, plus optional participation in a weekend field training exercise.

ROTC 1143 (1). ARMY ROTC: INTRODUCTION TO LEADERSHIP I. Introduces basic military skills, including principles of emergency first aid, evacuation of casualties, map and compass reading, terrain association, cross-country navigation, principles of physical fitness training, and military inspections. *Corequisite:* ROTC 1180.

ROTC 1180 (1). LEADERSHIP LABORATORY. A practical laboratory of applied leadership and skills. Students plan, organize, and conduct training that is oriented toward leadership development. Topics include marksmanship and small-unit tactics. Multitiered programs focus on individual skill levels. Uniform and equipment provided. May be repeated for credit.

ROTC 2248 (2). EVOLUTION OF CONTEMPORARY MILITARY STRATEGY. A review of contemporary military conflicts. Selected battles from World War II, Korea, Vietnam, and the Yom Kippur War are examined for impact upon current U.S. military doctrine, strategy, and weapons systems. *Corequisite:* All military science students must enroll or participate in ROTC 1180 unless exception is given by the PMS.

ROTC 2251 (2). INDIVIDUAL AND TEAM DEVELOPMENT. Application of ethics-based leadership skills and fundamentals of the ROTC's Leadership Development Program. Develops skills in oral presentations, concise writing, event planning, coordination of group efforts, advanced first aid, land navigation, and military tactics. *Corequisite:* ROTC 1180. Includes mandatory participation in individual physical fitness training, plus optional participation in a weekend field training exercise.

ROTC 2252 (2). INDIVIDUAL AND TEAM MILITARY TACTICS. Introduces individual and team aspects of military tactics in small-unit operations. Includes use of radio communications, safety assessments, movement techniques, team safety and security, and pre-execution checks.

Corequisite: ROTC 1180. Includes mandatory participation in individual physical fitness training, plus optional participation in a weekend field training exercise.

ROTC 2291 (2). CONFERENCE COURSE. Supplements the military science curricula through concentrated, independent study in a narrower field of military skill or subject matter. May be repeated for credit. Does not count for PE credit. *Prerequisite:* Permission of the PMS.

ROTC 2343 (3). LEADERSHIP TRAINING CAMP. A rigorous 5-week summer camp conducted at an Army post. Stresses leadership, initiative, and self-discipline. No military obligation incurred. Course completion qualifies the student for entry into the advanced course. Three different cycles offered during the summer, but spaces are limited by the Army. Candidates can apply for a space any time during the school year prior to the summer. Open only to students who have not taken all four of ROTC 1141, 1142, 2251, and 2252 and who pass an ROTC physical examination. P/F grade only.

ROTC 3341 (3). LEADERSHIP I. Development of ability to evaluate situations, plan and organize training, learn military tactics, review case studies in leadership management, and develop teaching and briefing skills. *Prerequisite:* Permission of PMS. *Corequisite:* ROTC 1180.

ROTC 3342 (3). LEADERSHIP II. Practical application of squad and platoon leadership in tactical situations, operation of small-unit communications systems, and development of the leaders' abilities to express themselves, analyze military problems, and prepare and deliver logical solutions. Demanding physical fitness training and performance-oriented instruction in preparation for summer field training. *Prerequisite:* Permission of PMS. *Corequisite:* ROTC 1180.

ROTC 3443 (4). NATIONAL ADVANCED LEADERSHIP CAMP. A 5-week, off-campus field training course stressing the practical application of leadership management, with emphasis on tactical and technical military field skills. Open only to students who have successfully completed ROTC 3341 and 3342. P/F grade only.

ROTC 3495 (4). NURSING ADVANCED SUMMER TRAINING. A 7-week, off-campus internship at a major U.S. Army hospital for ROTC nursing students. This nursing practicum provides hands-on experience that integrates clinical, interpersonal, and leadership knowledge and skills. Practical experience and familiarization with Army nursing in a variety of clinical tasks in the areas of medical-surgical nursing, pediatrics, obstetrics, and, in some cases, intensive care in ICUs in some cases. May be used for partial credit for NURS 3647 or 3347 with prior arrangement and approval of the dean of nursing. *Prerequisites:* Completion of the junior year of a baccalaureate nursing program and permission of the PMS.

ROTC 4341 (3). ADVANCED LEADERSHIP I. Stresses leadership qualities necessary for command and staff functions and operations. Students plan and conduct meetings, briefings, conferences, physical training programs. Introduces the Army's logistical system and personnel management system. Also, preparation of after-action reports. *Prerequisite:* Permission of PMS. *Corequisite:* ROTC 1180.

ROTC 4342 (3). ADVANCED LEADERSHIP II. Examines the ethical standards, professional roles, responsibilities, and uniqueness of the profession of officership. Includes case study analysis of military law and practical exercises on establishing an ethical command climate. Students complete a term-long senior leadership project that requires them to plan, organize, and demonstrate their leadership skills. Following course completion, students are commissioned as second lieutenants in the Army. Provides a basic working knowledge of the military justice system, with emphasis on company-level actions and requirements, including law of land warfare. *Prerequisite:* Permission of PMS. *Corequisite:* ROTC 1180.

ROTC 4391 (3). CONFERENCE COURSE. Independent study on current topics in military science. Performance is assessed by oral examination, written test, or research paper, as arranged. May be repeated for credit. *Prerequisite:* Permission of PMS.

MEADOWS SCHOOL OF THE ARTS

GENERAL INFORMATION

The Meadows School of the Arts educates visionary artists, scholars, and arts and communication professionals so that they may have a sustainable, transformative impact on both local and global society.

Founded through the generosity of Algur H. Meadows, his family and the Meadows Foundation, the Meadows School is recognized as one of the nation's premier arts schools. It offers intense, specialized education in the communication, performing and visual arts to arts majors, and provides a rich variety of coursework for students from other disciplines exploring the arts as part of their liberal arts education.

In addition to working closely with a nationally renowned faculty, Meadows students have access to many eminent visiting professors, artists and scholars, as well as the annual winners of the Meadows Prize. The Meadows School also offers one of the nation's finest university complexes for instruction, performance and exhibition in advertising, art, art history, arts management and arts entrepreneurship, communications, creative computation, dance, film and media arts, journalism, music, and theatre.

Facilities

Academic, Performance and Exhibition Spaces

The Owen Arts Center houses the Greer Garson Theatre (a classical thrust stage), the Bob Hope Theatre (a proscenium theatre), the Margo Jones Theatre (a black box theatre), Caruth Auditorium (which includes a 51-stop, 3,681-pipe Fisk organ), the Charles S. Sharp Performing Arts Studio, the O'Donnell Lecture-Recital Hall and several smaller performance spaces, as well as classrooms, studios and rehearsal areas. The Doolin Gallery in the Owen Arts Center and the Pollock Gallery, housed in the Hughes-Trigg Student Center, are the art exhibition spaces of the Division of Art. Student work is exhibited and critiqued in the Doolin Gallery. Exhibitions organized in the Pollock Gallery provide students, faculty, staff and the community with opportunities to experience a thoughtful and wide array of exhibitions representing diverse artists, time periods and cultures.

The Meadows Museum exhibits one of the finest and most comprehensive collections of Spanish art outside of Spain, including works of such masters as El Greco, Velázquez, Ribera, Montañés, Murillo, Goya, Sorolla, Picasso, Gris, Miró and Tápies. The Elizabeth Meadows Sculpture Collection includes important works by such modern sculptors as Rodin, Maillol, Lipchitz, Henry Moore, Marini, Giacometti, Noguchi, David Smith and Claes Oldenburg.

The Umphrey Lee Center serves as home to several of the communication arts areas, including a journalism complex that houses a high-definition television studio, a control room, computer labs and editing suites.

The four-story Jake and Nancy Hamon Arts Library is adjacent to the Owen Arts Center and houses all arts library collections, a slide library, an audio/visual center and the Mildred Hawn Exhibition Gallery. The G. William Jones Film and Video Collection, a part of the library's holdings, is housed in the Greer Garson Theatre's 3,800-square-foot refrigerated storage vault, with screening rooms also in the building. The Bywaters Special Collections hold works on paper and archival materials illuminating the cultural history of the Southwest.

National Center for Arts Research

SMU's National Center for Arts Research, the first of its kind in the nation, acts as a catalyst for the transformation and sustainability of the national arts and cultural community. The center analyzes the largest database of arts research ever assembled and makes its findings available free of charge to arts leaders, funders, policymakers, researchers, students and the general public.

NCAR's mission is to be the leading provider of evidence-based insights that enable arts and cultural leaders to overcome challenges and increase impact. The scope of this work requires the collaboration of multiple national organizations such as the Cultural Data Project, the National Center for Charitable Statistics, the National Endowment for the Arts, the National Assembly of State Arts Agencies, the Theatre Communications Group, TRG Arts, IBM, the Nonprofit Finance Fund and the Boston Consulting Group. More information is available at www.smu.edu/artsresearch.

Center of Creative Computation

The Center of Creative Computation is an interdisciplinary research and teaching center exploring computation as a universal, generative medium that integrates creative development, quantitative analysis and interdisciplinary synthesis. The center offers a major and minor in creative computing, combining core coursework from the Meadows School of the Arts and the Lyle School of Engineering. The center sponsors student and faculty fellowships, workshops and lectures, and facilitates interdisciplinary creative development and research. Examples of projects include hardware and software development, digital media/arts production, visualization, interactive performance, intermedia practice, digital humanities, and pedagogical development.

Meadows School of the Arts and the Liberal Arts Education

All first-year undergraduates spend at least one year as SMU Pre-Majors before transferring officially to Meadows. Students are assigned an academic adviser in the University Advising Center based on their intended majors. Arts students have advisers who specialize in those disciplines. In the first year, students combine liberal arts courses with the introductory course requirements of their intended major. After entering Meadows, normally in the sophomore year, students continue to combine courses in the major with University Curriculum requirements.

Meadows Divisions

The Meadows School consists of 10 undergraduate and graduate divisions. Each is outlined in detail in individual sections of this publication. They are as follows:

Temerlin Advertising Institute for Education and Research	Communication Studies
Art	Dance
Art History	Film and Media Arts
Arts Management and Arts Entrepreneurship	Journalism
	Music
	Theatre

Programs of Study

Bachelor of Arts

Advertising
Art
Art History
Communication Studies
Creative Computing
Fashion Media
Film and Media Arts
Interdisciplinary Studies
in the Arts
Journalism
Music
Public Relations and
Strategic Communication

Bachelor of Fine Arts

Art
Dance Performance
Film and Media Arts
Theatre

Bachelor of Music

Music Composition
Music Education (*includes Texas
teacher certification*)
Music Performance
Music Therapy (*approved by the Amer.
Music Therapy Association; leads to
eligibility to sit for Music Therapy
Board Certification exam*)

Academic Minors

University students may complete a minor in various divisions within Meadows School of the Arts. The minor will be noted on the student's transcript. Interested students should contact the office of the academic dean of their school of record for procedures concerning minor declaration. The minors are as follows:

Advertising
Art
Art History
Arts Entrepreneurship
Arts Management
Communication Studies
Creative Computing
Dance Performance
Fashion Media

Graphic Design
History of the Visual and
Performing Arts
Journalism
Music
Musical Theatre
Photography
Songwriting

ADMISSION

Various divisions in Meadows School of the Arts have special admissions criteria such as auditions, portfolio reviews and specified coursework that are in addition to meeting general University admission criteria. Admissions criteria pertinent to each instructional unit are stated in the section of this publication devoted to that unit.

Admission Procedures

Prospective students interested in undergraduate degrees in Meadows School of the Arts apply for undergraduate admission to SMU as first-year students or transfer students through the SMU Division of Enrollment Services, Office of Undergraduate Admission, PO Box 750181, Dallas TX 75275-0181. Application deadlines and information on performing and visual arts consideration are in the Admission to the University section in the front of this catalog.

Admission as an SMU Interschool Transfer Student

SMU Pre-Major students enter Dedman College and then transfer to Meadows School of the Arts when they complete requirements for the major declaration. A student transferring from Dedman College (or other schools of the University) must secure a Student Change of Degree Program form from the office of the academic dean of the student's current school to present to the Student Academic Services Office of Meadows School of the Arts.

Students must have completed a minimum of 24 term hours of study with a minimum cumulative GPA of 2.000. Students in various divisions also must receive formal recognition of suitable scholarly or creative ability and talent in the performing arts.

Advertising, communication studies, film and media arts (B.A. only), and journalism students must successfully complete the prerequisite subset of courses with the appropriate GPA to be admitted to their degree programs. Advertising students must additionally complete a written on-site application to the program.

Art students must submit a portfolio (15 images) to SlideRoom, the online digital portfolio system (www.smu.slideroom.com), halfway through their second term of art study for admission to study for the B.F.A. or B.A. degree. Art students are considered for admission to the B.F.A. or B.A. based upon that portfolio and review of transcript courses.

Art history students are strongly encouraged to contact the chair of the Art History Division for a conference.

Students interested in pursuing the B.F.A. in film and media arts must submit a portfolio to SlideRoom (www.smu.slideroom.com), the online digital portfolio system. The portfolio must include at least one film/video sample in which the student was a primary creative voice (such as writer or director), and no more than five works.

All students in dance, music and theatre will have auditioned/interviewed prior to entering SMU.

Admission as an External Transfer Student

Students applying for admission to Meadows School of the Arts by transfer from another accredited educational institution should request a transfer application from the Division of Enrollment Services. Transfer applicants who have completed 30 transferable hours with a GPA of 2.700 or better are often successful in gaining admission to the University. Once admitted, a transfer student must be prepared to earn at least 60 hours of credit through enrollment at SMU. That is, 60 hours of credit must be earned in SMU courses or SMU-approved international programs.

Transfer credit is not given for correspondence courses or for work completed at a nonaccredited school. Only grades of C- or better in comparable courses are transferable to SMU.

Transfer into Meadows School of the Arts is not automatic. Consideration is also given to creative or scholarly potential for the program to be undertaken and to particular talent in performing areas. Admissions criteria pertinent to each instructional unit also must be satisfied.

Readmission

Students should contact the Division of Enrollment Services, Office of Undergraduate Admission regarding readmission. A student who has been readmitted after an absence of more than three years will be expected to meet all current requirements for graduation. Dance, music or theatre students may also be required to re-audition. Official transcripts from each college or university attended since last enrolled at SMU must also be forwarded to the Division of Enrollment Services. If five years have lapsed since the last term of enrollment at SMU, official transcripts from each college or university attended prior to SMU must also be forwarded to the Division of Enrollment Services. All documentation is due no later than the last business day prior to the first day of classes of the term of re-entry. Detailed information is in the Admission to the University, Readmission of Students section of this catalog.

Undergraduate Student Financial Aid

For many SMU students, scholarships and other aid make the cost of attending a distinguished university no more, and often less, taxing on their families' financial resources than attending a public university. More than 75 percent of SMU students receive some type of financial aid. More information is available in the Student Financial Aid section of this catalog or through the Division of Enrollment Services, Office of Financial Aid: www.smu.edu/financial_aid, phone 214-768-3417.

SMU has a generous program of merit scholarships, grants, loans and part-time jobs to recognize academic achievement and talent in specific fields and to meet financial need.

Meadows Undergraduate Artistic Scholarships

The divisions and centers comprising Meadows School of the Arts annually award scholarships for outstanding achievement in a particular discipline. Candidacy for scholarship considerations may require an audition, review and/or interview. No student with ability should hesitate to apply to SMU and Meadows because of financial need.

For information regarding artistic scholarships, students should contact the director of financial aid and scholarships at Meadows School of the Arts, Southern Methodist University, PO Box 750356, Dallas TX 75275-0356; phone 214-768-3314.

To receive primary consideration for all SMU merit scholarships and other aid, students should comply with the following schedule:

By January 15

- Complete the SMU Application for Admission.
- Submit the Free Application for Federal Student Aid at www.fafsa.ed.gov and the CSS/Financial Aid Profile at www.collegeboard.org.

By March 1

- Complete auditions and/or interviews.

DEGREE REQUIREMENTS

Requirements for Graduation

Students who are candidates for a degree in Meadows School of the Arts must submit a formal application for graduation to the Student Academic Services Office by the end of the first week of class for December and May graduation, and by the second day of summer school for August graduation. In addition to Universitywide requirements and requirements for the major, candidates for graduation must also fulfill the following requirements:

1. Credits

A minimum total of 122 term credit hours. Additional term credit hours are required by some programs as needed to fulfill Universitywide requirements. No more than two term credit hours from Personal Responsibility and Wellness courses count toward degree completion.

2. Grades

- a. A minimum cumulative GPA of 2.000 on all attempted SMU work and a minimum 2.000 GPA in the major area of study.
- b. A maximum of 12 term credit hours at the student's election with a grade of *P* (Pass).

3. Credit Requirements:

- a. A minimum total of 60 term credit hours through enrollment at SMU.
- b. A maximum of 30 term credit hours of transfer work after matriculation.

A degree from Meadows School of the Arts is awarded by the faculty only in recognition of developed abilities, demonstrated knowledge of the student's particular field of study and the capacity to express an understanding of the art medium. Merely passing all courses is not necessarily sufficient.

Requirements for the Major

Candidates for undergraduate degrees must complete the requirements for an academic major in one of the divisions in Meadows. Students usually declare a major at the end of the first year. Students may major in more than one program within Meadows or combine a major in Meadows with one in a different school. All coursework counting toward a major must be taken for a letter grade, except for those courses that are routinely designated as pass/fail. Students must process appropriate forms in the Student Academic Services Office to change majors or declare a second major.

Universitywide Requirements

Universitywide requirements (University Curriculum) must be met by all undergraduate students, regardless of degree program or major. All courses used to meet Universitywide requirements must be taken for a letter grade, unless the course is offered only on a pass/fail basis. Questions concerning University Curriculum requirements may be directed to the Student Academic Services Office.

Double Majors

A student who wishes to double major (majors in two departmental areas or in two schools) must satisfy the requirements of each department or school.

Graduation Honors

There are three classes of graduation Latin honors: summa cum laude, magna cum laude and cum laude. Eligibility for graduation honors will be based upon a student's total academic program. All academic work attempted at other colleges or universities equivalent to SMU work will be included in the calculation of the GPA. For students who have transferred to SMU or who have transferred coursework following matriculation at SMU, two GPAs will be calculated: that for all work attempted and that for work completed through enrollment at SMU. Latin honors will be based on the lower of the two averages.

Commencement Activities Prior to Completion of Degree Requirements

Participation in May graduation activities is allowed for students who are within six hours of completing graduation requirements and are enrolled to complete all degree requirements during the summer following graduation activities. Students who meet the above requirements may petition to participate in commencement activities.

ADVERTISING

Temerlin Advertising Institute for Education and Research

Professor Steven Edwards, Director

Professors: Patricia Alvey, Willie Baronet, Steven Edwards, Alice Kendrick, Carrie La Ferle. **Assistant Professors:** Eunjin Kim, Sidharth Muralidharan, Hye Jin Yoon. **Lecturer:** Cheryl Mendenhall. **Executives-in-Residence:** David Haderler, Peter Noble. **Adjunct Lecturers:** Belinda Baldwin, John Hall, Suzanne Larkin, Gordon Law, Bruce Orr.

The Temerlin Advertising Institute was endowed by the Dallas advertising community through a pledge to augment scholarships, faculty salaries and public programs that enrich student learning and practical experience in advertising. Established in 2001, it is one of the nation's only endowed advertising institutes. The institute enjoys a strong relationship with the industry, as it is situated in a top media and advertising market – the Dallas/Fort Worth Metroplex. This location affords access to professionals of the highest caliber who serve as class clients, guest lecturers, executives-in-residence, adjunct faculty and internship sponsors. Students have access to high-profile internships at national and global agencies as well as client and media corporations. All undergraduate students admitted to the institute work toward a B.A. degree in advertising. Students wishing to pursue a master's degree in advertising may apply to the graduate program. Additional information is available online at www.smu.edu/temerlin ("Graduate Studies" link) or in the Meadows School of the Arts graduate catalog.

Admission Requirements

For students wishing to pursue a B.A. in advertising at SMU, admission into the Temerlin Advertising Institute is a two-step process.

STEP ONE: Students must complete ADV 1300 and at least one specialization introductory course (ADV 1321, 1331 or 1341) with a minimum GPA of 3.000 in these classes. Students must also be in good academic standing with the University with a minimum cumulative GPA of 2.000. Students transferring from other universities must have completed equivalent courses and obtained the equivalent cumulative GPA in those courses before they can progress to step two.

STEP TWO: Advertising major candidates who have fulfilled or are fulfilling step one also must complete an application for the specialization area(s) in which they are interested. The application is offered during the spring term only. Students who are not admitted during an application process may reapply during the next application period. Dates, times and location are posted at www.smu.edu/temerlin.

Bachelor of Arts in Advertising

The Temerlin Advertising Institute offers students pursuing a B.A. in advertising the opportunity to focus their studies in one of three areas: creative, digital media strategy or strategic brand management. Students must apply to both the major and a specialization concurrently. Students may apply to more than one area of specialization but will be admitted to only one. All SMU advertising students are required to take a core set of advertising courses that includes survey, society and ethics, consumer behavior, research, media, business communication, professional seminar, and campaigns. In addition, advertising majors must declare and complete a second major or a minor outside of advertising. Because SMU is in the center of a dynamic U.S. advertising market, many students participate in internships for course credit.

Creative Specialization

The creative program prepares students to enter the world of advertising and marketing as art directors and copywriters. The curriculum covers all aspects of content creation for communicating a brand's identity to consumers. Courses focus on conceptual thinking, approaches to ideation, the creative process, discovery and execution of the big idea, and communicating information in an effective way across a variety of traditional and digital media. Students will learn to create compelling work, present and justify their ideas, and develop a personal aesthetic. The creative specialization courses must be taken in sequence.

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
Required Advertising Courses ADV 1300, 2301 (or MKTG 3343), 2302, 3303, 3304, 3305, 4106, 4399	22
Advertising Specialization Courses ADV 1321 ADV 1331 or 1341 (or MKTG 3340)	6
Creative Specialization Courses ADV 2322, 2323, 3322, 3323, 4322, 4323	18
Second Major or Minor Choice Hours vary according to choice.	
Free Electives Hours vary as needed to meet University residency and degree requirements.	
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Digital Media Strategy Specialization

The digital media strategy specialization prepares students to enter the world of advertising and marketing as digital producers, digital strategists, content managers and media specialists. Marketing in the digital age means understanding when and where to communicate to consumers when they are most receptive to receiving and sharing messages. Students admitted to the specialization will learn to maximize consumers' engagement with marketing messages using paid, owned and earned media to achieve this goal. The digital media strategy specialization courses must be taken in sequence.

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
Required Advertising Courses ADV 1300, 2301 (or MKTG 3343), 2302, 3303, 3304, 3305, 4106, 4399	22
Advertising Specialization Courses ADV 1331 ADV 1321 or 1341 (or MKTG 3340)	6
Digital Media Strategy Specialization Courses ADV 2332, 2333, 3332, 3333, 4332, 4333	18

Second Major or Minor Choice

Hours vary according to choice.

Free Electives

Hours vary as needed to meet University residency and degree requirements.

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Strategic Brand Management Specialization

The strategic brand management specialization prepares students to enter the world of advertising and marketing as account or brand managers, project managers, planners/strategists, consumer insight experts, event and promotion specialists, and new business developers. This specialization examines the approaches to management in advertising agencies and on the client side. Topics include strategies for the identification of marketing-related problems and the processes needed to find solutions through messaging, promotions and other forms of consumer engagement to build brand equity and market share. Students learn how to think critically, work collaboratively in an interdisciplinary environment, develop strategy, hone their communication skills, assess the metrics of their work and present concepts in an engaging way. The strategic brand management specialization courses must be taken in sequence.

*Requirements for the Degree**Credit Hours***Universitywide Requirements**

varies

Required Advertising Courses

22

ADV 1300, 2301 (or MKTG 3343), 2302, 3303, 3304, 3305, 4106, 4399

Advertising Specialization Courses

6

ADV 1341 or MKTG 3340
ADV 1321 or 1331**Strategic Brand Management Specialization Courses**

18

ADV 2342, 2343, 3342, 3343, 4342, 4343

Second Major or Minor Choice

Hours vary according to choice.

Free Electives

Hours vary as needed to meet University residency and degree requirements.

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Minor in Advertising

The minor in advertising offers an overview of the social, economic, legal and marketing environments in which advertising functions. Students wishing to pursue a minor in advertising may request approval from the Temerlin Advertising Institute to do so any time after they have declared a major. Students must also be in good academic standing with the university with a minimum cumulative GPA of 2.000.

Required Advertising Courses**18**

ADV 1300, 1321, 1331, 1341 (or MKTG 3340), 2301 (or MKTG 3343), 2302

18**The Courses (ADV)**

ADV 1300 (3). SURVEY OF ADVERTISING. Introductory course for majors and nonmajors that surveys the field of advertising and explores how it fits into society. Topics include history, law, ethics, social dynamics, economic implications, and the advertising campaign planning process. Examines the process of advertising from the perspectives of art, business, and science. Required for all majors and minors.

ADV 1321 (3). INTRODUCTION TO CREATIVITY. A survey of the theoretical, practical, and ethical issues associated with creative thinking. Examines individual and organizational strategies for promoting creativity and the creative thinker's role in shaping the culture. Also, highlights the intellectual connections between the scholarship in creativity and advertising industry practice. Students who complete this course may apply for admission to the Temerlin Advertising Institute's creative program. Students must earn a B or better in ADV 1321 to be eligible for admission to the creative program. *Prerequisite or corequisite:* ADV 1300.

ADV 1331 (3). DIGITAL MEDIA LANDSCAPES. Introduces the technologies and processes associated with mobile, Web, and other interactive experiences. Topics include how the Internet works, interaction design, information architecture, visual design, and the development process. Students must earn a B or better in ADV 1331 to be eligible for admission to the interactive media strategy program. *Prerequisite or corequisite:* ADV 1300.

ADV 1341 (3). MARKETING PRINCIPLES OF ADVERTISING. Students learn the basic principles of consumer marketing and the role of advertising in the marketing mix. Emphasizes marketing and advertising strategy and planning processes through case studies in which students develop advertising answers to marketing problems and opportunities. Students must earn a B or better in ADV 1341 to be eligible for admission to the strategic brand management program. *Prerequisite or corequisite:* ADV 1300.

ADV 1360 (3). CREATIVE PRODUCTION. Students learn the basic principles of advertising design and production in tandem with the use of industry-standard hardware and software programs, including the Adobe Creative Suite.

ADV 2301 (3). CONSUMER BEHAVIOR. Covers theories from psychology, social psychology, sociology, anthropology, economics, marketing, and communications to explore the consumer decision-making process. Includes theories of motivation, attitudes, beliefs, and learning, with a direct application to advertising. *Prerequisites:* ADV 1300 and ADV 1321, 1331, or 1341.

ADV 2302 (3). ADVERTISING, SOCIETY, AND ETHICS. Broad overview of the interaction of advertising with society. Examines economic, social, and ethical issues as well as legal and regulatory constraints. *Prerequisites:* ADV 1300 and ADV 1321, 1331, or 1341.

ADV 2322 (3). CONCEPTING. A workshop for developing ideation skills and helping students self-identify as art directors or writers. Students acquire techniques and develop personal discipline inherent to the generation of novel, sophisticated creative work based on a solid concept: the distinctive, guiding idea that drives campaign messages. Assignments are evaluated in group critiques, and each student completes a final portfolio by term's end. *Prerequisites:* ADV 1300, 1321. Restricted to advertising majors.

ADV 2323 (3). WORD AND IMAGE, ART AND DESIGN: 1900–PRESENT. Contemporary designers and artists create meaningful, persuasive, and expressive works through a combination of images and text. These works of graphic design and art shape the visual culture of every aspect of life, from the look of media and information networks to people's experience of the cities in which they live. This course surveys the modern and contemporary history of works of art and design that demand to be read as much as seen, from the industrial age to the knowledge economy.

ADV 2332 (3). DIGITAL MEDIA STRATEGY 1. Focuses on strategies used by marketers and advertisers to engage fragmented audiences using paid media (television, radio, print, online display, mobile, or paid search), owned media (websites, Facebook pages, retail environments,

and special events), and earned media (word-of-mouth and social media channels). Covers strategies for engagement (i.e., fostering direct relationships with prospects and customers through dialogue). *Prerequisites:* ADV 1300, 1331. Restricted to advertising majors.

ADV 2333 (3). INTERNET AND MOBILE ADVERTISING. Focuses on the tactical side of purchasing, placing, and improving interactive media marketing. Topics include paid search, paid social media placement, and display advertising. Explores the burgeoning world of mobile advertising, location-based advertising, and second-screen interaction. Restricted to advertising majors.

ADV 2342 (3). STRATEGIC BRAND MANAGEMENT 1. Provides the basic concepts, duties, skills, problem-solving techniques, and processes of an account brand manager. Covers industry trends, agency structure, and the tools to be a leader in advertising that uplifts brands, engages consumers, and moves market share. *Prerequisites:* ADV 1300, 1341. Restricted to advertising majors.

ADV 2343 (3). INTERNATIONAL ADVERTISING. Explores the rapidly changing global environment that influences marketing and advertising, including research, management, strategy, media, and execution. Students learn to recognize similarities and differences between countries and consumers based on tangible cultural indicators, and they develop the necessary leadership and problem-solving tools to effectively communicate and advertise products in a global marketplace. Restricted to advertising majors.

ADV 3150 (1). INTERNSHIP. Off-campus opportunity in a professional setting where students apply principles learned in various advertising courses. Students may be placed for the fall, spring, or summer terms. Through weekly, midterm, and final reports; the completion of an essay; and the satisfactory accomplishment of 50, 100, or 150 hours of work, a student may earn one, two, or three academic credit hours respectively. Only three total credit hours may be earned through internships. Departmental consent required.

ADV 3250 (2). INTERNSHIP. Off-campus opportunity in a professional setting where students apply principles learned in various advertising courses. Students may be placed for the fall, spring, or summer terms. Through weekly, midterm, and final reports; the completion of an essay; and the satisfactory accomplishment of 50, 100, or 150 hours of work, a student may earn one, two, or three academic credit hours respectively. Only three total credit hours may be earned through internships. Departmental consent required.

ADV 3303 (3). ADVERTISING MEDIA. Covers principles essential to media planners, buyers, and sellers. Includes media audience analysis, media vehicle comparisons, and budgeting. Students master the elements of media plans used in major advertising agencies. Restricted to advertising majors.

ADV 3304 (3). ADVERTISING RESEARCH. Explores a variety of research methods, sources, and issues, with a focus on the proper role of research in advertising planning. Students design, execute, analyze, and present primary and secondary research projects. Restricted to advertising majors.

ADV 3305 (3). BUSINESS COMMUNICATION. Provides the framework and tools for successful communication in business environments. Focuses on the written, oral, and interpersonal communication skills that are needed in planned and impromptu situations to effectively and efficiently convey information and deliver messages that meet professional standards. Restricted to advertising majors.

ADV 3322 (3). PORTFOLIO. A workshop course devoted to the continued development and professional-level execution of an advertising portfolio reflecting mastery of strategic and conceptual thinking. Work is prepared and evaluated to satisfy highest industry standards for placement. A jury of creative professionals reviews portfolios at an end-of-term critique. *Prerequisite:* ADV 2322.

ADV 3323 (3). INTRODUCTION TO GRAPHIC DESIGN. An introduction to graphic design as a form of visual communication through the use of type, image, form, and color. Projects explore principles of perception, visual identity and communication, thematic structure and hierarchy, creative problem-solving, and basic design practices of critique and discussion. *Prerequisite:* ADV 1360 or 2322.

ADV 3332 (3). DIGITAL MEDIA STRATEGY 2. Utilizes a series of marketing and advertising cases to explore the successes and failures of companies applying the principles learned in ADV

2332. Socratic in nature, with little lecture; instead, students are expected to participate in class discussions and presentations. *Prerequisites:* ADV 2332.

ADV 3333 (3). MEDIA MEASUREMENT AND METRICS. Focuses on the tools, methods, and new metrics advertisers use to glean deeper consumer insights and more accurately measure the relative success of marketing campaigns. Topics include media segmentation, assessing audience exposure, ROI, Web analytics, big data, and quantitative and qualitative research methodologies. *Prerequisite:* ADV 2333.

ADV 3342 (3). STRATEGIC BRAND MANAGEMENT 2. Provides the basic concepts, duties, skills, problem-solving techniques, and processes of an account brand manager. Covers industry trends, agency structure, and the tools to be a leader in advertising that uplifts brands, engages consumers, and moves market share. *Prerequisite:* ADV 2342.

ADV 3343 (3). ADVERTISING ACCOUNT PLANNING. Focuses on account planning, which is a research-based and consumer-centered approach to the strategic development of advertising. Students review qualitative and quantitative research practices used in advertising as well as the planning techniques used by account planners. Includes the creation of strategic briefs, primary research among consumers, and reports that contribute to the creative and media elements of an advertising campaign. *Prerequisite:* ADV 2343.

ADV 3350 (3). INTERNSHIP. Off-campus opportunity in a professional setting where students apply principles learned in various advertising courses. Students may be placed for the fall, spring, or summer terms. Through weekly, midterm, and final reports; the completion of an essay; and the satisfactory accomplishment of 50, 100, or 150 hours of work, a student may earn one, two, or three academic credit hours respectively. Only three total credit hours may be earned through internships. Departmental consent required.

ADV 3361 (3). TYPOGRAPHY. Introduces the fundamentals of typography. Explores the history of typographic forms, typographic anatomy, vocabulary, principles of composition, the expressive potential of type, the intricacies of spacing between individual letterforms and lines of type, and legibility across a variety of media and across varying distances and speeds of delivery. *Prerequisites:* ADV 1360, ADV 3323, and ASAG 1310 or ADV 2323.

ADV 4322 (3). ADVANCED PORTFOLIO. A workshop course devoted to the continued development and professional-level execution of an advertising portfolio reflecting mastery of strategic and conceptual thinking. Work is prepared and evaluated to satisfy highest industry standards for placement. A jury of creative professionals reviews portfolios at an end-of-term critique. *Prerequisite:* ADV 3322.

ADV 4323 (3). COPYWRITING. This workshop covers how to write for radio, television, cable/satellite, and Web-based advertising. Correct grammar, structure, and style are important factors in student success. Explores the blending of visual and verbal elements in the writing of television and radio advertising and promotional material. *Prerequisite:* ADV 3322. Restricted to advertising majors.

ADV 4332 (3). DIGITAL MEDIA STRATEGY 3: DIGITAL MEDIA PRACTICUM. Students solve real-world digital media problems using lessons and tools learned in previous courses. Problems may come from clients and/or the instructor. *Prerequisite:* ADV 3332.

ADV 4333 (3). TOPICS IN DIGITAL MEDIA MARKETING. Covers the process of conceiving, designing, and building interactive experiences that engage customers but do not feel like ads. *Prerequisite:* ADV 3333.

ADV 4342 (3). STRATEGIC BRAND MANAGEMENT 3: APPLIED BRAND STRATEGIES. Students apply management concepts, theories, and processes studied and practiced in prior courses to provide strategic and business solutions appropriate for advertising problems. Problems may come from clients and/or the instructor. *Prerequisite:* ADV 3342.

ADV 4343 (3). STRATEGIC PROMOTION MANAGEMENT. Focuses on the selection and management of specialized forms of promotion, including in-store marketing, price promotion, direct marketing, event sponsorship, product placement, branded entertainment, public relations, viral marketing, and other tools available to the marketing communications practitioner. *Prerequisite:* ADV 3343.

ADV 4363 (3). LOGO AND TRADEMARK DESIGN. Explores the theory and practice of personal and corporate identity systems, including symbol and logotype design and their application to various media such as stationery systems, signage, websites, displays, and packaging.

Also, issues of legibility, cross-cultural understanding, and the integrity of representation across a variety of media. *Prerequisites:* ADV 1360, ADV 2322 or 3323, and ASAG 1310 or ADV 2323.

ADV 4364 (3). PUBLICATION DESIGN. Examines the graphic designer's role in the layout and design of publications. Lectures and studio work cover historical and current practices and technologies used to produce multipage publications. Also, issues of legibility and enhanced storytelling. Students produce visualizations for several publications using the elements of layout with typography and art. *Prerequisites:* ADV 1360, ADV 2322 or ADV 3323, and ASAG 1310 or ADV 2323.

ADV 4366 (3). VISUALIZATION OF INFORMATION. Addresses visual problem-solving and emphasizes methods of translating complex data into clear, visually dynamic solutions. Topics include corporate communication systems, publication, way-finding, interaction design, and explanatory and interactive graphics for use in print and digital media. *Prerequisites:* ADV 1360, ADV 2361 or 3323, and ASAG 1310.

ADV 4399 (3). ADVERTISING CAMPAIGNS. Integrating the major advertising principles, students develop and present an advertising campaign. Includes research, creative strategy, media plan, and presentation of the campaign to a client. *Prerequisites:* ADV 3303, 3304. Restricted to advertising majors.

ADV 5110 (1). DIRECTED STUDY. Independent study under the direction and supervision of a full-time faculty member. A directed study is a close collaboration between the professor and an advanced student who conducts a rigorous project that goes beyond the experience available in course offerings. The student must secure written permission from the instructor and return a completed Directed Studies Approval Form to the Temerlin Advertising Institute before the start of the term. Instructor and departmental consent required. *Prerequisite:* Junior standing. Restricted to advertising majors.

ADV 5210 (2). DIRECTED STUDY. Independent study under the direction and supervision of a full-time faculty member. A directed study is a close collaboration between the professor and an advanced student who conducts a rigorous project that goes beyond the experience available in course offerings. The student must secure written permission from the instructor and return a completed Directed Studies Approval Form to the Temerlin Advertising Institute before the start of the term. Instructor and departmental consent required. *Prerequisite:* Junior standing. Restricted to advertising majors.

ADV 5301 (3). TOPICS IN ADVERTISING. Focuses on special topics in advertising such as timely, evolving, ethical, and/or international issues immediately relevant to the advertising industry. *Prerequisite:* ADV 1300. Restricted to advertising majors.

ADV 5302 (3). TOPICS IN ADVERTISING. Focuses on special topics in advertising such as timely, evolving, ethical, and/or international issues immediately relevant to the advertising industry. *Prerequisite:* ADV 1300. Restricted to advertising majors.

ADV 5310 (3). DIRECTED STUDY. Independent study under the direction and supervision of a full-time faculty member. A directed study is a close collaboration between the professor and an advanced student who conducts a rigorous project that goes beyond the experience available in course offerings. The student must secure written permission from the instructor and return a completed Directed Studies Approval Form to the Temerlin Advertising Institute before the start of the term. Instructor and departmental consent required. *Prerequisite:* Junior standing. Restricted to advertising majors.

ART

Associate Professor Noah Simblist, Division Chair

Professors: Michael Corris, Barnaby Fitzgerald, James W. Sullivan, Philip Van Keuren, Mary Vernon. **Associate Professors:** Debora Hunter, Noah Simblist. **Assistant Professors:** Mary Walling Blackburn, Brian Molanphy, Brittany Ransom. **Adjunct Professor:** Susan Kress.

General Information

The study and practice of art offers a unique experience for the exercise of imaginative freedom, the opportunity for the independent organization of work, and the promise of self-knowledge and personal satisfaction. Contemporary art is also increasingly a source of knowledge about the world and, for many, an active agent in the transformation of social life. The Division of Art embraces these values in its art courses leading to the B.A., B.F.A. and M.F.A. degrees.

At the heart of the student's experience is the acquisition of skills, concepts and strategies relevant to an expanded notion of studio culture in contemporary art. Students are encouraged to explore and develop art in a challenging environment that rewards experimentation and risk-taking. The Division of Art offers a program of study that prepares students for the successful continuation of professional practice as an artist, the pursuit of graduate study in art or the application of visual art to other fields of study.

The program is marked by its wide range of supporting resources: studio courses that offer grounding in techniques and concepts; courses in the critical and historical study of art; well-equipped workshops, galleries and exhibition areas that provide ample opportunities for the public presentation of student work; field trips to public and private collections of art and to artists' studios; and a lively series of lectures and seminars by distinguished contemporary practitioners, critics and curators. Small class size coupled with an approach that takes full advantage of the division's setting within a distinguished school of the arts of a major university offers a transdisciplinary educational experience that few, if any, specialist colleges of art can match. More information is available at www.meadows.smu.edu/art.

Instructional Facilities

Facilities for the study of art include well-lighted studios, individual workspaces and excellent equipment to support all media taught, as well as individual experimentation. Facilities span both new and traditional approaches to studio art, including digitally based studios for photography, video, computer-generated imaging, 3-D imaging and rapid prototyping (3-D printing), and physical computing (microcontrollers/Arduino boards and sensors). Art students work as broadly and as experimentally as they wish within an environment of open artistic exchange, surrounded by artists in dance, music, theatre, film and communications. Additional facilities comprise a variety of spaces for the installation of artwork, including the Pollock Gallery – the art exhibition space of the Division of Art located in Hughes-Trigg Student Center. The Pollock Gallery provides students, faculty, staff and the surrounding community with opportunities to experience a wide and thought-provoking array of exhibitions representing diverse artists, time periods and cultures, as well as the B.F.A. and M.F.A. qualifying exhibitions. The Meadows School and SMU offer excellent library and technological resources, including the Hamon

Arts Library (incorporating the Meadows computer center), the Center of Creative Computation (an interdisciplinary research center open to all Meadows' undergraduate and graduate students), as well as specific facilities within the Division of Art.

The division runs an extensive visiting artist program, ranging from visiting artist lectures and workshops to the Meadows distinguished visiting professor. Through these programs, artists, critics and curators of note are brought to campus to teach, lecture and conduct upper-level undergraduate and graduate critiques.

The division also offers two special programs of importance to graduate and undergraduate students: the New York Colloquium (a winter interterm program in New York) and SMU-in-Taos, a summer program at SMU's campus near Taos, New Mexico. During the New York Colloquium, students visit a range of museums, galleries, artists' studios and other venues appropriate to the development of their critical and professional studies in art. The program at Fort Burgwin, Taos, offers coursework as well as independent and directed study each summer in a wide range of studio and external exhibition projects. The University offers a range of programs for study abroad during all phases of study.

The Dallas/Fort Worth area has a large artistic community with rich and varied resources. These include many internationally and nationally significant museums and contemporary exhibition spaces: the Dallas Museum of Art, SMU's newly designed Meadows Museum, the Nasher Sculpture Center, the Dallas Contemporary, the Crow Collection of Asian Art, the Latino Cultural Center of Dallas, the McKinney Avenue Contemporary, the Arlington Museum, the Kimbell Museum, the Fort Worth Museum of Modern Art and the Amon Carter Museum. There are also vibrant, artist-run alternative and cooperative galleries, and a growing commercial gallery system.

Admission and Financial Aid

In addition to meeting University admission criteria, students wishing to pursue the B.A. in art or B.F.A. in art degrees must submit a portfolio for admission to the degree program. After the first term of required study (ASAG 1300, 1304 or their equivalents), they will also be asked to submit a final portfolio for consideration as a continuing student in either the B.A. in art or B.F.A. degree program.

All students admitted to the University and to the B.A. in art or B.F.A. degree program are considered for artistic scholarships based on artistic merit as they enter the University. The deadline for incoming portfolios to be reviewed for artistic scholarships is February 1 of every year for scholarships beginning in the fall term, and November 15 for early admission/early action candidates. Portfolios must be submitted through SlideRoom (www.smu.slideroom.com), the online digital portfolio system, for full consideration. A guide to aid the student in the preparation of the portfolio of images is available through the Division of Art and on the division website. In addition, the Division of Art hosts regularly scheduled portfolio review days for prospective students where faculty critique and discuss student work in an open review. More information is available at www.meadows.smu.edu/art.

In addition to meeting University transfer admission criteria, students wishing to transfer to the B.A. or B.F.A. degree program from another university must be accepted by portfolio review prior to admission to study. For more information, students should contact the Division of Art.

Financial aid from the Division of Art for entering and continuing students is based upon artistic accomplishment. Continuing scholarships are reviewed through

portfolio submissions each year, as well as satisfactory progress toward the degree. To receive an award for artistic merit, students must submit either a Free Application for Federal Student Aid (www.fafsa.ed.gov) or a waiver, and a CSS/Profile (www.collegeboard.com).

Programs of Study

The Division of Art offers two undergraduate degrees – the B.F.A. in art and the B.A. in art – and minors in art, creative computing (details in the Interdisciplinary Programs section) and photography. In addition, the Division of Art contributes to the continuous development and delivery of interdisciplinary courses throughout the Meadows School of the Arts. The division provides important course components in new minors such as fashion media (in collaboration with the Journalism and Communication Studies divisions) and graphic design (in collaboration with the Templin Advertising Institute).

Bachelor of Fine Arts in Art

The B.F.A. degree prepares students to become professional artists, engage in professions in the arts or continue studies at the graduate level. The division offers instruction in an integrated studio environment in the following media: ceramics, digital/hybrid media, drawing, painting, photography, printmaking and sculpture. There is also scope for the study of performance in art and for work in courses that focus on art and engagement with the city. Cross-disciplinary interaction is encouraged at every level. First-year students intending to major in art should take ASAG 1300, 1304 in fall and ASAG 1308, 1312 in spring, as the beginning of their B.F.A. studies.

To earn a B.F.A., the student is required to take a minimum of 66 hours in the Division of Art and nine to 12 hours in the Division of Art History. **Note:** All majors in art are strongly encouraged to enroll in the May term or summer term study of art at SMU-in-Taos in May or summer after declaring their major.

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Universitywide Requirements	Varies
Foundations	12
ASAG 1300, 1304, 1308, 1312	
Required Art Courses	15
ASAG 3310, 3380, 3390, 5310, 5315	
Advanced Art Studies	24
Division of Art courses at the 3000 level or higher	
Additional Art Studies	15
Division of Art courses at any level	
Art History	12
No more than 6 hours at the 1000 level. ASAG 3350 may substitute for one 3000-level ARHS course. Approved courses in visual culture studies from other divisions may substitute.	
Community Experience	0–1
MSA 1101 <i>or</i> 1001	
Free Electives	
Hours vary as needed to meet University residency and degree requirements	

***Bachelor of Fine Arts/Master of Interactive
Technology Program in Digital Game Development***

SMU Guildhall provides an in-depth master's degree and graduate certificate in digital game development tailored to students who wish to become actively involved in the game development industry as designers or programmers.

In conjunction with the Guildhall, the Division of Art offers a B.F.A. degree in art that coordinates with the art creation and design tracks in game development in the master's degree program at the Guildhall. This program provides the breadth and rigor of a B.F.A. degree while simultaneously providing an in-depth investigation of digital game development fundamentals through the curriculum of the Master of Interactive Technology.

The B.F.A./M.I.T. program is designed to furnish students with significant studio art training and a clear curriculum to prepare them for specialized graduate-level study of art creation, game creation and simulation at SMU Guildhall.

Students apply for admission to the Guildhall in the fall of the senior year. Students admitted to this program spend seven terms at the Meadows School and the last term at the Guildhall, located at SMU's Plano campus. The first two modules of Guildhall courses complete the B.F.A. The student can then apply to the master's program, which requires three additional terms and one summer term to complete the M.I.T. degree. More information about the B.F.A./M.I.T. program is available online at www.smu.edu/meadows-guildhall.

Bachelor of Arts in Art

The B.A. in art is designed to offer students a degree in art that allows time for significant study in another discipline as well. This makes room for double majors and extensive study in the humanities, sciences or other degree programs. The B.A. degree gives students with varied interests in university study a sound footing in the visual, tactile and conceptual capabilities, as well as historical and cultural knowledge and a range of theoretical and analytical bases, for making art. To earn a B.A., the student is required to take a minimum of 48 hours in the Division of Art and nine to 12 hours in the Division of Art History.

Students may choose the B.A. degree in art upon the completion of ASAG 1300, 1304 or their equivalent.

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
Foundations	9
ASAG 1300, 1304 (fall term) and one 1300-level course in ASCE, ASDR, ASIM, ASPH, ASPR, ASPT, or ASSC or three 1300-level courses in ASAG, ASCE, ASDR, ASIM, ASPH, ASPR, ASPT, or ASSC (for the student who declares the major in art after taking a number of introductory courses)	9
Required Art Courses	6
ASAG 3310, 5315	
Advanced Art Studies	15
Division of Art courses at the 3000 level or higher	

<i>Requirements for the Degree (continued)</i>	<i>Credit Hours</i>
Additional Art Studies	6
Division of Art courses at any level	
Art History	12
No more than 6 hours at the 1000 level. ASAG 3350 may substitute for one 3000-level ARHS course. Approved courses in visual culture studies from other divisions may substitute.	
Free Electives	
Hours vary as needed to meet University residency and degree requirements	
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Minor in Art

The minor in art is designed to give a coherent structure to a brief but serious investigation of studio art. In this minor, students should grow to understand the formation of visual imagery and gain confidence in studio practice. The minor is designed for students who wish to incorporate more intensive visual studio training with studies in other areas, such as art history or advertising, or for those who want a basic studio curriculum.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
Any two courses at the 1300 level in ASAG, ASCE, ASDR, ASIM, ASPH, ASPR, ASPT, and ASSC	6
Any four art courses at the 3000 level or higher	12
	18

Minor in Photography

Students completing 18 hours in photographic study can expect to obtain a sophisticated understanding of the photographically derived image and the technical and creative skills necessary for its production. Classes in photography offered by the Division of Art integrate the technical aspects of the medium with the aesthetic concerns appropriate to art. Through the use of photography, students learn to think and express themselves visually. A minor in photography prepares one for further work in fine arts or commercial photography and other areas where knowledge of photography is helpful. Beyond vocational applications, a minor in photography creates a firm foundation for future creative development.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
ASPH 1300	3
Two from ASPH 3300, 3303, 3304	6
ARHS 3355, or 3367, or an approved substitution	3
Additional coursework in ASPH at the 3000 level or above	6
	18

The Courses

Studio courses generally require six hours per week of in-class work and critical discussion. Students should enroll with a firm commitment to regular attendance and should expect to spend an additional four to six hours per week, per class, to complete their coursework.

Prerequisites and Course Fees. In enrolling for courses in art, it is necessary that the course number be preceded by the appropriate subject code prefix for credit to be properly recorded. Many courses at the 3000 level and all courses at the 5000 level have prerequisite coursework required. All directed studies courses require instructor approval before enrollment. All courses in studio art, except lectures and seminars, have a laboratory fee of \$30 per credit hour, which is added to the tuition and fees assigned at the time of enrollment. Certain courses in art require an additional material or tool expense in addition to fees.

Foundations and Art, General Studio (ASAG)

Foundations courses are ASAG 1300, 1304, 1308 and 1312. This sequence of courses is for art majors or any student who seeks an intensive study of the visual arts. The remaining ASAG courses are organized thematically to explore a range of assumptions and practices – from the historical to the contemporary – that inform the making and display of art; these general studio courses have been designed to provide students with intensive training in studio practice, exposure to a range of materials, processes and research methods, and an introduction to the theoretical issues that frame contemporary art.

ASAG 1300 (3). OBSERVATION. Seeing is not as simple as it looks. What people see, how they see, and how and why they chose to represent their experience of the world in a particular form and through a particular medium are fundamental questions for the artist. Students experiment with various media while exploring the history, theory, and application of these resources of representation in visual art; they learn the differences among looking, scanning, and seeing; and they encounter a range of resources, from theories of perspective in drawing and painting through 3-D modeling and digital simulations of reality. *Corequisite:* ASAG 1304.

ASAG 1304 (3). SPACES. The apprehension of space is tied to the fact that each person occupies space and invests various kinds of spaces with meaning. The expression of spaces through art may include a range of media and situations, from sculpted forms, constructions, architecture, and installations to two-dimensional renderings and virtual representations of space. Students explore this multivalent conception of space to understand how one's embodied conception of the world is made manifest through visual art. *Corequisite:* ASAG 1300.

ASAG 1308 (3). NARRATIVE. Narrative is the simple act of recounting a story. The ability to depict and connect events in an aesthetic and persuasive manner is at the heart of some of the most compelling visual art. Students explore a wide variety of media and issues that relate to art that includes the dimension of time, explicitly or implicitly, which can be the literal time of a moving image (film, video, animation), the duration of a performance, the time required for the reading of a text, the depiction of an event through a single image, or a sequence of still images as found in the illustrated novel or comic strip. *Prerequisites:* ASAG 1300, 1304. *Corequisite:* ASAG 1312.

ASAG 1310 (3). WORD AND IMAGE, ART AND DESIGN: 1900–PRESENT. Contemporary designers and artists create meaningful, persuasive, and expressive works through a combination of images and text. These works of graphic design and art shape the visual culture of every aspect of life, from the look of media and information networks to people's experience of the cities in which they live. This course surveys the modern and contemporary history of works of art and design that demand to be read as much as seen, from the industrial age to the knowledge economy.

ASAG 1312 (3). SYSTEMS. In the course of modern and contemporary art, many artists have chosen to take a systematic approach toward making their art. Systems in art are a set of rules or constraints that function as a machine for making art. Students encounter a wide range of systematic art practices, from the elegant serial works of impressionism to art that incorporates models taken from communication theory and linguistics. Explores the concept of systems in art drawn from the realm of social and political theory, where the artist's work may be done in collaboration with others in order to understand and possibly change social relations that characterize everyday life. *Corequisite:* ASAG 1308.

ASAG 1375 (3). ART AND URBANISM. There is a long history of artists making work in or about the city. This class draws from historical and theoretical models, including social sculpture, relational aesthetics, and social practice, to create works that are situational and participatory. Students from all levels and disciplines are welcome in this highly interdisciplinary class.

ASAG 3305 (3). ART, WORD, AND IMAGE IN CONTEMPORARY ART. Contemporary artists create meaningful and expressive art through the combination of images and text: artwork that demands to be read as much as seen. Students learn about the recent history of language in art and create works of art for a variety of sites of display — real and virtual — such as the gallery, social media, printed ephemera, the fabric of the campus, and the city at large. *Prerequisite:* One 1300-level studio art course.

ASAG 3310 (3). ART IN THE WORLD. Works are made in the world of art and in the world of history, not in the world of school. Students study the world of art by visiting museums, galleries, notable architecture, public lectures, installations, symposia, etc. All student work is written or made in relation to the experiences in these venues.

ASAG 3315 (3). ART AND SOCIAL PRACTICE. Research in a variety of areas that support practices in art outside the studio, including contemporary developments in criticism and theory, approaches to media, social and community contexts, and specific geographic or cultural contexts. Focused seminar discussion, research, and group projects. *Prerequisite:* Permission of instructor.

ASAG 3325 (3). STUDIO WORKSHOP. An intensive investigation in arts by students engaged in independent work, group collaboration, and analytical study. *Prerequisite:* 15 credit hours in art or permission of instructor.

ASAG 3350 (3). ART COLLOQUIUM: NEW YORK. Involves intensive analysis, discussion, and writing concerning works of art in museum collections and exhibitions, and in alternative exhibition spaces. Students study the philosophical as well as the practical to define and understand the nature of the art society produces and values. The colloquium meets in New York City for 2 weeks in January.

ASAG 3360 (3). COLOR AND THE VISUAL IMAGE. Color systems of Munsell, Itten, Photoshop palettes, etc. are studied in the light of contemporary neurobiology and the capabilities of media. Klee, Albers, Matisse, and other masters of color focus the course on color modes. *Prerequisite:* 24 credit hours in art or permission of instructor.

ASAG 3370 (3). SPECIAL TOPICS IN STUDIO ART. To be announced by the Division of Art. *Prerequisite:* Permission of instructor.

ASAG 3380 (3). CRITICAL ISSUES. A seminar for art majors in their 3rd year of studies. This course investigates topics in current critical theory in the arts as well as the historical context of their development. Readings are taken from philosophy, literary criticism, art theory, and art criticism. *Prerequisite:* 24 credit hours in art.

ASAG 3390 (3). GROUP JUNIOR TUTORIAL. A forum for art majors in the 3rd year of studies that facilitates the student's ability to articulate his or her work as an artist and to defend and present it in a peer-group setting. *Prerequisite:* ASAG 3380.

ASAG 5001 (0). B.F.A. QUALIFYING EXHIBITION. (for students who entered prior to fall 2010) Participation in the qualifying exhibition is required for all candidates for the degree of B.F.A. in art.

ASAG 5100 (1). INTERNSHIP IN STUDIO ART. Students work in internship positions that relate to their individual studio studies, including internships in teaching, in galleries, as assistants to established artists, or with businesses in the arts. Students should sign up for 1, 2, or 3 credit hours for internships of 3, 6, or 10 hours per week. Internships are supervised and evaluated by a member of the Division of Art faculty. *Prerequisite:* Approval of departmental chair or adviser.

ASAG 5200 (2). INTERNSHIP IN STUDIO ART. Students work in internship positions that relate to their individual studio studies, including internships in teaching, in galleries, as assistants to established artists, or with businesses in the arts. Students should sign up for 1, 2, or 3 credit hours for internships of 3, 6, or 10 hours per week. Internships are supervised and evaluated by a member of the Division of Art faculty. *Prerequisite:* Approval of departmental chair or adviser.

ASAG 5300 (3). INTERNSHIP IN STUDIO ART. Students work in internship positions that relate to their individual studio studies, including internships in teaching, in galleries, as assistants to established artists, or with businesses in the arts. Students should sign up for 1, 2, or 3 credit hours for internships of 3, 6, or 10 hours per week. Internships are supervised and evaluated by a member of the Division of Art faculty. *Prerequisite:* Approval of departmental chair or adviser.

ASAG 5310 (3). PROFESSIONAL PRACTICE IN ART. For art majors in their final year of studies. A practical and informed approach to understanding the competencies that are required to sustain practice as an artist beyond the undergraduate experience. Students learn how to negotiate the professional aspects of art and to identify and take advantage of a host of opportunities. Topics include establishing a studio; applying for residencies and grants; exhibiting work; intellectual property law; the contemporary art market; and alternative models of production, distribution, and exchange of art. *Prerequisite:* ASAG 3390.

ASAG 5315 (3). ART CAPSTONE PROJECT. A culmination of the study of art in support of the production of a body of work for exhibition. Required for the B.A. in art and the B.F.A. in art. *Prerequisite:* ASAG 3390.

ASAG 5325 (3). STUDIO WORKSHOP. An intensive investigation in arts by students engaged in independent work, group collaboration, and analytical study. *Prerequisite:* 15 credit hours in art or permission of instructor.

ASAG 5350 (3). ART COLLOQUIUM: NEW YORK. Involves intensive analysis, discussion, and writing concerning works of art in museum collections and exhibitions, and in alternative exhibition spaces. Students study the philosophical as well as the practical to define and understand the nature of the art society produces and values. The colloquium meets in New York City for 2 weeks in January.

Ceramics (ASCE)

ASCE 1300 (3). INTRODUCTION TO CERAMICS. Introduces the discipline of ceramics through projects, readings, and field trips. The motto of the ceramics area is “panta rhei” (everything flows) because the deformation of matter and the flowing across disciplines determine what one makes in ceramics. Students engage the Dallas community by making pots for the annual Empty Bowls food bank benefit, and they learn to use ceramic materials to analyze the ceramics they produce and to judge them critically.

ASCE 3300 (3). INTERMEDIATE CERAMICS. Further engages the discipline of ceramics through projects, readings, and field trips. Students form independent projects in which they may pursue a particular interest of their own (e.g., to depict the human figure in ceramic, to copy in clay an object that exists in another material, to create a set of tableware in a particular style, to use ceramic as a complement to artwork being made concurrently in other disciplines such as painting, or to employ ceramics as a part of an installation). *Prerequisite:* ASCE 1300 or permission of instructor.

ASCE 3310 (3). SPECIAL TOPICS IN CERAMICS. To be announced by the Division of Art. *Prerequisite:* ASCE 1300 or permission of instructor.

ASCE 3320 (3). SEX, DRUGS, AND ROCKS. Beyond their more common uses, pots have traditionally been used ritually and socially in conjunction with powerful substances and forces, which are often depicted in a pot’s form or surface decoration. Such practices continue today. Traditional and current uses of pots include Greek wares for gymnasias and bacchanalia, Chinese tea ware, Central American chocolate ware, North American dinnerware, and South African brewery ware, as well as pots that celebrate bodily functions such as giving birth and pots that depict parts of the body gendered, sexualized, or related to reproduction. After studying these pots and their contexts, the ceramics of living artists particularly concerned with topics such as sex and drugs, and texts about various pots and their contents, students make their own interpretations by undertaking the ceramic process as an artificial geological process.

ASCE 5100 (1). DIRECTED STUDIES IN CERAMICS. Students may take one course per term only. *Prerequisite:* ASCE 3300.

ASCE 5200 (2). DIRECTED STUDIES IN CERAMICS. Students may take one course per term only. *Prerequisite:* ASCE 3300.

ASCE 5300 (3). ADVANCED CERAMICS. Students refine their understanding of the discipline of ceramics based on their grasp of techniques/principles from the first two courses. Employing

the fluid nature of ceramics to flow across disciplines, students select a common ground (for example, architecture, food service, or the human figure) and identify specific techniques (for example, printing, throwing, or painting) to accomplish primarily self-initiated projects of research and making. *Prerequisite:* ASCE 3300 or permission of instructor.

ASCE 5302 (3). DIRECTED STUDIES IN CERAMICS. Students may take one course per term only. *Prerequisite:* ASCE 3300.

ASCE 5310 (3). SPECIAL TOPICS IN CERAMICS. To be announced by the Division of Art. *Prerequisite:* ASCE 1300 or permission of instructor.

Digital and Hybrid Media (ASIM)

ASIM 1300 (3). INTRODUCTION TO DIGITAL HYBRID MEDIA. Introduces computational media and digital processes as the basis of creative practice. Students gain proficiency in digital imaging, computer-generated animation, and digital video using popular graphics software such as Adobe Creative Suite. Includes an overview of the history of digital and hybrid art from the mid-20th century onward, including Internet art, mobile and ubiquitous computing, sonic art, virtual worlds, interactive installation, and augmented performance.

ASIM 1310 (3). ART AND CODE I. Explores computation as a powerful generative medium. Working with the open-source processing development environment and Java programming language, students learn the fundamentals of creative coding and computational thinking, including object-oriented programming. Hands-on topics include algorithmic drawing, procedural imaging, 2-D and 3-D animation, visualization, interactivity, and gaming.

ASIM 1330 (3). RESPONSIVE ARTS. Students use advanced processing tools to experiment and generate interactive pieces, art robots, and works that respond to stimuli. This studio class introduces students to nonscreen-based digital art that exists in real space. For students interested in installation, sculpture, performance, robotics, and electronics in art. *Prerequisite:* Meadows student or permission of instructor.

ASIM 1340 (3). COMPUTATIONAL SCULPTURE. An introduction to 3-D modeling, with a focus on modeling and physical object output using sophisticated 3-D software and rapid prototype production using a 3-D printer. For students interested in sculpture, design, architecture, computer science, and biovisualization. Students develop a multidisciplinary skill set and learn to model objects and environments and to apply surface texturing, lighting, rapid prototyping, rigging, and rendering. Includes lectures, field trips, in-class studio time, and assignments. *Prerequisite:* Meadows student or permission of instructor.

ASIM 3305 (3). ART AND CODE II. Introduces advanced creative coding principles using the C++ programming language and OpenGL and openFrameworks graphics libraries. Students learn how to design software systems for real-time performance, 3-D virtual environments, interactive applications, mobile games, and augmented installations. *Prerequisite:* ASIM 1310, or CSE 1341, or permission of instructor.

ASIM 3310 (3). COMPUTATIONAL MEDIA WORKSHOP. An intensive study designed to further integrate computational media and digital processes into creative practice. The focus is on developing independent work, group collaboration, and analytical study. Depending on the topic and work completed, study may be applied to different media concentrations. *Prerequisite:* ASIM 1310, CSE 1341, or CSE 1342.

ASIM 3315 (3). SPECIAL TOPICS IN DIGITAL AND HYBRID MEDIA. Intermediate to advanced research in a variety of areas that support digital and hybrid media practice and research. Uses focused research topics, studio projects, seminar discussions, and an introduction to various computational tools as vehicles for personal aesthetic expression. *Prerequisites:* ASIM 1310, 3320 or permission of instructor.

ASIM 3320 (3). RESPONSIVE ARTS II. Introduces advanced physical computing principles using microcontrollers, custom circuit design, and advanced code to generate interactive art pieces that respond to stimuli. Students further their mastery of nonscreen-based digital art that exists in real space. For students interested in installation, sculpture, performance, robotics, and electronic art. *Prerequisite:* ASIM 1330.

ASIM 3325 (3). SPECIAL PROJECTS IN DIGITAL AND HYBRID MEDIA. Intensive study of a particular subject or design project.

ASIM 3340 (3). INTRODUCTION TO INTERACTIVE GRAPHICAL PROGRAMMING. Using the graphical programming languages Pd/GEM and Max/MSP/Jitter and object-oriented programming software, students explore sound and video and strategies for creating generative creative art while connecting computation to the physical world. Also, the ways in which data from external input sources can be used to create interactive projects, algorithmic compositions, screen-based work, installations, and objects and experiences in real space. *Prerequisite:* Completion of any ASIM course.

ASIM 3350 (3). TECHNOLOGY AND THE BODY: EXPLORATION IN WEARABLES AND E-TEXTILES. Introduces wearable art and wearable-based performance art through survey lectures, video documentation, reading, technical instruction, and off-campus research trips. Students explore the intersection of material, interactivity, technology, the body (human and nonhuman), and the conceptual potentials within the context of wearable art. Includes programming at the introductory level through LilyPad and other Arduino microcontrollers as well as basic electronics. Students produce their own wearable prototypes both individually and collaboratively, working up to one final completed piece. *Prerequisite:* ASIM 1330.

ASIM 3370 (3). BIOART SEMINAR: NATURE AS MATERIAL. A combined seminar and studio course introducing artists and collaborative groups working with nature, science, and alternative organic methods as material to produce sculpture, installations, and performance-based work. Students explore nature as material and research-based art practices that engage in biology; the environment; genetics; technoscience; and the use of and collaboration with plants, animals, and organic and synthetically organic materials. Includes visits to various laboratories and exhibitions as well as lectures from visiting guest speakers.

ASIM 5302 (3). INTERMEDIA DIRECTED STUDIES. Students may take one course per term only. *Prerequisite:* Permission of instructor.

ASIM 5325 (3). SPECIAL PROJECTS IN DIGITAL AND HYBRID MEDIA. Intensive study of a particular subject or design project.

Drawing (ASDR)

ASDR 1300 (3). INTRODUCTION TO DRAWING. Drawing from life objects and concepts. Work in class is supplemented by outside assignments and readings. Emphasis placed on space, materials, analysis of form, and critical judgment.

ASDR 1310 (3). DRAWING IN ITALY. This course introduces students to plein-air drawing of the ruins, monuments, and landscape of central Italy, with an emphasis on development of light, space, and compositional structure. Offered at SMU-in-Italy.

ASDR 3300 (3). DRAWING: INTERMEDIATE LEVEL. Studio and outside work in drawing that further develops vision and individual approaches to drawing. *Prerequisite:* ASDR 1300.

ASDR 3305 (3). DRAWING AS CONCEPT AND PERFORMANCE. This course begins with the premise that the contemporary artist conceives of drawing as an expanded field of expressive and conceptual possibilities. Drawing understood as concept or performance is neither solely preparatory nor descriptive. Rather, drawing is constructed using a variety of means, including imaginative systems of notation, graphic conventions drawn from visual culture at large, and scripted physical actions. *Prerequisite:* ASAG 1300 or ASDR 1300.

ASDR 3320 (3). MATERIAL STUDIES: THE BOOK ART. An interdisciplinary course for creating artworks based on the form of the book. Considers the relationships among materiality, time, and an extended field of image making. Students are encouraged to utilize constructed and found materials in their exploration of concepts and processes central to contemporary book works, including sequence, repetition, and viewer participation; the embodiment of ideas through the book; book as tool and as art object; and the variety of formats clustered around the scroll and the codex. *Prerequisite:* ASAG 1300 or ASDR 1300.

ASDR 3330 (3). THE MIRRORING LINE: INTERDISCIPLINARY MARK MAKING. Interdisciplinary mark making (be it movement, sculpture, sound, drawing, or text) enables research on what might be termed the "mirroring line." By locating and engaging a series of borders (legal, social, physical, psychic, sonic, environmental, theoretical, and imaginary) that striate Dallas, its environs, and the multiple communities that intersect within the city, students expand the concepts of what it means to make a line (using graphite, blood, router, string, etc.) and of the kinds of substrate that take a line (be it paper, street, water, or human beings).

ASDR 5100 (1). DIRECTED STUDIES IN DRAWING. Students may take one course per term only. *Prerequisite:* ASDR 3300.

ASDR 5200 (2). DIRECTED STUDIES IN DRAWING. Students may take one course per term only. *Prerequisite:* ASDR 3300.

ASDR 5300 (3). DRAWING ADVANCED. Drawing at the senior level exemplifying independent development in drawing. *Prerequisite:* ASDR 3300 or permission of instructor.

ASDR 5302 (3). DIRECTED STUDIES IN DRAWING. Students may take one course per term only. *Prerequisite:* ASDR 3300.

ASDR 5303 (3). DIRECTED STUDIES IN ITALY: ADVANCED STUDENTS. Offers senior-level development in drawing and individual responses to the ruins, monuments, and landscape of Italy, which are themselves the subjects of many masterpieces encountered in churches, museums, and archaeological sites. Students are allowed the freedom to explore formal issues and expressive means in response to these subjects, producing a visual record of their perceptions and thoughts in representational, abstract, or conceptual modes. Critiques allow students to demonstrate skills in formal analysis and interpretation. Enrollment is limited. *Prerequisite:* ASDR 3300.

ASDR 5305 (3). DRAWING AS CONCEPT AND PERFORMANCE. This course begins with the premise that the contemporary artist conceives of drawing as an expanded field of expressive and conceptual possibilities. Drawing understood as concept or performance is neither solely preparatory nor descriptive. Rather, drawing is constructed using a variety of means, including imaginative systems of notation, graphic conventions drawn from visual culture at large, and scripted physical actions. *Prerequisite:* ASDR 3305.

Painting (ASPT)

ASPT 1300 (3). INTRODUCTION TO PAINTING. A first course in painting from life, objects, and concepts. Emphasis is placed on space, materials, color, analysis of form, and critical judgment.

ASPT 3300 (3). PAINTING INTERMEDIATE. Includes study of the materials, capabilities, processes, and essential meaning of painting, as well as the qualities of color, vision, and composition. Subjects are drawn from life, objects, and concepts. Extensive studio and outside work is required. *Prerequisite:* ASPT 1300 or permission of instructor.

ASPT 3305 (3). STUDIO WORKSHOP: COLOR AND MEANING. A painting workshop in which theoretical works on color are discussed and employed, but the central concern remains the development of color relationships within each student's work. Extensive reading and written presentations are required. *Prerequisite:* ASPT 3300.

ASPT 3306 (3). PAINTING IN TAOS I. An intermediate study of painting in the physical and cultural environment of the Fort Burgwin Research Center. *Prerequisite:* ASPT 1300 or permission of instructor.

ASPT 3309 (3). PAINTING IN ROME. A study of painting among the monuments and landscapes of central Italy. *Prerequisite:* ASPT 1300 or permission of instructor. (SMU-in-Italy)

ASPT 5100 (1). DIRECTED STUDIES IN PAINTING. Students may take one course per term only. *Prerequisite:* ASPT 3300.

ASPT 5200 (2). DIRECTED STUDIES IN PAINTING. Students may take one course per term only. *Prerequisite:* ASPT 3300.

ASPT 5300 (3). ADVANCED PAINTING. An intensive studio experience for students who wish to develop a significant body of work in painting. Independent development is stressed alongside a program of readings and individual and group critiques. *Prerequisite:* 6 credit hours in painting at the 3000 level or permission of instructor.

ASPT 5302 (3). DIRECTED STUDIES IN PAINTING. Students may take one course per term only. *Prerequisite:* ASPT 3300.

ASPT 5306 (3). PAINTING IN TAOS II. An advanced study of painting in the physical and cultural environment of the Fort Burgwin Research Center. *Prerequisite:* ASPT 3300 or 3306, or permission of instructor.

Photography (ASPH)

ASPH 1300 (3). THE BASICS OF PHOTOGRAPHY. Thorough discussion of camera operation and the elements of visual design (space, composition, color, and light). Emphasis is placed upon the creative application of aperture, shutter speed, framing, and lighting. Students must supply their own digital single-lens reflex cameras or advanced compact digital cameras that allow for manual exposure control. Assignments submitted digitally. Written examination. No darkroom or computer lab.

ASPH 1310 (3). INTRODUCTION TO VIDEO. Provides an opportunity to understand and master the craft of video production in the context of art. Using Final Cut Pro and higher-end cameras with full manual controls, students experiment with the many ways to generate moving images. Covers methods and concepts derived from film and video: point of view, shot composition, spatial and time continuity, lighting, and superimposition. Encourages the comparison of narrative and non-narrative formal systems. Also, the most important practitioners of video as art and the intersection of video with film, theatre, installation art, and architecture.

ASPH 3300 (3). BLACK-AND-WHITE PHOTOGRAPHY I. Exploration of the creative possibilities of silver-based photographic materials in the darkroom. Special attention is given to black-and-white film development, negative enlarging, and a variety of manipulative techniques. Students provide their own film camera in any format. *Prerequisite:* ASPH 1300 or permission of instructor.

ASPH 3302 (3). BLACK-AND-WHITE PHOTOGRAPHY II. Continuation of ASPH 3300, with emphasis on the zone system, film manipulation, chemical printing, and matting techniques. Includes the possibility of working in medium-to-large film formats, zone system, and bifilter printing. *Prerequisite:* ASPH 3300 or permission of instructor.

ASPH 3303 (3). COLOR PHOTOGRAPHY. Exploration of the aesthetic issues and technical concerns of digital color photography. Students use Adobe Photoshop to produce fine-quality inkjet prints and supply their own digital single-lens reflex cameras. *Prerequisite:* ASPH 1300 or permission of instructor.

ASPH 3304 (3). DIGITAL TOOLS. Exploration of the experimental use of image-capture devices, software manipulation, output material, and presentation. Topics can include flatbed scanners, large-format inkjet printing, and text and collage techniques. Students provide their own single-lens reflex digital cameras. *Prerequisite:* ASPH 1300 or permission of instructor.

ASPH 3306 (3). PHOTOGRAPHY IN TAOS. Intermediate and advanced study of photography in the physical and cultural environment of the Fort Burgwin Research Center. *Prerequisite:* ASPH 1300 or permission of instructor.

ASPH 3310 (3). LARGE-FORMAT PHOTOGRAPHY. Explores the mechanics, creative possibilities, and aesthetics of silver-based photographs made with the 4x5 view camera. Fully examines adjustments unique to the view camera allowing for maximum image control. Topics include still life, landscape, portraiture, and architecture. View cameras are available for student use. *Prerequisite:* ASPH 1300 or permission of instructor.

ASPH 3315 (3). INTERMEDIATE VIDEO. Studio class for the creation of video art. Students complete guided and independent projects with a focus on the application of more advanced postproduction techniques. For students interested in using video as their primary expressive medium for incorporating video into their studio practice or for exploring the transmedia potential of video. Students attain technical proficiency and develop individual ideas and personal concepts within each video project. *Prerequisite:* ASPH 1310.

ASPH 3320 (3). THE DOCUMENTARY IMPULSE. Exploration of traditional and contemporary approaches to documentary photography through shooting assignments, lectures, and readings. Utilizing print-on-demand technology, each student produces a book of images and text on a self-defined project. Students work with digital cameras. *Prerequisite:* ASPH 1300 or permission of instructor.

ASPH 3325 (3). THE PHOTOGRAPHIC PORTRAIT. Explores traditional and contemporary approaches to the photographic portrait through shooting assignments, lectures, and readings. Students work in available light on location and with SMU's electronic strobe equipment in the studio. Includes work with digital cameras. *Prerequisite:* ASPH 1300 or instructor permission.

ASPH 3330 (3). FASHION PHOTOGRAPHY. Students photograph on location and in the studio. Includes on- and off-camera lighting techniques, concept development, art direction,

work with talent, shot styling, fees, publication rights, model releases, editing, portfolio presentation, and the history of fashion photography. Students work with digital cameras. *Prerequisite*: ASPH 1300 or permission of instructor.

ASPH 3340 (3). ALTERED AND ALTERNATIVE PHOTOGRAPHIC IMAGES. Exploration of the specialized chemical techniques that alter the gelatin silver print, including line drop, Sabattier effect, and hand coloring. Also, alternative nonsilver-based printmaking methods, including cyanotype, Van Dyke brown, gum bichromate, and platinum and palladium. *Prerequisite*: Any studio art 1000-level course or instructor consent.

ASPH 3350 (3). THE PHOTOGRAPHIC BOOK. Exploration of the creative presentation of photographs in traditional and contemporary book form using conventional and alternative bookbinding techniques. Field trips to local rare book collections supplement the student's understanding of the nature of the photographic book. Students may work with film and/or digital cameras. *Prerequisite*: ASPH 3300, 3303, or 3304 or permission of instructor.

ASPH 3360 (3). SPECIAL TOPICS IN PHOTOGRAPHY. Topics to be announced by the Division of Art. *Prerequisite*: Permission of instructor.

ASPH 3390 (3). EXPERIMENTAL CAMERA. Pushing the technical boundaries of cameras as capture devices, students experiment with the creative aesthetic possibilities therein (still and/or motion) and then draw from a variety of genres to create short, experimental films. Students explore diverse concepts such as storytelling, portraiture, documentary, poetry, and abstraction, and they combine elements such as still photography, animation, graphics, narration, sound effects, and original music to create motion picture media. *Prerequisites*: FILM 1304, or ASPH 1300 and 1310 (or instructor permission is available for students with a working knowledge of the camera, including aperture, shutter speed, and focal length), and a basic understanding of video editing. Students are required to have access to at least a digital still camera.

ASPH 5100 (1). DIRECTED STUDIES IN PHOTOGRAPHY. Students may take one course per term only. *Prerequisite*: Permission of instructor.

ASPH 5101 (1). DIRECTED STUDIES IN VIDEO. Students may take one course per term only. *Prerequisite*: Permission of instructor.

ASPH 5200 (2). DIRECTED STUDIES IN PHOTOGRAPHY. Students may take one course per term only. *Prerequisite*: Permission of instructor.

ASPH 5201 (2). DIRECTED STUDIES IN VIDEO. Students may take one course per term only. *Prerequisite*: Permission of instructor.

ASPH 5302 (3). DIRECTED STUDIES IN PHOTOGRAPHY. Students may take one course per term only. *Prerequisite*: Permission of instructor.

ASPH 5303 (3). DIRECTED STUDIES IN VIDEO. Students may take one course per term only. *Prerequisite*: Permission of instructor.

Printmaking (ASPR)

ASPR 1300 (3). INTRODUCTION TO PRINTMAKING. Introduction to historical and contemporary printmaking in a wide variety of media, including intaglio printing, etching, engraving, drypoint, aquatint, monotype, silkscreen, woodcut, and numerous digital possibilities presented by the medium.

ASPR 1321 (3). PRINTMAKING: WOODCUT. Introduces the process of relief printing.

ASPR 3300 (3). PRINTMAKING WORKSHOP. Intermediate- and advanced-level exploration of the printing medium as an expressive tool. The ambience of the workshop, with no fixed structure, offers freedom to experiment in all directions (emotionally, intellectually, and technically) and to seek inspiration from any source. Students gain the self-discipline necessary for coherent results and mastery of the craft of printing. *Prerequisite*: ASPR 1300 or instructor consent.

ASPR 5100 (1). DIRECTED STUDIES IN PRINTMAKING. *Prerequisite*: Permission of the instructor.

ASPR 5200 (2). DIRECTED STUDIES IN PRINTMAKING. *Prerequisite*: Permission of the instructor.

ASPR 5300 (3). PRINTMAKING WORKSHOP. Further intermediate- and advanced-level exploration of the possibilities of the printing medium as an expressive tool. The ambience of the workshop, with no fixed structure, offers freedom to experiment in all directions (emotionally, intellectually, and technically) and to seek inspiration from any source. Students gain the self-discipline necessary for coherent results and mastery of the craft of printing. *Prerequisite:* ASPR 3300 or permission of instructor.

ASPR 5302 (3). DIRECTED STUDIES IN PRINTMAKING. *Prerequisite:* Permission of the instructor.

Sculpture (ASSC)

ASSC 1300 (3). INTRODUCTION TO SCULPTURE. An introduction to working in three dimensions from a variety of approaches, investigating sculpture's purposes, materiality, and spatial nature. Students examine historical and contemporary approaches to sculpture to understand how to manipulate form, space, and expressive content in three dimensions.

ASSC 1320 (3). MATERIALS AND PROCESSES. Introductory survey of the manipulation of a variety of media (clay, plaster, wood, metal, etc.) and contemporary and historical approaches to the use of these materials in art. Emphasis on expressive potential and studio safety.

ASSC 3300 (3). INTERMEDIATE SCULPTURE. A continuation of study of problems in sculpture, including analysis of form, theory, and technical processes. Emphasis on sustained investigation using a number of perspectives, critical discussion, analysis of contemporary and historical work, and concentrated studio practice. Students gain confidence with and understanding of the tools, materials, and concepts of sculpture. *Prerequisites:* ASSC 1300, 1320 or permission of instructor.

ASSC 3310 (3). MATERIAL AND FORM. Intensive investigation of material processes (construction, metal casting, and subtractive techniques) and the ramifications of material choice and method in the formal and stylistic development of sculptural work. Explores the traditional development and contemporary practice of each process. Requires 6 hours of studio work outside of scheduled meeting times. *Prerequisites:* 6 credit hours in ASSC courses and 12 credit hours in ASAG courses, or permission of instructor.

ASSC 3320 (3). BODY AND OBJECT. An intensive sculptural study of the body and figure that addresses the body through its objective structure and its social and psychological meanings and explores how these can be conveyed in contemporary practice. In class, students focus on the observation and direct study of the figure and its tactile translation into material. Out of class, students focus on independent projects to consider the question of the body as a metaphoric and performative subject, to explore the body's material and immaterial nature, and to create work about the figure without literal reference to it. Requires 6 hours of studio work outside of scheduled meeting times. *Prerequisites:* 6 credit hours in ASSC courses and 12 credit hours in ASAG courses, or permission of instructor.

ASSC 3330 (3). TIME AND MATERIAL. An interdisciplinary course that considers the relationships among materiality, time, and drawing, using both constructed and found materials. Investigates time, movement, and repetitive action; work that documents the process of making; the relationship between digital and material form; and the formats of installation and documentation. *Prerequisites:* 6 credit hours in ASSC courses and 12 credit hours in ASAG courses, or permission of instructor.

ASSC 3340 (3). SHELTER AND PLACE. An intensive interdisciplinary investigation into social forms and environments, both constructed and natural, in order to question what it is to dwell, how a sense of place is described and enacted, and how forms and events can influence and be influenced by structures. Work is based upon the identification of and location within a specific urban or natural landscape site. Includes collaborative work, drawing, analytical study of sites and environments, and construction. Draws paradigm examples from installation, architectural, and sculptural practice. Requires 6 hours of studio work outside of scheduled meeting times. *Prerequisites:* 6 credit hours in ASSC courses and 12 credit hours in ASAG courses, or permission of instructor.

ASSC 3350 (3). XSCULPTURE. Investigates the creation of 3-D forms and environments using experimental methods such as digital modeling, processing, computer-based manufacture, and electronic output. Students to interact with different knowledge bases and purposes in an investigation of the problem of how to image 3-D in contemporary practice. *Prerequisite:* ASSC 1300 or instructor consent.

ASSC 5100 (1). DIRECTED STUDIES IN SCULPTURE. Students may take one course per term only. *Prerequisite:* Permission of instructor.

ASSC 5200 (2). DIRECTED STUDIES IN SCULPTURE. Students may take one course per term only. *Prerequisite:* Permission of instructor.

ASSC 5300 (3). ADVANCED SEMINAR IN SCULPTURE. Advanced investigation of contemporary practice in sculpture, including methods of research, means of production, and the critical and theoretical contexts of contemporary sculpture. *Prerequisite:* 9 credit hours in art courses at the 3000 level or permission of instructor.

ASSC 5302 (3). DIRECTED STUDIES IN SCULPTURE. Students may take one course per term only. *Prerequisite:* Permission of instructor.

ART HISTORY

Professor Randall C. Griffin, Department Chair ad interim

Professor: Randall C. Griffin. Associate Professors: Janis Bergman-Carton, Adam Herring, Lisa Pon. Assistant Professors: Beatriz Balanta, Amy Freund, Stephanie Langin-Hooper, Eric Stryker. Adjunct Associate Professor: Mark Roglán.

Bachelor of Arts in Art History

The B.A. degree in art history trains students to negotiate a world saturated with images. It challenges students to confront critically the issues posed by the visual culture that mediates their understanding of the past, present and future. Built on the fertile exchange between the arts and the humanities, art history at SMU subscribes to an interdisciplinary and intercultural approach to learning. Students are taught to think across current categories and boundaries and practice a socially responsible art history.

In addition to developing acute visual sensibilities, students acquire the ability to evaluate and organize information, conduct scholarly research and articulate their ideas in both written and spoken language. Students completing this course of study are prepared for advanced training in the field of art history; museum and gallery professions; or work in a broad range of other fields, including publishing, arts administration, teaching and public policy.

Foundation Courses. All students must enroll in a two-class art history foundations sequence beginning in the first fall term following declaration of the major.

Temporalities/Global Perspectives Courses. Temporalities courses are upper-level art history courses that offer frameworks for a broad understanding of temporal dimensions: a duration of time, the power of some areas over others, the telescoping of past into present and vice versa, or questions of recurrence across time. The global perspectives designation is used for courses that are structured around distinctive spatial dimensions: a geographic feature like an ocean, territorial boundaries, colonial expansion, national imaginaries, subcultures or other social spaces of artistic production.

Required Methods and Theories Courses. These small, upper-level art history classes are reading and writing intensive and offer the occasion to think critically and carefully about the dynamics of historical change and to engage with issues and debates in art history.

Note: Only courses passed with a grade of *C* or better will count toward the major in art history. Courses passed with a grade of *C-* or less may count toward other, elective requirements in a student's degree plan.

Many art history majors use free elective hours to complete minors or second majors in fields such as anthropology, chemistry (for conservation), English, history, international business, international studies, languages and psychology.

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
Foundations ARHS 1307, 4399 (AP credit may substituted for 1307)	6
Temporalities 6 credit hours must cover a period pre-1500 C.E. and 6 must cover a period post-1500 C.E.; 6 of these 12 credit hours must have a global perspectives designation.	12
Methods and Theories At least one seminar course, in addition to ARHS 4399.	6
Art History Electives No more than 6 credit hours at the 1000 level.	12
Studio Art	3
Second Language Students must complete the intermediate level in a single second language.	12
Free Electives Hours vary as needed to meet University residency and degree requirements.	

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Honors Program

The Art History Honors Program is available to majors with exceptional academic records who seek a greater intellectual challenge. It is conducted as a two-term sequence (fall: ARHS 4391 and spring: ARHS 4392) during senior year, culminating with a 30-page thesis and faculty review. Students should contact the art history undergraduate adviser for more information.

Minor in Art History

The minor in art history enables all students in the University to extend their study into the realm of the visual arts. As a discipline dedicated to the examination of art in context, art history is a natural complement to a major in history, languages, anthropology, political science, sociology, psychology, philosophy, religion, music or any of the humanities.

Requirements: Eighteen credit hours in art history, with a maximum of nine credit hours at the 1000 level. **Note:** Only classes passed with a grade of C- or better will count for credit toward the minor.

The Courses (ARHS)

Temporalities Pre-1500	ARHS, 3303, 3310–11, 3313, 3315–17, 3320, 3322–25, 3328, 3349, 3382–83, 3385, 3392, 3394–95
Temporalities Post-1500	ARHS 3312, 3330–34, 3337, 3339, 3344, 3346, 3348–50, 3352, 3355–56, 3358, 3360, 3364–65, 3367–69, 3373–74, 3376–79, 3384, 3386, 3391, 3398
Global Perspectives	ARHS 3324, 3334, 3363, 3365, 3376–79, 3382–83, 3385, 3388, 3391–96, 3399
Methods and Theories	ARHS 4304, 4310, 4320–22, 4330–31, 4349–50, 4399

ARHS 1303 (3). INTRODUCTION TO WESTERN ART I. Prehistoric through medieval. An introduction in lecture form to the fundamentals of art history. Includes observations of historical styles, techniques, and media of cultures.

ARHS 1304 (3). INTRODUCTION TO WESTERN ART II. Renaissance through modern. A continuation of ARHS 1303. Can be taken separately or as part of a two-term survey of the history of Western art.

ARHS 1306 (3). INTRODUCTION TO ARCHITECTURE. A contextual history of European and North American architecture from classical antiquity to the present century, with particular emphasis on 1400 to the present. Students will be introduced to basic principles and terminology, but the course will focus on the social and cultural meanings of the built environment in its urban context.

ARHS 1307 (3). INTRODUCTION TO ART HISTORY. A one-term introduction to the history of art and architecture, emphasizing the challenges inherent in the evaluation of archaeological, material, and documentary evidence; the identification and analysis of canonical monuments; and the construction of historical narrative. Fulfills the introductory course requirement for the art history major and serves as a prerequisite for ARHS 4399.

ARHS 1308 (3). EPIC OF LATIN AMERICA. Examines art, society, and culture in Latin America, 1450–1950. Presents art as a broad and multifaceted cultural problematic, and considers the enduring legacies and the dynamic processes of change that have shaped the region and its art. Topics include pre-Columbian empires; royal Spanish cities and revolution, reform, and modernism; Umbanda, Santeria, and Vodou; and Native American and gendered identities. An introductory survey course intended for undergraduate students of all academic and professional interests; no previous art history courses or experience with Latin America necessary. Includes slide lectures, classroom discussions, and visits to SMU and Dallas museums.

ARHS 1310 (3). HISTORY THROUGH THINGS: CONSUMER CULTURE IN THE UNITED STATES. Examines the history of consumption in the U.S. in the 20th century and the phenomenon of consumption as it relates to the economy, social anxieties, cultural expressions, and a complex array of globalization processes.

ARHS 1312 (3). PICTURING THE AMERICAN WEST. This class will examine the different ways the American West has been depicted over time in photography, painting, film, and fiction, from Lewis and Clark to Clint Eastwood.

ARHS 1333 (3). INTRODUCTION TO VISUAL CULTURE. Designed to help students develop the skills necessary to negotiate the visual culture in which they now live. Organized as an introduction to the media, methods, and issues of visual culture through the dialectic of copies and originals. Questions of originality and authenticity are particularly resonant today in the age of video and electronic media where digital technology has generated a world of endlessly reproducible, transmittable images. The class is particularly well-suited to students interested in art, art history, advertising, film, and electronic media.

ARHS 1335 (3). MONSTERS, MAYHEM, AND MIRACLES: LIFE IN THE MEDIEVAL WORLD. Explores the medieval world – ranging from the miraculous to the preposterous – through art, architecture, music, and literature. Sorcerers and werewolves, crusaders and inquisitors, soaring cathedrals, priceless books, and miracle-making saints are all creations of the Middle Ages and part of a vibrant legacy that is still alive today.

ARHS 1336 (3). RHETORICS OF ART, SPACE, AND CULTURE: WAYS OF KNOWING. Exposes students to the interdisciplinary field of art history, analyzing its points of intersection with anthropology, English, film studies, geography, history, and religious studies. Also, introduces the diverse media of art history (painting, sculpture, the built environment, printmaking, video, decorative arts); the major debates within the field; and the role played by curators, archivists, and librarians in the production of art knowledge.

ARHS 1350 (3). ART IN THE PORTUGUESE EMPIRE. During 1494–1654, Portugal created the world's first truly global empire, using the arts to help project a combination of political, economic, and especially cultural hegemony. Students focus on issues of cultural globalization and concepts of empire in the visual cultures of Portugal, West and East Africa, Brazil, India, Sri Lanka, China, and Japan, paying particular attention to the rich, new artistic traditions that arose as these diverse cultures intermingled.

ARHS 1351 (3). VISUAL CULTURES: TOPICS IN WESTERN ART. Introduces the art, architecture, and other visual production of a region, period, or culture within its historical context. Designed for nonmajors.

ARHS 3310 (3). WAR, LOOTING, AND COLLECTING IN THE ANCIENT WORLD. Examines the effects of war, looting, and collecting practices on the visual culture of the ancient world. Looks at the ways ancient wars and looting caused art objects to be destroyed or relocated, but also inspired the creative repurposed, collecting, and even creation of other arts. Investigates the devastating effects of modern wars and looting on archaeological sites, and analyzes how contemporary collecting practices both contribute to and raise awareness against cultural heritage destruction.

ARHS 3311 (3). MORTALS, MYTHS, AND MONUMENTS OF ANCIENT GREECE. A visual analysis of the rich tapestry of ancient Greek culture, fountainhead of Western civilization, with emphasis on mythological, archaeological, and historical settings in which the art and architecture occur. Touches on various aspects of ancient Greek life such as religious practices, Olympic contests, theatrical performances, and artistic perfection. (Temporalities pre-1500)

ARHS 3312 (3). PORTRAITURE AND SELFHOOD, 1400–1914. Examines the development of portraiture and self-portraiture in Europe from the Renaissance through World War I. Considers portraits and self-portraits against changing social, political, religious, and psychological constructs of the self, and in the contexts of artistic theory and practice. Topics include the construction of gender, the reinforcement and subversion of class distinctions, the changing definition of citizenship, racial identity in the context of European colonial conquest, the artist's self-image, and the distinction between human and animal. (Temporalities post-1500)

ARHS 3313 (3). THE ETRUSCANS AND IRON AGE ITALY. Covers the cultural context and environment of the art and architecture of early Italy, including Etruscan art, early Roman art, and Italic art. (Temporalities pre-1500)

ARHS 3315 (3). CLASSICAL SCULPTURE. A study of the styles, subjects, and techniques of the sculptor's art during the ancient Greek, Hellenistic, and Roman eras. Focuses on the functions of sculpture in the round and in relief, free-standing, and in architectural settings, with particular attention to historical background. (Temporalities pre-1500)

ARHS 3316 (3). ART IN ROME. A broad survey of the wide range of ancient, medieval, Renaissance, and Baroque artworks in Rome. Stresses art historical methodologies in looking at painting, sculpture, and architecture. Includes on-site lectures. (Temporalities pre-1500) (SMU-in-Italy)

ARHS 3317 (3). LAND BETWEEN TWO RIVERS: ART OF ANCIENT IRAQ AND ITS NEIGHBORS. From the Tower of Babel and the Hanging Gardens to the Code of Hammurabi, the art of Mesopotamia holds a mythical aura. This lecture course investigates and demystifies the arts of ancient Iraq and its neighbors (Iran, Israel, Anatolia, and the eastern Mediterranean) from the invention of cities (c. 4000 B.C.E.) to the beginning of Islam (c. 600 C.E.). Also, examines temple and palace architecture, monumental sculpture, glyptic, terracotta, and small-scale luxury arts to appreciate some of the oldest civilizations in the world.

ARHS 3320 (3). MEDIEVAL ART. Introduces the art of Byzantium, Islam, and the medieval West through the study of five genres to which each of these cultures made distinctive contributions: the congregational worship space, imaging the sacred word, the court and its objects, the pilgrimage site, and the urban religious complex. (Temporalities pre-1500)

ARHS 3322 (3). ART AND THE ITALIAN COMMUNE. The interplay of artistic styles, workshop practice, religious change, and political controversy in the century between St. Francis and the Black Death, emphasizing the art of the Pisani, Cimabue, Cavallini, Giotto, Duccio, and the Lorenzetti. (Temporalities pre-1500)

ARHS 3324 (3). ART AND CULTURES OF MEDIEVAL SPAIN. Introduces the visual traditions of the diverse medieval cultures that coexisted from the fall of Roman Hispania to the cultural and political consolidations of Ferdinand and Isabella. Emphasizes instances of cultural coexistence and rivalry (“convivencia”) among Spain’s medieval Islamic, Christian, and Jewish cultures. Also, the interplay of foreign and indigenous traditions, the expression of religious and ethnic identity, and the reuse and reconception of artistic forms and objects. Direct study of medieval Spanish painting, sculpture, and manuscripts in the Meadows Museum and Bridwell Library supplement classroom lectures, discussion, and research projects. (Temporalities pre-1500; global perspectives)

ARHS 3325 (3). THE GOTHIC CATHEDRAL AND ITS WORLD. The social and spiritual centerpiece of medieval European life, the Gothic cathedral was also one of the greatest multimedia creations of its age. This lecture course uses the cathedral as a springing point for the investigation of the rich architectural and artistic traditions of the high and late Middle Ages in Europe. (Temporalities pre-1500)

ARHS 3328 (3). LATIN AMERICAN HISTORY THROUGH VISUAL CULTURE. Uses visual culture to explore the history of Latin America, including African slavery, colonialism, independence movements, and civil war.

ARHS 3329 (3). PARIS ART AND ARCHITECTURE I. Interweaves investigation of the development of Paris from Roman times to the Renaissance with a history of French architecture during this period, revealing the major trends of both and their reciprocal relationship. Includes visits to important monuments, buildings, and features of urban design. (SMU-in-Paris)

ARHS 3330 (3). RENAISSANCE AND BAROQUE ARCHITECTURE. Introduction to Renaissance and Baroque architecture through a focus on the fashioning of religious spaces in Italy from the 15th to 17th centuries. Considers the work of artists and architects such as Bramante, Sangallo, Raphael, Michelangelo, Vasari, Bernini, Borromini, Tintoretto, Caravaggio, and Guarini. (Temporalities pre- or post-1500)

ARHS 3331 (3). ART AND CULTURE OF THE ITALIAN RENAISSANCE. Surveys major artistic developments of the Renaissance (1300–1600), focusing on the work of Giotto, Donatello, Leonardo, Raphael, Titian, and Michelangelo. Studies the customs, literature, and philosophy of the period through selected readings of primary sources. (Temporalities pre-1500)

ARHS 3332 (3). 16TH-CENTURY ITALIAN ART. Topics include the dominance of Leonardo, Michelangelo, Raphael, and Titian in the 16th century; the High Renaissance in Florence and Rome and its aftermath; Mannerism in Catholic courts across Europe; the development of art history as a discipline in conjunction with the rise of academics, art collecting, and the search for elevated status; and the challenge of women artists such as Sofonisba Anguissola to prevailing notions of creativity. (Temporalities pre- and post-1500)

ARHS 3333 (3). SPECIAL TOPICS IN ITALIAN ART AND ARCHITECTURE. Surveys major monuments of Italian painting, sculpture, and architecture. Focus specified by the instructor. The SMU-in-Italy summer course includes visits to actual sites. (Temporalities pre-1500)

ARHS 3334 (3). THE LOOK OF FREEDOM. This course investigates the visual history of freedom. The idea of freedom as a fundamental human right became prominent in the 18th century, during the same time “vision” became an essential tool in science, the main axis of politics, and the leading sensitivity in art and aesthetics. To complicate matters, both liberty and vision emerged at a time of heightened colonialism and the expansion of empire. Students investigate the manner in which different visual media facilitated, documented, and articulated debates regarding freedom. Particular attention is given to the representation of the body, as this exercise negotiated a range of specific aesthetic, artistic, and cultural concerns regarding the social and political world: To what extent is the idea of freedom, both in historical actuality and in the cultural imagination, determined by the colonial system? What is the political history of freedom? How is freedom coded visually? What are the political limits of freedom? The course readings are organized to consider a range of theoretical and methodological approaches that show the complex history of the concept of freedom in the West.

ARHS 3337 (3). THE BAROQUE FROM A NORTHERN PERSPECTIVE. Explores the world of Rembrandt, Rubens, Leyster, Vermeer, Van Dyck, De la Tour, Le Brun, Jones, and Wren in the context of contemporary events such as the Thirty Years' War and the Reformation, and of issues such as art versus craft, nationalism versus internationalism, individual genius versus market, colourism versus classicism, and collector versus connoisseur. By considering a broad range of artworks – from tapestry to painting, from etching to architecture – in terms of the maker, patron or client, and market, this survey seeks the underlying whys for this absorbing period. (Temporalities post-1500)

ARHS 3339 (3). EL GRECO TO GOYA: SPANISH PAINTING OF THE GOLDEN AGE. Survey of the painting traditions of Spain during the 15th through early 19th centuries. Includes artists such as El Greco, Velazquez, Ribera, Murillo, and Goya. Lectures are supplemented by direct study of Spanish paintings and prints in the Meadows Museum. (Temporalities post-1500)

ARHS 3344 (3). PAINTINGS AT THE PRADO. A study of Spanish paintings at the Prado Museum. Familiarizes students with the most relevant Spanish artists and offers a general European view through differences and affinities between Spain and the rest of the continent. (Temporalities post-1500) (SMU-in-Spain)

ARHS 3346 (3). PARIS ART AND ARCHITECTURE II. Interweaves an investigation of the development of Paris from the Renaissance to the present with a history of French architecture during this period, revealing the major trends of both and their reciprocal relationship. Takes advantage of the Paris location to visit important monuments, buildings, and features of urban design. (Temporalities post-1500) (SMU-in-Paris)

ARHS 3348 (3). 18TH-CENTURY ART. A study of European visual culture, 1700–1800, in its many contexts. Topics include art and the public sphere; the rise of museums, exhibitions, criticism, and theory; shifts in patronage and artistic practice; connections among commerce, industry, and the arts; questions of identity; stylistic revivals and innovations; explorations of the past; and encounters with cultures outside Europe. (Temporalities post-1500)

ARHS 3349 (3). HIEROGLYPHS TO HYPERTEXT: THE ART AND HISTORY OF THE BOOK. Examines the early development and enduring cultural impact of the book – the physical format of written communication known as the codex, which has dominated the intellectual landscape for the past two millennia. Traverses the historical forms of written communication, including cuneiform, hieroglyphs, calligraphy, woodblock, letterpress printing, and the new dematerialized forms stored in digital information retrieval technologies. (Temporalities pre-1500)

ARHS 3350 (3). MODERN ART AND MEDIA CULTURE, 1789–1870. Examines the emergence of a public sphere and a culture of looking in the 19th century. Discusses European visual art in relation to the rise of museum and gallery culture, journalistic illustration, the department store display window, photography and the panorama, the art critic, and early cinema. (Methods and theories)

ARHS 3352 (3). IMPRESSIONISM, SYMBOLISM, AND THE DEVIANT BODY: MAKING A DIFFERENCE. Examines impressionist and symbolist art in relation to the emergence of the modern metropolis and the concept of modernity in Europe during 1870–1940. The discourse of degeneration that emerged in the context of 19th-century racial theory, criminology, and medical science forms a framework for discussion. (Methods and theories) (Also SMU-in-Paris)

ARHS 3355 (3). HISTORY OF PHOTOGRAPHY II: 1940–PRESENT. A survey of the history of photographic media from 1940 to the present, with particular emphasis on the still photograph in its various uses as art, document, aide-memoire, amateur pursuit, and social practice. Examines photographic images and image-makers in relation to the social historical contexts in which they are produced, the evolution of photographic technologies, and the idea of the photographic image as it appears in and is transformed through TV, video, film, conceptual art, and new media. (Temporalities post-1500)

ARHS 3356 (3). MODERN ARCHITECTURE. Western architecture from the late 19th century to the present, focusing on the protomodern trends of the late 19th century and the major masters of the modern movement: Sullivan, Wright, Gropius, Le Corbusier, and Mies van der Rohe. (Temporalities post-1500)

ARHS 3358 (3). GENDER AND SEXUALITY IN THE VISUAL ARTS. Considers the representation of gender and sexuality in the visual arts, as well as the gendering of art production, patronage, and viewership. Topics may include the work of female artists, representations of

male and female bodies, the role of the visual arts in constructing, subverting, norms of gender and sexuality, and the gendering of art theory and the art historical canon.

ARHS 3359 (3). TOPICS IN ART HISTORY: INTERNATIONAL STUDIES. Specific topics chosen by the instructor.

ARHS 3360 (3). MODERN PAINTERS IN SPAIN. Spanish art since the beginning of modernity in Spain from the early 19th century to the present. Focuses on the most important and internationally recognized Spanish painters of the 20th century (Picasso, Dali, and Miro) and trends in painting. Special attention is given to integrating program activities into the syllabus, such as the study of Gaudi's architecture. (Temporalities post-1500) (SMU-in-Spain)

ARHS 3361 (3). SPECIAL STUDIES IN ART HISTORY. Specific topics chosen by instructor.

ARHS 3362 (3). THE FAMILY IN EUROPEAN PAINTING AND PHOTOGRAPHY. Examines European art between 1789 and 1916 in relation to modern ideas about family, parenting, and children. Focuses on changes in portraiture through the study of paintings by such figures as Renoir and Picasso and the photography of Lewis Carroll, author of "Alice in Wonderland." (Methods and theories)

ARHS 3363 (3). TOPICS IN BRAZILIAN ART AND ARCHITECTURE. Explores Brazilian art and architecture from the encounter of the Portuguese with native peoples of the New World in 1500, through the long period of colonial history, to the vibrant contemporary arts of Brazil today. Topics include the complex tapestry of artistic and intercultural exchange among Brazil's Amerindian, African, and European populations; indigenous terra-forming; Tupi feather work, ceramics, and urban planning; European mapping of Brazil and the Amazon; religious art and architecture; Afro-Brazilian art forms and religious practices; Carnival and other performances of popular culture; the artistic production of the colonial period and the foundations of Brazilian modern art; video art during the dictatorship and contemporary allegories of underdevelopment; and historical artistic practices and their link to different national and international models for representing Brazilian national identity today, as well as their ethical, aesthetic, political, and/or social repercussions. (Temporalities post-1500; global perspectives)

ARHS 3364 (3). HISTORY AND THEORY OF PRINTS. Covers how prints are made and how they can function (newspapers, postage stamps, maps, works of art, etc.). Also, the history of printmaking, established and emerging printmakers and major printmaking techniques from the 15th through 21st centuries, and fundamental issues regarding originality and copying, uniqueness and multiplicity, display, and collecting as raised by the medium of print. Provides first-hand experience of prints through looking assignments, visits to local collections, and in-class exercises. (Temporalities post-1500)

ARHS 3365 (3). RACE AND GENDER IN VISUAL CULTURE. The body is not just a compilation of organs. It is a site through which this era's most contentious political discussions (e.g., human rights violations, racism, and sexism) are experienced. This course explores the complex interconnections among race, gender, and politics in visual culture. Analyzes how these identities, locations, and markers are constructed and deployed in various media, including painting, photography, and TV. (Temporalities post-1500; methods and theories)

ARHS 3367 (3). HISTORY OF PHOTOGRAPHY I: ORIGINS–1940. Examines the origins of photography in the early 19th century, when photography emerged as part of a late-Enlightenment scientific discourse and was interwoven with a wide array of new institutional spaces, including botany, anthropology, and geology. Also, photography on the battlefield and in prisons, the emergence of documentary photography and the role that medium played in shaping consumer culture, and the emergence of art photography, from Victorian peasant imagery to Precisionist portrayals of skyscrapers in the 1930s. (Temporalities post-1500)

ARHS 3368 (3). ART AND CONTEXT: 1940–1970. An international survey of modern art during 1940–1970 that looks at the postwar development of modernist, formalist, figurative, realist, and antimodernist art in a social historical context, with particular attention to the cultural impact of World War II, the ideological conflicts and geopolitics of the Cold War, and the social and political upheaval of the 1960s. Also, the relevant histories of gender, sexual, racial, regional, and national identity in America and other industrialized nations (Britain, France, Germany, Italy, the Soviet Union, and Japan.) (Temporalities post-1500)

ARHS 3369 (3). CONTEMPORARY ART: 1965–PRESENT. An international survey of contemporary art from 1965 to the present, with specific attention to the rise of the current proliferation of new modes and new media in art (multimedia, installation, performance, site-

specificity, video, interactive, and digital art), locating its origins in the social upheaval and shifting artistic practices at the close of the 1960s. Also, contemporary art practices as they relate to a range of influential developments in critical theory, social history, and local and global visual cultures. (Temporalities post-1500)

ARHS 3373 (3). AMERICAN ART AND ARCHITECTURE TO 1865. A survey of American painting, sculpture, and architecture from the Colonial period through the Civil War.

ARHS 3374 (3). AMERICAN ART AND ARCHITECTURE, 1865–1940. Provides a stylistic and iconographic survey of American painting, sculpture, photography, and architecture from 1865 to 1940 and attempts to situate the images within their specific cultural contexts. Also, broad underlying issues such as nationalism, class, race, and gender. Group discussions on the strengths, assumptions, and weaknesses of these interpretations are relevant for the students' research, thinking, and writing. (Temporalities post-1500)

ARHS 3376 (3). LATIN AMERICAN ART. A survey of art and architecture in Latin America from the initial contacts between European and American civilizations until the 20th century. (Temporalities post-1500; global perspectives)

ARHS 3377 (3). ART AND ARCHITECTURE OF HISPANIC NEW MEXICO. Examines artistic and cultural legacies of colonial New Mexico: Spanish city planning and church design; "retablos," "santos," and their place in religious experience; and art in the secular life of towns and haciendas of colonial/postcolonial New Mexico. Field trips to galleries, collections, and historical sites of northern Mexico. (Temporalities post-1500; global perspectives) (SMU-in-Taos)

ARHS 3378 (3). ART AND CULTURAL PRODUCTION: THE STRANGER IN VISUAL CULTURE AND LITERATURE OF THE AMERICAS. In this experimental lab, students examine why strangeness, or the succession of encounters with and repulsion of alien life forms, has been a foundational preoccupation of Western culture. Begins with the assumption that the alien operates beyond and within three conceptual boundaries: alien as informal crosser, alien as expatriate, and alien as extraterrestrial. Thus, the sign for alien turns out to be a condensed metaphor for what exists beyond the closed circle of the community. Analyzes the political function and visual production of strangers and alien forces in different locales and specific historical moments. Examines visual and literary representations of the discovery of America, and considers topics such as abduction, transmigration, alien ethnography, prisoners, imposters, sexed monsters, refugees, and intruders. Takes an interdisciplinary approach to the study of these questions, and draws from postcolonial theory, feminism, philosophy, and cultural studies to formulate theorizations of the strange. Readings include the writings of Avery Gordon, Jean-Luc Nancy, Okwui Enwezor, and Oswald de Andrade, as well as a selection of entries from "The Extra Earth Analog." Students also consider artworks, performances, and films by Gertjan Bartelsman, Forrest Bess, Grupo Chaclacayo, Nance Klehm, Duane Linklater, Ana Mendieta, Sister Gertrude Morgan, Linda Montano, Teresa Margolles, Pauline Oliveros, Shanawdithit, Santiago Sierra, Lygia Clark, and Cildo Meireles.

ARHS 3379 (3). POWER AND SPECTACLE: THE ARTS OF SPAIN AND NEW SPAIN. Examines the visual arts of early modern Spain and colonial Mexico. Emphasis on the interplay and creative synthesis of European and New World visual cultures within the colonial sphere. (Temporalities post-1500; global perspectives)

ARHS 3382 (3). ART AND EXPERIENCE IN INKA PERU. The ritual and everyday objects of the native inhabitants of North America, and the architecture of the Mound Builders and the Southwestern Indians. (Temporalities post-1500; global perspectives)

ARHS 3383 (3). THE ANCIENT MAYA: ART AND HISTORY. Introduces the art and history of the Maya of Central America. Also, addresses the principal sites and monuments of the ancient Maya civilization, imparts a working understanding of the Maya hieroglyphic writing system, and surveys the political history of the fractious ancient Maya cities. (Temporalities pre-1500; global perspectives)

ARHS 3384 (3). LAND ART. Focuses on site-specific art made in the landscape. Special attention is given to land art made in the American West. The contemporary practice of land art is studied in relation to historical examples of site-specific works, including petroglyphs from the ancient and Colonial periods, as well as modern alterations of the landscape. Discussion of these works parallels the consideration of philosophical concepts of space, place, and time. Travel to specific sites in New Mexico is a component of this course.

ARHS 3385 (3). THE AZTECS BEFORE AND AFTER THE CONQUEST: MESOAMERICA, 1400–1600. Examines the art and cultural history of Mexico in the centuries immediately before and after the Spanish arrival in Mesoamerica. Topics include the art and ceremony of the imperial Aztec state; the nature of the conflict between 1519 and 1521 that ended in the fall of the Aztec capital to the Spanish; and the monuments of Spanish conquerors, missionaries, and the native elite in Mexico's early colonial period. (Temporalities pre-1500; global perspectives)

ARHS 3386 (3). SUBCULTURES. Studies the scope and nature of subcultural visual production, especially film, photography, illustration, and fashion and/or dress. Distinctions between the related concepts of subculture, counterculture, fan culture, club culture, neo-tribes, and “scenes” are of particular interest. Focuses on discussing problems surrounding the definition, intersection, and historical emergence of group identities within dominant cultures, as well as the subcultural expression of gender and sexual identity in relation to ethnicity, youth, and socioeconomic class. Related themes include the interaction of fashion and politics and the relationship between art and popular culture. The cultures studied run from the end of the 19th century to the present.

ARHS 3388 (3). WHY WE GO TO AUSCHWITZ: ART, TRAUMA, AND MEMORY. Examines how societal memory of the Holocaust is shaped by visual media and public spaces of remembrance like museums, memorials, and artistic monuments. Also, the close ties between fascism and visual culture in the 1930s (Leni Riefenstahl's propaganda films for Hitler and the Degenerate Art Exhibition of 1937) and the emergence of a Holocaust consciousness in philosophy, literature, art, and film in the 1960s, stimulated by Eichmann's trial in Israel. The primary focus is the preoccupation with the Holocaust in the last two decades by artists and intellectuals born after World War II whose knowledge of Shoah (the Holocaust) derives from its representation in books, photographs, and film. (Methods and theories; global perspectives)

ARHS 3391 (3). VISUAL CULTURE IN COLONIAL MEXICO. The arrival of Europeans in the Americas in 1492 inaugurated one of the most remarkable and violent encounters in human history. This course examines the visual and material culture created in the aftermath of this cultural collision in Mexico, the former Viceroyalty of New Spain, from the 16th to 18th centuries. Topics include the interplay and creative synthesis of discrete European and indigenous visual cultures within the colonial sphere; the role of the arts in empire building; and feather work, manuscripts, painting, sculpture, architecture, urban planning, etc. as visual practices. (Temporalities post-1500; global perspectives)

ARHS 3392 (3). ISLAMIC ART AND ARCHITECTURE: THE CREATION OF A NEW ART. Issues significant to the creation and expansion of Islamic art from the 7th to the 15th century, e.g., the cultural and political exchange and conflict between Muslims and Christians, religious concerns and the artistic forms created to meet them, the importance of the book in Muslim culture, the distinctions between religious and secular art, and the appropriation of sacred space in Muslim architecture. (Temporalities pre-1500; global perspectives)

ARHS 3393 (3). CULTURE OF OAXACA: A SENSE OF PLACE. Learning adventure in Oaxaca: exploration of multilayered cultural history through field trips to artists' workshops, museums, archaeological sites, and religious fiestas. The focus is on art, art history, folklore, and religion. Lectures, readings, discussion, essays, interviews and photographs of artists for student projects, and numerous field trips provide a broad exposure to Oaxacan culture. (Global perspectives) (SMU-in-Oaxaca)

ARHS 3394 (3). ART AND ARCHITECTURE OF JAPAN. A survey of religious and secular arts from prehistoric times through the Edo period. Field trips to Kyoto and Nara. (Temporalities pre-1500; global perspectives) (SMU-in-Japan)

ARHS 3396 (3). ART AND ARCHITECTURE OF CHINA. Important monuments in China, dating from 2000 B.C. to the present day, in a variety of media: cast bronze, stone, sculpture, painting on silk and paper, porcelain, wooden architecture, etc. Selected objects and sites illuminate the concept of monument from differing perspectives of technology, aesthetics, labor, religion, ethnicity, and politics. Also, comparisons to analogous monuments outside China and visits to collections of Chinese art in Dallas/Fort Worth. (Temporalities pre- and post-1500; global perspectives)

ARHS 3398 (3). INTRODUCTION TO MUSEUM STUDIES. Introduces art history majors and graduate students to the basic principles of connoisseurship, conservation, framing, lighting, and exhibition design in the context of the art museum today, with emphasis on the interpretative, cultural, and social role of museums over time. Evaluates specific collections and exhibi-

tions in area museums and examines a number of private collections, challenging students to make quality judgments based upon objective criteria and intuitive response. Students assess the meaning of art through visual analysis and comparison. The efficacy and ethics of museum management are considered.

ARHS 3399 (3). THE MEDIEVAL JEWISH-CHRISTIAN DIALOGUE IN ART AND TEXT. Examines the mutual perceptions, conflicts, and commonalities among medieval European Christians and Jews as reflected in works of visual art and in philosophical, theological, legal, and literary texts. (Temporalities pre-1500; global perspectives)

ARHS 4101 (1). DIRECTED STUDIES AND TUTORIALS. Independent study for undergraduate majors under the direction and supervision of a faculty member. A directed study is a close collaboration between the professor and an advanced student who conducts a rigorous project that goes beyond the experience available in course offerings. Instructor permission required.

ARHS 4102 (1). DIRECTED STUDIES AND TUTORIALS. Independent study for undergraduate majors under the direction and supervision of a faculty member. A directed study is a close collaboration between the professor and an advanced student who conducts a rigorous project that goes beyond the experience available in course offerings. Instructor permission required.

ARHS 4111 (1). UNDERGRADUATE MUSEUM INTERNSHIP. Available to majors with a GPA of 3.000 or higher.

ARHS 4201 (2). DIRECTED STUDIES AND TUTORIALS. Independent study for undergraduate majors under the direction and supervision of a faculty member. A directed study is a close collaboration between the professor and an advanced student who conducts a rigorous project that goes beyond the experience available in course offerings. Instructor permission required.

ARHS 4202 (2). DIRECTED STUDIES AND TUTORIALS. Independent study for undergraduate majors under the direction and supervision of a faculty member. A directed study is a close collaboration between the professor and an advanced student who conducts a rigorous project that goes beyond the experience available in course offerings. Instructor permission required.

ARHS 4211 (2). UNDERGRADUATE MUSEUM INTERNSHIP. Available to majors with a GPA of 3.000 or higher.

ARHS 4301 (3). DIRECTED STUDIES AND TUTORIALS. Independent study for undergraduate majors under the direction and supervision of a faculty member. A directed study is a close collaboration between the professor and an advanced student who conducts a rigorous project that goes beyond the experience available in course offerings. Instructor permission required.

ARHS 4302 (3). DIRECTED STUDIES AND TUTORIALS. Independent study for undergraduate majors under the direction and supervision of a faculty member. A directed study is a close collaboration between the professor and an advanced student who conducts a rigorous project that goes beyond the experience available in course offerings. Instructor permission required.

ARHS 4304 (3). THE CITY AS PLACE. Given to us by ancient Roman reality and myth, the distinction between the city as a physical place ("urbs") and the city as an idea ("orbis") created a long-standing link between territory and ritual, locale and law, nation and citizen, and homeland and world. Students investigate the city in Italy in space and time as it is the locus of such cultural to-and-fro. The goal is to better understand the complexities of the Italian city as a living entity. The period of study spans some 3,000 years, from the Etruscan foundations of Rome to Richard Meier's Jubilee Church, located along the suburban periphery of the city. Topics include the Italian city of antiquity, early Christianity, the Middle Ages, the Renaissance, the Baroque era, and modernism. Includes city and museum tours, lecture, readings, discussion, and short essays. (Temporalities pre- and post-1500) (SMU-in-Italy)

ARHS 4310 (3). SEMINAR ON ANCIENT ART. Specific topics chosen by the instructor. (Methods and theories)

ARHS 4311 (3). UNDERGRADUATE MUSEUM INTERNSHIP. Available to majors with a GPA of 3.000 or higher.

ARHS 4320 (3). SEMINAR ON MEDIEVAL ART. Specific topics chosen by the instructor. (Methods and theories)

ARHS 4322 (3). MUSEUM THEORY. Specific topics chosen by the instructor.

ARHS 4330 (3). SEMINAR ON EARLY MODERN ART. Specific topics chosen by instructor. (Methods and theories seminar)

ARHS 4331 (3). SEMINAR ON SPANISH ART. Specific topics chosen by the instructor. (Methods and theories)

ARHS 4349 (3). SEMINAR ON CONTEMPORARY ART. Specific topics for investigation are chosen by the instructor. (Methods and theories)

ARHS 4350 (3). SEMINAR ON MODERN ART. Specific topics chosen by the instructor. (Methods and theories)

ARHS 4362 (3). THE CITY OF NEW YORK. This course examines the changing art and architecture of the city of New York from the 18th century to the present.

ARHS 4391 (3). ART HISTORY HONORS THESIS. First of a two-part Art History Honors Program sequence. Research-based directed study with thesis adviser. Instructor permission required.

ARHS 4392 (3). ART HISTORY HONORS THESIS. Second of a two-part Art History Honors Program sequence. Completion of writing honors thesis. *Prerequisite:* ARHS 4391. Instructor permission required.

ARHS 4399 (3). RESEARCH AND METHODS IN ART HISTORY. This seminar introduces students to seminal texts and contemporary debates in the research and writing of art history. Each week is devoted to a fundamental critical issue raised in the study of images and objects, including form, materials, content, context, connoisseurship, taste, biography, iconography, social identity, politics, ideology, class, and economics. Students read, discuss, and compare the many methods adopted by art historians and use those methods in discussions of objects in Dallas/Fort Worth collections. The course also contains a research and writing workshop component in which students are introduced to research tools, taught writing skills specific to art history, and guided through the process of conducting scholarly research. Enrollment is required for art history majors and is a prerequisite to all other 4000-level seminars. (Methods and theories)

ARHS 5011 (0). MUSEUM INTERNSHIP. Available to majors with a GPA of 3.000 or higher.

ARHS 5012 (0). MUSEUM INTERNSHIP. Available to majors with a GPA of 3.000 or higher.

ARHS 5101 (1). DIRECTED STUDIES. To be arranged with permission of the adviser and the faculty members directing the studies project.

ARHS 5102 (1). DIRECTED STUDIES. To be arranged with permission of the adviser and the faculty members directing the studies project.

ARHS 5201 (2). DIRECTED STUDIES. To be arranged with permission of the adviser and the faculty members directing the studies project.

ARHS 5202 (2). DIRECTED STUDIES. To be arranged with permission of the adviser and the faculty members directing the studies project.

ARHS 5301 (3). DIRECTED STUDIES. To be arranged with permission of the adviser and the faculty members directing the studies project.

ARHS 5302 (3). DIRECTED STUDIES. To be arranged with permission of the adviser and the faculty members directing the studies project.

ARHS 5303 (3). HISTORY AND METHODS OF ART HISTORY. Introduction to the history of the discipline with discussion of major methodological approaches as they have shaped past scholarship and the present sense of crisis in the discipline. Exercise in methods of research and its presentation in good form. Required of all first-year graduate students.

ARHS 5304 (3). SEMINAR ON ANCIENT ART. Specific topics chosen by the instructor. Seminar members discuss the student reports.

ARHS 5305 (3). SEMINAR ON GREEK ART. Specific topics chosen by the instructor. Seminar members discuss the student reports.

ARHS 5316 (3). SEMINAR ON NON-WESTERN ART. Specific topics chosen by the instructor.

ARHS 5320 (3). SEMINAR ON MEDIEVAL ART. Specific topics chosen by the instructor.

ARHS 5322 (3). SEMINAR ON CONVIVENCIA: JEWISH, ISLAMIC, AND CHRISTIAN ART IN MEDIEVAL SPAIN. The art and architecture produced by the Christians, Jews, and Muslims of Iberia during the 10th through 15th centuries. Students study the cultural contacts, conflicts, and compromises that affected each culture's artistic traditions and contributed to the diverse heritage of what now is called Spanish art.

ARHS 5330 (3). SEMINAR ON ITALIAN RENAISSANCE ART. Specific topics chosen by the instructor.

ARHS 5331 (3). SEMINAR ON EARLY MODERN ART. Specific topics chosen by instructor.

ARHS 5333 (3). SEMINAR ON 18TH-CENTURY ART. Specific topics on 18th-century art and/or architecture chosen by the instructor.

ARHS 5340 (3). SEMINAR ON SPANISH ART. Specific topics chosen by the instructor.

ARHS 5354 (3). SEMINAR ON 19TH-CENTURY ART. Specific topics chosen by instructor.

ARHS 5355 (3). SEMINAR ON 20TH-CENTURY ART. Specific topics chosen by instructor.

ARHS 5358 (3). SEMINAR ON MODERN ART. Specific topics chosen by the instructor.

ARHS 5359 (3). SEMINAR ON CONTEMPORARY ART. Specific topics chosen by instructor.

ARHS 5360 (3). SEMINAR ON BRITISH ART. Specific topics chosen by the instructor.

ARHS 5361 (3). SEMINAR ON AMERICAN ART. Specific topics chosen by the instructor.

ARHS 5362 (3). SEMINAR ON AMERICAN ART. Specific topics chosen by the instructor.

ARHS 5366 (3). SEMINAR ON PRE-COLUMBIAN ART. Specific topics chosen by instructor.

ARTS MANAGEMENT AND ARTS ENTREPRENEURSHIP

Professor Zannie Giraud Voss, Division Chair

Professor: Zannie Giraud Voss. Assistant Professors: Susan Benton, Kathleen Gallagher. Assistant Professor of Practice: Jim Hart. Adjunct Professor: Margaret Williams. Adjunct Assistant Professor: Kelly Trager. Adjunct Lecturers: Trey Bowles, JoLynne Jensen, Maureen Mixtacki, Jennifer Schuder.

The Division of Arts Management and Arts Entrepreneurship offers two undergraduate minors. The minor in arts entrepreneurship provides an overview of how to develop and launch a new arts venture, either for-profit or nonprofit. The minor in arts management provides an overview of how professional arts organizations are managed, with an emphasis on understanding the practical issues facing today's arts manager. Students may not declare both a minor in arts entrepreneurship and a minor in arts management.

Minor in Arts Entrepreneurship

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
Core Requirements	12
AMAE 3301, 3305, 3387, 4390	
Elective Course (one from the following)	3
ADV 1300 Survey of Advertising	
ADV 1360 Creative Production	
ADV 2301 Consumer Behavior	
ADV 4343 Strategic Promotion Management	
AMAE 3322 Marketing the Arts	
COMM 3355 Principles of Public Relations	
Additional Elective Course (one from the following)	3
AMAE 3370, 4321, 4375, 4377	
ASAG 3350 Art Colloquium: New York	
COMM 3360 Business and Management Communication	
COMM 5302 Topics: Communication Consulting	
FILM 4316 Film Producing	
MNO/CFB 3375 Corp Social Responsibility/Ethical Ldrshp	
MNO 4371/CFB 3381 Leadership and Culture	

Minor in Arts Management

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
Core Requirements:	12
AMAE 3301, 3305, 3387 (or COMM 3387 Advanced Non-profit Communication), 4326	
Elective Course (one from the following)	3
ADV 1300 Survey of Advertising	
ADV 1360 Creative Production	
ADV 2301 Consumer Behavior	
ADV 4343 Strategic Promotion Management	
AMAE 3322 Marketing the Arts	
APSM 4372 Sport Facility and Event Management	
COMM 3355 Principles of Public Relations	
COMM 3380 Principles of Nonprofit Communication	

Additional Elective Course**3**

One additional course from the list above or one from the following with instructor approval:

- AMAE 4321 Law and the Arts
- ARHS 1333 Introduction to Visual Culture
- ASAG 3350 Art Colloquium: New York
- COMM 3360 Business and Management Communication
- COMM 3365 Organizational Communication
- FILM 3328 Media Management
- FILM 3330 Media Sales
- FILM 3335 Film Exhibition and Distribution
- FILM 4316 Film Producing
- FILM 4399 Global Media Systems
- MNO 3375/CFB 3375 Corporate Social Responsibility and Ethical Leadership
- MNO 4371/CFB 3381 Leadership and Culture
- THEA 4309 Business and Professional Aspects of Theatre

The Courses (AMAE)

AMAE 3301 (3). INTRODUCTION TO ARTS MANAGEMENT. This course introduces students to arts management theory, practices, and trends affecting a variety of disciplines across the visual and performing arts. It explores key issues in management of arts organizations and events at local, regional, national, and international levels. Topics include organizational formation and structure, governance, funding, strategic planning and implementation, and organizational relationships with artists, employees, audiences, supporters, and other sectors of the public.

AMAE 3305 (3). ARTS BUDGETING AND FINANCIAL MANAGEMENT. The primary emphasis of this course is financial management of arts organizations. Emphasis will be placed on budgeting as a reflection of the art form; as a means of fiscal prediction and control; and as a vehicle of communication among staff, trustees, investors, donors, and other constituencies.

AMAE 3322 (3). MARKETING THE ARTS. Introduces the fundamental concepts of marketing and their practical implementation by arts organizations and arts professionals. Discussion of examples and cases help illustrate applications of theory and familiarize students with essentials such as the production, pricing, promotion, and delivering of arts goods and services to audiences, markets, and the community.

AMAE 3370 (3). ENTREPRENEURSHIP AND THE HERO ADVENTURE. Considering the risk, obstacles, competition, and demands for change and adaptability in today's ever-evolving arts market, how do artists and arts entrepreneurs not only survive, but also thrive? Students draw parallels between the "hero journey" structure in storytelling and the grand adventure of entrepreneurship to gain perspective and a practical structure and lens that they can utilize to help build a unique career and life in the arts. Students learn how to take bold but educated risks, how to carve out a niche within the market, and how to persevere in the face of seemingly insurmountable odds.

AMAE 3387 (3). ATTRACTING CAPITAL: DONORS, INVESTORS, AND PUBLIC FUNDS. Focuses on the strategies for attracting capital for new arts-related ventures, whether for-profit or nonprofit. Students explore each capital market for its defining characteristics, mechanisms, and motivations, and develop skills in preparing funding proposals and pitching their ideas to potential funders.

AMAE 4321 (3). LAW AND THE ARTS. Students examine, debate, and critically assess legal and ethical aspects of the creation, collection, and preservation of works of art and antiquity; the management of intellectual property and related rights in works of visual and performing arts; relationships between and among creators, performers, dealers, collectors, theatres, museums, and the public; and broader domestic and international issues impacting the art world.

AMAE 4326 (3). CULTURAL POLICY. An overview of policy analysis and practice of the cultural sector in its different areas (heritage, visual, performing arts, etc.) and perspectives. Analyzes historical and theoretical backgrounds of cultural policy; cultural policies in practice (stylized facts and geographical and political divergence at the local, national, and international level); evaluation of cultural policies and their socioeconomic impact; culture, diversity, and development; cultural access and arts education.

AMAE 4375 (3). SOCIAL ENTREPRENEURSHIP: CREATING A MOVEMENT AND INNOVATING THROUGH SOCIAL GOOD. Explores how to use one's talents, passions, and interests to address world problems with innovative solutions that result in movements and cultural change. Focuses on building a business that realizes success and aids those in need.

AMAE 4377 (3). ACCELERATING A STARTUP: GOING FROM IDEA TO IMPLEMENTATION. Provides hands-on training and instruction on how to start, build, and grow a business from idea to implementation. Topics covered include feasibility analysis, market research, financial projections, the process of going to market, team building, and growth of the business. Acceptance to the course is competitive and based on submitted applications from teams of students; each team must include at least one student in the Meadows School of the Arts. It is preferred that applicants are juniors or seniors. An application does not guarantee admission. Selected students receive a predetermined amount of startup funds at the beginning of the class, and they may choose to work with professional mentors, advisers, and experienced entrepreneurs at the Dallas Entrepreneur Center's business incubator.

AMAE 4385 (3). NEGOTIATION SKILLS. Covers conflict theory and the negotiation skills artists and arts managers use to represent themselves, their work, and their institutions. Topics include assessing individual conflict styles, using the strengths of an individual style to make an effective negotiation plan, and preparing and practicing negotiations in order to be more comfortable navigating interactions in life and business.

AMAE 4390 (3). DEVELOPING AN ARTS VENTURE PLAN: LEGAL, STRATEGIC, AND PRACTICAL ISSUES. Students 1) develop an idea for an unmet need in the marketplace; 2) create a plan for the intended impact of their service or product and the model for how that change will take place; 3) analyze the environmental, industry-related, legal, and market-related factors that will influence the success of their new venture; 4) analyze the risks involved with launching their new venture; and 5) develop a plan for the human, financial, space-related, and other resource needs that will be necessary to launch their venture.

COMMUNICATION STUDIES

Associate Professor Sandra C. Duhé, Division Chair

Professor: Rita Kirk. **Associate Professors:** Maria Dixon, Sandra C. Duhé, Owen Lynch, Ben Voth. **Assistant Professors:** Cara Jacocks, Stephanie Martin. **Senior Lecturer:** Christopher Salinas. **Adjunct Lecturer:** Steve Lee.

General Information

The Division of Communication Studies offers a B.A. in communication studies and a B.A. in public relations and strategic communication. In each of these programs, the division educates students to apply intellectual rigor and integrity to communication theory and practice in research, critical thinking, writing and advocacy. A broad review of nonprofit, political and organizational communication undergirds the curriculum. Students may pursue a double major in communication studies and in public relations and strategic communication; certain restrictions apply.

Students seeking an undergraduate degree in communication studies and/or public relations and strategic communication receive a broad background in the liberal arts, followed by a major curriculum that prepares them for graduate study or professional work in agencies, corporations, nonprofit organizations, government and associations, as well as cultural, legal and political institutions.

The curriculum is designed to introduce students to the historical development of the communication field and educate them about the principles and theories behind organizational and public communication. Students also develop requisite communication skills, gain awareness of the ethical responsibilities of professional communicators, and develop the communication and management capabilities required for success in a global environment.

In addition to major coursework in the division, communication studies students must complete a minor. Students seeking to double major or minor in another communication-related field may need to complete more than the minimum 122 total hours required for graduation.

In addition to those requirements of the University and Meadows School of the Arts, undergraduate students planning to major or minor in communication studies or major in public relations and strategic communication must meet minimum GPA requirements, earn a passing score on a divisional writing examination and meet the specific requirements for their area of study outlined below.

Admission to Communication Studies. Students planning to major or minor in communication studies must complete DISC 1312 (or equivalent), one statistics course (STAT 1301, 2301 or 2331) and six hours of communication studies core coursework (COMM 2310, 2327), with a minimum 3.000 GPA across these four courses. Once declared, students must successfully complete the remaining six hours of communication studies core coursework (COMM 2308 or DISC 1313 with topic introduction to newswriting, and COMM 2375) before taking any additional coursework in the major.

Admission to Public Relations and Strategic Communication. Students planning to major in public relations and strategic communication must complete DISC 1312 (or equivalent), one statistics course (STAT 1301, 2301 or 2331) and six hours of communication studies core coursework (COMM 2327, and COMM 3300 or equivalent), with a minimum 3.000 GPA across these four courses. Once declared, students must successfully complete the remaining six hours of communication studies core

coursework (COMM 2375, 3355) before taking any additional coursework in the major.

Core coursework may not be repeated to meet the requirements to declare communication studies as a major or minor or public relations and strategic communication as a major.

Special Requirements

- Transfer hours for major credit may be considered on petition and with approval of the chair. Courses satisfying major requirements are expected to be taken at SMU.
- Students must earn a grade of *C* or better for coursework toward their program's major or minor requirements.
- Communication studies coursework may not be double-counted toward the requirements for a second major or minor in advertising, fashion media, film and media arts, or journalism.
- Public relations and strategic communication majors may choose to double major in advertising, journalism or communication studies; restrictions apply to which courses may be double counted.
- Attendance is required on the first day of class in communication courses to prevent being dropped from the course.
- Students who do not meet GPA requirements to declare a major in the division will not be permitted to enroll in major coursework.

Scholarships. Communication honors scholarships are awarded each year to outstanding majors in the division. The Charles Douglas Bauer Scholarship Fund and Advisory Board funds provide competitive scholarships available to division majors through an annual application process.

Pre-Law Scholars Program. The Division of Communication Studies offers a one credit hour elective course exclusively for students in SMU's Pre-Law Scholars Program. Enrollment in the program provides preferred access for admission to the highly rated Dedman School of Law at SMU. Additional information is available from SMU's Division of Enrollment Services.

Bachelor of Arts in Communication Studies

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
Core Requirements	12
COMM 2308 <i>or</i> DISC 1313 (topic: introduction to newswriting), and COMM 2310, 2327, 2375 (COMM 2310 and 2327 are required prior to entry into the major.)	
Course Requirements	6
(Enrollment is contingent upon successful completion of all core requirements.)	
COMM 4323 <i>or</i> 4324 and COMM 4325 <i>or</i> 4326	
Intercultural/International Requirement	3
COMM 3302, 3321, 3341, or 4385	

Upper-level Electives	15
<p>COMM 2300 12 additional hours at the 3000 level or above (No more than 6 term credit hours from COMM 4375, 5110, 5210, 5310, or 5301–5304 may apply toward the major.) Students double majoring in both communication studies and public relations and strategic communication may not fulfill this requirement with COMM 3300, 3310, 3382, or 4340.</p>	
Second Language	8
<p>Two terms of the same language.</p>	
Ethics Course Requirement	3
Second Major or Minor	
<p>To be determined with counsel of adviser; hours vary according to choice.</p>	
Free Electives	
<p>Hours vary as needed to meet University residency and degree requirements.</p>	
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Bachelor of Arts in Public Relations and Strategic Communication

Universitywide Requirements	Varies
Core Requirements	12
<p>COMM 2327 <i>or</i> ADV 4317 (for declared advertising majors) COMM 3300 <i>or</i> ADV 2375 (for declared advertising majors) <i>or</i> JOUR 4316 (for declared journalism majors) (COMM 2327 and 3300 are required prior to entry into the major.)</p>	
<p>COMM 2375 <i>or</i> ADV 3393 (for declared advertising majors) <i>or</i> MKTG 3343</p>	
<p>COMM 3355</p>	
Course Requirements	16
<p>(Enrollment is contingent upon successful completion of all core requirements.)</p>	
<p>COMM 2300 COMM 2308 <i>or</i> DISC 1313 (topic: introduction to newswriting) <i>or</i> JOUR 2312 (for declared journalism majors)</p>	
<p>COMM 3382 <i>or</i> JOUR 2313, 33 62, 3382, <i>or</i> 4310 (for declared journalism majors)</p>	
<p>COMM 3310, 4130 COMM 4340 <i>or</i> ADV 4362 (for declared advertising majors) <i>or</i> JOUR 4306 (for declared journalism majors)</p>	

Media/Technology Electives	6
Two from ADV 3391, ASIM 1300, 1310; COMM 3335, 4335; FILM 1304; JOUR 2304, 3357; MSA 1315 (Declared advertising majors may also choose ADV 3390 or 4365; declared journalism majors may also choose JOUR 2380.)	
Campaigns	3
COMM 4395 (or ADV 4399 for declared advertising majors)	
Second Major or Minor	
To be determined with counsel of adviser; hours vary according to choice.	
Free Electives	
Hours vary as needed to meet University residency and degree requirements.	

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Notes

Public relations and strategic communication majors are required to meet the following additional requirements as part of the communication studies curriculum or as part of the University Curriculum. JOUR 4316 may not count as both an ethics course and a substitute for COMM 3300.

- **Ethics/Law.** JOUR 2302 or COMM 2328 (or ADV 2302 for declared advertising majors or JOUR 4316 for declared journalism majors).
- **Local Contexts.** COMM 4320 (or COMM 4325 for declared communication studies majors or COMM 4125 or 4225 for declared double majors who complete a three credit hour internship in advertising, communication studies or journalism). Students who double major in public relations and strategic communication and in advertising, communication studies or journalism must earn a minimum of four but no more than six total credit hours of internship. At least one credit hour must be earned in COMM internship credit.
- **Diversity.** JOUR 4360, or COMM 3321 and 3341, or COMM 4390 (or ADV 2343 for declared advertising majors).

Honors Program

Students may apply for admission to the honors track after completion of 45 hours with a 3.500 overall GPA or better. To graduate with distinction, students must take six hours of honors-designated communication studies courses and COMM 4375. Students accepted to the honors track must maintain a 3.500 or higher overall GPA in all SMU coursework to graduate with the honors distinction. The top 10 percent of each class is eligible for faculty nomination to Kappa Tau Alpha, the national communication honorary society.

Minor in Communication Studies

To minor in communication studies, students must meet all the requirements for declaring the major. Students must be accepted into the program prior to enrollment in upper-division courses.

Core Requirements	12
COMM 2308 or DISC 1313 (topic: introduction to newswriting), and COMM 2310, 2327, 2375	
Electives	9
Selected from COMM courses at the 3000 level or higher.	
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The Courses (COMM)

COMM 2300 (3). PUBLIC SPEAKING IN CONTEXT. Introduces the theory and practice of public speaking. Students learn important rhetorical principals for studying an audience and a situation to create and perform an effective public presentation. They also learn important abilities for public presentation regarding evidence, nonverbal communication, visual aids, and more. *Prerequisite:* Enrollment in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in law and legal reasoning program.

COMM 2301 (3). SPECIAL TOPICS: COMMUNICATION, INTERNATIONAL STUDIES ABROAD. Specific topics for study abroad must be approved by the Division of Communication Studies chair.

COMM 2302 (3). SPECIAL TOPICS: COMMUNICATION, INTERNATIONAL STUDIES ABROAD. Specific topics for study abroad must be approved by the Division of Communication Studies chair.

COMM 2303 (3). SPECIAL TOPICS: COMMUNICATION, INTERNATIONAL STUDIES ABROAD. Specific topics for study abroad must be approved by the Division of Communication Studies chair.

COMM 2308 (3). INTRODUCTION TO NEWSWRITING FOR PUBLIC RELATIONS. Introduces basic media writing, research, and interviewing skills, as well as AP style for news, features, and press releases. Reserved for students who have not earned credit for DISC 1313. *Prerequisites:* C or better in COMM 2310 (or 3300) and 2327; eligibility to enroll in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in communication studies program.

COMM 2310 (3). RHETORIC, COMMUNITY, AND PUBLIC DELIBERATION. Examines the role of rhetoric and public deliberation in the production and maintenance of communities and the larger public sphere. Topics include the formation and rhetoric of the civil rights movement, the structural factors impacting the modern public sphere, and the skills necessary to be an informed citizen. *Prerequisite:* DISC 1312.

COMM 2327 (3). COMMUNICATION THEORY. Introduces the foundational concepts, theories, and approaches to the study and practice of human communication. Includes a historical overview and discussions of contemporary ethical questions. *Prerequisite:* DISC 1312.

COMM 2328 (3). COMMUNICATION ETHICS. Through readings, case studies, and the application of philosophical approaches to ethics, students examine the ethical challenges of strategic communication, explore the historic development of the field, and develop their own personal code of ethics to guide them through the ethical dilemmas they will encounter in the working world.

COMM 2375 (3). COMMUNICATION RESEARCH AND METRICS. Students learn how to conduct professional research utilizing primary and secondary data, statistics, and analytics. *Prerequisites:* C or better in COMM 2310 (or 3300) and 2327; eligibility to enroll in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in communication studies program.

COMM 3101 (1). SMU PRE-LAW SCHOLARS SEMINAR. Introduces various legal topics, including an overview of legal subjects and careers in law. Provides information relating to the Dedman School of Law admissions process. Restricted to SMU Pre-Law Scholars who have completed their first two full-time academic terms.

COMM 3300 (3). FREE SPEECH AND THE FIRST AMENDMENT. Examines the philosophy, cases, and issues relevant to the First Amendment right to free expression, with a focus on

internal security, obscenity, pornography, slander, and the regulation of communication. Also, the foundations of legal argumentation.

COMM 3302 (3). ETHNOVIOLENCE: INTERDISCIPLINARY PERSPECTIVES. An introduction to ethnoviolence (violence or the threat of violence based on one's race, ethnicity, religion, gender, or sexual orientation) from a comparative, global, and critical framework that synthesizes sociology, colonial studies, and communications, as well as ethnic, religious, historical, and gender studies.

COMM 3310 (3). CRISIS MANAGEMENT. Examines different strategies and tactics organizations use after a crisis to respond to internal and external audiences. Applies theoretical models (apologia, attribution theory, organizational identification theory, etc.) to specific types of organizational crises. Special emphasis is placed on the role emerging communication technologies play in the organization's crisis response. *Prerequisites:* C or better in COMM 2310 (or 3300), 2327, 2375, and 3355; enrollment in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in communications studies program.

COMM 3321 (3). COMMUNICATION IN GLOBAL CONTEXTS. Provides an international perspective to the study of corporate communication and public affairs. Emphasis on experiential study allows exposure to professional practitioners in both political and corporate arenas. Students explore opportunities and challenges involved in working in corporate communication in an international forum. *Prerequisites:* C or better in COMM 2308 (or 3355 or DISC 1313), 2310 (or 3300), 2327, and 2375.

COMM 3327 (3). ARGUMENTATION AND ADVOCACY. Explores concepts characterizing rational discourse with a concern for examining validity and fallacy. Students consider traditional and contemporary models for analyzing argument, including an examination of the philosophy of argument and practical inquiry into the uses of debates on contemporary social issues. *Prerequisite:* Enrollment in the B.A. in communication studies, minor in communication studies, or minor in law and legal reasoning program.

COMM 3335 (3). DIGITAL COMMUNICATION. The course is grounded in practice, and students are required to participate in social networks, forums, blogs, wikis, microblogs, and virtual worlds. *Prerequisite:* Enrollment in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in communications studies program.

COMM 3341 (3). ETHNICITY, CULTURE, AND GENDER: INTRODUCTION TO CRITICAL STUDIES IN COMMUNICATION. Explores the impact of culture on the understanding and practice of human communication in interpersonal, organizational, and mass media contexts. Strong emphasis is placed on the role of globalization, race, and socioeconomic dynamics as impediments and conduits of cross-cultural collaboration and interaction. *Prerequisites:* C or better in COMM 2308 (or DISC 1313), 2310, 2327, and 2375.

COMM 3342 (3). RACE AND IDENTITY CONSTRUCTION IN GLOBAL CONTEXTS. Explores what impact communication practices in organizational, interpersonal, and mass media contexts have on the construction of ethnicity, gender, and sexuality in U.S. and post-Colonial settings.

COMM 3345 (3). PERSUASION THEORY AND PRACTICE. Surveys major theories that explain how to influence attitudes and behaviors. Applications to persuasion within a variety of contexts, including relationships, organizations, legal campaigns, and the mass culture. *Prerequisites:* C or better in COMM 2308 (or DISC 1313), 2310, 2327, and 2375.

COMM 3347 (3). POLITICAL COMMUNICATION. Examines political communication as it evolves throughout a political campaign. Topics include political communication theory and research, communication strategies, the influence of the mass media, television advertising, candidate debates, news management, polling, and the use of new technologies in political campaigns. *Prerequisites:* C or better in COMM 2308 (or DISC 1313), 2310, 2327, and 2375; enrollment in the B.A. in communication studies or minor in communications studies program.

COMM 3350 (3). INTEGRATED MARKETING COMMUNICATION. Explores the concept of planning that recognizes the value of coordinating the media mix within a communication campaign to create maximum clarity and impact. Covers the ways that a firm or brand communicates with its publics. *Prerequisites:* C or better in COMM 2308 (or DISC 1313), 2310 (or 3355), 2327, and 2375; enrollment in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in communications studies program.

COMM 3355 (3). PRINCIPLES OF PUBLIC RELATIONS. Introduces the basic theories, concepts, and approaches to public relations. Includes a historical overview as well as discussions of the professional and ethical demands on practitioners. *Prerequisites:* C or better in COMM 2310 (or 3300) and 2327; eligibility to enroll in the B.A. in communication studies, B.A. in public relations and strategic communication, minor in communication studies, minor in arts entrepreneurship, or minor in arts management program.

COMM 3360 (3). BUSINESS AND MANAGEMENT COMMUNICATION. Emphasizes the role that communication plays in recruiting and selecting project team members, motivating employees, and making a project team productive. *Prerequisites:* C or better in COMM 2308 (or DISC 1313), 2310, 2327, and 2375.

COMM 3365 (3). ORGANIZATIONAL COMMUNICATION. Explores the role of communication in key organizational processes in corporate and nonprofit settings. Students examine the multiple approaches to organizing and their implications for human communication. *Prerequisites:* C or better in COMM 2308 (or DISC 1313), 2310, 2327, and 2375; enrollment in the B.A. in communication studies, minor in communications studies, or minor in arts management program.

COMM 3380 (3). PRINCIPLES OF NONPROFIT COMMUNICATION. Explores the unique discursive context of not-for-profit organizations. Students examine the role of communication in the various stages of nonprofit organizational life, including founding and incorporation, recruitment and retention of staff volunteers, and external funding and philanthropic development. *Prerequisites:* C or better in COMM 2308 (or DISC 1313), 2310, 2327, and 2375; enrollment in the B.A. in communication studies, minor in communications studies, or minor in arts management program.

COMM 3382 (3). ADVANCED WRITING FOR PUBLIC RELATIONS. Provides experience in researching, strategizing, developing, and writing a variety of public relations materials for an array of audiences and objectives. *Prerequisites:* C or better in COMM 2308 (or DISC 1313), 2327, 3300, and 3355; enrollment in the B.A. in public relations and strategic communication program.

COMM 3387 (3). ADVANCED NONPROFIT COMMUNICATION: DONOR AND PHILANTHROPIC COMMUNICATION. This experiential course teaches students to strategize, develop, research, and write in-depth articles, newsletters, speeches, press releases, and position papers. *Prerequisites:* C or better in COMM 2308 (or DISC 1313), 2310, 2327, 2375, 3365, and 3380.

COMM 3390 (3). EMPLOYEE COMMUNICATION. Introduces the theories, ethics, and methods of creating and measuring communication to employees and work groups. Topics include employee campaigns, communication with unionized work groups, and use of social media for employee and leadership interaction and collaboration. Students explore how employee discourse can shape perceptions of organizational culture and trust, employee retention and satisfaction, and external branding. *Prerequisites:* C or better in COMM 2308 (or DISC 1313), 2310, 2327, and 2375.

COMM 3393 (3). RHETORIC, POLITICS, AND MASS MEDIA. Examines the dynamic and interpersonal relationship between the news media and politics: the media's influence on the political process, the relationship between reporters and public officials, the impact of media-based campaigns, and the ethical impact of media manipulation by political strategists. *Prerequisite:* Enrollment in the B.A. in communication studies or minor in communication studies program.

COMM 3395 (3). PUBLIC OPINION, THE PRESS, AND PUBLIC POLICY. Examines the interdependent relationships among media coverage, public opinion, and public policy. Students consider the influence of press coverage on electoral and policymaking processes in which public voice is presumed to affect democratic outcomes. *Prerequisite:* Enrollment in the B.A. in communication studies or minor in communication studies program.

COMM 4025 (0). ORGANIZATIONAL INTERNSHIP. Students in approved positions gain career-related experience and establish professional contacts. Offered as pass/fail only. *Prerequisites:* 90 or more hours of coursework, 2.750 overall GPA, 3.000 GPA in COMM coursework, permission of faculty adviser, and enrollment in the B.A. in communication studies or B.A. in public relations and strategic communication program.

COMM 4125 (1). PUBLIC RELATIONS IN LOCAL CONTEXT. Provides experience working with public relations professionals part time during the fall or spring terms. Offered as pass/fail

only. *Prerequisites*: 90 or more hours of coursework, 2.750 overall GPA, 3.000 GPA in COMM coursework, permission of faculty adviser, enrollment in the B.A. in public relations and strategic communication program, and completion of COMM 3382 (or its equivalent for double majors in advertising or journalism).

COMM 4130 (1). PROFESSIONAL SEMINAR. Prepares a student to meet the expectations and demands of working as a strategic communications professional in various organizational contexts, including corporate, agency, nonprofit, government, and public affairs. Topics addressed by instructors and industry professionals include ethics, issues in professional development, interviewing and résumé construction, and power and politics for the new employee. *Prerequisites*: C or better in COMM 2308 (or DISC 1313), 2327, 2375, 3300, 3355; junior standing; enrollment in the B.A. in public relations and strategic communication program.

COMM 4225 (2). PUBLIC RELATIONS IN LOCAL CONTEXT. Provides 100 hours of experience working with public relations professionals. P/F only. *Prerequisites*: 90 or more hours of coursework, 2.750 overall GPA, 3.000 GPA in COMM coursework, permission of faculty adviser, and enrollment in the B.A. in public relations and strategic communication program.

COMM 4300 (3). SEMINAR IN POLITICAL COMMUNICATION. Offered only as appropriate occasions arise. Provides advanced study of the role of communication within specific public affairs settings, e.g., political summits, party conventions, or other major venues. *Prerequisite*: Enrollment in the B.A. in communication studies or minor in communication studies program.

COMM 4302 (3). WASHINGTON TERM STUDIES. Offers an opportunity to study and work in Washington, D.C., as part of American University's Washington semester. *Prerequisites*: C or better in COMM 2308 (or DISC 1313), 2310, 2327, 2375; junior standing.

COMM 4303 (3). WASHINGTON TERM STUDIES. Offers an opportunity to study and work in Washington, D.C., as part of American University's Washington semester. *Prerequisites*: C or better in COMM 2308 (or DISC 1313), 2310, 2327, 2375; junior standing.

COMM 4304 (3). WASHINGTON TERM STUDIES. Offers an opportunity to study and work in Washington, D.C., as part of American University's Washington semester. *Prerequisites*: C or better in COMM 2308 (or DISC 1313), 2310, 2327, 2375; junior standing.

COMM 4305 (3). WASHINGTON TERM DIRECTED STUDIES. An independent study with the goal of producing original research while students are enrolled in American University's Washington semester. *Prerequisites*: C or better in COMM 2308 (or DISC 1313), 2310, 2327, 2375; junior standing.

COMM 4310 (3). HISTORY AND PHILOSOPHY OF FREE SPEECH. Examines the philosophical debates on the existence, extent, and effect of free speech on society, including the rights of the individual versus the rights of the collective body politic.

COMM 4320 (3). PUBLIC RELATIONS IN LOCAL CONTEXT. Provides 150 hours of experience working with public relations professionals. P/F only. *Prerequisites*: 90 or more hours of coursework, 2.750 overall GPA, 3.000 GPA in COMM coursework, permission of faculty adviser, enrollment in the B.A. in public relations and strategic communication program, and completion of COMM 3382 (or its equivalent for double majors in advertising or journalism).

COMM 4323 (3). FORENSICS WORKSHOP. Explores the pedagogy of competitive forensics. Students examine methods, theories, and techniques of competitive debate and individual events, tournament administration, and professional responsibilities of the forensic educator, and gain practical experience in forensics and debate competition. *Prerequisite*: Enrollment in the B.A. in communication studies, minor in communication studies, or minor in law and legal reasoning program. Instructor approval required.

COMM 4324 (3). COMPETITIVE MOCK TRIAL. Provides the opportunity to investigate and explore principles of legal advocacy within a competitive environment. Trains students to represent SMU as members of the SMU Mock Trial Team before invitational, regional, and national trial competitions. *Prerequisite*: Enrollment in the B.A. in communication studies, minor in communication studies, or minor in law and legal reasoning program.

COMM 4325 (3). PUBLIC RELATIONS IN LOCAL CONTEXT. Students in approved positions gain 150 hours of career-related experience and establish professional contacts. *Prerequisites*: 90 or more hours of coursework, 2.750 overall GPA, 3.000 GPA in COMM coursework, permission of faculty adviser, enrollment in the B.A. in public relations and strategic communication program, and completion of COMM 3382 (or its equivalent for double majors in advertising or journalism).

COMM 4326 (3). WASHINGTON TERM INTERNSHIP. Offered in conjunction with courses taken in Washington, D.C. Provides experience working in public affairs in the nation's capital, supervised by a faculty member there. *Prerequisites:* 90 or more hours of coursework, 2.750 overall GPA, 3.000 GPA in COMM coursework, permission of faculty adviser, and enrollment in the B.A. in communication studies program.

COMM 4335 (3). DIGITAL ENGAGEMENT. Experience in writing for various digital communication tools, statistical measurement, and search engine optimization techniques that provide return on investment to organization management. *Prerequisite:* C or better in COMM 3335.

COMM 4338 (3). CREATIVE PRODUCTION FOR COMMUNICATORS. Introduces basic principles of graphic design and production in tandem with the use of industry standard hardware and software programs, including the Adobe Creative Suite. Focuses on public relations applications. *Prerequisite:* Enrollment in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in communication studies.

COMM 4340 (3). PUBLIC RELATIONS MANAGEMENT. Provides business literacy, financial and accounting basics, and case study analysis that enables professionals to implement communication strategies that advance business objectives. *Prerequisites:* C or better in COMM 2327, 2375, 3300, 3355; enrollment in the B.A. in public relations and strategic communication program.

COMM 4375 (3). HONORS THESIS IN COMMUNICATION. Provides advanced students with the opportunity to do original research on a topic related to communication. Students learn how to write research questions, conduct a literature review, engage in qualitative or quantitative methodologies, and present findings. *Prerequisites:* Honors standing; enrollment in the B.A. in communication studies or B.A. in public relations and strategic communication program.

COMM 4385 (3). COMMUNICATION, TECHNOLOGY, AND GLOBALIZATION. Examines how various communication technologies are used within a strategic communication context, and addresses historical, ethical, and legal issues surrounding the use of these technologies. *Prerequisite:* Enrollment in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in communication studies program.

COMM 4386 (3). FINANCIAL COMMUNICATION. Familiarizes students with terms, principles, theories, and practices in financial communications. Examines techniques used in investor relations and considers the legal and ethical responsibilities. *Prerequisite:* Enrollment in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in communication studies program.

COMM 4390 (3). GLOBALIZATION, ECONOMICS, AND COMMUNICATION. The globalization of economic and communicative activity entails a new type of organizing structure as well as an understanding of self and one's connection (interdependence) to the global marketplace. Examines the rise of globalization and the social, political, and economic activity that has significance for every individual and community across the globe.

COMM 4392 (3). MUSTANG CONSULTING I: INTRODUCTION TO COMMUNICATION CONSULTING. Provides a hands-on opportunity to learn and implement the theories and skills necessary to engage in the task of communication consulting. Unlike other models of consulting, the art of communication consultation emphasizes the centrality of organizational communication as a means of assisting clients in addressing their organizational concerns and opportunities. Covers applying communication theory and research to the practice of communication consultation; distinguishing the difference between academic research and communication consulting; and proposing, planning, and implementing a consulting project. Instructor consent only.

COMM 4393 (3). MUSTANG CONSULTING II: CAPSTONE. This advanced communication consulting course provides the opportunity for students to manage their own communication consulting clients under the supervision of the faculty principal. Students are responsible for all client contact, presentations, and resolutions and are required to implement an entire strategic communication solution on behalf of the client, from planning through evaluation. Instructor consent only.

COMM 4395 (3). BOULEVARD CONSULTING PRACTICUM. In this capstone course, students work in teams, conduct original research, and develop and present a comprehensive public relations campaign for an actual client. *Prerequisites:* C or better in 2308 (or DISC 1313), 2327,

2375, 3300, 3355, 3382; senior standing; enrollment in the B.A. in public relations and strategic communication program.

COMM 4397 (3). FASHION MEDIA PUBLIC RELATIONS. Focuses on application of public relations principles and practices standard to the fashion industry. Covers public relations planning, development of written materials, and demonstration of effective business communication strategies. *Prerequisite:* Enrollment in the B.A. in public relations and strategic communication, B.A. in fashion media, or minor in fashion media program.

COMM 5110 (1). DIRECTED STUDY. A close collaboration between the professor and an advanced student who conducts a rigorous project that goes beyond the experience available in course offerings. The student must secure written permission from the instructor and return a completed directed studies form to the Division of Communication Studies before the drop/add date in the term during which the study is to be undertaken. *Prerequisites:* Junior standing; permission of instructor and division chair; and enrollment in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in communication studies program.

COMM 5210 (2). DIRECTED STUDY. A close collaboration between the professor and an advanced student who conducts a rigorous project that goes beyond the experience available in course offerings. The student must secure written permission from the instructor and return a completed directed studies form to the Division of Communication Studies before the drop/add date in the term during which the study is to be undertaken. *Prerequisites:* Junior standing; permission of instructor and division chair; and enrollment in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in communication studies program.

COMM 5301 (3). TOPICS IN COMMUNICATIONS. Encourages students to examine the role of communication within contemporary issues and social problems. Topics vary by instructor. *Prerequisite:* Enrollment in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in communication studies program.

COMM 5302 (3). TOPICS IN COMMUNICATIONS. Encourages students to examine the role of communication within contemporary issues and social problems. Topics vary by instructor. *Prerequisite:* Enrollment in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in communication studies program.

COMM 5303 (3). TOPICS IN COMMUNICATIONS. Encourages students to examine the role of communication within contemporary issues and social problems. Topics vary by instructor. *Prerequisite:* Enrollment in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in communication studies program.

COMM 5304 (3). TOPICS IN COMMUNICATIONS. Encourages students to examine the role of communication within contemporary issues and social problems. Topics vary by instructor. *Prerequisite:* Enrollment in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in communication studies program.

COMM 5305 (3). TOPICS IN COMMUNICATION. Encourages students to examine the role of communication within contemporary issues and social problems. Topics vary by instructor. *Prerequisite:* Enrollment in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in communication studies program.

COMM 5310 (3). DIRECTED STUDY. A close collaboration between the professor and an advanced student who conducts a rigorous project that goes beyond the experience available in course offerings. The student must secure written permission from the instructor and return a completed directed studies form to the Division of Communication Studies before the drop/add date in the term during which the study is to be undertaken. *Prerequisites:* Junior standing; permission of instructor and division chair; and enrollment in the B.A. in communication studies, B.A. in public relations and strategic communication, or minor in communication studies program.

CREATIVE COMPUTING

Center of Creative Computation

Professor Ira Greenberg, Center Director

Visiting Professor: Yong Bakos

General Information

Creative computing is a highly interdisciplinary program offering a Bachelor of Arts and a minor that combine theory and methodology from computer science and engineering with aesthetic principles and creative practice from the arts. The program is rigorous in its interdisciplinary integration, requiring students to pursue core coursework in both the Lyle School of Engineering and the Meadows School of the Arts. In addition, the program requires a capstone project and either a minor concentration or a second major. Study abroad is also highly recommended.

The major in creative computing crosses traditional disciplinary boundaries in response to technological innovation, contemporary arts practices and demands of the global marketplace. An underlying principle at the philosophical core of the major is the integration of creative and analytical study and practice – championing an integrated “whole brain” approach. The major in creative computing enables students to consider problems from many angles and conceptual frameworks, integrating widely disparate approaches and practices.

The program’s breadth enables students to target many different segments and professional opportunities within the digital economy, including software engineering, Web design, interactive design/development, mobile application development, 3-D modeling and animation, scientific visualization, and social media. It is anticipated that opportunities will continue to increase as the application of computation and digital processes continues to proliferate across all segments of the global economy. Graduates of the program will

- Be fully literate in at least one major programming language (Java, C/C++, etc.) and a secondary scripting language (JavaScript, Python, etc.), and will be capable of developing a fully functional software project from concept through deployment, including platform integration, installation, debugging and maintenance.
- Have a conceptual, technical and aesthetic direction informing their creative development and research.
- Be capable of bridging multiple disciplines and synthesizing original technology-driven solutions.
- Be equally comfortable and competent applying creative and computational methods, approaches and processes in solving problems.
- Be capable of working across multiple segments of the digital economy in roles such as interactive designers and/or developers, creative technologists, software engineers, project managers, fine artists and entrepreneurs.

Bachelor of Arts in Creative Computing

Admission to the program is competitive. A minimum overall GPA of 3.000 is required, as well as at least a 3.500 GPA in courses listed under Computing Fundamentals in the table below. Students are admitted to the major through consultation with the program director.

The major requires a final capstone project, where students, working with a faculty adviser, develop an independent project in creative computing. Projects may include an art installation, performance, original software (tool, library or application) or a scholarly article. It is expected that students will present their projects in a public forum.

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
Computing Fundamentals	9
CSE 1341 Principles of Computer Science I or ASIM 1310 Art and Code I	
CSE 1342 Programming Concepts or ASIM 3305 Art and Code II	
CRCP 2330 Nand to Tetris	
Creative Fundamentals (three from the following)	9
(Any 1000- or 2000-level courses in the Meadows School of the Arts may be substituted for up to 6 hours of the courses listed below, with adviser approval.)	
ASCE 1300 Introduction to Ceramics	
ASDR 1300 Introduction to Drawing	
ASPH 1300 Basics of Photography	
ASPR 3300 Printmaking Workshop	
ASPT 1300 Introduction to Painting	
ASSC 1300 Introduction to Sculpture	
ENGL 2390 Introduction to Creative Writing	
FILM 1301 Art of Film and Media	
FILM 1302 Media and Culture	
Creative Computing (seven from the following)	21
ASIM 1300 Creative Computation 1	
ASIM 1330 Responsive Arts I	
ASIM 1340 Computational Sculpture	
ASIM 2305 Video and Image for Performance/Real-time Visual Manipulation	
ASIM 3305 Art and Code II	
ASIM 3310 Computational Media Workshop (topic: international digital atelier)	
ASIM 3320 Physical Computing	
ASIM 3350 Technology and the Body	
ASIM 5302 Intermedia Directed Studies	
ASPH 3304 Digital Tools	
ASPH 3390 Experimental Camera	
CEE 5373 Introduction to CAD	
CRCP 1330 Sound and Code	
CRCP 1350 Art of 3-D Animation or CSE 5360 Introduction to 3-D Animation	
CRCP 2310 Nature and Code	
CRCP 3310 Data: Narrative, Meaning, and Discovery	
CRCP 3320 Postmodern Software Design	
CSE 1319 Introduction to Digital Imaging	
CSE 1331 Introduction to Web Programming	

Creative Computing (continued)

CSE 3345 Graphical User Interface Design/Implementation
 CSE 5382 Computer Graphics
 EE 1301 Modern Electronic Technology
 EE 1322 Survey of Electrical and Electronic Devices
 EE 5390 Mobile Phone Application Programming
 FILM 1304 Production I
 FILM 3309 Multicamera Production
 FILM 3384 Film Audio
 FILM 4304 New Media Distribution
 FILM 4308 Postproduction Visual FX
 FILM 4385 Advanced Sound Design
 MSA 3310 Fundamentals of Audio and Sound
 MSA 3330 Special Topics
 (topic: creative visualization or synthesizing nature)
 MUTH 4310 Introduction to Electro-Acoustic Music
 MUTH 4311 Advanced Topics in Music Technology
 PHYS 3320 Physics of Music
 PHYS 3340 Computational Physics
 PHYS 1320 Musical Acoustics
 THEA 2275 Technical Theatre Laboratory
 THEA 2333 Technical Drawing for Theatre
 THEA 3379, 3380 Computer-Assisted Design I, II

Math, Sciences and Engineering

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(Any courses within the math, sciences or engineering disciplines may be substituted for up to 6 credit hours of the courses listed below, with adviser approval.)

One from the following:

MATH 3308 Introduction to Discrete Mathematics
 MATH 3353 Introduction to Linear Algebra
 PHYS 1313 Fundamentals of Physics

At least 6 credit hours from the following:

CSE 2353 Discrete Computational Structures
 CSE 2240 Assembly Language
 ANTH 2315 Human Evolution
 ANTH 2363 Introduction to Archaeology
 BIOL 1303 Essentials of Biology
 BIOL 1305 Our Natural Environment
 BIOL 1308 Plant Biology
 BIOL 1401, 1402 Introductory Biology
 CHEM 1301 Chemistry for Liberal Arts
 CHEM 1303, 1304 General Chemistry
 GEOL 1301 Earth Systems
 GEOL 1305 Oceanography
 GEOL 1307 The Solar System
 GEOL 1308 Evolution and Life History
 GEOL 1313 Earthquakes and Volcanoes
 PHYS 1303 Introductory Mechanics
 PHYS 1304 Introductory Electricity and Magnetism
 PHYS 1314 The Physical Perspective
 PHYS 3305 Introduction to Modern Physics

<i>Requirements for the Degree (continued)</i>	<i>Credit Hours</i>
Advanced Engineering	9
Any Lyle applied technology courses at the 3000 level or above, with adviser approval.	
Advanced Arts	9
Any Meadows studio or performance arts courses at the 3000 level or above, with adviser approval.	
Theory (one from the following)	3
ARHS 1332 20th-Century Art	
ARHS 3369 Contemporary Art: 1965–Present	
CSE 2240 Assembly Language Programming/ Machine Organization	
CSE 3353 Fundamentals of Algorithms	
MATH 3308 Introduction to Discrete Mathematics	
MATH 3353 Introduction to Linear Algebra	
PHIL 1301 Elementary Logic	
PHIL 3363 Aesthetic Experience and Judgment	
PSYC 3310 Memory and Cognition	
SOCI 3345 Media Ethics and Gender	
Capstone	3
CRCP 5301 Creative Computing Major Capstone	
Minor or Second Major and Free Electives	
Hours vary as needed to meet University residency and degree requirements.	
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Minor in Creative Computing

The minor in creative computing is highly interdisciplinary, championing a “whole brain” approach. Combining study, creative practice and research, students explore computing as a universal creative medium, integrating aesthetic principles and practices from the arts with analytical theories and processes from computer science and engineering.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
Core Course Requirements	6
CSE 1341 Principles of Computer Science <i>or</i> ASIM 1310 Art and Code I	
CSE 1342 Programming Concepts <i>or</i> ASIM 3305 Art and Code II	
Creative Computation (at least 6 hours from the following, according to track choice)	6
<i>Computational Art Track (two from the following)</i>	
ASIM 1330 Responsive Arts I	
ASIM 1340 Computational Sculpture	
ASIM 3310 Computational Media Workshop	
ASIM 3320 Responsive Arts II	
ASIM 3350 Technology and the Body	
ASIM 5302 Intermedia Directed Studies	

Creative Computation (continued)*Graphics and Gaming Track (two from the following)*

- CRCP 1330 Sound and Code
- CSE 5360 Introduction to 3-D Animation
- CSE 5382 Computer Graphics
- MATH 3353 Introduction to Linear Algebra

Music Track (two from the following)

- CRCP 1330 Sound and Code
- MUTH 4310 Introduction to Electro-Acoustic Music
- MUTH 4311 Advanced Topics in Music Technology
- PHYS 1320 Musical Acoustics
- PHYS 3340 Computational Physics

Creative Coding Track (two from the following)

- CRCP 2310 Nature and Code
- CRCP 3310 Data: Meaning, Narrative, and Discovery
- CRCP 3320 Postmodern Software Design
- EE 5378 Mobile Phone Embedded Design

*Digital Humanities (two from a list to be determined)**Customized Track (two chosen in consultation with adviser)*

Theory	3
CRCP 2330 Nand to Tetris	
Capstone Project	3
CRCP 5301 Creative Computing Major Capstone	

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The Courses (CRCP)

CRCP 1330 (3). SOUND AND CODE. Explores computation as a powerful creative medium. Working with the visual programming environment Max/MSP, students learn the fundamentals of aural programming in the context of creative development. Course examples include algorithmic music, sound synthesis, waveform analysis, sound effects, sound detection, and midi. Laptop computer required.

CRCP 1350 (3). THE ART OF 3-D MODELING AND ANIMATION. Students explore 3-D modeling and animation using Maya, the industry standard 3-D software package. Topics include virtual sculpting, texture maps, transformations, procedural shaders, virtual lights and cameras, timeline-based animation, and special effects. Laptop computer required.

CRCP 2310 (3). NATURE AND CODE. Students explore patterns, systems, and underlying emergent structures found in nature through code experiments, simulations, and sketches. Course topics include swarming, growth, motility, chaos, complexity, predation, cellular automata, L-systems, and fractals. *Prerequisite:* ASIM 1310, CSE 1341, CSE 1342, a score of 4 or above on the computer science AP exam, or instructor permission. Laptop computer required.

CRCP 2330 (3). NAND TO TETRIS: ELEMENTS OF COMPUTING SYSTEMS. Students build an entire modern computer from the ground up to master the creative tools used within creative computation. Includes using simulated hardware and constructing an assembler, a virtual machine, a compiler, an operating system, and a program that runs on the project computer. Covers computing history, technical layers of abstraction, creative programming, and integration of ideas in creative computing. *Prerequisite:* CSE 1342 or ASIM 3305.

CRCP 3310 (3). DATA: MEANING, NARRATIVE, AND DISCOVERY. Students apply programming to obtain, transform, and automate data analysis to extract meaning from large sets of data. From basic data streams to social media APIs, relational databases to unstructured data, bits to big data, and from statistics to data mining, students apply technical concepts to datasets from the arts, humanities, sciences, and other disciplines. *Prerequisite:* CSE 1342.

CRCP 3320 (3). POSTMODERN SOFTWARE DESIGN. Students learn how to build integrated mobile and Web applications using postmodern tools, platforms, and practices. They also obtain a timeless understanding of application architecture, design patterns, and craftsmanship, applying them with powerful tools and workflows to ensure successful software. Covers Web development, Web applications, cloud-based architecture, user experience design, project management, mobile device programming, and software craftsmanship in creative computing. *Prerequisite:* CRCP 3310 or instructor consent. Restricted to creative computation majors and/or Lyle School of Engineering majors.

CRCP 4391 (3). SPECIAL TOPICS. Designed to cover topics that may have temporary or limited interest. *Prerequisite:* CSE 1342 or instructor approval.

CRCP 5101 (1). CREATIVE COMPUTING MINOR CAPSTONE. In consultation with a faculty adviser, students propose, design, and implement an independent creative computing project. Projects may include performance, exhibition, and hardware and/or software development. Requires completion of a paper summarizing significant project outcomes and results. Restricted to creative computing majors. To be completed in the student's last term of the creative computing major. *Prerequisite:* Permission of instructor.

CRCP 5301 (3). CREATIVE COMPUTING MAJOR CAPSTONE. In consultation with a faculty adviser, students propose, design, and implement an independent creative computing project. Projects may include performance, exhibition, and hardware and/or software development. Requires completion of a paper summarizing significant project outcomes and results. Restricted to creative computing majors. To be completed in the student's last term of the creative computing major. *Prerequisite:* Permission of instructor.

CRCP 5390 (3). VISUALIZATION OF INFORMATION. Introduces data visualization and creative coding utilizing the Processing programming language. Explores visual and information design principles, primarily through hands-on programming exercises. Includes assignments and exams that incorporate 2-D and 3-D computer graphics, interactivity, and data input. Covers procedural and object-oriented programming approaches to data visualization and provides an overview of leading-edge data visualization libraries and application program interfaces, including Web-based approaches.

DANCE

Associate Professor Patty Harrington Delaney, Division Chair

Professors: Shelley C. Berg, Danny Buraczski, Myra Woodruff. **Associate Professors:** Patty Harrington Delaney, Christopher Dolder, Leslie Peck. **Lecturer:** Anne Westwick. **Visiting Artist-in-Residence:** Adam Houglan. **Adjunct Lecturers:** Kathy Chamberlain, Albert Drake, Zac Hammer. **Musicians:** Dick Abrahamson, Jamal Mohamed, Mina Polevoy, Edward Smith, Janeen Vestal.

General Information

The Division of Dance offers a Bachelor of Fine Arts and a minor in dance performance. Students receive professional dance training within the context of a comprehensive liberal arts education. The goal is to develop the disciplined, versatile dance artist through a balanced study of ballet, modern dance and jazz dance techniques, complemented and reinforced by a broad range of theoretical studies and performance opportunities. The program provides an atmosphere in which students are nurtured and stimulated in their quest for artistic achievement, technical mastery and scholarly excellence. Undergraduate majors study dance as a performing art with the intent to become practicing artists. The core of the dance curriculum is designed with this goal in mind. The combination of performance and liberal arts education courses serves to develop the articulate dancer.

The Division of Dance has four dance studios, three of which are located in the Owen Arts Center. Each studio is equipped with a sprung floor, vinyl covering, sound system, grand piano, ballet barres and mirrors. The Charles S. Sharp Performing Arts Studio doubles as a performing space and is equipped with an adjustable black traveler, a control booth, state-of-the-art sound equipment and a theatrical lighting system. Adjacent to the Sharp Studio (B100) is Studio B120. The third facility in the Owen Arts Center is Studio 1430, adjacent to the Margo Jones Theatre and the stage of the Bob Hope Theatre. A fourth studio is located in McFarlin Auditorium. Live accompaniment is provided for all studio classes.

Admission, Audition and Financial Aid

Admission to the Division of Dance program is in two parts. In addition to meeting the admission criteria of the University as outlined in the Admission to the University section of this catalog, applicants must participate in a performance audition, which is the principal factor in determining an applicant's eligibility to major or minor in dance. In the performance audition, applicants are observed in a ballet class, modern dance sequences and a jazz dance combination. After this process, selected candidates are asked to perform a prepared solo that is 90 seconds in length. Applicants should bring a brief résumé, a wallet-sized photograph, music for the solo (tablet, smartphone or DVD) and appropriate dancewear and footwear (the modern dance portion of audition will be danced barefoot). Students will be asked to fill out a form that includes contact information as well SAT and/or ACT scores if available. Campus and regional dance auditions occur between October and March. Campus auditions are confirmed at www.smu.edu/meadows/areasofstudy/dance ("Undergraduate Studies" and "Admissions" links).

Performance

All dance majors have opportunities to perform and choreograph as an integral part of their performance studies. The Dance Performance Series includes main stage concerts in the Bob Hope Theatre, concerts in the Sharp Studio and noontime Brown Bag performances in the Owen Arts Center lobby. Other opportunities include special events, outreach programs and interdisciplinary projects within and beyond the Meadows community. Dance majors are required to participate in Dance Performance Series.

Bachelor of Fine Arts in Dance Performance

The Bachelor of Fine Arts degree in dance performance is accredited by the National Association of Schools of Dance. Successful completion of this program will enhance the student's personal growth as well as technical development in ballet, modern dance and jazz dance. The degree requires 80 credit hours in dance, of which a minimum of 44 credit hours are in technique and the remaining 36 credit hours provide students with the opportunity to develop scholarly and creative abilities in dance and related areas of interest.

Curriculum Notes: A student must be enrolled in six credit hours of dance with a minimum of three credit hours in technique class/classes in order to be a dance major in good standing and maintain an artistic scholarship. A minimum of four terms of ensemble work (DANC 3080) are required; enrollment will be processed by the division after casting is determined for each term. Three terms of dance composition (DANC 3341, 3342, 3343) are required beginning in the junior year. The capstone course is taken in the last term of the senior year.

Requirements

The faculty expects dance majors to apply themselves scholastically and to assume responsibilities conscientiously. Students are required to maintain a minimum GPA of 2.700 in dance courses to continue in the dance major. Grades lower than *C* are not acceptable in any required dance course and will necessitate repeat enrollments. If requirements are not met, the student is placed on academic probation. To be eligible for scholarship, students are required to maintain a minimum cumulative GPA of 2.700 in dance courses, and they must be enrolled in a minimum of six credit hours in dance. Full participation in the program and in division performances is expected of every student who receives a merit scholarship award. Performance studies and production activities in the Division of Dance take precedence over performance opportunities outside of the division.

Evaluation

High standards of discipline and execution are essential for artistic growth, progress and success. Regular class attendance, attendance at auditions, classroom and theatre etiquette, punctuality and attendance at student meetings are essential. Students meet with individual faculty at midterm to receive a progress report and to establish individual goals. At the close of each term, each student receives a performance evaluation by the collective faculty. Various aspects of a student's work are examined, including technical progress, capacity for and commitment to class work, personal growth and maturity, attitude, academic performance, production support, program participation, performance artistry, and health and fitness. When standards are not met, a student is advised that significant improvement must take place

to remain in the program. Poor critiques may result in probationary measures and/or loss of dance scholarship funding. All dance scholarships are reviewed each term. Further details on the standards and requirements for the dance major are included in the *Division of Dance Student Handbook*, which is available online.

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
Performance Technique	32
To be taken during the first 2–3 years of study:	
Ballet Courses: 12 credit hours	
Modern Dance Courses: 12 credit hours	
Jazz Dance Courses: 8 credit hours	
Advanced Performance Technique	12
Must be at the 3000–4000 level of proficiency in at least one major area of performance technique.	
Ensemble Performance	0
DANC 3080 (four terms)	
Composition	9
DANC 3341, 3342, 3343	
Theoretical and Applied Studies	17
DANC 1101, 1144, 1151, 1152, 1326, 2160, 3363, 4373, 4374	
Dance Electives (hours needed depends on capstone choice)	8–11
Selected from advanced performance technique, theoretical and applied studies, directed studies, or other elective courses taken within the Meadows School.	
Dance Capstone	0–3
DANC 4091, 4191, 4291, or 4391	
Community Experience	0–1
MSA 1001 or 1101	
Free Electives	
Hours vary as needed to meet University residency and degree requirements	

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Note: DANC 2160 is required for the dance major, and it also fulfills the University Curriculum requirement for PRWII.

Minor in Dance Performance

The minor in dance performance, which is available to all University students, is designed for those with previous dance training who wish to continue the pursuit of their interests within the context of their liberal arts studies. Dance performance minors do not perform in main stage concerts but are eligible to audition for student concerts by permission. Students who wish to take more than nine hours of technique classes may do so by permission. Acceptance criteria for the dance minor are the same as those for the major. The minor requires a minimum of 18 credit hours in dance as outlined below.

Dance Classes	9
DANC 4373 6 credit hours from the following: DANC 1151, 1326, 2160, 2170, 3363, 3374 (KNW/ CFA 3337)	
Performance Technique Classes (three from the following)	9
Ballet: DANC 1311, 2311, 3311 Modern Dance: DANC 1321, 2321, 3321 Jazz Dance: DANC 1231, 2231, 3231 Partnering: DANC 4004, 4104	

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The Courses (DANC)

Dance courses open to nondance majors are offered on a periodic basis. The remaining dance courses are restricted to dance majors unless otherwise indicated in the course descriptions.

Dance Courses Open to Nonmajors

DANC 1301, 1303, 1305, 3374 (also KNW/
CFA 3337)

Dance Courses for Dance Performance Majors

Ballet: DANC 1018, 1311, 2311, 3016, 3018, 3218,
3211, 3216, 3311, 4004, 4104, 4211

Performance Technique *Jazz Dance:* DANC 1231, 2231, 3231, 4231

Modern Dance: DANC 1321, 2321, 3221, 3321,
4221

Advanced Performance Technique DANC 3211, 3216, 3218, 3221, 3231, 3311, 3321,
4104, 4211, 4221, 4231

Ensemble Performance DANC 3080

Composition DANC 3341, 3342, 3343

Theoretical Studies DANC 1326, 3363, 4190, 4290, 4390, 4373,
4374

Applied Studies DANC 1101, 1144, 1151, 1152, 2160, 2170, 3354,
4091, 4191, 4291, 4391, 4366

DANC 1018 (0). POINTE I. Introduces and develops the fundamentals of pointe technique. Admission by placement. *Corequisite:* DANC 1311, 2311, or 3311.

DANC 1030 (0). PARTNERING I LABORATORY. A focus on the development of weight sharing skills, with methodology based in techniques associated with contact improvisation and Bartenieff fundamentals. Covers repertory from Pilobolus, one of the most internationally renowned dance companies that bases its work in contact improvisation. Restricted to first-year students.

DANC 1144 (1). THE DANCER'S TOOLBOX. Introduces healthy and effective practices that serve to develop a vibrant and successful dance artist. Focuses on physical well-being, artistic protocols, intellectual and cultural perspectives, and diverse approaches to creating and sustaining motivation and inspiration. Also, collaboration with other orientation courses and projects.

DANC 1151 (1). DANCE PRODUCTION I. Introduces the technical preparation, production, and running of dance performances. Also, orientation and information for providing support in areas of lighting, sound, costumes, and scenery. Service assignments provide hands-on training in mounting a mainstage production, as well as load-in and strike of dance productions in other venues. Required of all first-year dance majors.

DANC 1152 (1). DANCE PRODUCTION II. Service assignments for performance activities as a continuation of material introduced in the previous term. Development of production skills through verbal and visual communication. Includes lab hours outside of and in addition to the regularly scheduled class meeting times. Required.

DANC 1218 (2). POINTE I. Introduces and develops the fundamentals of pointe technique. Admission by placement.

DANC 1231 (2). JAZZ DANCE I. Exploration of the basics of jazz dance technique and styles (classic, musical theatre, and contemporary forms), including studies in basic positions, placement, isolations, and jazz rhythms.

DANC 1301 (3). BEGINNING BALLET. Introduction to the fundamentals of classical ballet. Not for credit in the dance major.

DANC 1302 (3). BEGINNING BALLET. Introduction to the fundamentals of classical ballet. Not for credit in the dance major.

DANC 1303 (3). BEGINNING MODERN DANCE. Introduction to basic movement skills, experiences, and concepts of modern dance. Not for credit in the dance major.

DANC 1304 (3). BEGINNING MODERN DANCE. Introduction to basic movement skills, experiences, and concepts of modern dance. Not for credit in the dance major.

DANC 1305 (3). BEGINNING JAZZ DANCE. Introduction to the fundamentals of jazz dance with emphasis on rhythm and theatrical style. Not for credit in the dance major.

DANC 1306 (3). BEGINNING JAZZ DANCE. Introduction to the fundamentals of jazz dance with emphasis on rhythm and theatrical style. Not for credit in the dance major.

DANC 1311 (3). BALLET I. Introduction to and development of the fundamentals of classical ballet and pointe technique. Inclusive of pointe class, men's class, and partnering class. *Prerequisite:* Restricted to dance majors and minors only.

DANC 1321 (3). MODERN DANCE I. Introduction to and development of the fundamentals of contemporary dance.

DANC 1326 (3). MUSICAL CONCEPTS. Introduces basic listening skills, historic musical literature methods for exploring multiple genres of music, and basic music theory related to rhythm and dynamics. The theoretical materials introduced are reinforced and practiced in the composition track.

DANC 2160 (1). INTRODUCTION TO PILATES. Introduces Pilates, a nonimpact, body conditioning method based on principles of abdominal and scapular stabilization. Emphasizes non-weight-bearing exercises, proper alignment, full range of motion, and patterned breathing.

DANC 2170 (1). YOGA FOR DANCERS. An introduction to the fundamentals of hatha yoga taught through vinyasa, a fluid series of physical poses initiated by focused breathing. Designed to cultivate mental clarity, to improve strength and flexibility, and to reduce muscular and mental tension.

DANC 2231 (2). JAZZ DANCE II. Continuing development of jazz dance technique and styles, with a focus on dynamics, rhythm, and directional changes. Explores classic jazz, blues, and contemporary jazz styles. Admission by placement.

DANC 2311 (3). BALLET II. Continuing exploration of classical ballet technique on the intermediate level with an emphasis on more complex port de bras, adagio, tourner, enchaînement, and allegro batterie. Inclusive of pointe class, men's class, and partnering class. *Prerequisite:* Admission by placement.

DANC 2321 (3). MODERN DANCE II. Continuing exploration of contemporary dance technique at an intermediate level with emphasis on more complex movement phrasing, rhythmic variation, and use of space. Admission by placement.

DANC 2361 (3). DANCE THEORY AND PRACTICE WITH AN EMPHASIS ON LABAN MOVEMENT STUDIES. Introduces established theoretical concepts and their practical application to

the performance and creation of movement. Areas of concentration include somatics, Laban Movement Analysis, motif writing, and Labanotation.

DANC 3016 (0). MEN'S BALLET TECHNIQUE. Emphasis on the virtuosity specific to the male dancer in the ballet idiom. *Corequisite:* DANC 1311, 2311, or 3311.

DANC 3018 (0). POINTE II. Emphasis on the virtuosity specific to the female dancer in the ballet idiom. Admission by placement. *Corequisite:* DANC 1311, 2311, or 3311.

DANC 3080 (0). ENSEMBLE PERFORMANCE. Rehearsal and public performance of existing repertory and/or original works. By audition. Departmental approval and administrative enrollment. Required. *Prerequisite:* DANC 2080.

DANC 3086 (0). EXPLORATIONS IN STYLE. Students explore a variety of dance forms, styles, and techniques beyond the foundation of the standing curriculum. *Prerequisites:* Junior or senior standing and technique level placement of II or IV in the appropriate technique.

DANC 3211 (2). BALLET III. Continuing development of classical ballet technique on the advanced level with an emphasis on technical proficiency, musicality, and movement dynamics. Admission by placement.

DANC 3216 (2). MEN'S BALLET TECHNIQUE. Emphasis on the virtuosity specific to the male dancer in the balletic idiom. The class objective is to strengthen and develop the dancer to his utmost potential. Includes variations. Admission by placement.

DANC 3218 (2). WOMEN'S POINTE TECHNIQUE. Emphasis on the virtuosity specific to the female dancer in the balletic idiom. The class objective is to strengthen and develop the dancer to her utmost potential. Includes variations. Admission by placement.

DANC 3221 (2). MODERN DANCE III. Continuing development of contemporary dance technique at an advanced intermediate level with emphasis on refining performance quality, depth of physically, dramatic expression, and individual style. Admission by placement.

DANC 3231 (2). JAZZ DANCE III. Exploration of more advanced technique and styles of jazz dance, performance projection, individual style, characterizations, and musical theatre themes. Focus on retaining extensive combination sequences. Admission by placement.

DANC 3311 (3). BALLET III. Continuing development of classical ballet technique on the advanced level with an emphasis on technical proficiency, musicality, and movement dynamics. May be inclusive of pointe class, men's class, and/or partnering class. *Prerequisite:* Admission by placement.

DANC 3321 (3). MODERN DANCE III. Continuing development of contemporary dance technique at an advanced intermediate level, with emphasis on refining performance quality, depth of physicality, dramatic expression, and individual style. Introduction of repertory. Admission by placement.

DANC 3341 (3). DANCE COMPOSITION I. Introduction to fundamental compositional concepts, including improvisation, abstraction, gesture, motivation, movement manipulation, and phrasing. Students create solo, duet, and group studies. *Prerequisite:* DANC 1326.

DANC 3342 (3). DANCE COMPOSITION II. Introduction to structural and aesthetic guidelines for the creation of group dance forms. Structural phrasing practices such as canon, unison, and antiphony serve as tools for facilitating student empiricism and experimentation. *Prerequisite:* DANC 3341.

DANC 3343 (3). DANCE COMPOSITION III. Focuses on working collaboratively with peers in music composition and lighting design. The primary project is the creation of an original work generated from a substantiated contextual source drawn from fields such as literature, visual art, science, architecture, philosophy, and religion. *Prerequisite:* DANC 3342.

DANC 3354 (3). DANCE AND CAMERA. Instruction in basic camera and editing skills and techniques designed to broaden and empower the dancer's understanding of the moving dance image on camera, and the ways this imagery may be modified and presented as digital media. Covers a variety of modes of digital capture, including single-camera archival, performer viewpoint, multicamera, and site-specific capture techniques. Students learn basic nonlinear editing skills in support of creating a dancer and/or choreographer reel and digital portfolio. *Prerequisite:* Junior or senior standing.

DANC 3363 (3). KINESIOLOGY FOR DANCE. Exploration of basic anatomy and the human body in motion. Normal and deviated skeletal structures and muscular development are assessed in regard to movement efficiency, injury potential, and dance aesthetics. Required.

DANC 3374 (3). THE EVOLUTION OF AMERICAN MUSICAL THEATRE. Examines the evolution of American musical theatre, from its roots in minstrelsy, burlesque, and vaudeville, to its adolescence in comic opera, operetta, and musical comedy, to its codification as musical theatre. Includes the early forms of popular entertainment, the integration of dance, music, and drama into the form known as musical theatre, and the figures of the 20th century who refined this integration on Broadway and in Hollywood.

DANC 3381 (3). REPERTORY AND PERFORMANCE III. Rehearsal and performance of masterworks of choreography, with emphasis on refinement of detail, clarity of phrasing, expression, musicality, and versatility within a broad range of styles. *Prerequisite:* DANC 2382 or instructor approval.

DANC 3382 (3). REPERTORY AND PERFORMANCE IV. Rehearsal and performance of additional masterworks of choreography, with emphasis on refinement of detail, clarity of phrasing, expression, musicality, and versatility within a broad range of styles. *Prerequisite:* DANC 3381 or instructor approval.

DANC 4045 (0). ADVANCED CHOREOGRAPHIC PROJECTS. Individual directed studies in choreography with a culminating performance. *Prerequisites:* DANC 3244 and instructor approval.

DANC 4090 (0). DIRECTED STUDIES. Supervised projects and/or research in theoretical studies, inclusive of community service projects. Arranged. *Prerequisite:* Instructor approval.

DANC 4091 (0). DANCE CAPSTONE. Provides the opportunity to create solo or group projects that focus on an area of high interest to the individual student. This may take forms such as choreography, performance, critical writing, and community engagement projects. *Prerequisite:* Restricted to dance majors only.

DANC 4104 (1). PARTNERING. Introduction to the basic elements of partnering inherent in classical ballet. Emphasis on technical skills and classical style. Includes excerpts from classical repertory. Admission by invitation. *Prerequisite:* Instructor approval. *Corequisite:* DANC 1311, 2311, 3211, or 3311.

DANC 4145 (1). ADVANCED CHOREOGRAPHIC PROJECTS. Individual directed studies in choreography with a culminating performance. *Prerequisites:* DANC 3244 and instructor approval.

DANC 4190 (1). DIRECTED STUDIES. Supervised projects and/or research in theoretical studies, inclusive of community service projects. Arranged. *Prerequisite:* Instructor approval.

DANC 4191 (1). DANCE CAPSTONE. Provides the opportunity to create solo or group projects that focus on an area of high interest to the individual student. This may take forms such as choreography, performance, critical writing, and community engagement projects. *Prerequisite:* Restricted to dance majors only.

DANC 4211 (2). ADVANCED BALLET. Advanced ballet technique offering a transition from dance study to professional-level work.

DANC 4221 (2). ADVANCED MODERN. Advanced modern technique offering a transition from dance study to professional-level work.

DANC 4231 (2). ADVANCED JAZZ. Advanced jazz technique offering a transition from dance study to professional-level work.

DANC 4245 (2). ADVANCED CHOREOGRAPHIC PROJECTS. Individual directed studies in choreography with a culminating performance. *Prerequisites:* DANC 3244 and instructor approval.

DANC 4270 (2). ADVANCED TECHNIQUE ELECTIVE. For advanced-level dancers. Presents local dance artists of the highest caliber in many genres of dance. Each term, the class offers one dance form such as modern, jazz, tap, ballroom, or flamenco. *Prerequisite or corequisite:* Level III class in the corresponding dance technique.

DANC 4271 (2). ADVANCED TECHNIQUE ELECTIVE. For advanced-level dancers. Presents local dance artists of the highest caliber in many genres of dance. Each term, the class offers one

dance form such as modern, jazz, tap, ballroom, or flamenco. *Prerequisite or corequisite:* Level III class in the corresponding dance technique.

DANC 4290 (2). DIRECTED STUDIES. Supervised projects and/or research in theoretical studies, inclusive of community service projects. Arranged. *Prerequisite:* Instructor approval.

DANC 4291 (2). DANCE CAPSTONE. Provides the opportunity to create solo or group projects that focus on an area of high interest to the individual student. This may take forms such as choreography, performance, critical writing, and community engagement projects. *Prerequisite:* Restricted to dance majors only.

DANC 4324 (3). MODERN DANCE IV. Advanced contemporary dance technique, offering a transition from dance study to professional-level work. Admission by placement.

DANC 4370 (3). DANCE CRITICISM/AESTHETIC. A practical introduction to writing about dance performance, with emphasis on observation and writing skills. Students examine works of master critics to gain a historical perspective and to become familiar with a variety of methodologies in analyzing dance texts. *Prerequisites:* DANC 2371 or 2372 and instructor approval.

DANC 4373 (3). DANCE HISTORY I: BALLET. The development of ballet as a Western theatre art, from its roots in the French court to contemporary ballet in Europe and America. Emphasis will be placed on choreographic schools and styles as well as the consideration of the ballet aesthetic in a broader cultural context. Required.

DANC 4374 (3). DANCE HISTORY II: MODERNISM. Explores the development of modernism in dance from the turn of the century to the present, with emphasis on the evolution of choreographic schools and styles. Also, the relationship of dance to the arts and humanities and to the culture in which it is created. Required *Prerequisite:* DANC 4373 or instructor approval.

DANC 4390 (3). DIRECTED STUDIES. Supervised projects and/or research in theoretical studies, inclusive of community service projects. Arranged. *Prerequisite:* Instructor approval.

DANC 4391 (3). DANCE CAPSTONE. Provides the opportunity to create solo or group projects that focus on an area of high interest to the individual student. This may take forms such as choreography, performance, critical writing, and community engagement projects. *Prerequisite:* Restricted to dance majors only.

FILM AND MEDIA ARTS

Associate Professor Derek Kompare, Division Chair

Professors: Sean Griffin, Rick Worland. Associate Professors: Kevin Heffernan, Mark Kerins, Derek Kompare, David Sedman. Lecturer: Paula Goldberg. Adjunct Lecturers: Sally Helppie, Tearlach Hutcheson.

General Information

The Division of Film and Media Arts offers students intensive training and close mentorship in the art of cinema and electronic/digital media, helping students develop their own artistic voice and vision. Production courses focus on fostering individual creativity and imagination while simultaneously developing technical skills (screenwriting, cinematography, editing and sound). History and critical studies courses expose students to the key artists and theorists of film and media, as well as to the various aesthetic movements that have developed across the globe. Students are also taught the business aspects of film/media, exposing them to how industrial concerns affect technological and artistic choices, and preparing them to successfully negotiate their place in the industry upon graduation. As such, students are encouraged to take an internship in the professional sector to gain practical experience in the field and establish professional contacts.

The B.A. in film and media arts requires 33 credit hours; it is designed to prepare students for careers in professional media industries or for postgraduate work in film and media studies. The B.A. is also designed to allow time for significant study in another discipline, making room for double majors and multiple minors in other fields. A wide variety of courses in cinema and media history, theory and criticism provide extensive insight into these media as art forms and as vibrant social and cultural institutions. Courses that focus on the business of film, television and new media initiate students into the diverse aspects of these industries. Additionally, courses in production offer experience in writing, shooting, directing and editing film and video projects. Finally, a capstone course provides final preparation for either entrance into a career in the media industries or further graduate studies.

The B.F.A. in film and media arts requires 48 credit hours and emphasizes developing the unique creative voice of each student. The B.F.A. is designed to prepare students for careers in professional film/television/new media production and to develop their creative abilities in the art form. Courses in production offer experience in writing, shooting, directing and editing film and video projects. Courses that focus on the business of film, television and new media initiate students into the diverse aspects of the industries they plan to enter. Additionally, courses in cinema and media history and criticism provide a basic and necessary knowledge of these media as art forms and as vibrant social and cultural institutions. Finally, a capstone program culminates in a yearlong creation of a thesis film/media project.

Instructional Facilities

The Division of Film and Media Arts is located in the Umphrey Lee Center, which houses faculty offices, classrooms, audio, video and film production, and media support areas. Computer labs with a full suite of editing, audio and graphics software are available to majors seven days a week through ID card access; other facilities include a recording studio, an audio mixing suite, storage and equipment checkout, a seminar room, and production classrooms. The division also has screening class-

rooms equipped for film, video and digital projection in the Owen Arts Center, and a shooting stage in McFarlin Auditorium.

Admission and Degree Requirements

To be admitted to the B.A. in film and media arts, a student must complete FILM 1301 and 1302 with a cumulative 2.750 or better GPA. Students transferring from other universities must have completed equivalent courses and obtained the equivalent GPA in those courses before they can be admitted to the major. Upon acceptance into the major, students are required to pass the following courses with a grade of C- or better to receive their degree: FILM 1304 and 2351.

To be provisionally accepted to the B.F.A. in film and media arts prior to matriculation at SMU, a student must submit a portfolio of film/video work, which will be reviewed by a faculty committee to determine acceptance into the B.F.A. program. Upon matriculation, a pre-admitted student must complete FILM 1304 and 2354 with a cumulative 2.750 or better GPA in order to be fully admitted into the B.F.A. To be considered for acceptance into the B.F.A. program while in attendance at SMU, students must have completed FILM 1304 and 2354 with a cumulative 2.750 or better GPA, and they must submit a portfolio. Students transferring from other universities must submit a portfolio, and must have completed equivalent courses to FILM 1304, 2354 and obtained the equivalent GPA in those courses before they can be considered for admission to the major. Upon acceptance into the B.F.A., students are required to pass FILM 1301 with a grade of C- or better to receive their degree.

Internships

Upon attaining junior-level status (60 credit hours), qualified students are encouraged to pursue internships that enable them to work under the guidance of professionals in the motion picture, television, cable and other digital media industries. Nonclassroom internship credit is limited to three credit hours taken as an elective on a pass/fail basis. Students must be a declared film and media arts major, must have taken FILM 1304, and must obtain permission from the division's internship coordinator.

B.A. Research Thesis

B.A. students wishing to pursue a senior thesis project (FILM 5314) must identify a proposed research project and then apply to FILM 5314 the spring term before they plan to do the thesis project; specifically, applications are due by the end of the first school week after spring break. Details about what to include in the application packet are available in the division office. **Note:** Thesis registration should take place the final fall of a student's SMU career, and application should take place the spring before that (i.e., for those graduating in May, application and registration will occur the spring term of the student's junior year).

Applications will be reviewed by a faculty committee, and students whose proposals are accepted will be notified by the end of the spring term so they can move forward on the projects during the summer break. Applications for a senior thesis are competitive and only a small number of proposals will be accepted each year.

The ensuing fall, approved students will register for FILM 5314 and complete their projects largely independently, though with advice and help from their committees as necessary. Each student registered for FILM 5314 in a given term will have, at most, until the end of the following term of that academic year to complete the proposed project to the satisfaction of his/her committee. This means thesis

defenses should be scheduled no later than mid-April to allow time to address any issues or concerns raised by the committee at the defense.

B.F.A. Thesis Film

The B.F.A. degree *requires* enrollment in a yearlong thesis film course and completion of a senior thesis project. Therefore, *all* B.F.A. students must submit a thesis project preproduction proposal packet the spring term of their junior year; specifically, proposals are due *by the end of the first school week after spring break*. Details about what to include in the proposal packet are available in the division office. Proposals will be reviewed by the faculty, and students will be notified about any potential problems that need to be addressed prior to registration in FILM 5311. Students not submitting proposals will not be allowed to register for this course or to shoot a thesis project. The ensuing academic year, B.F.A. students will register for FILM 5311 in the fall, and for FILM 5313 in the spring. Students registered for FILM 5212 will have, at most, until the second day of final exams that term to complete the proposed project to the satisfaction of their committees. This means thesis defenses should be scheduled no later than mid-April to allow time to address any issues or concerns raised by the committee at the defense. Each senior B.F.A. student will be required to present his/her finished project after it has been approved by the committee.

Directed Studies

A directed study is a close collaboration between a professor and an advanced student with junior or senior standing who conducts a rigorous research or creative project that goes beyond the experience available in course offerings. The student must secure formal approval from the professor to undertake a directed studies project.

Class Attendance

Due to limited class space and enrollment pressures, a student who fails to appear on the first day or who fails to attend three consecutive class meetings during an academic term without establishing contact with the instructor may be administratively dropped from a course.

Bachelor of Arts in Film and Media Arts

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
Studies and Production Requirements	18
FILM 1301, 1302, 2351, 5353	
FILM 1304 and one from FILM 2354, 3301, 3302, 3303, 3308	
Industry Requirements (one from the following)	3
FILM 3328, 3330, 3335, 3361, 3396, 4304, 4316, 4399	
Capstone Requirement	3
FILM 5314 (requires application and permission) <i>or</i> 5315	
Film and Media Arts Electives	9
Free Electives	
As needed to meet University residency/degree requirements	
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Bachelor of Fine Arts in Film and Media Arts

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
Studies Requirements	9
FILM 1301	
<i>At least two from the following:</i>	
FILM 1302, 2306, 2332, 2344, 2351, 2362, 2364, 3300, 3310, 3314, 3352, 3353, 3355, 3359, 3375, 3395, 3397, 4351, 5315, 5353	
Industry Requirements	9
FILM 4316	
<i>At least two from the following:</i>	
FILM 3328, 3330, 3335, 3361, 3396, 4304, 4399 AMAE 3305, 3322, 3370, 3387	
Production Requirements	21
FILM 1304, 2354, 3304	
<i>Four from the following:</i>	
FILM 3301, 3302, 3303, 3305, 3306, 3308, 3309, 3316, 3364, 3365, 3384, 3390, 3391, 4301, 4305, 4306, 4307, 4308, 4317, 4385	
Capstone Requirement	9
FILM 5311, 5312, 5313	
Community Experience	0–1
MSA 1001 or 1101	
(B.F.A. pre-admits enroll their first term at SMU; current SMU students admitted to the B.F.A. enroll the first fall after their acceptance.)	
Free Electives	
Hours vary as needed to meet University residency and degree requirements	

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Departmental Distinction

Both B.A. and B.F.A. film and media arts majors with sufficiently high standing may graduate from the division with honors (i.e., with departmental distinction). All students who are qualified – 3.750 departmental GPA, 3.500 SMU GPA and 21 credits of film and media arts courses completed – will be informed by the division chair of their eligibility at the end of the fall term of their junior year. To attain the departmental distinction recognition, an eligible candidate must complete a thesis project through the FILM 5311/5313 or FILM 5314 sequence, and successfully defend the thesis to his or her committee with a final grade of A; candidates must also maintain a 3.750 departmental GPA and 3.500 SMU GPA through graduation. Students should note that admission to FILM 5314 is competitive, and eligibility for departmental distinction does not guarantee acceptance into this course.

The Courses (FILM)

FILM 1301 (3). ART OF FILM AND MEDIA. Introduction to the fundamental visual and audio techniques used in cinema, television, and emerging media to convey meaning and mood. Careful analysis of selected films, TV shows, and other media. Required of all majors.

FILM 1302 (3). CONTEMPORARY MEDIA CULTURE. Surveys the relationship between media and society. Also, the technological, economic, and legal aspects of the media industries. Required of all majors and minors.

FILM 1304 (3). PRODUCTION 1. Practical, comprehensive course in the fundamentals of video and audio production, covering cameras, microphones, lighting, shooting, editing, sound design, and outputting. Incorporates hands-on exercises, screenings, lecture, and group and individual video projects. Required of all majors.

FILM 2306 (3). HISTORY OF RECORDED MUSIC. Connects major periods of recorded music to innovations in music hardware with special focus on the importance of music to the radio, television, cinema, and new media industries.

FILM 2332 (3). AMERICAN POPULAR FILM AND TELEVISION. An in-depth examination of specific aspects of the American popular cinema, with a focus on questions of popular culture and ideology, the historical development of styles and genres, and the impact of the Hollywood film industry. Specific topics and films vary from term to term.

FILM 2344 (3). HISTORY OF ANIMATED FILM. Provides a critical and historical overview of the development of the animated film from its origins in the 19th century to the present.

FILM 2351 (3). INTERNATIONAL FILM HISTORY. Overview of the development of the cinema as a technology, an art form, an industry, and a social institution, beginning with the origins of the medium and tracing its major movements and configurations up to the present.

FILM 2354 (3). SCREENWRITING 1. Introduces students to the language of screenwriting. Topics include the creative process of idea generation and what makes a story filmable; creating memorable and redeemable characters; the arc and transformation of story, including the setup, the question or conflict, the turning point, and the climax or ending; and the details of proper format and presentation. In application, students produce two short film scripts as their mid-terms and finals, and they gain an understanding of the characteristics of a good short film and the differences between shorts and feature scripts.

FILM 2362 (3). DIVERSITY AND AMERICAN FILM: RACE, CLASS, GENDER, AND SEXUALITY. Historical survey of representations of race, ethnicity, class structure, gender, and sexual orientation in American cinema. Also, opportunities for minorities within the industry.

FILM 2364 (3). HISTORY OF CINEMA AND TV COMEDY. Survey of the development of comedy in film and television, with emphasis on a historical examination of comic films and TV shows. Also, a theoretical analysis of the phenomena of humor and laughter.

FILM 3300 (3). FILM AND TELEVISION GENRES. Examines questions of genre pertinent to film and television by focusing on various generic forms and their history. Specific genres for consideration vary from term to term.

FILM 3301 (3). EXPERIMENTAL CAMERA. Pushing the technical boundaries of cameras as capture devices, students experiment with the creative aesthetic possibilities therein (still and/or motion) and then draw from a variety of genres to create short, experimental films. Students explore diverse concepts such as storytelling, portraiture, documentary, poetry, and abstraction, and they combine elements such as still photography, animation, graphics, narration, sound effects, and original music to create motion picture media. *Prerequisites:* FILM 1304, or ASPH 1300 and 1310 (or instructor permission is available for students with a working knowledge of the camera, including aperture, shutter speed, and focal length), and a basic understanding of video editing. Students are required to have access to at least a digital still camera.

FILM 3302 (3). CONVERGENT MEDIA. Explores the technical, legal, and practical requirements for creating cross-platform media, from preproduction through distribution. Also, covers crowdsourcing, projects distributed on the Web, and projects utilizing the interactive nature of the Web. The goal is to understand, at a fundamental level, how the Web works and all the components and/or tools that allow interactivity to happen. This course demystifies Internet and Web technology for nontechnical people.

FILM 3303 (3). FILM ACTING. Designed to help the director understand the actor's process of crafting performances from objectives, obstacles, substitutions, inner objects, beats, actions, and doings. Explores a basic overview of these techniques through monologue and scenes. Concentrates on the unique circumstances given to the single-camera film actor: set etiquette (film crew breakdown, terminology), technical basics (the shots), blocking (hitting the mark), and general camera awareness (overlapping, cheating, matching). Also, the marketing needed to secure an acting job (headshots, agents and managers, auditioning, callbacks).

FILM 3304 (3). PRODUCTION 2. Intermediate-level production course building on the lighting, camerawork, editing, and sound design skills and techniques learned in FILM 1304. Focuses on developing an artistic vision and includes the basics of directing, preproduction, grip, double-system sound, set etiquette, and crewing. Students produce individual short narratives in addition to working together on an all-class project. *Prerequisites:* FILM 1304, 2354.

FILM 3305 (3). MOS CAMERA. A focus on visual language and advanced camera and lens techniques. Each student makes a short film, shooting only nonsynchronous original material and concentrating on visual design through effective lens choice, mise-en-scène, location usage, and production design. The course covers prime lenses, exposure, latitude, color grading, and other camera-specific technologies, and provides hands-on experience with high-end camera equipment. Students gain a deeper understanding of how to use visual language to express their ideas. *Prerequisite:* FILM 3304.

FILM 3306 (3). NONFICTION PRODUCTION. Combines the history and practice of nonfiction field production. Hands-on demonstrations, screenings, readings, lectures, and discussions prepare students to produce and create a short documentary piece. Focuses on research, pre-planning, and writing skills as integral components of video production. Students create a documentary project 5–10 minutes in length on a topic of their choice. *Prerequisite:* FILM 3304.

FILM 3308 (3). EDITING. This course on the creative art and craft of editing develops storytelling and rhythmic sensibilities through close study of films, critique and discussion of works in progress, and hands-on practice. Projects include short editing exercises, reworks of students' own existing projects, and re-edits of others' films. *Prerequisite:* FILM 1304.

FILM 3309 (3). MULTICAMERA PRODUCTION. Multiple-camera shooting has long been a staple of such things as three-camera television shooting and live sporting events, but as cameras have gotten cheaper and more accessible, multicam has found a place in a vast range of applications. Students explore the variety of ways multiple-camera techniques are used and the advantages and disadvantages of each compared with each other and with single-camera shooting. Includes several multicam projects covering a range of content types and shooting styles. *Prerequisite:* FILM 1304.

FILM 3310 (3). SCREEN ARTISTS. This course examines the questions of authorship pertinent to the cinema by focusing on the works of one or more film artists. The specific directors, producers, screenwriters, and other artists treated by the course will vary from term to term.

FILM 3314 (3). COMICS: FROM PANELS TO SCREENS. An overview of comics, one of the most influential aesthetic forms of the past century, with a focus on aesthetics (including genre), cultural history, and function as a media industry. Analyzes the relationship between comics and other media forms, particularly film and TV.

FILM 3316 (3). 16 MM PRODUCTION. A focus on visual language and 16 mm film production techniques. Each student makes a short film, shooting only nonsynchronous original material. Covers use and operation of the Bolex 16 mm film camera: incident light meter, fixed focal length lenses, film speeds, and color temperature ratings. Also, visual design through effective lens choice, mise-en-scène, location usage, and production design. Students gain a deeper understanding of how to use visual language to express their ideas. *Prerequisite:* FILM 1304.

FILM 3328 (3). MEDIA MANAGEMENT. Explores the relationship between the theory and practice of broadcast and cable management, with emphasis on legal and economic constraints on these media outlets.

FILM 3330 (3). MEDIA SALES. Examines the contemporary world electronic media sales, combining strategic thinking with creative thought while keeping the target audience and/or client in mind.

FILM 3335 (3). FILM EXHIBITION AND DISTRIBUTION. Detailed examination of contemporary practices in the distribution and exhibition of theatrical feature films, including the roles of audience survey techniques, booking, publicity, and advertising.

FILM 3352 (3). AMERICAN FILM HISTORY. An overview of U.S. film history from the silent period to the present day. Emphasis on the genres, directors, cinematic techniques, and industrial factors that advanced the art of Hollywood and independent filmmakers.

FILM 3353 (3). AMERICAN BROADCAST HISTORY. Focus on the history of American television, with an emphasis on the industrial and sociocultural aspects of the medium's development. Issues of race, gender, class, genre, sexuality, and national identity are studied in the context of significant television shows of the past and present.

FILM 3355 (3). HISTORY OF DOCUMENTARY FILM AND TELEVISION. An overview of the development of the documentary mode surveying historical and critical aspects of nonfiction cinema and TV, including newsreels, social issue films, propaganda movies, wartime documentaries, the cinema verité movement, network documentary series, and reality TV.

FILM 3359 (3). NATIONAL CINEMAS. Examines the social, economic, technological, and aesthetic histories of cinema from various nations. Also, the concept of "national cinema." Specific nations for consideration vary from term to term.

FILM 3361 (3). MEDIA PROGRAMMING. Analysis of the development of program ideas and the research and strategies involved in programming media outlets.

FILM 3364 (3). SCREENWRITING 2. Students produce a first draft of a feature screenplay. Review of proper format and act structure leads to a more in-depth exploration of story, character, dialogue, scenes and scene sequencing, narrative devices, and the emotional payoff. Each student pitches his or her idea twice: the logline (short summary) pitch at the beginning of the term and the 10-minute room pitch at the end of the term. Work includes step outlines of each act, scene readings, and collective feedback, culminating in a fully realized first-draft screenplay. *Prerequisite:* FILM 2354.

FILM 3365 (3). ADVANCED SCREENWRITING WORKSHOP. Writing is rewriting. Every student is required to enter the class with a first draft of a feature-length screenplay. In order to strengthen and deepen the story, students solidify characters, give characters clear agendas and goals, fix story problems, identify the central conflict and work on anything superfluous that does not move the story forward, improve scene sequences, punch up the dialogue, eliminate clichés, and work toward the final edit. *Prerequisite:* FILM 3364.

FILM 3375 (3). POSTWAR EUROPEAN CINEMA: 1945–PRESENT. Presents an overview of postwar European cinema, with a focus on major films, directors, and national movements. Considers cultural and stylistic features that differ from Hollywood-genre models. (Summer abroad)

FILM 3384 (3). SOUND 1. Comprehensive audio course with instruction and work in recording, editing, mixing, and design. Topics include microphone selection and placement, Pro Tools, advanced recording techniques, routing in a studio and within software, Foley sound effects, automated dialog replacement, and introduction to audio processors. Also, individual and group sound-design projects. *Prerequisite:* FILM 1304, MSA 3310, or instructor permission.

FILM 3385 (3). SOUND 2. Audio course that builds on the ideas and tools covered in FILM 3384, with a focus on postproduction. Also, creative sound design, including sound effect creation, synthesis and sampling, artistic approaches to using sound over the course of an entire work, and storytelling through sound. Emphasizes the rerecording mix, including advanced work with processing and automation, surround sound mixing, and mastering. Additional topics such as MIDI, stems, live mixing, music mixing, and mixing for different venues may be added depending on student and instructor interests. *Prerequisite:* FILM 3384.

FILM 3390 (3). TOPICS IN PRODUCTION. Focus on a specific area of production. Subjects and prerequisites vary from term to term.

FILM 3391 (3). TOPICS IN POSTPRODUCTION. Focus on a specific topic of film/video postproduction. Subjects and prerequisites vary from term to term.

FILM 3395 (3). TOPICS IN FILM AND MEDIA STUDIES. Focuses on a specific topic pertinent to film and media studies (e.g., film and/or television history, criticism, critical theory). Topics vary from term to term.

FILM 3396 (3). TOPICS IN MEDIA INDUSTRIES. Focuses on a specific topic related to the business and/or industrial side of film and media. Subjects vary from term to term.

FILM 3397 (3). GENDER AND SEXUALITY IN MEDIA. Focus on a specific topic related to gender and sexuality in film and media. Subjects vary from term to term.

FILM 4125 (1). INTERNSHIP. Offers practical experience through work in the professional media, either part-time during the fall or spring terms, or full-time during summer. Students may take a maximum of 3 credit hours of internship (150 hours of work per term is calculated as 3 credit hours). Internship credit is given on a pass/fail basis only. *Prerequisites:* Permission of instructor and upper-division standing.

FILM 4225 (2). INTERNSHIP. Offers practical experience through work in the professional media, either part-time during the fall or spring terms, or full-time during summer. Students may take a maximum of 3 credit hours of internship (150 hours of work per term is calculated as 3 credit hours). Internship credit is given on a pass/fail basis only. *Prerequisites:* Permission of instructor and upper-division standing.

FILM 4301 (3). TV AD CONCEPTING AND PRODUCTION. Working collaboratively, students create and develop ideas for 30-second commercials for predetermined clients, complete all necessary preparation for producing these concepts, and shoot and edit them into finished ads. Focus is on real-world commercial-style production, emphasizing how to address clients' specific needs while maintaining the creative elements of design and production. Completed ads are submitted to national and/or international advertising competitions and festivals. Note: Interdisciplinary course cross-listed with ADV 4397; usually offered during the January or summer term. *Prerequisite:* Instructor consent. Generally, students must have taken ADV 3395 and/or FILM 3304 beforehand, though in special cases exceptions may be made.

FILM 4304 (3). NEW MEDIA DISTRIBUTION. Discusses the distribution and monetization of online video. Industry concepts such as measuring return on investment, identifying the major industry players in new media distribution, and sustaining an online filmmaking brand are framed within the contemporary, multiplatform video marketplace.

FILM 4305 (3). CINEMATOGRAPHY. Cinematography is the articulation of motion picture language through the technical and aesthetic concerns of the lens, composition, lighting, visual design, camera movement, and point of view. Students explore each of these elements in theory and in practice to better develop their visual storytelling skills. Examination and analysis of art, print media, films, videos, and TV shows is complemented by demonstration of and intensive hands-on practice with camera, lighting, grip, electric, and filtration. *Prerequisite:* FILM 1304.

FILM 4306 (3). INTRODUCTION TO ANIMATION. Studies in traditional animation principles, including squash and stretch, timing and spacing, morphing, paths of action, overlapping actions, walk/run cycles, balance, and jumping. This introduction to character animation, with class exercises in character acting in both voice and movement, helps students translate performance into their animated characters. Students have opportunities to work with multiple methods of animation, including 2-D traditional hand drawn, Claymation, stop motion, and 2-D/3-D CGI software. *Prerequisite:* FILM 1304.

FILM 4307 (3). INTRODUCTION TO 3-D ANIMATION. An introduction to computer graphics with an emphasis on the popular software package Maya. Includes focus on the user interface, creating of 3-D geometry using polygonal techniques, materials and textures, kinematics, animation, and camera lighting techniques. This course explores the various aspects and fundamentals of computer graphics. Students gain an understanding of the workflow necessary to create 3-D imagery. Assignments employ students to combine a variety of techniques to become familiar with the computer animation production process. *Prerequisite:* Junior standing or higher.

FILM 4308 (3). POSTPRODUCTION VISUAL FX. Project-based studies in design concepts and application to broadcast graphics and visual special FX. Introduces 3-D design and advanced green screen keying and compositing techniques and motion tracking. Also, working within 3-D space and setting up virtual cameras and lights using After Effects and Apple Motion. Focuses on visual FX design and advanced key framing techniques for animating FX with final compositing into live-action footage. *Prerequisites:* FILM 1304 and instructor consent.

FILM 4316 (3). FILM PRODUCING. Lectures and discussions by both faculty and guest speakers provide an overview of the basic business and legal aspects of film and television production. *Prerequisites:* FILM 1304, 2354.

FILM 4317 (3). FILM DIRECTING. Covers all elements of the directing process, with specific emphasis on how the film director works with screen actors and captures actors' performances to fit the director's unique vision. Working from a script throughout the term, students learn about script analysis, character outline, casting, rehearsals, and on-set direction. Students create a casting notice, hold auditions, and work with professional and/or student actors. *Prerequisite:* FILM 1304.

FILM 4325 (3). INTERNSHIP. Offers practical experience through work in the professional media, either part-time during the fall or spring terms, or full-time during summer. Students may take a maximum of 3 credit hours of internship (150 hours of work per term is calculated as 3 credit hours). Internship credit is given on a pass/fail basis only. *Prerequisites:* Permission of instructor and upper-division standing.

FILM 4351 (3). MAPPING MODERNISM: ARTISTIC COLLABORATIONS IN PARIS AND MOSCOW, 1890–1940. Investigates artistic modernism in Paris, Moscow, and St. Petersburg, with a focus on fertile collaborations and exchange in art, dance, theatre, music, and film.

FILM 4353 (3). FILM AND MEDIA THEORY. Provides an overview of major theoretical writings on cinema, television, and new media (including the work of theorists such as Andre Bazin, Sergei Eisenstein, Laura Mulvey, and Christian Metz) and demonstrates the application of various analytical approaches to specific texts. *Prerequisites:* FILM 1301, 2351.

FILM 4399 (3). GLOBAL MEDIA SYSTEMS. Overview of contemporary globalized media industries, policies, and texts, with an emphasis on how cultural differences and similarities are represented, marketed, and contested in television, film, and other media forms. *Prerequisite:* FILM 2351 or instructor consent.

FILM 5110 (1). DIRECTED STUDY. Independent study under the direction and supervision of a faculty member. A directed study is a close collaboration between the professor and an advanced student who conducts a rigorous project that goes beyond the experience available in course offerings. The student must secure written permission from the instructor and return a completed directed studies form to the Film and Media Arts Office before the start of the term during which the study is to be undertaken. *Prerequisites:* Junior standing and permission of instructor.

FILM 5210 (2). DIRECTED STUDY. Independent study under the direction and supervision of a faculty member. A directed study is a close collaboration between the professor and an advanced student who conducts a rigorous project that goes beyond the experience available in course offerings. The student must secure written permission from the instructor and return a completed directed studies form to the Film and Media Arts Office before the start of the term during which the study is to be undertaken. *Prerequisites:* Junior standing and permission of instructor.

FILM 5310 (3). DIRECTED STUDY. Independent study under the direction and supervision of a faculty member. A directed study is a close collaboration between the professor and an advanced student who conducts a rigorous project that goes beyond the experience available in course offerings. The student must secure written permission from the instructor and return a completed directed studies form to the Film and Media Arts Office before the start of the term during which the study is to be undertaken. *Prerequisites:* Junior standing and permission of instructor.

FILM 5311 (3). THESIS FILM 1. A course centered on completing a high-quality senior thesis film using classes as a workshop to improve projects in the preproduction, production, and postproduction phases. This course is designed as the culmination of the production curriculum, providing a forum for putting the ideas, skills, and techniques learned throughout the curriculum into use on one ambitious piece. The student enrolled must come in the first day with director's book in hand and be the director and primary creative force behind the project proposed (e.g., cannot propose to be the producer, writer, or director of photography for the film but not direct it). The thesis film must ultimately be defended to and approved by a faculty committee. *Prerequisites:* Completion of all other production requirements, senior standing, and acceptance through a competitive application process.

FILM 5312 (3). MEDIA CAREER PREPARATION. Through various assignments, research, lectures, and guest presentations by industry professionals, students learn about career options and opportunities in the field of media arts. Students are expected to prepare for their short- and long-term career goals through research projects, the creation of personal marketing pieces (e.g., business cards, reels of their work, and film festival submissions), the preparation of appropriate résumés, networking, and the creation of a final project designed to launch their individual careers in the entertainment industry. Substantial work outside the class periods is required. *Prerequisite:* FILM 5311 or senior standing within the division.

FILM 5313 (3). THESIS FILM 2. A course centered on completing a high-quality senior thesis film using classes as a workshop to improve projects in the preproduction, production, and postproduction phases. This course is designed as the culmination of the production curriculum, providing a forum for putting the ideas, skills, and techniques learned throughout the curriculum into use on one ambitious piece. The student enrolled must be the director and primary creative force behind the project proposed (e.g., cannot propose to be the producer, writer, or director of photography for the film but not direct it). The thesis film must ultimately be defended to and approved by a faculty committee. *Prerequisite:* FILM 5311.

FILM 5314 (3). RESEARCH THESIS. An advanced critical studies course in which students research, write, and defend a research paper, 10,000-15,000 words in length and developed in consultation with a faculty adviser. The thesis is designed to synthesize interests and works that the student may have developed in previous critical studies courses, and to potentially serve as an essay for scholarly publication or for application to a graduate program in media studies. While the course is individually structured and highly self-directed, it also requires regular meetings with the thesis adviser. The thesis must ultimately be defended to and approved by a faculty committee. *Prerequisites:* Two 2000-level or above FILM critical studies courses, senior standing, and acceptance through a competitive application process.

FILM 5315 (3). CRITICAL STUDIES SEMINAR. A high-level research seminar that fulfills the department's capstone requirement. Topics may vary each term; may be repeated once for credit with a different topic. *Prerequisites:* FILM 2351 and one other 3000- or 4000-level critical studies course; nonmajors need consent of instructor.

FILM 5353 (3). FILM AND MEDIA THEORY. Provides an overview of major theoretical writings on cinema, television, and new media (including the work of theorists such as Andre Bazin, Sergei Eisenstein, Laura Mulvey, and Christian Metz) and demonstrates the application of various analytical approaches to specific texts. *Prerequisites:* FILM 1301, 2351.

INTERDISCIPLINARY PROGRAMS AND COURSES

Bachelor of Arts in Interdisciplinary Studies in the Arts

Professor Kevin Paul Hofeditz, Director

The major in interdisciplinary studies provides an opportunity for outstanding students to design programs that bring together multiple disciplines within the Meadows School of the Arts. Another option is to combine a discipline or disciplines housed in the Meadows School of the Arts with areas of study found elsewhere in the University for the purpose of exploring new forms of artistic expression or communication. Academically qualified students may explore the possibility of a specialized major with the program director. If the proposed plan appears to have merit, the program director will suggest faculty advisers who can provide further assistance in designing the program.

Program Description. Students with at least a 3.000 GPA in the first 24 term hours taken through enrollment at SMU are eligible to pursue the program. The program consists of individually designed majors in the arts of at least 36 term hours, with a minimum of at least 24 term hours of advanced courses (3000 level or above). At least two-thirds of the courses that count toward the major must be taken in the Meadows School of the Arts. The program must satisfy all Universitywide requirements and all other University and Meadows School graduation requirements. Students are responsible for fulfilling all prerequisites for courses taken. This program is designed to allow exceptional students an opportunity to design an interdisciplinary program; it is not intended to be a way of avoiding divisional requirements. Certain Meadows courses are open only to majors or by audition. Admission to such courses is at the discretion of the faculty of the division in which such courses are offered. The degree will be identified as a Bachelor of Arts. The transcript will refer to the major as "Interdisciplinary Studies in the Arts." A note on the transcript will denote the specialization. Students intending to seek admission to graduate schools are encouraged to include at least 30 hours of a coherent set of courses in an identifiable disciplinary field.

Administrative Procedures. The Meadows Academic Policies Committee shall have the final authority to approve all specialized programs. In order to initiate discussion of a specialized major, a student must submit to the program director a preliminary plan of study in the form of a brief statement of goals and a course list made in consultation with appropriate faculty advisers. A number of steps must be completed prior to declaring the major:

1. If the program director approves the program, the student and the faculty advisers must form a supervisory committee with a minimum of three members. The supervisory committee will provide advice and guidance to the student. At least two members, including the chair of the committee, shall be resident members of the Meadows School faculty. The chair of the committee will normally be the faculty adviser.
2. The student will submit a formal plan of study to the supervisory committee. The plan of study must include a proposal for a special project such as a thesis, exhibition or performance. Satisfactory completion (in the judgment of the supervisory committee) of this special project is a requirement. If the committee approves the plan, it must then be submitted to the program director, who will submit it to the Meadows Academic Policies Committee for approval.

3. Once approved by the Meadows Academic Policies Committee, the plan will be transmitted to the Office of the Meadows Associate Dean for Student Affairs. The plan of study normally should be submitted to the Meadows Academic Policies Committee for approval before the completion of 60 total term hours of coursework.
4. The chair of the supervisory committee and the program director will recommend candidates for graduation. The chair of the supervisory committee will certify that the required project has been completed to the satisfaction of the committee. The supervisory committee may recommend that the degree be awarded with distinction if the GPA in the courses required for the major exceeds or equals 3.500 and if the project is deemed excellent. The associate dean for student affairs will be responsible for verifying and certifying graduation requirements.

Minor in Graphic Design

Lecturer Cheryl Mendenhall, Director

The graphic design minor provides a basic understanding and development of skills necessary for message design across various media. Topics and skill sets may include identity (logos, branding collateral material, packaging), digital (social, mobile, online media), publication (magazines, newspapers, books), and other areas of design. The minor is designed for students who wish to incorporate an interest in graphic design into their major coursework or to pursue further study in a variety of design disciplines.

Through this minor, students will demonstrate an understanding of the history of graphic design communication, demonstrate the visual and aesthetic skills needed to communicate design messages across media, apply production techniques and technologies to solve graphic design problems, create a design portfolio that includes both print and online collateral material, understand the interrelationship of graphic design to society, and develop a better understanding of graphic design in the various communication industries (advertising, journalism, public relations, publishing, etc.) The minor requires 21 term credit hours, distributed as follows:

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
Core Courses	12
ADV 1360 (formerly 3391) Creative Production	
ADV 2323 (formerly 2310)	
<i>or ASAG 1310</i> Word and Image/Art and Design: 1900–Present	
ADV 2361 (formerly 3360) Introduction to Graphic Design Studio	
ADV 3361 (formerly 4320) Typography	
Electives	9
Three from the following, with at least one course at the 4000 level or above:	
ADV 1321 (formerly 3385) Introduction to Creativity	
ADV 4363 (formerly 4330) Logo and Trademark Design	
ADV 4364 (formerly 4335) Publication Design	
ADV 4366 (formerly 4360) Visualization of Information	
ASIM 1300 Introduction to Digital Hybrid Media	
ASIM 1310 Art and Code I	
ASIM 3310 Computation and Media Workshop	

Minor in the History of the Visual and Performing Arts

Lecturer Melissa Murray, Director

The minor in the history of the visual and performing arts provides students with a broad multidisciplinary engagement with the arts in their historical contexts. Students must take six courses (18 hours) from the following list, with at least one course from each group and no more than two courses from any single group.

Art, art history, dance, film and media arts, music, and theatre majors may apply credits from the history sequence requirements of their respective majors toward this minor but must take at least 12 hours outside their discipline.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
History of Art (one or two from the following)	3–6
ARHS 1303 Introduction to Western Art I: Prehistoric Through Medieval	
ARHS 1304 Intro to Western Art II: Renaissance–Modern	
ARHS 1307 Introduction to Art History	
ARHS 1336 Rhetorics of Art, Space, and Culture: Ways of Knowing	
Any art history course at the 3000 level or above	
Music (one or two from the following)	3–6
MUHI 1321 The Art of Listening	
MUHI 3301, 3302 Survey of Music History I and II	
MUHI 4350 Music in World Cultures	
Dance and Theatre (one or two from the following)	3–6
DANC 2370 Movement as Social Text	
THEA 3381, 3382 Theatre and Drama History I, II	
Film History (one or two from the following)	3–6
FILM 2351 International Film History	
FILM 2352 American Film History	
FILM 2353 American Broadcast History	

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Minor in Musical Theatre

Professor Kevin Paul Hofeditz, Director

The minor in musical theatre is designed to develop the fundamental set of skills required for musical theatre. Through the specific studies in dance, music and theatre that are needed for competency in musical theatre, students in this program enhance their marketability as performers.

Admission to the minor is competitive and available only by audition. The minor is intended, primarily, for dance performance, theatre and voice majors, and for dance performance minors and music minors with a voice concentration, but all students may audition.

Students who are not enrolled in one of the above majors or minors may audition for provisional admission to the minor in musical theatre. Full admission to the minor is subsequently granted upon the successful completion (with a grade of *B* or better) of PERB 1206 by no later than the first term of the sophomore year and THEA 2311 by no later than in the first term of the junior year.

Auditions are held annually, typically late in the fall term or early in the spring term, for entrance to the program the following fall. In order to be able to complete the curriculum, students must audition during their first year and begin the coursework in the fall term of their sophomore year.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
Jazz Dance	3–4
<p>DANC 1305 or 1306 Beginning Jazz Dance Dance performance majors or minors substitute two from: DANC 1231 Jazz Dance I DANC 2231 Jazz Dance II DANC 3231 Jazz Dance III</p>	
Ballet or Modern Dance	3
<p>DANC 1301 Beginning Ballet or DANC 1303 Beginning Modern Dance Dance performance majors or minors substitute one from: DANC 1311 Ballet I DANC 2311 Ballet II DANC 3311 Ballet III or DANC 1321 Modern Dance I DANC 2321 Modern Dance II DANC 3321 Modern Dance III</p>	
Music	6
<p>PERB 3306, 3307 Class Voice Musical Theatre I, II Music minors or majors with a concentration in voice and voice performance majors substitute 6 hours: VOIC 3100 and/or 3200 Private Study: Voice</p>	
Theatre	3
<p>THEA 3311 Acting for Singers and Dancers (theatre students substitute THEA 3303 Acting 3)</p>	
History/Theory	3
<p>DANC 3374 or CFA 3337 Evolution of Amer Musical Theatre</p>	
Interdisciplinary	3
<p>MSA 3131 Acting in Song: Solo MSA 3232 Acting in Song: Ensemble</p>	
<hr/>	
21–22	

Interdisciplinary Course Offerings (MSA)

MSA 1001 (O). FACE: FIRST-YEAR ARTS COMMUNITY EXPERIENCE. A collaborative, cross-disciplinary exploration for students enrolled in the foundational courses in art, dance, music, and theatre. Students meet collectively to build community, to explore a common currency among the arts, to take risks, to discover alternative models of practice, to understand the concept of artists as entrepreneurs, and to define personal goals for success. Graded pass/fail. *Corequisite:* ASAG 1300, DANC 1244, MUAS 1020, or THEA 1303.

MSA 1010 (O). UNDERGRADUATE TEACHING PRACTICUM. Development of teaching and leadership skills through preparing lesson plans, leading discussion groups, assessing course presentations, and coordinating and developing supplemental learning experiences. The corresponding course by the same professor is required as either a prerequisite or corequisite. Students spend a minimum of 1 hour per week preparing a lesson plan, 1 hour in discussion planning with the professor, and 1 hour leading a discussion and listening group.

MSA 1101 (1). FACE: FIRST-YEAR ARTS COMMUNITY EXPERIENCE. A collaborative, cross-disciplinary exploration for students enrolled in the foundational courses in art, dance, music, and theatre. Students meet collectively to build community, to explore a common currency among the arts, to take risks, to discover alternative models of practice, to understand the concept of artists as entrepreneurs, and to define personal goals for success. Graded pass/fail. *Corequisite:* ASAG 1300, DANC 1244, MUAS 1020, or THEA 1303.

MSA 1110 (1). UNDERGRADUATE TEACHING PRACTICUM. Development of teaching and leadership skills through preparing lesson plans, leading discussion groups, assessing course presentations, and coordinating and developing supplemental learning experiences. The corresponding course by the same professor is required as either a prerequisite or corequisite. Students spend a minimum of 1 hour per week preparing a lesson plan, 1 hour in discussion planning with the professor, and 1 hour leading a discussion and listening group.

MSA 1315 (3). MASS MEDIA AND TECHNOLOGY. An overview of technology as it applies to mass media in America, emphasizing the access of information via the Internet and World Wide Web. Topics include the expanding nature of technology, legal aspects, and the effects of technology on society.

MSA 1350 (3). THE ARTS IN THEIR CULTURAL CONTEXT: THE CITY OF THE IMAGINATION. Introduction to the way that the performing and visual arts are situated in their temporal, historiographic, geographic, and social contexts. Examines issues of theory and practice in the individual disciplines (art, art history, cinema, dance, music, and theatre) through readings that engage varied methodologies and through hands-on experiences with practitioners and scholars in Dallas.

MSA 2051 (0). ARTISTS IN THE WORLD: THE TEACHING ARTIST AS CATALYST. Introduces artists-in-training to the basic principles, practices, and priorities of the artist as teacher in the community. Provides a foundation in any artistic discipline and for the most common kinds of education work that artists undertake, such as working with young people (in schools and other settings), teaching one's art form, integrating curriculum and in-depth residencies, creating artistically authentic programs with an education thrust, working in challenging situations, and working with adults in performance, educational, and professional settings. Students design a program they can use in real-world settings. Includes field observations, readings, written response, and active participation and presentation. First course of a two-term sequence. *Prerequisites:* Consent of instructor and a minimum GPA of 3.000.

MSA 2052 (0). ARTISTS IN THE WORLD: THE TEACHING ARTIST AS CATALYST. Introduces artists-in-training to the basic principles, practices, and priorities of the artist as teacher in the community. Provides a foundation in any artistic discipline and for the most common kinds of education work that artists undertake, such as working with young people (in schools and other settings), teaching one's art form, integrating curriculum and in-depth residencies, creating artistically authentic programs with an education thrust, working in challenging situations, and working with adults in performance, educational, and professional settings. Students design a program they can use in real-world settings. Includes field observations, readings, written response, and active participation and presentation. After completion, students are eligible to apply for a competitive paid fellowship in the following year. Second course of a two-term sequence. *Prerequisites:* MSA 2051, 2151, or 3351; consent of instructor; and a minimum GPA of 3.000.

MSA 2151 (1). ARTISTS IN THE WORLD: THE TEACHING ARTIST AS CATALYST. Introduces artists-in-training to the basic principles, practices, and priorities of the artist as teacher in the community. Provides a foundation in any artistic discipline and for the most common kinds of education work that artists undertake, such as working with young people (in schools and other settings), teaching one's art form, integrating curriculum and in-depth residencies, creating artistically authentic programs with an education thrust, working in challenging situations, and working with adults in performance, educational, and professional settings. Students design a program they can use in real-world settings. Includes field observations, readings, written response, and active participation and presentation. First course of a two-term sequence. *Prerequisites:* Consent of instructor and a minimum GPA of 3.000.

MSA 2152 (1). ARTISTS IN THE WORLD: THE TEACHING ARTIST AS CATALYST. Introduces artists-in-training to the basic principles, practices, and priorities of the artist as teacher in the community. Provides a foundation in any artistic discipline and for the most common kinds of education work that artists undertake, such as working with young people (in schools

and other settings), teaching one's art form, integrating curriculum and in-depth residencies, creating artistically authentic programs with an education thrust, working in challenging situations, and working with adults in performance, educational, and professional settings. Students design a program they can use in real-world settings. Includes field observations, readings, written response, and active participation and presentation. After completion, students are eligible to apply for a competitive paid fellowship in the following year. Second course of a two-term sequence. *Prerequisites:* MSA 2051, 2151, or 3351; consent of instructor; and a minimum GPA of 3.000.

MSA 2301 (3). MEDIA LITERACY. An exploration of the critical thinking skills necessary to understand and interpret modern media, both news and entertainment. Social networking and the Internet, the complexities of the 24-hour news cycle, celebrity news and infotainment, violence, media framing and bias are among the topics examined.

MSA 3101 (1). DIRECTED STUDY IN THE ARTS. Independent study in an interdisciplinary arts topic under the direction and close supervision of a faculty member of the Meadows School. *Prerequisite:* Instructor approval.

MSA 3130 (1). SPECIAL TOPICS. Various topics determined by the instructor regarding studies in the arts.

MSA 3131 (1). ACTING IN SONG I: SOLO. Focuses on the acquisition and/or redirection of the skills, technical vocabulary, and techniques necessary to create fully realized performances of solo songs from the musical theatre repertoire. Culminates in a program of performed solo songs. *Prerequisites:* Permission of instructor; musical theatre minor or major or minor in dance, music, or theatre. Students minoring in musical theatre have priority to enroll in the class.

MSA 3201 (2). DIRECTED STUDY IN THE ARTS. Independent study in an interdisciplinary arts topic under the direction and close supervision of a faculty member of the Meadows School. *Prerequisite:* Instructor approval.

MSA 3230 (2). SPECIAL TOPICS. Various topics determined by the instructor regarding studies in the arts.

MSA 3232 (2). ACTING IN SONG II: ENSEMBLE. Builds on the skills developed in MSA 3131. Includes preparing, rehearsing, and performing selected duets, trios, and ensemble pieces from the musical theatre repertoire. Also, synthesizing vocal and acting performance techniques. Culminates in the creation of a workshop performance. *Prerequisites:* Permission of instructor; musical theatre minor or major or minor in dance, music, or theatre. Students minoring in musical theatre have priority to enroll in the class.

MSA 3301 (3). DIRECTED STUDY IN THE ARTS. Independent study in an interdisciplinary arts topic under the direction and close supervision of a faculty member of the Meadows School. *Prerequisite:* Instructor approval.

MSA 3310 (3). FUNDAMENTALS OF AUDIO AND SOUND. Provides a solid grounding in the concepts, techniques, and terms associated with audio across disciplines. Individual and/or group projects acquaint students with the basics of recording, editing, mixing and processing, and distributing audio projects. Includes lectures and discussions on these and other areas such as listening practices, rights, and fair use to supplement hands-on work with a broader perspective on sound.

MSA 3330 (3). SPECIAL TOPICS. Various topics determined by the instructor regarding studies in the arts.

MSA 3351 (3). ARTISTS IN THE WORLD: THE TEACHING ARTIST AS CATALYST. Introduces artists-in-training to the basic principles, practices, and priorities of the artist as teacher in the community. Provides a foundation in any artistic discipline and for the most common kinds of education work that artists undertake, such as working with young people (in schools and other settings), teaching one's art form, integrating curriculum and in-depth residencies, creating artistically authentic programs with an education thrust, working in challenging situations, and working with adults in performance, educational, and professional settings. Students design a program they can use in real-world settings. Includes field observations, readings, written response, and active participation and presentation. First course of a two-term sequence. *Prerequisites:* Consent of instructor and a minimum GPA of 3.000.

MSA 3352 (3). ARTISTS IN THE WORLD: THE TEACHING ARTIST AS CATALYST. Introduces artists-in-training to the basic principles, practices, and priorities of the artist as teacher

in the community. Provides a foundation in any artistic discipline and for the most common kinds of education work that artists undertake, such as working with young people (in schools and other settings), teaching one's art form, integrating curriculum and in-depth residencies, creating artistically authentic programs with an education thrust, working in challenging situations, and working with adults in performance, educational, and professional settings. Students design a program they can use in real-world settings. Includes field observations, readings, written response, and active participation and presentation. After completion, students are eligible to apply for a competitive paid fellowship in the following year. Second course of a two-term sequence. *Prerequisites:* MSA 2051, 2151, or 3351; consent of instructor; and a minimum GPA of 3.000.

MSA 3369 (3). LONDON: EXPLORING REPRESENTATION OF THE PERFORMATIVE. This course is based in the academic discipline of performance studies, which examines performance from a broad range of critical perspectives and includes the disciplines of history, anthropology, literary studies, gender studies, critical theory, and analysis of the act of performance itself. The intention is to use the city of London (and its environs: theatres, concert halls, sports arenas, exhibitions, museums, tourist attractions, fairs, markets, law courts, pubs, restaurants, etc.) as a template to engage the student with the vibrant dialogues between art, culture, and history that make it a thriving, multicultural city and an international melting pot.

MSA 3390 (3). INTERDISCIPLINARY STUDIES IN THE ARTS: SMU ABROAD. Interdisciplinary topics in the performing, visual, and communication arts.

MSA 3391 (3). INTERDISCIPLINARY STUDIES IN THE ARTS: SMU ABROAD. Interdisciplinary topics in the performing, visual, and communication arts.

MSA 4099 (0). MEADOWS UNDERGRADUATE FULL-TIME STATUS.

MSA 5105 (1). DIRECTED STUDY IN THE ARTS. Independent study in an interdisciplinary arts topic under the direction and close supervision of a faculty member of the Meadows School. *Prerequisite:* Instructor approval.

MSA 5205 (2). DIRECTED STUDY IN THE ARTS. Independent study in an interdisciplinary arts topic under the direction and close supervision of a faculty member of the Meadows School. *Prerequisite:* Instructor approval.

MSA 5305 (3). DIRECTED STUDY IN THE ARTS. Independent study in an interdisciplinary arts topic under the direction and close supervision of a faculty member of the Meadows School. *Prerequisite:* Instructor approval.

MSA 5310 (3). DIRECTED STUDY. Independent study under the direction of an instructor.

MSA 5326 (3). CULTURAL POLICY. Overview of policy analysis and practice of the cultural sector in its different areas (heritage, visual and performing arts, etc.) and perspectives. Analyzes the historical and theoretical backgrounds of cultural policy; cultural policies in practice (stylized facts and geographical and political divergence at the local, national, and international level); cultural policies and their socioeconomic impact; culture, diversity and development; and cultural access and arts education.

JOURNALISM

Professor Tony Pederson, Chair

Professor: Tony Pederson. **Associate Professor:** Camille Kraeplin. **Assistant Professor:** Jake Batsell. **Journalist-in-Residence:** Mark Vamos. **Executive-in-Residence:** Pam Harris Hackett. **Professors of Practice:** Chelsea R. Bell, Valerie Evans, Michele Houston, Jayne Suhler, Karen Thomas. **Adjunct Professor of Practice:** Carolyn Barta. **Adjunct Lecturers:** Robert Hart, Linda Leavell, Lauren Smart, Jean-Jacques Taylor, Bruce Tomaso.

General Information

The world of journalism is changing fast. Once-divergent media forms are rapidly coming together in ways that make it essential for 21st-century journalism education to reflect the complexity of actual practice. Graduates must be prepared to function and lead in a new and changing environment. The Division of Journalism offers the Bachelor of Arts with majors and minors in journalism and fashion media to prepare students to succeed in this dynamic setting.

Majors study multimedia journalism, including broadcast, print and online formats. They learn professional skills that enable them to adapt swiftly to a changing journalism environment. Content that is useful and interesting will have value regardless of the delivery system or systems of a particular era. For this reason, students also are taught the intellectual and theoretical skills they will need to help them interpret the world around them and understand the role of the media in society. They will graduate as clear, concise thinkers and writers.

Specialized knowledge also plays an increasingly critical role for media professionals in this competitive age. Students in the Division of Journalism may develop expertise in financial reporting while pursuing their degree through the William J. O'Neil program in business journalism, detailed below. Likewise, students with an interest in the growing fields of fashion journalism or fashion industry promotions may earn a Bachelor of Arts in fashion media, a rigorous new interdisciplinary program housed in the Division of Journalism.

Instructional Facilities

The Division of Journalism is located in the Journalism Complex in the Umphrey Lee Center, which houses faculty and administrative offices, audio and video production, and media support areas. The main media content areas are a complete broadcast studio with control room and a convergence newsroom with computer equipment designed for production of multiplatform news content. Classrooms and conference rooms in the Journalism Complex are state of the art, with complete audio and video capabilities. All labs are equipped with the latest computers for each student.

The Journalism Complex is a secured area where journalism majors are permitted 24-hour access. The concept and design of the Journalism Complex promote the individualized instruction for which the Division of Journalism is known. Each student is encouraged to spend as much time as desired on highly specialized equipment to pursue projects and assignments in a professional media work environment.

Admission and Degree Requirements

Strong writing skills are essential to the student's success in the division's journalism curriculum and later in the profession of journalism. Students may enroll in journalism classes as first-year students. Those seeking permission to major or minor in the Division of Journalism must have completed 24 hours of study, which may include transfer hours. Students must also have taken DISC 1312 (or equivalent) and earned a minimum grade of *B* in this course. Students are required to take JOUR 2103 before further journalism study, and they must declare the major or minor before taking JOUR 2312. Students transferring from other universities must have completed equivalent courses and obtained the equivalent GPA in those courses before they can be considered a major candidate in the Division of Journalism. The Journalism Division has a focus on and commitment to diversity, recognizing the need for diversity in media and communications in the 21st century.

Scholarships

Honors scholarships are awarded each year to outstanding students who intend to major in journalism. Other scholarships are available to journalism students through a variety of foundations and gifts to the division.

The William J. O'Neil Program in Business Journalism

As global markets and fast-paced technological change buffet American workers, consumers, investors and companies, business has become one of the most important components of news. The O'Neil Program equips aspiring journalists with both the technical knowledge to understand often-complex business and economic issues and the journalistic skills to make those topics understandable and accessible to news audiences. And because an ability to follow the money is critical to many beats, the tools and techniques developed in this program will prepare students for more sophisticated and insightful coverage of subjects ranging from national and local politics to technology, the fashion industry and the environment.

This innovative interdisciplinary program includes courses in the Cox School of Business. In addition to the 37 credit hours required for the journalism major or the 37 hours required for the major in fashion media, students wishing to concentrate in business and finance journalism will complete a second major in business, the minor in business administration or the summer minor in business, plus ECO 1311 and 1312. Students will put into practice what they are learning about business, financial markets and economics in advanced journalism classes and in coverage of North Texas-based companies and the regional economy.

Admission to the program is subject to the approval of the faculty member who holds the O'Neil Chair in Business Journalism. Students studying in the program will be advised by this faculty member.

Internships and Practica

Upon achieving junior and senior status, students are encouraged to take on experiences that enable them to work under the guidance of professionals in the news industry (internships). Many on-campus activities also offer practical experience (practica), and students are strongly urged to take advantage of the opportunities available to them through both the Student Media Company, which publishes a daily newspaper and a yearbook, and the Journalism Division.

Practica are taken for one credit hour at a time. Internships may be taken for one, two or three credit hours at a time, depending on the number of hours worked. A total of three credit hours of internships and practica may be counted toward a student's degree requirements but no more than two internships may be taken for credit. Internships and practica may not be counted toward the required nine credit hours of electives within the division.

All internships taken for credit must have prior approval of the faculty adviser. Internships and practica are taken on a pass/fail basis only and are restricted to journalism majors and minors.

Class Attendance

Due to limited class space and enrollment pressures, a student who fails to appear on the first day of journalism class may be administratively dropped from the class at the instructor's discretion. Furthermore, students must comply with any more specific attendance policies spelled out in course syllabi; creation and enforcement of such policies are entirely at the instructor's discretion. The division strives to keep class size small enough for individual attention, and large enough to ensure discussion and interaction among students.

Off-campus Programs

Journalism students may participate in academic programs offered abroad and through partners in the United States. Two programs of particular interest to journalism students are the Washington Term Program and SMU-in-London.

Washington Term Program. Through a cooperative program with American University in Washington, D.C., students have an opportunity to study in the nation's capital as a part of the Washington Term Program. Students may complete up to six hours of journalism elective credit and internships, as well as courses in other disciplines. The program is restricted to journalism majors and minors.

SMU-in-London. SMU students can earn six credit hours by enrolling in the SMU-in-London communications program. Conducted each year during the second session of summer school, the program allows students to study in London, a hub for international communications. Courses offered carry three credit hours. They do not require prerequisites, and they are designed to take full advantage of London's importance as an international center. Students live in dormitories in London. As part of their international experience, students are encouraged to explore the culture and fine arts offerings of London and European countries on their own, as class schedules permit.

Programs of Study

Journalism students will study multimedia journalism, learning the basic skills and conventions of broadcast journalism, print journalism and the emerging skill set needed to practice journalism on the Internet. The major requires 37 credit hours within the division. Journalism majors may count no more than 40 hours of JOUR courses toward graduation. Courses may be used to fulfill only one of the student's divisional requirements (i.e., a student may not fulfill two divisional requirements with one course). **Note:** All journalism majors must declare and complete a second major or a minor of their choosing. The fashion media major and minor do not meet this requirement. Only JOUR courses passed with a grade of C- or better will count for credit toward the major in journalism. **[This paragraph was updated in the addendum 12/16/2015.]**

Bachelor of Arts in Journalism

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Universitywide Requirements	Varies
Journalism Core Curriculum	13
JOUR 2103, 2302, 2304, 2312, 4316	
Advanced Writing Requirement (one from the following)	3
JOUR 2313, 3362, 3370, 3382	
Skills Requirement (one from the following)	3
JOUR 2313, 3357, 3358, 3360, 3362, 3365, 3370, 3382, 3385, 4310, 4384, 4385, 4388, 4390, 5306	
Topical Studies Requirement (one from the following)	3
JOUR 3325, 3326, 3327, 4300, 4306, 4307, 4344, 4345, 4387, 4392, 4395, 4396, 5301, 5302, 5303, 5304	
Critical Studies Requirement (one from the following)	3
JOUR 3345, 3390, 3396, 4331, 4350, 4360, 4370, 4380, 4393, 4394, 4397, 5305	
Journalism Electives	9
Selected from JOUR courses	
Capstone	3
JOUR 4398	
Minor or Second Major and Free Electives	
Hours vary as needed to meet University residency and degree requirements	

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Bachelor of Arts in Fashion Media

All fashion media majors must declare and complete a second major or a minor of their choosing. The journalism major and minor do not meet this requirement. Required courses must be passed with a grade of C- or better to count for credit toward the major in fashion media. Degree requirements were updated in the addendum 12/16/2015.

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Universitywide Requirements	Varies
Introductory Core	7
JOUR 2103 Writing and Editing Tutorial and Lab	
JOUR 2302 Ethics of Convergent Media	
JOUR 2312 Reporting I	
Written Media Skills (one from the following)	3
JOUR 2313 Reporting II	
JOUR 3362 Magazine Writing	
JOUR 3370 Fashion Journalism	
JOUR 3382 Feature Writing	

Visual Media Skills (one from the following)	3
ASPH 1300 Basics of Photography	
JOUR 2304 Basic Video and Audio Production	
Critical Studies	6
ANTH 2301 Introductory Cultural Anthropology	
<i>One from the following:</i>	
ANTH 3310/CFB 3310 Gender and Sex Roles: A Cross-Cultural Perspective	
ARHS 1333 Introduction to Visual Culture	
ARHS 3350 Modern Art and Media Culture, 1789–1870	
ARHS 3369 Contemporary Art: 1965–Present	
COMM 3341/CFB 3341 Ethnicity, Culture, and Gender: Introduction to Critical Studies in Communication	
JOUR 4360 Women and Minorities in the Media	
PSYC 3371 Psychology of Women	
SOCI 3345 Construction of Social Identities in the Media	
SOCI 3371 Sociology of Gender	
WGST 2322/CFA 3302 Gender: Images and Perspectives	
Advanced Core	9
JOUR 2310 Fashion, Media, and Culture	
JOUR 3326 Media and the Art of Fashion Design	
JOUR 3327 Media and the Business of Fashion	
Capstone	3
JOUR 4398 Digital Journalism	
Electives	6
Two additional courses from written media skills, visual media skills, or critical studies, or chosen from the following:	
ADV 1300 Survey of Advertising	
ADV 1360 Creative Production for the Noncreative Track	
ARHS 3355 History of Photography II: 1940–Present	
ARHS 3367 History of Photography I: Origins–1940	
ASPH 3300 Black-and-White Photography I	
COMM 5304 Topics in Communications: Fashion Media and Public Relations	
Any JOUR course (excluding internships)	
Minor or Second Major and Free Electives	
Hours vary as needed to meet University residency and degree requirements	

Departmental Distinction

The honors program in journalism is highly selective. At midterm of the sophomore year, and again at midterm of the junior year, declared journalism majors with a GPA of 3.500 or better can apply to the honors program. All interested students, including those who have been previously awarded honors scholarships, need to apply for admission to the program. Those wishing to graduate with distinction in

journalism must complete six hours of honors coursework within the Division of Journalism. Where specific honors sections are not offered in the Division of Journalism, students may work with individual professors to develop appropriate honors coursework within regular classes, subject to approval of the honors program director. Three hours must be in honors skills; the remaining three hours must come from either honors topical studies or honors critical studies. In addition, seniors must complete JOUR 5308 as a directed study and produce an honors thesis. More information is available from the honors program director, Division of Journalism, Meadows School of the Arts, 280 Umphrey Lee, Dallas TX 75275. The honor society is separate from the honors program. At midterm of the senior year, the top 10 percent of the graduating class is invited for membership in Kappa Tau Alpha, the Journalism Mass Communication Honor Society.

Minor in Journalism

The minor in journalism provides a basic understanding of the role of the news media in American society and an introduction to the basic skills necessary for the practice of the field.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
JOUR 2103, 2302, 2304, 2312, 4398, 4316	16
One from JOUR 2313, 3362, 3370, 3382	3
Additional JOUR course	3
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Minor in Fashion Media

The fashion media minor is an interdisciplinary program of study that exposes students to fashion media coursework and prepares them for further academic study or workplace internships. **[Degree requirements were updated in the addendum 12/16/2015.]**

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
Core	3
JOUR 2310 Fashion, Media, and Culture	
Critical Studies (one from the following)	3
ANTH 2301 Introductory Cultural Anthropology	
ANTH 3310 Gender and Sex Roles	
ARHS 1333 Introduction to Visual Culture	
ARHS 3350 Modern Art and Media Culture	
JOUR 4360 Women and Minorities in Media	
PSYC 3371 Psychology of Women	
SOCI 3345 Media Ethics and Gender	
SOCI 3371 Sociology of Gender	
WGST 2322/CFA 3302 Gender: Images and Perspectives	
Visual Media Skills (one from the following)	3
ADV 1360 Creative Production (advertising majors may substitute ADV 3390)	
ASPH 1300 Basics of Photography	
JOUR 2304 Basic Video and Audio Production	

Written Media Skills	7
JOUR 2103 Writing and Editing Tutorial and Lab	
JOUR 2312 Reporting I	
One from the following:	
JOUR 2313 Reporting II	
JOUR 3362 Magazine Writing	
JOUR 3382 Feature Writing	
Elective	3
One additional course from critical studies, visual media skills, or written media skills, or one from the following:	
ADV 1300 Survey of Advertising	
ARHS 3355 History of Photography II	
ARHS 3367 History of Photography I	
JOUR 2302 Ethics of Convergent Media	
JOUR 3326 Media and the Art of Fashion Design	
JOUR 3327 Media and Business of Fashion	
JOUR 4398 Digital Journalism	
Fashion Media Skills	3
ASPH 3330 Fashion Photography	
COMM 5304 Topics in Communications: Fashion Media and Public Relations	
JOUR 3370 Fashion Journalism	

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The Courses (JOUR)

JOUR 2103 (1). WRITING AND EDITING TUTORIAL AND LABORATORY. Introduces basic journalistic writing for all media. Students review English grammar and punctuation, and become versed in Associated Press writing style. Combines an online tutorial with a required weekly lab. Required before enrollment in JOUR 2312.

JOUR 2302 (3). ETHICS OF CONVERGENT MEDIA. Explores the ethical issues (e.g., free speech, privacy, and government regulation and censorship) that provide the foundation for all communication fields and have become more complex as media and industries have converged.

JOUR 2304 (3). BASIC VIDEO AND AUDIO PRODUCTION. Offers practical training in the fundamentals of broadcast communication. Students learn the basic techniques, including field production and editing, and control room and studio editing. Includes 3 hours of lecture and one 1.5-hour lab per week. *Prerequisite:* JOUR 2103 or 2303.

JOUR 2310 (3). FASHION, MEDIA, AND CULTURE. Explores how and why people tell others who they are by what they wear, and what roles fashion magazines, blogs, and other media play in that process. Examines fashion, media, and their relationship to culture, with an emphasis on the contemporary designers and fashion editors who have shaped the modern fashion landscape. Supports the fashion media major and minor.

JOUR 2312 (3). REPORTING I. Rigorous foundation writing and reporting course needed to complete the major. Students gain fundamental skills (e.g., gathering, documenting, organizing, and writing news) that are essential to accurate, fair, clear, and concise journalism. Includes 3 hours of lecture and one 1.5-hour lab per week. Restricted to journalism majors and minors or fashion media majors and minors. *Prerequisites:* JOUR 2103 (or 2303) and 2302.

JOUR 2313 (3). REPORTING II. Builds on the foundation of JOUR 2312. Students learn to analyze information quickly and accurately while applying critical thinking skills. Introduces the basics of broadcast writing. Includes 3 hours of lecture and one 1.5-hour lab per week. *Prerequisite:* JOUR 2312. Restricted to journalism majors and minors or fashion media majors and minors.

JOUR 3325 (3). TECHNOLOGY REPORTING. Helps journalists of tomorrow understand complex technologies like the World Wide Web in a way that will allow them to foresee the impact of those technologies on U.S. society, culture, and way of life. *Prerequisite:* JOUR 2312.

JOUR 3326 (3). MEDIA AND THE ART OF FASHION DESIGN. An in-depth look at how the elements of art and the principles of design apply to the medium of fashion. Examines the work of fashion designers, from inspiration through creative process to final product, with an emphasis on analysis and critique and the use of personal inspiration and creative process techniques to style and narrate looks. *Prerequisite:* JOUR 2310, MSA 3325, or THEA 2319.

JOUR 3327 (3). MEDIA AND THE BUSINESS OF FASHION. Introduces journalism students to the trillion-dollar global fashion industry. Students learn to find and tell stories about the businesses behind the fashions, from designers to manufacturers, marketers, and retailers, and about how these enterprises affect their investors, customers, workers, and communities. *Prerequisites:* JOUR 2103 (or 2301) and 2312, or permission of instructor.

JOUR 3345 (3). MASS MEDIA IN GREAT BRITAIN: POLITICS, PIN-UPS, AND PROPAGANDA. Explores the interaction between power, politics, and mass media in Great Britain; the history of the media in Great Britain; the health (or lack thereof) of mass media today and its impact on politics and popular culture; and how journalists report the news abroad and in the United States. Daily assignments include examination of newspapers and broadcast and Internet news available in the U.K. Students write papers based on visits to sites such as the British Library and the Imperial War Museum. British journalists, scholars, and foreign correspondents present guest lectures. Final class projects that include papers and class presentations involve group studies in specialized areas of British media. (SMU-in-London)

JOUR 3357 (3). PHOTOJOURNALISM. Training in the techniques and execution of digital photojournalism, including computer processing of images. Students learn to produce digital photojournalism, and they have the opportunity to generate photographic images for the division's convergence website.

JOUR 3358 (3). NEW MEDIA NEWS. Focuses on using new media presentation methods and design skills to produce new forms of communication for news outlets. *Prerequisite:* JOUR 2380 or 3330.

JOUR 3360 (3). COMPUTER-ASSISTED REPORTING. Emphasizes a hands-on approach through the gathering and organizing of computerized data. Students learn techniques for locating, retrieving, and verifying information from electronic sources such as libraries, research institutions, government documents, databases, court cases, and experts. *Prerequisite:* JOUR 2313, 3362, 3370, or 3382. Restricted to majors and minors.

JOUR 3362 (3). MAGAZINE WRITING. Introduces the diverse world of magazines. Students study exceptional magazine feature writing (profiles, narratives, analytical pieces, etc.) and practice feature magazine reporting and writing to prepare for professional work in the industry. *Prerequisites:* JOUR 2103 (or 2303), 2302, 2312. Restricted to journalism majors, journalism minors, and fashion media majors.

JOUR 3365 (3). INVESTIGATIVE REPORTING. Intensive introduction to the art of generating original news ideas about issues of public significance; developing critical news judgment; unearthing often difficult-to-access information; and organizing the information into focused, well-documented, and compelling stories. *Prerequisite:* JOUR 2313, 3362, 3370, or 3382. Restricted to journalism majors and minors.

JOUR 3370 (3). FASHION JOURNALISM. Intensive training on reporting and writing for journalism outlets, with a focus on fashion. Students produce spot news and short fashion features for student media. Includes field trips to meet with Dallas fashion writers and other fashion media professionals. *Prerequisite:* JOUR 2103, or 2303 and 2312, or COMM 2308.

JOUR 3382 (3). FEATURE WRITING. Emphasizes the conceptual and technical skills needed to develop one's own voice, to bring a literary quality to one's journalism, and to produce professional-level descriptive pieces and features for various media. *Prerequisites:* JOUR 2103 (or 2303), 2302, 2312. Restricted to journalism majors, journalism minors, and fashion media majors.

JOUR 3385 (3). BROADCAST I. Builds on skills learned in JOUR 2304, with more emphasis on deadline-driven, original, campus-based reporting and broadcast producing. Students learn how to assign coverage, to enterprise original story ideas, and to write cogent broadcast stories

and turn them in on deadline using video, set debriefs, and Web components. Convergence laboratory required. *Prerequisites:* JOUR 2304, 2312.

JOUR 3390 (3). LITERARY JOURNALISM. Students explore and analyze nonfiction through roundtable discussion, book reviews, and creative writing. Requires heavy reading, with an emphasis on books and essays of the last 100 years. *Prerequisite:* Sophomore standing.

JOUR 3396 (3). HISTORY OF JOURNALISM. The story of how American journalism became what it is today. Emphasizes the people and events that transformed the media, from the Colonial printer to 21st-century media conglomerates. *Prerequisite:* Sophomore standing.

JOUR 4101 (1). JOURNALISM PRACTICA. Students work in on-campus media positions. A maximum of 2 credit hours may be earned and counted toward degree requirements. Offered on a pass/fail basis only. *Prerequisites:* Junior standing and permission of adviser. Restricted to majors and minors only.

JOUR 4102 (1). JOURNALISM PRACTICA. Students work in on-campus media positions. A maximum of 2 credit hours may be earned and counted toward degree requirements. Offered on a pass/fail basis only. *Prerequisites:* Junior standing and permission of adviser. Restricted to majors and minors only.

JOUR 4125 (1). INTERNSHIPS IN JOURNALISM. Internship credit for off-campus work in the field during the regular term or in the summer. Students are limited to a total of 3 credit hours for internships. These hours will not count toward the 9 hours of required elective credit in the division. Offered on a pass/fail basis only. *Prerequisites:* Junior standing and permission of adviser. Restricted to majors and minors only.

JOUR 4127 (1). INTERNSHIP IN FASHION MEDIA. Off-campus interdisciplinary internship in any area of the fashion media field during the regular term or summer. Graded pass/fail. *Prerequisites:* Junior standing and permission of adviser. Restricted to fashion media majors and minors.

JOUR 4225 (2). INTERNSHIPS IN JOURNALISM. Internship credit for off-campus work in the field during the regular term or in the summer. Students are limited to a total of 3 credit hours for internships. These hours will not count toward the 9 hours of required elective credit in the division. Offered on a pass/fail basis only. *Prerequisites:* Junior standing and permission of adviser. Restricted to majors and minors only.

JOUR 4227 (2). INTERNSHIP IN FASHION MEDIA. Off-campus interdisciplinary internship in any area of the fashion media field during the regular term or summer. Graded pass/fail. *Prerequisites:* Junior standing and permission of adviser. Restricted to fashion media majors and minors.

JOUR 4300 (3). BROADCAST NEWS SEMINAR. A small group of selected students conduct an in-depth study of current events, examining and analyzing issues and producing sophisticated television programming. *Prerequisite:* JOUR 3385.

JOUR 4302 (3). WASHINGTON TERM DIRECTED STUDIES. Students study and practice journalism in the nation's capital. Restricted to majors and minors only.

JOUR 4303 (3). WASHINGTON TERM DIRECTED STUDIES. Students study and practice journalism in the nation's capital. Restricted to majors and minors only.

JOUR 4304 (3). WASHINGTON TERM DIRECTED STUDIES. Students study and practice journalism in the nation's capital. Restricted to majors and minors only.

JOUR 4305 (3). WASHINGTON TERM DIRECTED STUDIES. Students study and practice journalism in the nation's capital. Restricted to majors and minors only.

JOUR 4306 (3). BUSINESS AND JOURNALISM. An intensive introduction to business, financial markets, and economics, combined with practice in reporting and writing about these complex topics. Gives aspiring business journalists the tools to make business information understandable and accessible to news audiences. *Prerequisite:* JOUR 2312.

JOUR 4307 (3). BUSINESS NEWS SEMINAR. Builds upon the skills and insights gained in JOUR 4306. Combines close reading and analysis of business coverage with detailed exploration of how to gather and understand financial and economic information. Also, intensive practice in reporting and writing business stories. *Prerequisite:* JOUR 4306.

JOUR 4310 (3). EDITORIAL/OPINION WRITING. Examines the role of opinion writing in American journalism and teaches techniques that help students develop clear and effective

editorials and columns on a range of topics. Emphasizes critical thinking and writing skills. *Prerequisite:* JOUR 2313, 3362, 3370, or 3382. Restricted to journalism majors, journalism minors, and fashion media majors.

JOUR 4316 (3). COMMUNICATION LAW. An exploration of the historical and philosophical bases for freedom of expression. Practical applications of the law (e.g., libel, censorship, access, privacy, obscenity, copyright, and government regulations) that affect broadcasting, advertising, and the press. *Prerequisite:* Sophomore standing.

JOUR 4325 (3). INTERNSHIPS IN JOURNALISM. Internship credit for off-campus work in the field during the regular term or in the summer. Students are limited to a total of 3 credit hours for internships and practica. These hours will not count toward the 9 hours of required elective credit in the division. Offered on a pass/fail basis only. *Prerequisites:* Junior standing and permission of adviser. Restricted to majors and minors only.

JOUR 4326 (3). WASHINGTON TERM INTERNSHIP. Internship opportunities in the nation's capital. Restricted to majors and minors only.

JOUR 4327 (3). INTERNSHIP IN FASHION MEDIA. Off-campus interdisciplinary internship in any area of the fashion media field during the regular term or summer. Graded pass/fail. *Prerequisites:* Junior standing and permission of adviser. Restricted to fashion media majors and minors.

JOUR 4331 (3). CURRENT ISSUES IN THE NEWS. Encourages students to think critically about important issues in journalism today, acquaints them with the classic writings and ideas that have shaped modern journalism, and identifies the key concepts that have formed recent journalism criticism. The goal is to teach communications majors to become more creative problem-solvers as professionals, and more critical as media consumers. *Prerequisite:* Sophomore standing.

JOUR 4344 (3). SPORTS JOURNALISM. Emphasizes the particular narrative style and news-gathering techniques of sports stories and coverage. Students learn how to interview sports personalities and compose stories relating to the competitive events and social issues surrounding the world of sports. *Prerequisite:* JOUR 2313, 3362, 3370, or 3382. Restricted to journalism majors and minors.

JOUR 4345 (3). MEDIA AND POLITICS. Increases students' understanding of political and elections processes so they can evaluate and practice political journalism. Covers campaigns, governance, analysis of media coverage, and practical application. *Prerequisite:* JOUR 2312.

JOUR 4350 (3). HUMAN RIGHTS AND THE JOURNALIST. Students analyze current human rights issues and the ways U.S. and international media cover these issues. Topics include the role of images in conveying the harsh truth of any human rights story, and the ways new media formats, shrinking budgets, etc. are changing the way journalists who cover these stories do their job. *Prerequisite:* Sophomore standing.

JOUR 4360 (3). WOMEN AND MINORITIES IN THE MEDIA. Examines the impact and representation of women and minorities in the mass media from historical and critical perspectives. *Prerequisite:* Sophomore standing.

JOUR 4370 (3). LAW AND ETHICS IN A HIGH-TECH WORLD. Investigates the real and possible boundaries in cyberspace among open and closed systems of code, commerce, governance, and education, while examining the relationship of law and ethics to each. Engages a wide spectrum of Internet issues, including privacy, intellectual property, antitrust concerns, content control, and electronic commerce. *Prerequisite:* Sophomore standing.

JOUR 4380 (3). OBJECTIVITY AND BIAS. Identifies the various forces that critics say bias the news media and looks for evidence of these biases in media products. *Prerequisite:* Sophomore standing.

JOUR 4384 (3). BROADCAST II. Furthers the foundation established in JOUR 3385. The curriculum emphasizes deadline-driven, off-campus beat reporting and broadcast producing. Students learn how to plan original story ideas, including investigative and long-form pieces. Convergence laboratory required. JOUR 4300 is highly recommended before taking this course. *Prerequisites:* JOUR 2313 (or 3362, 3370, or 3382) and 3385. Restricted to journalism majors and minors.

JOUR 4385 (3). GRAPHICS AND DESIGN. Introduction to the principles and processes associated with visual design. Students examine the roles of visual design as both a tool and a

medium of communication and cultural production. Assignments include creating, altering, editing, and processing images; conceptualizing, formatting, analyzing, and refining typography; and preparing materials for production and publication, utilizing one or more media. Includes 3 hours of lecture and one 1.5-hour lab per week. *Prerequisite:* JOUR 2312.

JOUR 4387 (3). ARTS BEAT. Students gain experience in a convergence class in reporting on arts and entertainment and writing reviews, etc. Includes sessions with local critics and experts in various areas of arts and literature. *Prerequisite:* JOUR 2313, 3362, 3370, or 3382. Restricted to journalism majors, journalism minors, and fashion media majors.

JOUR 4388 (3). PRINT DESIGN AND EDITORIAL DECISION-MAKING. The fundamentals of newspaper layout and design, including an emphasis on news selection, decision-making, and publication trends. Includes 3 hours of lecture and one 1.5-hour lab per week. *Prerequisite:* JOUR 2312.

JOUR 4390 (3). ADVANCED WEB MASTERY. Builds on the online journalism skill sets of students and trains them to create dynamic, online news packages that leverage the flexibility of the Internet in order to increase the public's understanding of news stories. Students learn how to create their own websites, how to use technology to assist in newsgathering, and how to unleash their creativity in online presentations. *Prerequisite:* JOUR 2380 or 3330.

JOUR 4392 (3). JOURNALISM AND RELIGION. Introduces the basics of the world's major religions and describes how journalists should cover faith-based organizations and interview religious leaders. *Prerequisite:* JOUR 2313, 3362, 3370, or 3382. Restricted to journalism majors, journalism minors, and fashion media majors.

JOUR 4393 (3). CIVIL RIGHTS IN THE MEDIA. Prior to the 1950s, the mainstream press was one of the major obstacles to African-American progress. But during the civil rights movement, the media became a primary force in helping African Americans achieve equal rights. The course explores how and why this revolutionary change took place. *Prerequisite:* Sophomore standing.

JOUR 4394 (3). MEDIA EFFECTS. A critical study of how mediated messages influence behavior, attitudes, and feelings within a society. Surveys historical research efforts to examine effects on individuals, groups, and institutions. Also, explores contemporary social critiques in the American mass media. *Prerequisite:* Sophomore standing.

JOUR 4395 (3). PUBLIC AFFAIRS REPORTING. Emphasizes the skills required for reporting news emanating from governmental bodies or politics. *Prerequisite:* JOUR 2313, 3362, 3370, or 3382. Restricted to journalism majors, journalism minors, and fashion media majors.

JOUR 4396 (3). INTERNATIONAL REPORTING. Prepares students to work as foreign correspondents by helping them understand international production processes. Students profile current American correspondents who work in foreign countries, comparing their work to those of their contemporaries. Includes newsgathering assignments that encourage students to publish on matters of international interest. *Prerequisite:* JOUR 2313, 3362, 3370, or 3382. Restricted to journalism majors, journalism minors, and fashion media majors.

JOUR 4397 (3). JOURNALISM IN LATIN AMERICA. Provides students with an understanding of the practice of journalism in Latin America. Students profile specific regions, examining the historical, political, economic, cultural, ethnic, and even geographical differences, to better understand the issues that affect the struggle for freedom of the press. *Prerequisite:* Sophomore standing.

JOUR 4398 (3). DIGITAL JOURNALISM. Students explore the use of new communication technologies for multimedia storytelling; work with social media as a tool for newsgathering, community building, and the fostering of audience engagement; learn about Web metrics and search engine optimization techniques; and update and perfect their personal portfolio websites and social media presence. *Prerequisites:* JOUR 2103 (or 2303), 2302, 2304, 2312; junior or senior standing. Restricted to journalism majors and minors and fashion media majors and minors.

JOUR 5110 (1). DIRECTED STUDY. Independent study under the direction and supervision of a faculty member. In close collaboration with the instructor, the student conducts a rigorous project that goes beyond the experience in course offerings. Written permission from the instructor is required, and a completed directed studies form must be filed with the Division of Journalism before the start of the term during which the study is to be undertaken. *Prerequisites:* Junior standing and permission of instructor. Restricted to majors and minors only.

JOUR 5210 (2). DIRECTED STUDY. Independent study under the direction and supervision of a faculty member. In close collaboration with the instructor, the student conducts a rigorous project that goes beyond the experience in course offerings. Written permission from the instructor is required, and a completed directed studies form must be filed with the Division of Journalism before the start of the term during which the study is to be undertaken. *Prerequisites:* Junior standing and permission of instructor. Restricted to majors and minors only.

JOUR 5301 (3). TOPICS IN JOURNALISM. Provides a study and discussion setting for an issue or topic of current interest in the journalism profession. Offered on an irregular basis, depending on the significance and timeliness of the topics to be studied.

JOUR 5302 (3). TOPICS IN JOURNALISM. Provides a study and discussion setting for an issue or topic of current interest in the journalism profession. Offered on an irregular basis, depending on the significance and timeliness of the topics to be studied.

JOUR 5303 (3). TOPICS IN JOURNALISM. Provides a study and discussion setting for an issue or topic of current interest in the journalism profession. Offered on an irregular basis, depending on the significance and timeliness of the topics to be studied.

JOUR 5304 (3). TOPICS IN JOURNALISM. Provides a study and discussion setting for an issue or topic of current interest in the journalism profession. Offered on an irregular basis, depending on the significance and timeliness of the topics to be studied.

JOUR 5305 (3). TOPICS IN CRITICAL STUDIES. Provides a study and discussion setting for a critical media studies issue. Offered on an irregular basis, depending on the significance and timeliness of the topics to be studied.

JOUR 5306 (3). TOPICS IN JOURNALISM PRACTICE. Provides an introduction to new, cutting-edge areas of journalism practice. Offered on an irregular basis, depending on the significance and timeliness of the topics to be studied.

JOUR 5308 (3). HONORS THESIS. Students research and write a thesis examining an aspect of or an issue in the field of journalism. Required for all students wanting to graduate with an honors degree in journalism. *Prerequisite:* Permission of instructor. Restricted to majors and minors only.

JOUR 5310 (3). DIRECTED STUDY. Independent study under the direction and supervision of a faculty member. In close collaboration with the instructor, the student conducts a rigorous project that goes beyond the experience in course offerings. Written permission from the instructor is required, and a completed directed studies form must be filed with the Division of Journalism before the start of the term during which the study is to be undertaken. *Prerequisites:* Junior standing and permission of instructor. Restricted to majors and minors only.

MUSIC

Associate Professor David Mancini, Director

Professors: Joaquín Achúcarro, Jack Delaney, Andrés Díaz, Virginia Dupuy, Stefan Engels, Michael Hawn, Samuel Holland, David Karp, Robert Krout, Barbara Hill Moore, Alfred Mouledous, Larry Palmer, Paul Phillips, Thomas Tunks. **Associate Professors:** Sarah Allen, Christopher Anderson, Clifton Forbis, Robert Frank, Kevin Hanlon, Pamela Elrod Huffman, Carol Leone, David Mancini, Xi Wang. **Assistant Professors:** Peter Kupfer, Jesús Ramos-Kittrell, Zachary Wallmark. **Artists-in-Residence:** Matthew Albert, Emanuel Borok, Chee-Yun Kim. **Associate Professor of Practice:** Julie Scott. **Senior Lecturers:** Dale Dietert, Mark Feezell, Gary Foster, Hank Hammett, Matthew Kline, Catharine Lysinger. **Lecturers:** Barbara Bastable, Tom Booth, Kevin Gunter, Jamal Mohamed, Melissa Murray, Jason Smith. **Adjunct Professors:** Christopher Adkins, Robert Guthrie, Douglas Howard, Gregory Hustis, John Kitzman, Wilfred Roberts. **Adjunct Associate Professors:** Kalman Cherry, Don Fabian, Paul Garner, Jean Larson Garver, Matthew Good, Erin Hannigan, Diane Kitzman, Thomas Lederer, Brian Merrill, Ellen Rose, Barbara Sudweeks. **Adjunct Assistant Professors:** Deborah Baron, Alessio Bax, Kim Corbet, Martha Gerhart, Lane Harder, Lynne Jackson, Camille King, David Matthews, Deborah Perkins, Kara Kirkendoll Welch. **Adjunct Lecturers:** John Bryant, Lucille Chung, Sue Cruse, Haley Hoops, Brian Jones, Drew Lang, Jon Lee, Morgan May, Naoko Nakamura, Brian Perry, Dylan Smith, Edward Smith. **Piano Technician:** David Brown. **Accompanists:** Tara Emerson, Liudmila Georgievskaya. **Music Therapy Supervisor:** Janice Lindstrom. **Mustang Band Staff:** Don Hopkins, Tommy Tucker.

General Information

The Division of Music is devoted to the advancement of music performance and scholarship; preparation of the next generation of music professionals; and service of the artistic life of the community, nation and world. Students in the Division of Music pursue the Bachelor of Arts or Bachelor of Music degree. Majors and minors offered by the division are described below. All music programs are accredited by the National Association of Schools of Music.

Admission

In addition to meeting University admission criteria, entering undergraduate students intending to major in music must audition prior to matriculation. Auditions assess a prospective student's previous experience and potential for success in the intended major. Entering students intending to major in composition must submit a portfolio of original compositions and pass a performance audition. Both the Division of Music and the University must accept the candidate in order for him or her to be classified as a music major. Information regarding auditions may be obtained by contacting the Office of the Associate Director for Recruitment of the Division of Music. In decisions regarding advanced placement, the Division of Music considers transfer credits and AP test results. Departments reserve the right to give additional tests to determine the most appropriate placement in any course sequence.

Nondegree students are those applicants for admission who wish to be enrolled in University courses for credit but are not intending to pursue an SMU degree program. Nondegree students are admitted through the Office of Non-degree Credit Studies and are eligible to register in day and evening classes for which they have satisfied prerequisites and received departmental approval. Admission as a non-degree-seeking student does not qualify a student as a degree applicant. The pres-

ence of nondegree students in courses or ensembles may not displace an opportunity for a degree-seeking music major.

Facilities

Concert performances are presented in Caruth Auditorium, a 490-seat concert hall, the 168-seat Robert J. O'Donnell Lecture-Recital Hall, and the Dr. Bob and Jean Smith Auditorium in the Meadows Museum. Opera productions are presented in the 400-seat Bob Hope Theatre. The Jake and Nancy Hamon Arts Library houses an inspiring collection of more than 110,000 books and scores, more than 31,000 audio and video recordings, and more than 100,000 items in special collections of research materials such as the Van Katwijk Music Collection.

Facilities available to music students include 45 newly renovated practice rooms in the Jeanne R. Johnson Practice Complex.

The electronic keyboard laboratory, used for class instruction in piano, theory and improvisation, is equipped with 17 Yamaha Clavinova 88-key digital pianos, an MLC 100 Communications Center and state-of-the-art audio-visual technology, including high definition projectors, screens and sound system.

Student recitals and faculty and ensemble performances are digitally recorded in formats that are acceptable for auditions, competitions and archival purposes.

The Group and Individual Music Therapy Clinics, connected by an observation room, offer student therapists opportunities for clinical practicum experiences under faculty supervision.

The Division of Music maintains an inventory of 30 Steinway grand pianos, three harpsichords and eight pipe organs, including a celebrated three-manual 51-stop tracker organ built by C.B. Fisk located in Caruth Auditorium.

The Electronic Music Studio is a comfortable, multitrack, MIDI and digital audio facility featuring hardware and software on a Macintosh platform. The studio is well equipped to support algorithmic composition, interactive performance, synthesis, sampling, sequencing, signal processing, video post scoring and digital recording with stereo, quad and 5.1 surround monitoring.

Act of Enrollment

By the act of enrolling in the Meadows School of the Arts Division of Music for participation in a music course – whether as a music major, music minor or through elective study – and in consideration of the right to participate in such course, the student

1. Acknowledges his or her willingness to accept and comply with the standards and policies set forth in the *Division of Music Handbook*, the *Graduate Supplement to the Division of Music Handbook*, and all other University rules and regulations.
2. Assigns to the University the exclusive right to use the proceeds from any curricular or extracurricular promotional, publicity or entertainment activities associated with the course, including but not limited to photographs, television, recordings, motion pictures, concerts and theatrical productions, and any right the student may have to receive any royalties and/or other sums that may be due to the student from such activities.
3. Releases the University, its trustees, officers, agents, employees and assigns from any obligation to pay any proceeds, royalties and/or other sums that may be due to the student in connection with the course.

4. Agrees, on request of the University, to periodically execute all documents necessary to acknowledge the assignment and release set forth herein.

Specific Music Requirements

During the second year of study, each premusic major or transfer student must apply for upper-division degree/major status. The Office of the Associate Director for Academic Affairs of the Division of Music reviews applications.

All full-time music majors are required to enroll for MUAS 1010 each term of residence, for which they will receive a grade of Pass or Fail. Minors are required to enroll for four terms. To complete the requirements of the course and receive a passing grade, majors must attend a minimum of 10 recitals each term (minors, six each term), in addition to those in which the student is participating for credit. A grade of Incomplete may be awarded by the associate director in case of illness or other reason based on student petition.

All music majors, with the exception of guitar, piano, organ, composition and music therapy, are required to enroll in one large ensemble (wind ensemble, orchestra or choral ensemble) each term of residence. Wind and percussion students are required to enroll for both Meadows Symphony Orchestra and Meadows Wind Ensemble at the discretion of the directors. Exemptions may be granted by written approval of the ensemble director and the applied faculty in an area. Transfer students will not be exempted from the large ensemble requirement based on transfer credits. Music artistic scholarships may require enrollment in a large ensemble each term of residence.

All second-year students are expected to present one solo performance in general recital, departmental recital or master class each term. Required recitals must include a cross-section of the repertory in the student's major performance area. The performance of contemporary works is encouraged.

The Division of Music requires attendance at all scheduled class meetings, lessons and ensemble rehearsals. The instructor determines the extent to which absences affect a student's grade. Students should become thoroughly acquainted with the class attendance policy established by their teachers and ensemble directors. Except for official University-excused absences, instructors are not obligated to make special arrangements for any student to accommodate an absence. All reasons for absence should be submitted to the instructor in advance. Failure to do so may result in a student being dropped from a course with a grade of *W* (before the calendar deadline to drop) or receiving a grade of *F* for the course.

All undergraduate music majors must receive a minimum grade of *C-* in all courses specified in the major. The major consists of all courses listed in the student's degree plan with the exception of University Curriculum courses, free electives and coursework in a minor or second major. Students must retake major courses in which a grade below *C-* is received. A course may be repeated only once.

All undergraduate music education majors who are seeking teacher certification must receive a grade of *C* or better in courses required for teacher certification (24 hours in the content area, as defined by the Texas Education Agency). A minimum cumulative GPA of 2.500 for all University courses leading to the degree and a minimum GPA of 3.000 in courses required for teacher certification are required for student teaching.

Bachelor of Music

The Division of Music offers majors in the areas of orchestral or keyboard instrument performance, as well as majors in percussion performance, guitar performance, voice performance, composition, music therapy and music education.

Brass and Woodwind Instruments

The credit hour requirements for a major in bassoon, clarinet, euphonium, flute, French horn, oboe, saxophone, trombone, trumpet or tuba performance are below. Saxophone and euphonium performance majors do not require enrollment in PERE 1018/1118 unless specifically requested by the director. The saxophone performance major may require enrollment in PERE 1015/1115 Meadows Jazz Orchestra.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
MUAS 1020 (one enrollment fall term of 1st year)	0
MUAS 1010 (each term of residence except fall term of 1st year)	0
MUTH 1129, 1130, 1229, 1230, 2129, 2130, 2229, 2230	12
MUTH Electives (at the 3000 level or above)	6
MUHI 1302, 3301, 3302	9
MUHI Elective (at the 4000 level or above)	3
PERB 1131, 1132, 2131, 2132 (or 1233, 1234)	4
Private Studies 3200 (eight terms)	16
MURE 3001 or 3101 (junior recital)	0–1
MURE 4001, 4101, or 4201 (senior recital)	0–2
MUCO 3209 (instrumental conducting)	2
PERE 1018 or 1118 and 1019 or 1119 (each term of residence)	0–6
PERE 5071 or 5171 (three terms)	0–3
MPED 4305	3
Music/AMAE Electives	13
Community Experience: MSA 1001 or 1101	0–1
Free Electives (hours vary as needed to meet University residency and degree requirements)	
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String Instruments

Credit hour requirements for a major in cello, double bass, harp, viola or violin performance are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
MUAS 1020 (one enrollment fall term of 1st year)	0
MUAS 1010 (each term of residence except fall term of 1st year)	0
MUTH 1129, 1130, 1229, 1230, 2129, 2130, 2229, 2230	12
MUTH Electives (at the 3000 level or above)	6
MUHI 1302, 3301, 3302	9

<i>Requirements for the Major (continued)</i>	<i>Credit Hours</i>
MUHI Elective (at the 4000 level or above)	3
PERB 1131, 1132, 2131, 2132 (or 1233, 1234)	4
Private Studies 3200 (eight terms)	16
MURE 3001 or 3101 (junior recital)	0–1
MURE 4001, 4101, or 4201 (senior recital)	0–2
MUCO 3209 (instrumental conducting)	2
PERE 1018 or 1118 (1019 or 1119 if assigned) (each term of residence)	0–6
PERE 5071 or 5171 (three terms)	0–3
MPED 4305 or 4308	3
MREP 5060 or 5160 (two terms)	0–2
Music/AMAE Electives	11
Community Experience: MSA 1001 or 1101	0–1
Free Electives (hours vary as needed to meet University residency and degree requirements)	
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Major in Piano Performance

Credit hour requirements for this curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
MUAS 1020 (one enrollment fall term of 1st year)	0
MUAS 1010 (each term of residence except fall term of 1st year)	0
MUTH 1129, 1130, 1229, 1230, 2129, 2130, 2229, 2230	12
MUTH Electives (at the 3000 level or above)	6
MUHI 1302, 3301, 3302	9
MUHI Elective (at the 4000 level or above)	3
PERB 1233, 1234	4
PIAN 3200 (eight terms)	16
MURE 3001 or 3101 (junior recital)	0–1
MURE 4001, 4101, or 4201 (senior recital)	0–2
MUCO 3208 or 3209 (choral or instrumental conducting)	2
PERE Large Ensemble (three terms)	0–3
PERE Chamber Ensemble (two terms)	0–2
MUAC 2101, 2102	0–2
MUAC 3100 (three terms)	3
PERB 1001 (each term of residence)	0

<i>Requirements for the Major (continued)</i>	<i>Credit Hours</i>
MUPD 4125, 4126, 4396, 4397 (for an emphasis in piano pedagogy substitute MUPD 5325, 5326 for MUPD 4125, 4126)	8–12
MREP 4114 (two terms)	2
PERB 1011, 1012	1
Music/AMAE Electives	5
Community Experience: MSA 1001 <i>or</i> 1101	0–1
Free Electives (hours vary as needed to meet University residency and degree requirements)	
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Major in Organ Performance

Credit hour requirements for this curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
MUAS 1020 (one enrollment fall term of 1st year)	0
MUAS 1010 (each term of residence except fall term of 1st year)	0
MUTH 1129, 1130, 1229, 1230, 2129, 2130, 2229, 2230	12
MUTH Electives (at the 3000 level or above)	6
MUHI 1302, 3301, 3302	9
MUHI Elective (at the 4000 level or above)	3
PERB 1233, 1234	4
ORG 3200 (eight terms)	16
MURE 3001 <i>or</i> 3101 (junior recital)	0–1
MURE 4001, 4101, <i>or</i> 4201 (senior recital)	0–2
MUCO 3208 <i>or</i> 3209 (choral or instrumental conducting)	2
PERE Large Ensemble (six terms)	0–6
PERE Chamber Ensemble (one term)	0–1
MPED 5114	1
MUAC 2101, 2102	2
MUHI 4320, 5207	5
PERB 1001 (each term of residence)	0
Music/AMAE Electives	5
Community Experience: MSA 1001 <i>or</i> 1101	0–1
Free Electives (hours vary as needed to meet University residency and degree requirements)	
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Major in Percussion Performance

Credit hour requirements for this curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
MUAS 1020 (one enrollment fall term of 1st year)	0
MUAS 1010 (each term of residence except fall term of 1st year)	0
MUTH 1129, 1130, 1229, 1230, 2129, 2130, 2229, 2230	12
MUTH Electives (at the 3000 level or above)	6
MUHI 1302, 3301, 3302	9
MUHI Elective (at the 4000 level or above)	3
PERB 1131, 1132, 2131, 2132 (or 1233, 1234)	4
PERC 3100, 3200 (eight terms; 2 or 3 credit hours per term)	16–20
MURE 3001 or 3101 (junior recital)	0–1
MURE 4001, 4101, or 4201 (senior recital)	0–2
MUCO 3209 (instrumental conducting)	2
PERE 1018 or 1118 and 1019 or 1119 (each term of residence)	0–6
PERE 5073 or 5173 (three terms)	0–3
MPED 4305	3
Music/AMAE Electives	13
Community Experience: MSA 1001 or 1101	0–1
Free Electives (hours vary as needed to meet University residency and degree requirements)	
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Major in Guitar Performance

Credit hour requirements for this curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
MUAS 1020 (one enrollment fall term of 1st year)	0
MUAS 1010 (each term of residence except fall term of 1st year)	0
MUTH 1129, 1130, 1229, 1230, 2129, 2130, 2229, 2230	12
MUTH Electives (at the 3000 level or above)	6
MUHI 1302, 3301, 3302	9
MUHI Elective (at the 4000 level or above)	3
PERB 1131, 1132, 2131, 2132 (or 1233, 1234)	4
GUIT 3200 (eight terms)	16
MURE 3001 or 3101 (junior recital)	0–1
MURE 4001, 4101, or 4201 (senior recital)	0–2
MUCO 3208 or 3209 (choral or instrumental conducting)	2
PERE Large Ensemble (four terms)	0–4

<i>Requirements for the Major (continued)</i>	<i>Credit Hours</i>
PERE 5030 or 5130 (each term of residence)	0–3
MPED 4303	3
MREP 5030 or 5130 (two terms)	0–2
Music/AMAE Electives	11
Community Experience: MSA 1001 or 1101	0–1
Free Electives (hours vary as needed to meet University residency and degree requirements)	
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Major in Voice Performance

Credit hour requirements for this curriculum are distributed as follows:

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
MUAS 1020 (one enrollment fall term of 1st year)	0
MUAS 1010 (each term of residence except fall term of 1st year)	0
MUTH 1129, 1130, 1229, 1230, 2129, 2130, 2229, 2230	12
MUTH Elective (at the 3000 level or above)	3
MUHI 1302, 3301, 3302	9
MUHI Elective (at the 4000 level or above)	3
PERB 1131, 1132, 2131, 2132 (or 1233, 1234)	4
VOIC 3200 (eight terms)	16
MURE 3001 or 3101 (junior recital)	0–1
MURE 4001, 4101, or 4201 (senior recital)	0–2
MUCO 3208 (choral conducting)	2
PERE 1013 or 1113, 1014 or 1114, or 5016 or 5116 (each term of residence)	0–6
MPED 5216	2
MPED 5217 or two additional terms of PERE 4150	2
PERB 2017 or 2117, or PERE 4050 or 4150 (two terms)	0–2
PERB 2106 and 2108, 2107 and 2109	4
VOIC 3015, 3116, 4017, 4118	2
Second Language (two terms)	8
Music/AMAE Electives	5
Community Experience: MSA 1001 or 1101	0–1
Free Electives (hours vary as needed to meet University residency and degree requirements)	
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Major in Composition

Each year, students are expected to organize at least one performance of an original work (completed in their studies) in a general/studio recital or another appropriate venue or medium, such as a film score, incidental music, a dance collaboration or an electronic music installation.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
MUAS 1020 (one enrollment fall term of 1st year)	0
MUAS 1010 (each term of residence except fall term of 1st year)	0
MUTH 1129, 1130, 1229, 1230, 2129, 2130, 2229, 2230	12
MUTH 1325	3
MUTH 3350, 4300, 4310, 5360, 5370	15
MUTH 3200 or 3300 (each term of residence)	14
MUTH 5000 (each term of residence)	0
MUHI 1302, 3301, 3302	9
PERB 1131, 1132, 2131, 2132 (or 1233, 1234)	4
Private Studies 3200 or 3100 (two to four terms, as needed)	4
MURE 4201	2
MUCO 3208 or 3209 (choral or instrumental conducting)	2
PERE/PERB Ensemble (must include two terms of large ensemble)	8
Music/AMAE Electives	7
Community Experience: MSA 1001 or 1101	0–1
Free Electives (hours vary as needed to meet University residency and degree requirements)	

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Major in Music Therapy

The Bachelor of Music degree with a major in music therapy is approved by the American Music Therapy Association. Successful completion of this program entitles the graduate to take the national board examination in music therapy administered by the Certification Board for Music Therapists. The official designation by the board is MT-BC, the nationally accepted credential of qualified music therapists.

Students majoring in music therapy have two junior-level performance options: 1) to present a minimum of one solo performance in general recital each term of the junior year or 2) to present a half recital of 30 minutes. Before enrolling for internship MUTY 4144, the student must meet the following conditions:

1. Completed all course, practicum and preclinical work.
2. Demonstrated good physical health and emotional stability.
3. Achieved functional competency on piano, guitar, percussion and voice.
4. Achieved a cumulative GPA of 2.500 and a 2.750 in all music therapy courses.

Students completing this program of study may add a minor in psychology with nine additional psychology credits.

The following, by adviser approval, fulfill large ensemble requirements for music therapy majors:

- Wind and percussion students are required to enroll in the Meadows Symphony Orchestra, Meadows Wind Ensemble or SMU Symphony Band.
- Voice students must enroll in a choral ensemble.
- String students must enroll in Meadows Symphony Orchestra or Mustang Strings.
- Piano and guitar students must enroll in Meadows Jazz Orchestra or in one of the other ensembles listed above.

<i>Requirements for the Major</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
MUAS 1020 (one enrollment fall term of 1st year)	0
MUAS 1010 (each term of residence except fall term of 1st year)	0
MUTH 1129, 1130, 1229, 1230, 2129, 2130, 2229, 2230	12
MUHI 1302, 3301, 3302	9
PERB 1131, 1132, 2131, 2132 (or 1233, 1234)	4
PERB 1103, 1104	2
MUAS 5152 or PERB 2113; MUAS 5153	2
Private Studies 3200 or 3100	10
MURE 3001 or 3101 (optional)	0
MUCO 3208 or 3209 (choral or instrumental conducting)	2
PERE Large Ensemble (five terms)	5
MUTY 1120, 1320, 3211, 3212, 3213, 3214, 3141, 3142, 3143, 3144, 4340, 4341, 4144, 4145, 4141	25
Music/AMAE Electives (may include MURE 3101 optional recital)	11
Community Experience: MSA 1001 or 1101	0–1
PSYC 1300, 2351, and PSYC elective	9
Free Electives (hours vary as needed to meet University residency and degree requirements)	

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Note: Students with a concentration in voice, percussion or guitar must substitute music electives for the corresponding technique class.

Major in Music Education (Teacher Certification*)

After the completion of 60 hours of coursework, including the music theory sequence, music education students must successfully undergo an upper-division review before enrolling in upper-division coursework. The senior major should present one solo performance in general recital. Prior to student-teaching certification, students must complete 45 clock hours of field experience in early childhood through grade 12 schools. Students should arrange to take both portions of the state-mandated Texas Higher Education Assessment before their student-teaching term. Registration for the TExES Pedagogy and Professional Responsibilities Test requires approval of the Department of Teaching and Learning of the Annette Caldwell Simmons School of Education and Human Development. Students are not eligible to

apply for state certification until successful completion of the TExES examination, all degree requirements and student-teaching hours. Student teaching, in addition to being subject to the eligibility requirements published by the Department of Teaching and Learning, must be approved by the Music Education Department and must follow successful completion of all methods (MUED) and techniques (MUAS) courses. Student teaching is considered a full-time endeavor, with no daytime coursework or concurrent ensemble assignments.

<i>Requirements for the Major</i>	<i>Credit Hours</i>	
	<i>Instrumental</i>	<i>Vocal or Keyboard</i>
Universitywide Requirements	varies	varies
MUAS 1020 (one enrollment fall term of 1st year)	0	0
MUAS 1010 (each term of residence except fall term of 1st year)	0	0
MUTH 1129, 1130, 1229, 1230, 2129, 2130, 2229, 2230	12	12
MUTH 5330	3	3
MUHI 1302, 3301, 3302	9	9
PERB 1131, 1132, 2131, 2132 (or 1233, 1234)	4	4
Private Studies 3200	14	14
MUCO 3208, 3210 (vocal) or 3209, 3211 (instrumental)	4	4
PERE Large Ensemble (each term of residence)	5	5
PERE Chamber Ensemble (keyboard principals may substitute MUAC 2101 or 2102; vocalists may substitute large ensemble)	1	1
MUAS 2149, 5152	2	2
MUED 2250, 3330	5	5
MUED 3331 (instrumental) or 3332 (vocal/keyboard)	3	3
EDU 2350, 5327, 5349	9	9
Community Experience: MSA 1001 or 1101	0–1	0–1
For Instrumental	9	
MUAS 5146, 5147, 5148, 5149, 5150, 5151, 5153, 5154 (optional for strings), 5155		
For Vocal or Keyboard		11
PERB 2106 and 2108, 2107 and 2109		
MUAS 5146 or 5147, 5148 or 5149, 5150 or 5151, 4230; MPED 5216 (keyboard may substitute MUAS 5153)		
Free Electives (hours vary as needed to meet University residency and degree requirements)		
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*Additional requirements for teacher certification: Student teaching: Select any two with adviser approval: EDU 5363, 5364, 5373, 5374	6	6
Successful completion of the state TExES exam		

Dual Majors in Performance and Music Education

Students who meet degree candidacy criteria in both performance and music education can pursue dual majors in these fields. If begun by the second or third term, the second major can usually be achieved with a range of nine to 17 additional credits (approximately one term) through careful selection of electives and curricular planning. Students considering these plans should consult their adviser and the department heads as early as possible in their academic program.

Bachelor of Arts With a Major in Music

The B.A. degree is intended to serve students combining a music degree with interests in one or more of the following:

- A broad liberal arts education.
- Exploration of the interdisciplinary relationship of music coursework to coursework in other areas of the Meadows School and the University as a whole.
- An additional major, a minor or preparation for medical school or law school.
- Preparation for graduate study in music.
- Participation in the SMU Honors Program.
- A term or summer of study abroad.

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
MUAS 1020 (one enrollment fall term of first year)	0
MUAS 1010 (each term of residence except fall term of 1st year)	0
MUTH 1129, 1130, 1229, 1230, 2129, 2130, 2229, 2230	12
MUHI 1302, 3301, 3302	9
MUTH Elective (3000 level or above) or MUHI Elective (4000 level)	3
PERB 1131 and 1132, or 1233 Class Piano	2
Private Studies 3200 or 3100, or composition in combination with private studies (14 credits maximum)	8
PERE Ensemble (required each term of residence)	4
Music/AMAE Electives (may include senior project)	11
Community Experience: MSA 1001 or 1101	0–1
For Vocal: PERB 2106, 2107, 2108, 2109	4
Free Electives (hours vary as needed to meet University residency and degree requirements)	

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Notes

- Of the 11 music elective credits, a minimum of three credits must be music classes from the 3000 level or higher, selected from the following areas: MPED, MPSY, MUAS, MUED, MUHI, MUPD, MUTH and MUTY.
- Multiple one- or two-credit electives may be taken in place of a three-credit elective.

Minor in Music

The minor is designed to meet one of the following objectives:

1. A course of study in music with sufficient breadth and depth to satisfy the artistic aspiration of students from any major who have some background and experience in music, or
2. An alternative to the rigorous course of study required for the major in music for those students who do not aspire to a musical career.

Acceptance criteria for the minor include a successful audition or composition portfolio review and a theory/aural skill assessment prior to enrollment in private lessons or the theory sequence. The ability to read music is required. Musicianship (MUTH 1129, 1130) must be taken concurrently with the corresponding offering of written music theory (MUTH 1229, 1230). In any given term, private study will be approved only if the student is enrolled for at least one other course (not including MUAS 1010) required for the minor. Approval is required for study beyond four credits. Ensemble participation is encouraged.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
MUTH 1129, 1130, 1229, 1230	6
MUHI 1302, 3301, 3302	9
Private Study (in instrument, voice or composition; typically 1 credit hour per term)	4
MUAS 1010 (four terms) (The <i>Division of Music Handbook</i> has course requirements.)	0
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Minor in Songwriting

The minor in songwriting is available to majors in all disciplines at SMU who are interested in developing basic skills as composers, lyricists and/or recording artists. The program allows students to pursue a lyric, music or production emphasis within the field of songwriting. The plan includes a repeatable class in which songs are written, produced, performed and recorded.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
MUTH 1301 (music majors and minors substitute MUTH 1129, 1229), 3117 (two terms), 3217, and 4310	10
MUAS 5322	3
ENGL 2390	3
One from AMAE 4321, MUHI 3339, or MUHI 3340	3
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The Courses

Music Courses Open to All University Students

The following courses are open to all students from any field of study.

Performance Classes	PERB 1103/1104, 1203/2203, 1205/2205/3205, 1206/2206, 2113/2114/2313, 2115
Ensembles	PERE 1010/1110, 1011/1111, 1012/1112, 1013/1113, 1014/1114, 1015/1115, 1017/1117, 1018/1118, 1019/1119, 3020/3120, 5073/5173
Other Music Courses	MUAS 1323, 5320, 5322 MUHI 1321, 3339, 3340, 3343, 4355/CFB 3355 MUTH 1301, 3117/3217, 4310 MUTY 1320, 4341

Private Studies

The following subject prefixes will be used to designate private study in the specific instrument or in voice. Section numbers, which indicate the specific teacher with whom the student should enroll, are listed in the schedule of classes for each term.

BSSN Bassoon	GUIT Guitar	SAX Saxophone
CELL Cello	HARP Harp	TROM Trombone
CLAR Clarinet	HARS Harpsichord	TRPT Trumpet
DBBS Double Bass	OBOE Oboe	TUBA Tuba
EUPH Euphonium	ORG Organ	VLA Viola
FLUT Flute	PERC Percussion	VIOL Violin
FRHN French Horn	PIAN Piano	VOIC Voice

XXXX 3100 (1). PRIVATE STUDY. One half-hour lesson each week (14 per term) with a jury examination at the conclusion of each term. These repeatable course numbers are offered each fall, spring and summer. Students are required to accept internships in performance or private teaching, subject to availability and/or scheduling conflicts with other SMU courses. Internships may begin prior to the beginning of the term.

XXXX 3200 (2). PRIVATE STUDY. One-hour lesson each week (14 per term) with a jury examination at the conclusion of each term. These repeatable course numbers are offered each fall and spring. Majors are required to enroll in private studies each term until degree requirements are completed. Students are required to accept internships in performance or private teaching, subject to availability and/or scheduling conflicts with other SMU courses. Internships may begin prior to the beginning of the term.

Music Pedagogy (MPED)

MPED 4184 (1). DIRECTED STUDY: PEDAGOGY. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Approval of instructor.

MPED 4284 (2). DIRECTED STUDY: PEDAGOGY. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Approval of instructor.

MPED 4303 (3). GUITAR PEDAGOGY. (fall term of odd-numbered years) Prepares guitarists for studio teaching.

MPED 4305 (3). INTRODUCTION TO INSTRUMENTAL PEDAGOGY. Prepares instrumental private teachers for studio teaching.

MPED 4308 (3). STRING PEDAGOGY I. A survey of methods, materials, and curriculum for teaching strings at the beginning level, with a focus on the philosophical, psychological, and developmental bases of string study. Topics include review and evaluation of current educational materials, current trends, the history of string education, and pedagogical situations. *Prerequisite:* Proficiency on a string instrument as a major, MUAS 3146 and 3147 or equivalents, or permission of instructor.

MPED 4309 (3). STRING PEDAGOGY II. A survey of methods, materials, and curriculum for teaching strings at the beginning level, with a focus on the philosophical, psychological, and developmental bases of string study. Topics include review and evaluation of current educational materials, current trends, the history of string education, and pedagogical situations. *Prerequisite:* Proficiency on a string instrument as a major, MPED 4308 or equivalent, or permission of instructor.

MPED 4384 (3). DIRECTED STUDY: PEDAGOGY. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Approval of instructor.

MPED 5114 (1). ORGAN/HARPSICHORD PEDAGOGY. (fall term of even-numbered years) A survey of teaching materials and pedagogical methods, both historical and modern, for organ and harpsichord students. Projects include compilation of graded repertoire lists and preparation and/or presentation of a supervised private lesson.

MPED 5216 (2). VOCAL PEDAGOGY I. A study of vocal techniques, including vocal acoustics, breathing, and laryngeal function. Provides information useful to the singer, the studio voice teacher, and choral director. *Prerequisite:* Permission of instructor.

MPED 5217 (2). VOCAL PEDAGOGY II. A study of teaching strategies and philosophies, diagnosis of vocal problems, stage deportment, vocal repertoire, and ethics for teachers. Students gain practical, supervised experience in teaching.

Music Psychology (MPSY)

MPSY 5340 (3). ACOUSTICS OF MUSIC. A study of the acoustical foundations of music. Covers topics such as basic acoustics, acoustics of musical instruments and voice, room and auditorium acoustics, acoustical principles of sound systems, and psychoacoustics. Includes 3 hours of lecture and one laboratory period per week.

Music Repertoire (MREP)

MREP 4114 (1). PIANO REPERTOIRE. A broad survey of piano literature, including lectures and performances by the students enrolled. Performance styles and practices of every historical period are emphasized.

MREP 5030 (0). GUITAR REPERTOIRE. Student performances of their solo repertoire and individual instruction in a master-class setting.

MREP 5040 (0). ORCHESTRAL REPERTOIRE: WOODWINDS. Interpretive study and performance preparation of significant excerpts from selected orchestral repertoire.

MREP 5050 (0). ORCHESTRAL REPERTOIRE: BRASS. Interpretive study and performance preparation of significant excerpts from selected orchestral repertoire.

MREP 5060 (0). ORCHESTRAL REPERTOIRE: STRINGS. Interpretive study and performance preparation of significant excerpts from selected orchestral repertoire.

MREP 5070 (0). ORCHESTRAL REPERTOIRE: PERCUSSION. Interpretive study and performance preparation of significant excerpts from selected orchestral repertoire.

MREP 5130 (1). GUITAR REPERTOIRE. Student performances of their solo repertoire and individual instruction in a master-class setting.

MREP 5140 (1). ORCHESTRAL REPERTOIRE: WOODWINDS. Interpretive study and performance preparation of significant excerpts from selected orchestral repertoire.

MREP 5150 (1). ORCHESTRAL REPERTOIRE: BRASS. Interpretive study and performance preparation of significant excerpts from selected orchestral repertoire.

MREP 5160 (1). ORCHESTRAL REPERTOIRE: STRINGS. Interpretive study and performance preparation of significant excerpts from selected orchestral repertoire.

MREP 5170 (1). ORCHESTRAL REPERTOIRE: PERCUSSION. Interpretive study and performance preparation of significant excerpts from selected orchestral repertoire.

MREP 5209 (2). CLASSICAL AND ROMANTIC SONG LITERATURE. (spring term of odd-numbered years) An overview of song literature from the Classical and Romantic periods. Students prepare repertoire for performance in class and make presentations on topics of specialized interest. Lectures focus on specific developmental trends such as the genesis of the song cycle, the evolution of the piano accompaniment in the 19th century, and links between poets and composers.

MREP 5210 (2). 20TH-CENTURY SONG LITERATURE. (spring term of even-numbered years) A survey of repertoire and performance practices of song literature from the 20th century. Provides students with a general knowledge of the literature to acquaint them with performance notational practices and to develop the musical skills necessary to perform this literature.

Accompanying (MUAC)

MUAC 2101 (1). TECHNIQUES OF VOCAL ACCOMPANYING. A course designed for pianists to acquaint them with the various skills associated with accompanying and to familiarize them with some of the vocal repertoire.

MUAC 2102 (1). TECHNIQUES OF INSTRUMENTAL ACCOMPANYING. A course designed for pianists to acquaint them with the various skills associated with accompanying and to familiarize them with some of the instrumental repertoire.

MUAC 3100 (1). PRACTICUM IN COLLABORATIVE PERFORMANCE. Practical application of collaborative performance skills through studio assignments and performance. *Prerequisites:* MUAC 2101, 2102.

Music Arts and Skills (MUAS)

MUAS 1010 (0). RECITAL ATTENDANCE. Required of all music majors. First-year students attend MUAS 1020 fall term.

MUAS 1020 (0). MUSIC PATHWAYS: EXPLORING MEADOWS AND YOUR FUTURE. Required orientation for all first-year music majors. Provides valuable information about college life and professional opportunities in music.

MUAS 1323 (3). EXPLORING THE POWER OF MUSIC IN OUR LIVES: FROM CHAOS 2 CREATION. Experiential course that explores ways to use music creatively in order to effect positive change. Covers the building blocks of sound and music (pitch, timbre, rhythm, melody, harmony), how the environment affects the sound source, and how sound and music affect the brain and body. Topics include hearing systems and music and emotions. Also, using musical improvisation, composition, and songwriting to help express thoughts and feelings in healthy and creative ways. No previous music training is required.

MUAS 2149 (1). INTRODUCTION TO MUSIC EDUCATION. A broad-based survey of the issues, aims, and opportunities in music education programs of all levels, with an introduction to music education philosophies and methodologies.

MUAS 3011 (0). PRACTICUM IN MUSIC. Practical on-campus work in areas such as piano technology or recording engineering. Specific learning outcomes, measures, and activities are stated in an individualized syllabus. Students are limited to a total of 3 credit hours for internships and practica. Departmental permission required.

MUAS 3084 (0). INTERNSHIP IN MUSIC. Internship credit for practical off-campus work in the music industry or with a professional music organization. Specific learning outcomes, measures, and activities are stated in an individualized syllabus. Students are limited to a total of 3 credit hours for internships and practica. Departmental permission required.

MUAS 3111 (1). PRACTICUM IN MUSIC. Practical on-campus work in areas such as piano technology or recording engineering. Specific learning outcomes, measures, and activities are stated in an individualized syllabus. Students are limited to a total of 3 credit hours for internships and practica. Departmental permission required.

MUAS 3184 (1). INTERNSHIP IN MUSIC. Internship credit for practical off-campus work in the music industry or with a professional music organization. Specific learning outcomes, measures, and activities are stated in an individualized syllabus. Students are limited to a total of 3 credit hours for internships and practica. Departmental permission required.

MUAS 3284 (2). INTERNSHIP IN MUSIC. Internship credit for practical off-campus work in the music industry or with a professional music organization. Specific learning outcomes, measures, and activities are stated in an individualized syllabus. Students are limited to a total of 3 credit hours for internships and practica. Departmental permission required.

MUAS 3384 (3). INTERNSHIP IN MUSIC. Internship credit for practical off-campus work in the music industry or with a professional music organization. Specific learning outcomes, measures, and activities are stated in an individualized syllabus. Students are limited to a total of 3 credit hours for internships and practica. Departmental permission required.

MUAS 4230 (2). ELEMENTARY MUSIC PRACTICUM. Focuses on crafting and teaching short lessons for peers in the college classroom and for area public school classrooms. Video camera is used extensively for accurate feedback. *Prerequisite:* MUED 3330.

MUAS 5145 (1). OVERVIEW OF PIANO TECHNOLOGY. An overview of the history and development of the piano, grand and upright construction and regulation, tuning, temperament, and relationships with technicians and retailers. Hands-on instruction in tuning techniques includes unison and octave tuning.

MUAS 5146 (1). UPPER STRING TECHNIQUES. Basic principles involved in playing and teaching violin and viola. Reserved for music majors and minors.

MUAS 5147 (1). LOWER STRING TECHNIQUES. Basic principles involved in playing and teaching cello and bass. Reserved for music majors and minors.

MUAS 5148 (1). SINGLE REED AND FLUTE TECHNIQUES. Basic principles involved in playing and teaching single reed and flute instruments. Reserved for music majors and minors.

MUAS 5149 (1). DOUBLE REED TECHNIQUES. Basic principles involved in playing and teaching double reed instruments. Reserved for music majors and minors.

MUAS 5150 (1). LOW BRASS TECHNIQUES. Basic principles involved in playing and teaching low brass. Reserved for music majors and minors.

MUAS 5151 (1). HIGH BRASS TECHNIQUES. Basic principles involved in playing and teaching upper brass. Reserved for music majors and minors.

MUAS 5152 (1). PERCUSSION TECHNIQUES. Basic principles involved in playing and teaching percussion. Reserved for music majors and minors.

MUAS 5153 (1). VOCAL TECHNIQUES. Basic principles involved in singing and teaching voice. Reserved for music majors and minors.

MUAS 5154 (1). MARCHING BAND TECHNIQUES. (fall term of even-numbered years) Provides music education students with opportunities to learn skills and techniques involved in marching band.

MUAS 5155 (1). JAZZ TECHNIQUES. (fall term of even-numbered years) Introduces jazz pedagogy, with an emphasis on improv.

MUAS 5310 (3). DIRECTED STUDY IN MUSIC SKILLS. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Approval of instructor.

MUAS 5320 (3). RECORDING TECHNOLOGY. A philosophical comparison of approaches to music recording in all forms of mass media. Includes demonstrations of studio equipment and digital recording and editing.

MUAS 5322 (3). ANALYSIS OF MUSIC PRODUCTION. Students gain a basic yet broad understanding of the function of a music producer in both artistic and music business environments, and of the process through which any musical work is produced as a live performance or recording. The role of the music producer is concentric to all decisions in recording and defining artistic endeavors. Whether working with a director in producing music for a film score, collaborating with a songwriter to define an expression, working with a composer to achieve an artistic vision, or understanding how an advertising agency needs musical help in order to sell a product, the producer must be able to coordinate the procedure with the vision. Even when the producer is also the artist, composer, recording engineer, and financier, he/she must step outside of all other roles to plan how the end result can best be achieved.

Conducting (MUCO)

MUCO 3208 (2). FUNDAMENTALS OF CHORAL CONDUCTING. Includes all basic beat patterns, subdivision, fermata problems, beat character, and an introduction to left-hand usage and basic score reading, with emphasis on the psychophysical relationship between conductor and ensemble.

MUCO 3209 (2). FUNDAMENTALS OF INSTRUMENTAL CONDUCTING. Includes basic conducting technique, score reading, score analysis, and general rehearsal procedures, with attention given to rehearsal techniques in a laboratory setting.

MUCO 3210 (2). CHORAL CONDUCTING PRACTICUM. Stresses development of rehearsal techniques in a laboratory setting. Students choose, prepare, and rehearse music with other students in class to develop skills in error detection, rehearsal pacing, sequencing, and ordering of music for optimum rehearsals. *Prerequisite:* MUCO 3208 or equivalent.

MUCO 3211 (2). INSTRUMENTAL CONDUCTING PRACTICUM. Stresses development of rehearsal techniques in a laboratory setting. Students choose, prepare, and rehearse music with other students in the class to develop skills in error detection, rehearsal pacing, sequencing, and ordering of music for optimal rehearsals. *Prerequisite:* MUCO 3209.

MUCO 4184 (1). DIRECTED STUDY IN CONDUCTING. Individual technical development and score preparation for the advanced conductor. *Prerequisite:* Approval of instructor.

MUCO 4284 (2). DIRECTED STUDY IN CONDUCTING. Individual technical development and score preparation for the advanced conductor. *Prerequisite:* Approval of instructor.

MUCO 4384 (3). DIRECTED STUDY IN CONDUCTING. Individual technical development and score preparation for the advanced conductor. *Prerequisite:* Approval of instructor.

MUCO 5210 (2). CHORAL CONDUCTING PRACTICUM. Stresses development of rehearsal techniques in a laboratory setting. Students choose, prepare, and rehearse music with other students in class to develop skills in error detection, rehearsal pacing, sequencing, and ordering of music for optimum rehearsals. *Prerequisite:* MUCO 3208 or equivalent.

MUCO 5309 (3). ADVANCED INSTRUMENTAL CONDUCTING. Stylistic analysis of a range of large ensemble repertoire, with emphasis on historical context, performance practice, interpretive issues, performance techniques, and conducting problems. Also, the study of baton and rehearsal technique.

Music Education (MUED)

MUED 2250 (2). NEW HORIZONS IN MUSIC EDUCATION. Observation and discussion of teaching methodologies conducted primarily in the public schools. Includes hands-on teaching experiences with supervision by SMU faculty and public school cooperating teachers.

MUED 3330 (3). ELEMENTARY MUSIC METHODS AND MATERIALS. An investigation of major approaches for teaching elementary general music. Includes public school classroom observations.

MUED 3331 (3). INSTRUMENTAL MUSIC METHODS AND MATERIALS. Covers materials for instruction, motivation, administration, class control, and performance preparation.

MUED 3332 (3). CHORAL MUSIC METHODS AND MATERIALS. Focuses on the art and practice of developing successful choral programs for fifth grade through high school. Topics include recruitment, auditions, behavior management, vocal techniques, the changing voice, choosing music, planning rehearsals, and management of nonmusical details. Includes public school observations.

MUED 4194 (1). DIRECTED STUDIES IN MUSIC EDUCATION. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Instructor approval.

MUED 4294 (2). DIRECTED STUDIES IN MUSIC EDUCATION. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Instructor approval.

MUED 4394 (3). DIRECTED STUDIES IN MUSIC EDUCATION. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Instructor approval.

MUED 5115 (1). METHODS AND MATERIALS: CHURCH. (spring term of odd-numbered years) The principles and practices of music education useful to church music professionals and others who may be interested in church work.

MUED 5147 (1). WORKSHOP IN MUSIC EDUCATION. A brief, intensive study of a focused topic in music education, including Orff, Kodály, Dalcroze, and other methodologies.

MUED 5149 (1). WORKSHOP IN MUSIC EDUCATION. A brief, intensive study of a focused topic in music education, including Orff, Kodály, Dalcroze, and other methodologies.

MUED 5150 (1). WORKSHOP IN MUSIC EDUCATION. A brief, intensive study of a focused topic in music education, including Orff, Kodály, Dalcroze, and other methodologies.

MUED 5151 (1). WORKSHOP IN MUSIC EDUCATION. A brief, intensive study of a focused topic in music education, including Orff, Kodály, Dalcroze, and other methodologies.

MUED 5152 (1). WORKSHOP IN MUSIC EDUCATION. A brief, intensive study of a focused topic in music education, including Orff, Kodály, Dalcroze, and other methodologies.

MUED 5153 (1). WORKSHOP IN MUSIC EDUCATION. A brief, intensive study of a focused topic in music education, including Orff, Kodály, Dalcroze, and other methodologies.

MUED 5154 (1). WORKSHOP IN MUSIC EDUCATION. A brief, intensive study of a focused topic in music education, including Orff, Kodály, Dalcroze, and other methodologies.

MUED 5250 (2). WORKSHOP IN MUSIC EDUCATION. A brief, intensive study of a focused topic in music education, including Orff, Kodály, Dalcroze, and other methodologies.

MUED 5251 (2). WORKSHOP IN MUSIC EDUCATION. A brief, intensive study of a focused topic in music education, including Orff, Kodály, Dalcroze, and other methodologies.

MUED 5252 (2). WIND LITERATURE FOR THE SECONDARY SCHOOL. (fall term of odd-numbered years) Survey of new and standard literature suitable for secondary school students. Examines music for instrumental solo, ensemble, band, and orchestra.

MUED 5253 (2). VOCAL AND CHORAL LITERATURE FOR THE SECONDARY SCHOOL. (fall term of odd-numbered years) Survey of new and standard vocal solo, ensemble, and choral literature suitable for the secondary school.

MUED 5254 (2). WORKSHOP IN MUSIC EDUCATION. A brief, intensive study of a focused topic in music education, including Orff, Kodály, Dalcroze, and other methodologies.

MUED 5255 (2). WORKSHOP IN MUSIC EDUCATION. A brief, intensive study of a focused topic in music education, including Orff, Kodály, Dalcroze, and other methodologies.

MUED 5257 (2). COMPUTER APPLICATIONS FOR MUSIC EDUCATION. Investigates the potential for computer use in music education, including computer-assisted instruction, information storage and retrieval, book and record keeping, and specialized uses such as computer-assisted management of schools of music. Also, the development of basic techniques for designing and implementing such uses.

MUED 5350 (3). WORKSHOP IN MUSIC EDUCATION. A brief, intensive study of a focused topic in music education, including Orff, Kodály, Dalcroze, and other methodologies.

MUED 5351 (3). WORKSHOP IN MUSIC EDUCATION. A brief, intensive study of a focused topic in music education, including Orff, Kodály, Dalcroze, and other methodologies.

MUED 5352 (3). WORKSHOP IN MUSIC EDUCATION. A brief, intensive study of a focused topic in music education, including Orff, Kodály, Dalcroze, and other methodologies.

MUED 5353 (3). MUSIC IN EARLY CHILDHOOD EDUCATION. A study of the role of music in teaching young children, including planning music experiences for preschool and early elementary levels.

MUED 5354 (3). WORKSHOP IN MUSIC EDUCATION. A brief, intensive study of a focused topic in music education, including Orff, Kodály, Dalcroze, and other methodologies.

Music History and Literature (MUHI)

MUHI 1302 (3). INTRODUCTION TO MUSIC IN WORLD SOCIETIES. Introduction to basic elements of music within the context of cultural traditions of world musics. Students study musical traditions of Western art music; jazz; African-American gospel music; and musics of India, China, Africa, and Latin America. Musical forms, techniques, terminology, and chro-

nology are presented, but primary emphasis is placed upon listening to and experiencing a diverse sample of music and exploring music's roles in societies.

MUHI 1321 (3). MUSIC: ART OF LISTENING. An investigation of the elements of music (melody, rhythm, harmony, form, timbre) as they develop and change throughout the various historical periods of music. Emphasis is on active listening. For nonmajors. Does not satisfy music history requirements for music majors.

MUHI 1322 (3). INTRODUCTION TO JEWISH MUSIC. Surveys the Jewish musical tradition, spanning over two millennia and five continents; its place in Jewish life; and its influences on church and mosque melodies. Music-reading and non-English languages not required.

MUHI 3301 (3). SURVEY OF MUSIC HISTORY I. Surveys the origins and evolution of musical forms, compositional procedures, performing practices, and musical instruments in the West from the rise of the Christian liturgy through the death of J.S. Bach. Presented within the contexts of related arts and historical events, as time permits. Includes listening, score analysis, and practice in writing about music. *Prerequisite:* MUHI 1302.

MUHI 3302 (3). SURVEY OF MUSIC HISTORY II. Surveys musical forms, styles, compositional procedures, and performing practices from the late 18th century to the present day. Presented within the contexts of related arts and historical events, as time permits. Includes listening, score analysis, and practice in writing about music. *Prerequisite:* MUHI 3301.

MUHI 3339 (3). MUSIC FOR CONTEMPORARY AUDIENCES. An examination of the interaction of the various forms of popular musical expression (folk, blues, soul, rock, Muzak, and film music) and their impact upon American culture.

MUHI 3340 (3). JAZZ: TRADITION AND TRANSFORMATION. Bunk, Bird, Bix, Bags, and Trane. From blues to bop, street beat to free jazz. A study of the people and music from its African, Euro-American origins through the various art and popular forms of the 20th century.

MUHI 3343 (3). MUSIC AND IDENTITY IN COLONIAL AND POSTCOLONIAL FRANCE. For undergraduate students with or without musical backgrounds. Explores music in France and in the colonies of the Maghreb and sub-Saharan Africa from the late 19th century to the present, including events that led to the invention of new musical styles in these geographical areas. Also, the music of the diaspora in France. Focuses on the incorporation of foreign musical elements by composers living in France, including the social context for several musical compositions, and the musical traditions of Java, Spain, and Russia, which provided sources of inspiration for these works. Examines how music has been used in colonial and postcolonial contexts to construct regional, ethnic, and national identities in France and formerly colonized countries. Does not satisfy music history requirements for music majors or minors; may be taken by music majors or minors as an elective. (SMU-in-Paris).

MUHI 4192 (1). DIRECTED STUDY IN MUSIC HISTORY. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Approval of instructor.

MUHI 4292 (2). DIRECTED STUDY IN MUSIC HISTORY. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Approval of instructor.

MUHI 4301 (3). RESEARCH PROJECT IN MUSIC HISTORY. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Approval of instructor.

MUHI 4302 (3). SEMINAR IN MUSIC HISTORY. Provides advance investigation into a variety of topics in music history, including music aesthetics, the works of a specific composer or compositional school, music within the context of a specific time and/or place, or in-depth studies of works relative to a particular genre. Topics are announced each term. Writing intensive. May be repeated for credit. *Prerequisites:* MUHI 3301, 3302.

MUHI 4320 (3). ORGAN HISTORY/LITERATURE. A survey of the literature for the organ, Renaissance to contemporary. Required of organ majors and concentrations (undergraduate).

MUHI 4345 (3). SURVEY OF OPERA HISTORY. A chronological survey of opera, beginning with a brief introduction to medieval and Renaissance precedents, followed by an in-depth presentation of selected Baroque and Classical masterworks. Explores the ways 19th-century Romantic opera synthesized music, literature, art, and elements of politics and culture. Also, investigates the musical language and dramatic substance of selected works from 20th-century

operatic repertoire. Students spend a significant amount of time viewing operas on video and laser disc, and in certain cases making comparative studies of productions. *Prerequisite:* MUHI 3302.

MUHI 4347 (3). SYMPHONIC LITERATURE. Examines representative orchestral works from the late Baroque era to the present day. Attention is directed to the forms, compositional procedures, and orchestration devices employed by selected composers who reflect the various stylistic orientations within this time frame. *Prerequisite:* MUHI 3302.

MUHI 4348 (3). GUITAR HISTORY/LITERATURE. (spring term of odd-numbered years) Examines the history of guitar and its music from the early 16th century to the present. Included are the vihuela and Baroque guitar, four-string Spanish guitar, and related literature. Emphasis is given to the evolution of the modern instrument and its repertoire. *Prerequisite:* Completion of the music history sequence or permission of division head.

MUHI 4355 (3). MUSIC AND CULTURE: STUDIES IN POPULAR MUSIC. Focuses on music as an element of culture formation. Explores current scholarship to introduce the multidisciplinary study of the role of human agency in creating meaningful spaces in which music unfolds its sociopolitical and cultural dimensions. *Prerequisite:* MUHI 3302.

MUHI 4384 (3). SURVEY OF CHORAL LITERATURE. (spring term of even-numbered years) A survey of choral music from the medieval era to the present. Examines representative compositions with regard to genre, form, compositional procedures, and stylistic aspects. Includes sociopolitical conditions, the intellectual and artistic outlooks of patrons and composers, and other external influences. *Prerequisite:* Completion of the music history sequence or permission of division head.

MUHI 4392 (3). DIRECTED STUDY IN MUSIC HISTORY. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Approval of instructor.

MUHI 5206 (2). PERFORMANCE PRACTICUM IN EARLY MUSIC. (spring term of even-numbered years) Studies in the interpretation of Baroque music from a stylistic point of view.

MUHI 5207 (2). ORGAN SURVEY. Covers organ building fundamentals of construction and design and organ history as it relates to the development of a style-conscious concept of enrollment. Required of organ majors and concentrations (undergraduate). Recommended elective for the M.M. and the M.S.M. degree.

Piano Pedagogy (MUPD)

MUPD 4125 (1). PIANO PEDAGOGY PRACTICUM. Supervised teaching experience; specific goals and projects are agreed upon for the term. Required for all piano majors.

MUPD 4126 (1). PIANO PEDAGOGY PRACTICUM. Supervised teaching experience; specific goals and projects are agreed upon for the term. Required for all piano majors.

MUPD 4396 (3). FUNDAMENTALS OF PIANO PEDAGOGY I. (fall term of even-numbered years) In-depth study of methods and curriculum for teaching piano at the elementary level. Students survey and evaluate current educational materials, with a focus on philosophical and physiological bases of piano study.

MUPD 4397 (3). FUNDAMENTALS OF PIANO PEDAGOGY II. (fall term of odd-numbered years) In-depth study of methods, materials, and curriculum for teaching piano at the intermediate and advanced levels. Includes current trends (including technology), professionalism, history of piano pedagogy, and employment opportunities.

MUPD 5103 (1). CREATIVE PIANO TEACHING. Pedagogical projects designed to meet the needs of the piano teacher. Offered in conjunction with the SMU Institute for Piano Teachers in the summer of even-numbered years or the National Conference on Keyboard Pedagogy in the summer of odd-numbered years. Reserved for music majors. Pedagogy majors are limited to one credit.

MUPD 5196 (1). DIRECTED STUDY IN PIANO PEDAGOGY.

MUPD 5203 (2). CREATIVE PIANO TEACHING. Pedagogical projects designed to meet the needs of the piano teacher. Offered in conjunction with the SMU Institute for Piano Teachers in the summer of even-numbered years or the National Conference on Keyboard Pedagogy in the summer of odd-numbered years. Reserved for music majors. Pedagogy majors are limited to one credit.

MUPD 5210 (2). CURRENT TRENDS IN PIANO PEDAGOGY. (spring term of even-numbered years) Students explore, through participation and observation, the psychological principles operative in group and class environments, with emphasis on teacher effectiveness. Surveys college-level keyboard texts.

MUPD 5312 (3). SURVEY OF PRECOLLEGE PIANO LITERATURE. (spring term of odd-numbered years) Survey and performance of standard piano literature in all style periods for precollege students. Emphasis on technical preparation and curriculum-building.

MUPD 5325 (3). PIANO PEDAGOGY INTERNSHIP I. Supervised teaching experience; specific goals and projects are agreed upon for the term. Required of all undergraduate piano majors with an emphasis in piano pedagogy performance.

MUPD 5326 (3). PIANO PEDAGOGY INTERNSHIP II. Supervised teaching experience; specific goals and projects are agreed upon for the term. Required of all undergraduate piano majors with an emphasis in piano pedagogy performance.

Recitals (MURE)

MURE 3001 (0). JUNIOR RECITAL. Solo performance of approximately 30 minutes of music. Graded pass/fail by committee.

MURE 3101 (1). JUNIOR RECITAL. Solo performance of approximately 30 minutes of music. Graded pass/fail by committee.

MURE 4001 (0). SENIOR RECITAL. Solo performance of approximately 1 hour of music. Graded pass/fail by committee.

MURE 4101 (1). SENIOR RECITAL. Solo performance of approximately 1 hour of music. Graded pass/fail by committee.

MURE 4201 (2). SENIOR RECITAL. Solo performance of approximately 1 hour of music. Graded pass/fail by committee.

Composition and Theory (MUTH)

MUTH 1129 (1). MUSICIANSHIP I. Beginning studies in solfege, melodic, and harmonic dictation. *Corequisite:* MUTH 1229.

MUTH 1130 (1). MUSICIANSHIP II. Continuation of MUTH 1129 covering solfege, melodic, and harmonic dictation. *Prerequisites:* MUTH 1129, 1229. *Corequisite:* MUTH 1230.

MUTH 1229 (2). MUSIC THEORY I. Covers rudiments (notation, clefs, key signatures, intervals, scales, and modes), diatonic and chromatic harmony, figured bass, part-writing, and analysis. *Corequisite:* MUTH 1129.

MUTH 1230 (2). MUSIC THEORY II. Continuation of MUTH 1229 covering diatonic and chromatic harmony, figured bass, part-writing, and analysis. *Prerequisites:* MUTH 1129, 1229. *Corequisite:* MUTH 1130.

MUTH 1301 (3). MUSIC FUNDAMENTALS. Covers the recognition, basic aural realization, and use and writing of the fundamental elements of tonal music, including pitch, rhythm, meter, chords, scales, key signatures, melody, and harmony. Lecture and discussion, with in-class application through rhythmic reading and singing. Appropriate for all students except music majors.

MUTH 1325 (3). INTRODUCTION TO COMPOSITION STUDIES. Provides a survey of historical and contemporary compositional skills and practices via projects and study of the literature. Also serves as an introduction to the faculty, each of whom directs sessions during the term. Required course during the first term of composition studies prior to private study. *Prerequisite:* Composition major or instructor consent.

MUTH 2129 (1). MUSICIANSHIP III. Continuation of MUTH 1130 covering solfege, melodic, and harmonic dictation employing chromaticism and 20th-century materials. *Prerequisites:* MUTH 1130, 1230. *Corequisite:* MUTH 2229.

MUTH 2130 (1). MUSICIANSHIP IV. Continuation of MUTH 2129, covering solfeggio, melodic, and harmonic dictation employing chromaticism and 20th-century materials. *Prerequisites:* MUTH 2129, 2229. *Corequisite:* MUTH 2230.

MUTH 2229 (2). MUSIC THEORY III. Continuation of MUTH 1230 covering repertoire from the 19th century to the present. Emphasis on traditional harmonization exercises, beginning

studies in musical form, and introduction to current analytical methods. *Prerequisites:* MUTH 1130, 1230. *Corequisite:* MUTH 2129.

MUTH 2230 (2). MUSIC THEORY IV. Continuation of MUTH 2229 covering repertoire from the 19th century to the present. Emphasis on traditional harmonization exercises, musical form, and current analytical methods. *Prerequisites:* MUTH 2129, 2229. *Corequisite:* MUTH 2130.

MUTH 3117 (1). SONGWRITING LABORATORY. Guided work-shopping of songs through group sharing and comprehensive application of information provided in MUTH 3217. *Corequisite:* MUTH 3217 or permission of instructor.

MUTH 3200 (2). PRIVATE COMPOSITION. Individual study with the composition faculty and regularly scheduled seminars with faculty and visiting guests. *Prerequisite:* Admission to the composition degree program.

MUTH 3217 (2). SONGWRITING. Development of songwriting knowledge and skills, including essential components of a song, basic song forms, multiple approaches to starting and completing songs, recording basics, and related aspects of music law. *Corequisite:* MUTH 3117.

MUTH 3300 (3). PRIVATE COMPOSITION. Individual study with the composition faculty and regularly scheduled seminars with faculty and visiting guests. *Prerequisite:* Admission to the composition degree program.

MUTH 3350 (3). FORM AND ANALYSIS. Study of musical form within a wide range of styles. *Prerequisites:* MUTH 2130, 2230.

MUTH 4184 (1). DIRECTED STUDIES IN MUSIC THEORY. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Approval of instructor.

MUTH 4190 (1). DIRECTED STUDIES IN MUSIC COMPOSITION. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Instructor approval.

MUTH 4202 (2). SEMINAR IN MUSIC THEORY. Advanced analytical study of music in a selected style or genre, or by a particular composer or group of composers. Fulfills upper-division MUTH requirements. Repeatable. *Prerequisites:* MUTH 2130, 2230.

MUTH 4284 (2). DIRECTED STUDIES IN MUSIC THEORY. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Approval of instructor.

MUTH 4290 (2). DIRECTED STUDIES IN MUSIC COMPOSITION. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Instructor approval.

MUTH 4300 (3). ANALYSIS OF CONTEMPORARY MUSIC. Detailed analysis of recent music written in a variety of styles and using diverse techniques. Explores early 20th-century antecedents of more recent music. Analysis and discussion are supported by readings from theoretical articles and composers' writings. *Prerequisites:* MUTH 2130, 2230.

MUTH 4310 (3). INTRODUCTION TO ELECTRO-ACOUSTIC MUSIC. Covers historical and emerging concepts and techniques of composing, performing, and listening to fixed and interactive electro-acoustic music via lectures and laboratory projects. Includes basic acoustics and the history and literature of electronically generated music. Also, hardware and software tools for the generation, processing, and reproduction of musical sound. Students complete individual and collaborative projects, applying their studies to the recording, creation, and performance of fixed and real-time interactive, creative projects. *Prerequisites:* MUTH 2130 and 2230, or consent of instructor.

MUTH 4311 (3). ADVANCED TOPICS IN MUSIC TECHNOLOGY. Advanced investigation into a variety of topics in electro-acoustic music and technology-related musical art forms. Topics vary and may include film music, MIDIstration, real-time interactive performance using Max/MSP/Jitter, algorithmic composition, and technology-related interdisciplinary collaboration. Repeatable. *Prerequisite:* MUTH 4310/6310, MSA 3310, or permission of instructor.

MUTH 4384 (3). DIRECTED STUDIES IN MUSIC THEORY. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Approval of instructor.

MUTH 4390 (3). DIRECTED STUDIES IN MUSIC COMPOSITION. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Instructor approval.

MUTH 5000 (0). COMPOSITION SEMINAR. Topics of common interest to all composers are presented and discussed by composition faculty, current students, and guest artists. Required each term of composition study.

MUTH 5130 (1). COLLABORATIVE COMPOSITION. Students collaborate with artists in other disciplines on composition projects. Meadows disciplines rotate periodically.

MUTH 5150 (1). ADVANCED MUSICIANSHIP. Develops musicianship skills beyond the level attained in the undergraduate core musicianship courses. Includes sight reading and improvisation studies in a range of musical styles for both voice and instruments, advanced melodic and harmonic dictation exercises, aural analysis of musical examples from a wide range of style periods, and the use of the keyboard to support the continued development of skills. Repeatable for credit. Instructor consent required. *Prerequisites:* MUTH 2130, 2230 for undergraduate students, or a passing score for the Graduate Music Theory Diagnostic Exam or for MUTH 6023, 6124, and 6125 for graduate students.

MUTH 5250 (2). ADVANCED MUSICIANSHIP. Develops musicianship skills beyond the level attained in the undergraduate core musicianship courses. Includes sight reading and improvisation studies in a range of musical styles for both voice and instruments, advanced melodic and harmonic dictation exercises, aural analysis of musical examples from a wide range of style periods, and the use of the keyboard to support the continued development of skills. Repeatable for credit. Instructor consent required. *Prerequisites:* MUTH 2130, 2230 for undergraduate students, or a passing score for the Graduate Music Theory Diagnostic Exam or for MUTH 6023, 6124, and 6125 for graduate students.

MUTH 5325 (3). CLASS COMPOSITION. A composition course for noncomposition majors. Topics include notational practices; contemporary and traditional approaches to composition through study of model works from the literature; in-class presentation, reading, and critique of projects; and professional standards for the creation and distribution of scores, parts, and recordings of compositions and arrangements. *Prerequisites:* MUTH 2130, 2230 or permission of instructor. Restricted to music majors.

MUTH 5330 (3). INSTRUMENTATION AND ARRANGING. An overview of the ranges and performing characteristics of orchestral and band instruments and vocalists, with practical application via scoring and arranging for a variety of small instrumental and vocal ensembles. *Prerequisites:* MUTH 2130, 2230.

MUTH 5360 (3). ADVANCED ORCHESTRATION. Explores advanced techniques of orchestration through a series of scoring projects for a variety of ensembles. *Prerequisite:* MUTH 5330 or permission of instructor.

MUTH 5370 (3). SURVEY OF COUNTERPOINT. Through exercises in analysis and composition, this course provides a study of contrapuntal techniques from the Middle Ages to the 20th century, with emphasis on traditional modal and tonal styles. *Prerequisites:* MUTH 2130, 2230.

Music Therapy (MUTY)

MUTY 1120 (1). CLINICAL ORIENTATION. The study of music therapy assessment, treatment procedures, and evaluation, through observation as well as literature and repertoire review. Each student will participate on a working music therapy team. *Prerequisite:* Permission of instructor.

MUTY 1320 (3). INTRODUCTION TO MUSIC THERAPY. An overview of the function of the music therapist, the history of the music therapy profession, and music in treatment procedures. The course is required of all music therapy majors and is open to others who may want information about the professional field of music therapy.

MUTY 3130 (1). DIRECTED STUDIES IN MUSIC THERAPY. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Approval of instructor.

MUTY 3141 (1). DEVELOPMENTAL MUSIC THERAPY PRACTICUM I. Supervised observation of and therapeutic experience with persons who exhibit developmentally delayed disorders. *Corequisite:* MUTY 3211.

MUTY 3142 (1). PSYCHIATRIC MUSIC THERAPY PRACTICUM II. Supervised observation of and therapeutic experience with persons who exhibit psychopathological disorders. *Corequisite:* MUTY 3212.

MUTY 3143 (1). MEDICAL MUSIC THERAPY PRACTICUM III. Supervised observation and development of clinical skills with patients in medical settings. *Corequisite:* MUTY 3213.

MUTY 3144 (1). GERONTOLOGICAL PRACTICUM IV. Supervised observation and development of clinical skills with elderly clients. *Corequisite:* MUTY 3214.

MUTY 3211 (2). DEVELOPMENTAL MUSIC THERAPY. A study of music therapy with developmentally disabled children and adults such as mentally disabled, visually disabled, and speech-impaired individuals. *Corequisite:* MUTY 3141.

MUTY 3212 (2). PSYCHIATRIC MUSIC THERAPY. A study of music therapy with persons with psychopathological disorders such as schizophrenia, depression, and dementia. *Corequisite:* MUTY 3142.

MUTY 3213 (2). MEDICAL MUSIC THERAPY. A study of music therapy with the health impaired, including burn patients, AIDS patients, and obstetric patients. *Corequisite:* MUTY 3143.

MUTY 3214 (2). GERONTOLOGICAL MUSIC THERAPY. Study of music therapy with elderly, gerontological clients. *Corequisite:* MUTY 3144.

MUTY 3230 (2). DIRECTED STUDIES IN MUSIC THERAPY. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Approval of instructor.

MUTY 3330 (3). DIRECTED STUDIES IN MUSIC THERAPY. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Approval of instructor.

MUTY 4141 (1). MUSIC THERAPY PRACTICUM V. Supervised clinical experience in the treatment and health maintenance of clients with clinical disorders.

MUTY 4142 (1). MUSIC THERAPY PRACTICUM VI. Continued supervised clinical experience in the treatment and health maintenance of clients with clinical disorders.

MUTY 4144 (1). INTERNSHIP I. Includes 3 months, or 520 clock hours, of continuous full-time music therapy experience in an AMTA-approved clinical facility. Requires reports from the intern and music therapy supervisor before, during, and after the internship. Because the internship extends beyond the regular term, enrollment for MUTY 4144 occurs for the term during which the internship begins and enrollment for MUTY 4145 occurs concurrently or for the term immediately following. *Prerequisite:* Completion of all course, clinical, and preclinical work in the undergraduate music therapy degree or graduate equivalency program.

MUTY 4145 (1). INTERNSHIP II. Continuation of MUTY 4144. An additional 3 months, or 520 clock hours, of continuous full-time music therapy experience in an AMTA-approved clinical facility. Requires reports from the intern and music therapy supervisor before, during, and after the internship. *Prerequisite or corequisite:* MUTY 4144.

MUTY 4340 (3). RESEARCH METHODS AND MATERIALS IN MUSIC THERAPY. A study of research methods in music psychology, therapy, and education, with emphasis on research designs, analysis, and interpretation of research literature.

MUTY 4341 (3). SURVEY OF MUSIC PSYCHOLOGY. Basic study of music systems, with emphasis on perception of and responses to musical stimuli. Also, interpretation of the interdependence of psychological, sociological, and physiological processes in musical behavior, such as musical ability and preference.

MUTY 5340 (3). TOPICS IN MUSIC THERAPY. A survey of contemporary trends in music therapy, psychology, and medicine. Also, the universality of music, with applications in modern therapy, medicine, and health. *Prerequisite:* Permission of instructor.

MUTY 5341 (3). SEMINAR ON CLINICAL MUSIC THERAPY. A survey of contemporary trends in music therapy, psychology, and medicine. Through use of group process and self-exploration, students develop a comprehensive, personalized, and demonstrable theory of clinical music therapy. *Prerequisite:* Permission of instructor.

Class Instruction for Performance (PERB)

Harpichord	PERB 5118, 5213
Piano	PERB 1001, 1011, 1012, 1131, 1132, 1205, 1233, 1234, 2131, 2132, 2205, 3205, 5107, 5108
Voice	PERB 1206, 2017, 2106–09, 2206, 2117, 3306, 5006, 5101, 5208
Other Instrumental	PERB 1103/1104, 1203/2203, 2113/2114/2313, 2115, 5011, 5111, 5211, 5215

PERB 1001 (0). DEPARTMENTAL PERFORMANCE CLASS. Departmental recitals, performance classes, master classes, guest artist performances, and lectures related to performance specialization. Students enroll concurrently with studies in applied music.

PERB 1011 (0.5). SIGHT READING FOR PIANISTS I. A requirement for premusic majors in piano performance. Students explore techniques to improve their ability to read music at any level through supervised practicing and reading of various piano literature.

PERB 1012 (0.5). SIGHT READING FOR PIANISTS II. A requirement for premusic majors in piano performance. Emphasis is given to reading skills that are particularly useful in collaborative playing, including exposure to various types of scores and score preparation. *Prerequisite:* PERB 1011.

PERB 1103 (1). THERAPEUTIC ACOUSTIC GUITAR I. Beginning steel-string acoustic guitar skills, with emphasis on flat-picking and finger-picking chords, strums, and additional left- and right-hand techniques for accompanying folk, popular, and original songs in music therapy, music education, and recreational music settings.

PERB 1104 (1). THERAPEUTIC ACOUSTIC GUITAR II. Intermediate steel-string acoustic guitar skills, with emphasis on enhanced flat-picking and finger-picking chords, strums, and additional left- and right-hand techniques for accompanying folk, popular, and original songs in music therapy, music education, and recreational music settings.

PERB 1131 (1). CLASS PIANO I. Emphasis on sight reading, technique, harmonization, transposition, improvisation, and appropriate literature. *Corequisites:* MUTH 1129, 1229. Reserved for music majors (except keyboard majors) or minors.

PERB 1132 (1). CLASS PIANO II. Emphasis on sight reading, technique, harmonization, transposition, improvisation, and appropriate literature. *Corequisites:* MUTH 1130, 1230. *Prerequisite:* PERB 1131. Reserved for music majors (except keyboard majors) or minors.

PERB 1203 (2). CLASS GUITAR. Basics of reading music; technique; simple chord progressions as applied to popular music; performance of simple classic guitar pieces.

PERB 1204 (2). MODERN ACOUSTIC GUITAR. Beginning class steel-string acoustic guitar skills with emphasis on flat-picking and finger-picking chords, strums, and additional left and right hand techniques for accompanying folk and popular songs in music therapy, music education, and recreational music settings.

PERB 1205 (2). BEGINNING CLASS PIANO. Designed for students with no previous piano study. Emphasis placed on the development of basic music reading and functional keyboard skills. Not open to music majors.

PERB 1206 (2). CLASS VOICE. A course in basic singing techniques and interpretive skills, suitable for both beginning singers and for students with singing experience but little formal training.

PERB 1233 (2). ADVANCED CLASS PIANO I. (fall term of odd-numbered years) Emphasis on sight reading, harmonization, transposition, improvisation, and technique. Reserved for keyboard majors or music majors with advanced keyboard skills.

PERB 1234 (2). ADVANCED CLASS PIANO II. (spring term of even-numbered years) Emphasis on sight reading, harmonization, transposition, improvisation, and technique. *Prerequisite:* PERB 1233. Reserved for keyboard majors or music majors with advanced keyboard skills.

PERB 2017 (0). MEADOWS OPERA WORKSHOP. Exploration of operatic and musical theatre styles, basic acting technique, dramatic analysis, storytelling skills, character development,

monologue study, stagecraft skills, repertoire preparation and research, and scene study. Open to all undergraduates whose primary instrument is voice. Must be taken in sequence for two terms beginning with the fall term.

PERB 2106 (1). DICTION: ITALIAN. Principles of pronunciation and enunciation for singing in Italian. Phonetic practice and practical application to the performance of art songs and arias.

PERB 2107 (1). DICTION: GERMAN. Principles of pronunciation/enunciation for singing in German. Phonetic practice and practical application to the performance of art songs and arias.

PERB 2108 (1). DICTION: ENGLISH. Principles of pronunciation and enunciation for singing in English. Phonetic practice and practical application to the performance of art songs and arias.

PERB 2109 (1). DICTION: FRENCH. Principles of pronunciation and enunciation for singing in French. Phonetic practice and practical application to the performance of art songs and arias.

PERB 2113 (1). HAND DRUMMING AND ETHNIC PERCUSSION I. Development of fundamental hand drumming and other percussion skills through listening, analysis, and performance of African, Latin American, and Asian rhythms.

PERB 2114 (1). HAND DRUMMING AND ETHNIC PERCUSSION II. Further development of hand drumming and other percussion skills through listening, analysis and performance of non-Western rhythms. *Prerequisite:* PERB 2113 or consent of instructor.

PERB 2115 (1). ELEMENTARY KEYBOARD IMPROVISATION. Introduces the fundamentals of improvisation for the novice pianist. Expands the student's knowledge of basic music theory, employing it in a wide variety of styles. Open to music and nonmusic majors. *Prerequisites:* Late beginner or intermediate piano skills, a basic knowledge of scales, and instructor consent.

PERB 2117 (1). MEADOWS OPERA WORKSHOP. Exploration of operatic and musical theatre styles, basic acting technique, dramatic analysis, storytelling skills, character development, monologue study, stagecraft skills, repertoire preparation and research, and scene study. Open to all undergraduates whose primary instrument is voice. Must be taken in sequence for two terms beginning with the fall term.

PERB 2131 (1). CLASS PIANO III. Emphasis on sight reading, technique, harmonization, transposition, improvisation, and appropriate literature. *Corequisites:* MUTH 2129, 2229. *Prerequisite:* PERB 1132. Reserved for music majors (except keyboard majors) or minors.

PERB 2132 (1). CLASS PIANO IV. Emphasis on sight reading, technique, harmonization, transposition, improvisation, and appropriate literature. *Corequisites:* MUTH 2130, 2230. *Prerequisite:* PERB 2131. Reserved for music majors (except keyboard majors) or minors.

PERB 2203 (2). CLASS GUITAR. Continued development of technical skills and performance repertoire. *Prerequisite:* PERB 1203 or equivalent proficiencies.

PERB 2205 (2). CLASS PIANO. Continued development of fundamental keyboard skills. Emphasis on sight reading, harmonization, transposition, improvisation, technique, and repertoire study. *Prerequisite:* PERB 1205 or equivalent. Audition for placement required. Not open to music majors.

PERB 2206 (2). CLASS VOICE. A course in singing techniques and interpretive skills, suitable for students with some singing experience but little formal training. *Prerequisite:* PERB 1206.

PERB 2313 (3). WORLD RHYTHMS: ETHNIC PERCUSSION AND CULTURAL IMMERSION. Introduces rhythms and instruments of world music through total immersion in a specific world culture. Students learn hand drumming and ethnic percussion techniques and the cultural context of the music. (SMU Abroad)

PERB 3205 (2). INTERMEDIATE CLASS PIANO. Continued development of individual repertoire study in a variety of musical styles, with supporting work in sight reading, harmonization, pop chord symbols, technique, and improvisation. *Prerequisite:* PERB 2205 or equivalent. Audition for placement required. Not open to music majors.

PERB 3306 (3). CLASS VOICE MUSICAL THEATRE I. Introduces the dancer and actor to proper singing technique for musical theatre, with emphasis on the repertoire of musical theatre. *Prerequisites:* Permission of instructor; musical theatre minor or major or minor in dance, music, or theatre. Students minoring in musical theatre have priority to enroll in the class.

PERB 3307 (3). CLASS VOICE MUSICAL THEATRE II. Advanced development of proper musical theatre singing technique for dancers and actors. Students also gain a broader knowledge of repertoire for the musical theatre. *Prerequisite:* PERB 3306 or instructor consent.

PERB 5006 (0). SINGERS' DICTION REVIEW. A review course required of all students not passing an entrance assessment for proficiency in the pronunciation of Italian, French, and German.

PERB 5011 (0). DIRECTED STUDIES IN PERFORMANCE. Directed studies or approved internships in performance or pedagogy. Students are required to accept internships in performance or private teaching, subject to availability and/or scheduling conflicts with other SMU courses. Internships may begin prior to the beginning of the term.

PERB 5022 (0). MUSIC THEATRE ACTING AND PERFORMANCE. Fundamentals of acting in musical theatre: script analysis, blocking, character development, and scene study. Introduces musical theatre movement and audition techniques. Culminates with a series of performed musical scenes. *Prerequisite:* By audition.

PERB 5101 (1). DIRECTED STUDIES IN VOICE. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Approval of instructor.

PERB 5107 (1). KEYBOARD SKILLS FOR CONDUCTORS I. Keyboard competencies for conductors, including basic technical patterns, harmonization, and relevant score reading. Review course for the M.S.M. and the M.M. in conducting keyboard proficiency requirement.

PERB 5108 (1). KEYBOARD SKILLS FOR CONDUCTORS II. Advanced keyboard competencies for conductors, including basic technical patterns, harmonization, and relevant score reading. Review course for the M.S.M. and the M.M. in conducting keyboard proficiency requirement.

PERB 5111 (1). DIRECTED STUDIES IN PERFORMANCE. Directed studies or approved internships in performance or pedagogy. Students are required to accept internships in performance or private teaching, subject to availability and/or scheduling conflicts with other SMU courses. Internships may begin prior to the beginning of the term.

PERB 5118 (1). INTRODUCTION TO THE HARPSICHORD. (spring term of odd-numbered years) Presents a variety of topics related to the harpsichord and its music. Provides keyboard musicians, especially pianists, with knowledge and practical experience at the harpsichord to enable them to face future contacts with the instrument in a more informed, confident, and artistic manner.

PERB 5122 (1). MUSIC THEATRE ACTING AND PERFORMANCE. Fundamentals of acting in musical theatre: script analysis, blocking, character development, and scene study. Introduces musical theatre movement and audition techniques. Culminates with a series of performed musical scenes. *Prerequisite:* By audition.

PERB 5201 (2). DIRECTED STUDIES IN VOICE. A close collaboration between a faculty member and an advanced student who conducts a rigorous project that goes beyond the experience available in current course offerings. *Prerequisite:* Approval of instructor.

PERB 5208 (2). ADVANCED ACTING FOR VOICE MAJORS. Acting and performance tools, character development, monologue study, and repertoire preparation and research. *Prerequisites:* Concurrent enrollment in VOIC and consent of instructor.

PERB 5211 (2). DIRECTED STUDIES IN MUSIC PERFORMANCE. Directed studies or approved internships in performance or pedagogy. Students are required to accept internships in performance or private teaching, subject to availability and/or scheduling conflicts with other SMU courses. Internships may begin prior to the beginning of the term.

PERB 5213 (2). STUDIES CONTINUO PLAYING. (fall term of even-numbered years) Designed for the harpsichord major, to fill the need for a well-developed skill in playing Baroque through bass accompaniments from an unrealized figured bass and/or from an unfigured bass with style performance suitable to the period.

PERB 5215 (2). INTRODUCTION TO JAZZ THEORY AND IMPROVISATION. Introduces jazz improvisation through applied theory. Students gain theoretical and practical experience in jazz improvisation using common jazz chord progressions and chord and scale relationships. Includes the study of jazz recordings to explore and understand the links among chords, scales, and melodies. May be repeated for credit. *Prerequisite:* Music major or minor, or instructor consent.

PERB 5310 (3). MUSIC THEATRE WORKSHOP. Preparation and performance of musical theatre as an American art form. *Prerequisite:* By audition.

Performance Ensembles (PERE)

Fulfill Large Ensemble Requirements	PERE 1013/1113, 1014/1114, 1018/1118, 1019/1119, 5016/5116
Chamber Ensembles	PERE 5023/5123, 5030/5130, 5068/5168, 5069/5169, 5071/5171, 5072/5172, 5073/5173
Other Ensembles	PERE 1010/1110, 1011/1111, 1012/1112, 1015/1115, 1017/1117, 3020/3120, 5077/5177, 3150, 4050/4150

PERE 1010 (0). POINT: INTERDISCIPLINARY PROJECT AND PERFORMANCE ENSEMBLE. An interdisciplinary ensemble for inventive artists of all interests, exploring the future of personal expression through collaborative projects and performances. Innovative technologies are utilized and created. Open to all SMU students with instructor consent. May be repeated for credit.

PERE 1011 (0). MUSTANG STRINGS: AN SMU CAMPUS ORCHESTRA. Open to all students and community members. Does not meet the large ensemble requirement for music majors. *Prerequisite:* Audition or permission of instructor.

PERE 1012 (0). MUSTANG MARCHING BAND. Preparation and performance of music for field performances.

PERE 1013 (0). MEADOWS CHORALE. This mixed choir features the most advanced vocal talent in the university. Meadows Chorale is open to all undergraduate and graduate students, regardless of major. Auditions are held at the beginning of the fall term.

PERE 1014 (0). CONCERT CHOIR. This large mixed ensemble performs a variety of choral repertoire and is open to all students through audition. Auditions are held at the beginning of every term.

PERE 1015 (0). MEADOWS JAZZ ORCHESTRA. Rehearsal and performance of standard and original works for jazz ensembles. By audition.

PERE 1017 (0). SMU SYMPHONY BAND. Open to all students and community members. Provides a concert band experience exploring band music ranging from transcriptions to original works. Does not meet the large ensemble requirement for music majors. *Prerequisite:* Audition or permission of instructor.

PERE 1018 (0). MEADOWS SYMPHONY ORCHESTRA. Open to all students through audition, although most participants are music majors. Includes public performances of a wide variety of orchestral repertoire each season.

PERE 1019 (0). MEADOWS WIND ENSEMBLE. Open to all students through audition, although most participants are music majors or minors. Includes performance of a wide variety of literature that encompasses the symphonic band and wind orchestra idioms.

PERE 1110 (1). POINT: INTERDISCIPLINARY PROJECT AND PERFORMANCE ENSEMBLE. An interdisciplinary ensemble for inventive artists of all interests, exploring the future of personal expression through collaborative projects and performances. Innovative technologies are utilized and created. Open to all SMU students with instructor consent. May be repeated for credit.

PERE 1111 (1). MUSTANG STRINGS: AN SMU CAMPUS ORCHESTRA. Open to all students and community members. Does not meet the large ensemble requirement for music majors. *Prerequisite:* Audition or permission of instructor.

PERE 1112 (1). MUSTANG MARCHING BAND. Preparation and performance of music for field performances.

PERE 1113 (1). MEADOWS CHORALE. This mixed choir features the most advanced vocal talent in the University. Open to all students, regardless of major. Auditions are held at the beginning of the fall term.

PERE 1114 (1). CONCERT CHOIR. This large, mixed ensemble performs a variety of choral repertoire. Open to all students through audition. Auditions are held at the beginning of every term.

PERE 1115 (1). MEADOWS JAZZ ORCHESTRA. Rehearsal and performance of standard and original works for jazz ensembles. By audition.

PERE 1117 (1). SMU SYMPHONY BAND. Open to all students and community members. Provides a concert band experience exploring band music ranging from transcriptions to original works. Does not meet the large ensemble requirement for music majors. *Prerequisite:* Audition or permission of instructor.

PERE 1118 (1). MEADOWS SYMPHONY ORCHESTRA. Open to all students through audition, although most participants are music majors. Includes public performances of a wide variety of orchestral repertoire each season.

PERE 1119 (1). MEADOWS WIND ENSEMBLE. Open to all students through audition, although most participants are music majors or minors. Includes performance of a wide variety of literature that encompasses the symphonic band and wind orchestra idioms.

PERE 3020 (0). MEADOWS WORLD MUSIC ENSEMBLE. Exploration of rhythms, melodies, forms, and basic ethnic percussion techniques from Africa, Asia, Latin America, and a variety of cultures. Includes composition, improvisation, and performances within forms of ethnic traditions adapted to Western instruments. *Prerequisite:* Music major or consent of instructor.

PERE 3120 (1). MEADOWS WORLD MUSIC ENSEMBLE. Exploration of rhythms, melodies, forms, and basic ethnic percussion techniques from Africa, Asia, Latin America, and a variety of cultures. Includes composition, improvisation, and performances within forms of ethnic traditions adapted to Western instruments. *Prerequisite:* Music major or consent of instructor.

PERE 3150 (1). CHAPEL CHOIR. Choir sings for 11 a.m. University Service of Worship (Protestant) on Sundays at Perkins Chapel; 14 services per term. Rehearsal at 9:30 a.m. Sunday.

PERE 4050 (0). MEADOWS OPERA ENSEMBLE. Musical preparation, dramatic coaching, role study, rehearsal, and performance of opera (one-act operas and opera excerpts) and scenes from musical theatre. Eligibility, by audition, for the annual main stage production. *Prerequisites:* By audition. Requires two consecutive terms of PERB 2017 or 2117, or instructor consent.

PERE 4150 (1). MEADOWS OPERA ENSEMBLE. Musical preparation, dramatic coaching, role study, rehearsal, and performance of opera (one-act operas and opera excerpts) and scenes from musical theatre. Eligibility, by audition, for the annual main stage production. *Prerequisites:* By audition. Requires two consecutive terms of PERB 2017 or 2117, or instructor consent.

PERE 5025 (0). JAZZ COMBO PERFORMANCE WORKSHOP. Preparation and performance of jazz repertoire in small-group settings developing improvisation and fake book reading skills and gig protocol. Does not fulfill ensemble requirements for music majors. *Prerequisite:* Audition or consent of instructor.

PERE 5030 (0). MEADOWS GUITAR ENSEMBLE. Preparation and performance of guitar ensemble literature. *Prerequisite:* Guitar major or consent of instructor.

PERE 5068 (0). CHAMBER ENSEMBLE: PIANO DUOS. Preparation and performance of piano duets for one piano, four hands and two pianos, four hands. Does not fulfill chamber music requirements for music majors.

PERE 5069 (0). CHAMBER ENSEMBLE: SONATAS. Preparation and performance of repertoire for one instrument and piano. With adviser approval, one term may be counted toward chamber music requirements for undergraduate piano majors. Does not fulfill chamber music requirements for graduate students.

PERE 5071 (0). CHAMBER ENSEMBLE. Preparation and performance of repertoire for various ensembles of three to nine mixed instruments, one to a part, without conductor.

PERE 5072 (0). ADDITIONAL CHAMBER ENSEMBLE. Preparation and performance of repertoire for various ensembles of three to nine mixed instruments, one to a part, without conductor. Requires simultaneous participation in at least one additional chamber ensemble.

PERE 5073 (0). MEADOWS PERCUSSION ENSEMBLE. Rehearsal and performance of standard percussion ensemble literature. By audition.

PERE 5077 (0). SYZGY CONTEMPORARY CHAMBER ENSEMBLE. Preparation and performance of the music of living and local composers as well as seminal works of the 20th century for various mixed ensembles, typically without conductor. Fulfills one term of chamber music requirement. *Prerequisite:* Audition or consent of instructor.

PERE 5125 (1). JAZZ COMBO PERFORMANCE WORKSHOP. Preparation and performance of jazz repertoire in small-group settings developing improvisation and fake book reading skills and gig protocol. Does not fulfill ensemble requirements for music majors. *Prerequisite:* Audition or consent of instructor.

PERE 5130 (1). MEADOWS GUITAR ENSEMBLE. Preparation and performance of guitar ensemble literature. *Prerequisite:* Guitar major or consent of instructor.

PERE 5168 (1). CHAMBER ENSEMBLE: PIANO DUOS. Preparation and performance of piano duets for one piano, four hands and two pianos, four hands. Does not fulfill chamber music requirements for music majors.

PERE 5169 (1). CHAMBER ENSEMBLE: SONATAS. Preparation and performance of repertoire for one instrument and piano. With adviser approval, one term may be counted toward chamber music requirements for undergraduate piano majors. Does not fulfill chamber music requirements for graduate students.

PERE 5171 (1). CHAMBER ENSEMBLE. Preparation and performance of repertoire for various ensembles of three to nine mixed instruments, one to a part, without conductor.

PERE 5172 (1). ADDITIONAL CHAMBER ENSEMBLE. Preparation and performance of repertoire for various ensembles of three to nine mixed instruments, one to a part, without conductor. Requires simultaneous participation in at least one additional chamber ensemble.

PERE 5173 (1). MEADOWS PERCUSSION ENSEMBLE. Rehearsal and performance of standard percussion ensemble literature. By audition.

PERE 5177 (1). SYZGY CONTEMPORARY MUSIC ENSEMBLE. Preparation and performance of the music of living and local composers as well as seminal works of the 20th century for various mixed ensembles, typically without conductor. Fulfills one term of chamber music requirement. *Prerequisite:* Audition or consent of instructor.

Vocal Coaching (VOIC)

VOIC 3015 (0). VOCAL COACHING. Vocal coaching (for voice majors only) course numbers are VOIC 3015, 3116, 4017, 4118. The instructor coaches the singer on diction and interpretation of art song and aria.

VOIC 3100 (1). PRIVATE STUDY: VOICE. One half-hour lesson each week (14 per term) with a jury examination at the conclusion of each term. These repeatable course numbers are offered each fall, spring, and summer. Students are required to accept internships in performance or private teaching, subject to availability and/or scheduling conflicts with other SMU courses. Internships may begin prior to the beginning of the term.

VOIC 3116 (1). VOCAL COACHING. Vocal coaching (for voice majors only) course numbers are VOIC 3015, 3116, 4017, 4118. The instructor coaches the singer on diction and interpretation of art song and aria.

VOIC 3200 (2). PRIVATE STUDY: VOICE. One 1-hour lesson each week (14 per term) with a jury examination at the conclusion of each term. These repeatable course numbers are offered each fall and spring. Majors are required to enroll in private studies each term until degree requirements are completed. Students are required to accept internships in performance or private teaching, subject to availability and/or scheduling conflicts with other SMU courses. Internships may begin prior to the beginning of the term.

VOIC 4017 (0). VOCAL COACHING. Vocal coaching (for voice majors only) course numbers are VOIC 3015, 3116, 4017, 4118. The instructor coaches the singer on diction and interpretation of art song and aria.

VOIC 4118 (1). VOCAL COACHING. Vocal coaching (for voice majors only) course numbers are VOIC 3015, 3116, 4017, 4118. The instructor coaches the singer on diction and interpretation of art song and aria.

THEATRE

Professor Stanley Wojewodski, Jr., *Division Chair*

Professors: Rhonda Blair, Kevin Paul Hofeditz, Bill Lengfelder, Stanley Wojewodski, Jr., Steve Woods. **Associate Professors:** Michael Connolly, James Crawford, Jack Greenman, Russell Parkman, Sara Romersberger, Anne Schilling, Gretchen Smith, Claudia Stephens. **Assistant Professors:** Benard Cummings, Blake Hackler. **Artist-in-Residence:** Will Power. **Lecturers:** Brad Cassil, Marsha Grasselli. **Adjunct Lecturers:** Dawn Askew, Jason Biggs, Linda Blase, Steve Leary, J.D. Margetts, Kathy Windrow. **Costume Shop Manager:** Melissa Panzarello. **Costumer:** Eugenie Stallings. **Prop Master:** JT Ringer. **Scene Shop Foreman:** Eliseo Gutierrez. **Master Electricians:** Dawn Askew, Chris Mount. **Technical Director:** Steve Leary. **Assistant Technical Director:** J.D. Margetts.

General Information

Undergraduate education in the Division of Theatre reflects a commitment to the rigorous study of theatre within a liberal arts context. To this end, undergraduate theatre majors pursue coursework not only in theatre, but also in the social and natural sciences, literature, the arts and humanities, and other areas of human culture and experience. A faculty adviser works closely with each student to develop a program of study best suited to the individual's needs and career goals. In addition, the Division of Theatre presents an annual season of public productions chosen for their timeliness, public appeal and suitability for training. Practical experience in all areas of theatre operation is considered a vital part of the educational program.

Instructional Facilities

The Division of Theatre is housed in the well-equipped facilities of the Meadows School of the Arts. These facilities include the Greer Garson Theatre (a 380-seat theatre with a classical thrust stage), the Bob Hope Theatre (a 400-seat proscenium theatre), the Margo Jones Theatre (a 125-seat "black box" theatre), the Hamon Arts Library and numerous rehearsal studios.

Admission

In addition to meeting University admission criteria, prospective theatre majors at SMU are admitted to the major by audition and interview. All prospective students prepare an audition, consisting of two contrasting monologues and a song. Candidates may also be asked to demonstrate improvisational skills. Students seeking admission into the B.F.A. in Theatre Studies program may also be asked to demonstrate ability in their particular area of interest by supplying writing samples, portfolio materials, etc. Admission to the major requires both admission to SMU and admission through the theatre audition process. **Note:** Admission procedures for applicants seeking to transfer from other schools are the same as those for first-year applicants. Transfer students may begin work only in the fall term.

Evaluation of Progress and Artistic Growth

Students must continually demonstrate a high order of talent and commitment in both class work and production work to progress in the curriculum. At the end of each term, the faculty of the Division of Theatre evaluates each student's progress, examining all aspects of a student's academic and production participation. Every student meets with the faculty to receive this evaluation. An unsatisfactory evaluation is accompanied by the reasons for this evaluation and the terms for continua-

tion in the program. An unsatisfactory evaluation may also result in a student's immediate dismissal from the program.

Degrees and Programs of Study

The Division of Theatre offers the B.F.A. degree in theatre with a specialization in theatre studies or a specialization in acting.

Bachelor of Fine Arts in Theatre With a Specialization in Theatre Studies

The B.F.A. degree in theatre with a specialization in theatre studies reflects a commitment to theatre training within the context of liberal education. Based on the division's philosophy that an understanding of and experience with the actor's process are essential to education and training in all areas of theatre, all undergraduate theatre majors focus on foundational actor training during the first two years of their program of study. Focused study in one area of theatre, chosen from directing, playwriting, stage management, critical studies and design, is required to complete the major. With the approval of the student's theatre adviser and the chair of the division, this emphasis may be individualized to suit the specific goals of the student. All theatre studies students must complete at least 12 hours of upper-level courses among those offered in directing, playwriting, stage management, critical studies or design.

<i>Requirements for the Specialization</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
Dramatic Arts	6
THEA 1303, 1304	
Practica/Crews	9
THEA 2140/2240, 2141/2241, 2142/2242	
Acting	6
THEA 2303, 2304	
Voice and Movement	12
THEA 2305, 2306	
THEA 2307, 2308	
Theatre and Drama History	6
THEA 3381, 3382	
Text Analysis, Stage Management	6
THEA 2322, 2361	
Emphasis Courses	12
Emphasis on directing, playwriting, stage management, design, or critical studies	
Theatre Electives	17
Community Experience	0–1
MSA 1001 <i>or</i> 1101	
Free Electives	
Hours vary as needed to meet University residency and degree requirements	

Bachelor of Fine Arts in Theatre With a Specialization in Acting

The B.F.A. degree in theatre with a specialization in acting is a unique program of specialized acting study within a liberal arts context. Enriched by the intellectual growth engendered by both their liberal arts and theatre courses, acting students engage in an intense investigation of acting at the highest level. The purpose of the program is two-fold: to prepare students for 1) entrance into the profession, and/or 2) admission to a top-flight, graduate training program. Upon completion of two years of foundational actor training, students in the acting major receive advanced training in the areas of acting, stage movement and stage voice.

<i>Requirements for the Specialization</i>	<i>Credit Hours</i>
Universitywide Requirements	varies
Dramatic Arts	6
THEA 1303, 1304	
Practica/Crews	9
THEA 2140/2240, 2141/2241, 2142/2242	
Acting	18
THEA 2303, 2304, 3303, 3304, 4303, 4304	
Voice	14
THEA 2305, 2306, 3305, 3306, 4105, 4106	
Movement	14
THEA 2307, 2308, 3207, 3208, 4207, 4208	
Theatre and Drama History	6
THEA 3381, 3382	
Text Analysis, Stage Management and Business Aspects	9
THEA 2322, 2361, 4309	
Community Experience	0–1
MSA 1001 or 1101	
Free Electives	
Hours vary as needed to meet University residency and degree requirements	

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The Courses (THEA)

The following classes are open to all students: THEA 2311, 2319, 2321, 3312–3314, 3316, 3318 3381–3382, 4373, 4381–4385, 5319. **Note:** There are no performance opportunities for nontheatre majors.

THEA 1303 (3). DRAMATIC ARTS TODAY. An introduction to theatre and performance for entering theatre majors. Considers basic artistic concepts, disciplines, and vocabulary common to this program, providing an elementary foundation in theatre with an emphasis on acting.

THEA 1304 (3). DRAMATIC ARTS TODAY. An introduction to theatre and performance for entering theatre majors. Considers basic artistic concepts, disciplines, and vocabulary common to this program, providing an elementary foundation in theatre with an emphasis on acting.

THEA 2101 (1). DIRECTED STUDY. Directed study courses are not required and are taken only as needed; form and content are not predetermined. The student and the adviser decide what kind of activity or learning experience should occur. Before the end of the add-drop period, the student must arrange the course content and grading basis with the supervising faculty. Numbers are assigned to the student's year status rather than by the subject matter.

THEA 2140 (1). LIGHT RUNNING/CONSTRUCTION CREW. Practical application of skills and knowledge studied in THEA 2240 to the mounting and running of a theatrical production; involves either serving on the running crew of a division production or completing 65 hours of work mounting a production. Theatre majors should complete this course by the end of the junior year. Division approval required for nonmajors. Must be taken concurrently with or subsequent to completion of THEA 2240.

THEA 2141 (1). SCENE RUNNING/CONSTRUCTION CREW. Practical application of skills and knowledge studied in THEA 2241 to the mounting and running of a theatrical production; involves either serving on the running crew of a division production or completing 65 hours of work mounting a production. Theatre majors should complete this course by the end of the junior year. Division approval required for nonmajors. Must be taken concurrently with or subsequent to completion of THEA 2241.

THEA 2142 (1). COSTUME RUNNING/CONSTRUCTION CREW. Practical application of skills and knowledge studied in THEA 2242 to the mounting and running of a theatrical production; involves either serving on the running crew of a division production or completing 65 hours of work mounting a production. Theatre majors should complete this course by the end of the junior year. Division approval required for nonmajors. Must be taken concurrently with or subsequent to completion of THEA 2242.

THEA 2201 (2). DIRECTED STUDY. Directed study courses are not required and are taken only as needed; form and content are not predetermined. The student and the adviser decide what kind of activity or learning experience should occur. Before the end of the add-drop period, the student must arrange the course content and grading basis with the supervising faculty. Numbers are assigned to the student's year status rather than by the subject matter.

THEA 2240 (2). LIGHTING PRACTICUM. An introduction to the backstage crafts of theatrical lighting intended to give the student a broad understanding of the basic principles and technical procedures used in the design of lighting. Requires a 50-hour lab. Division approval required for nonmajors.

THEA 2241 (2). SCENERY PRACTICUM. An introduction to the backstage crafts of theatrical scenery intended to give the student a broad understanding of the basic principles and technical procedures used in the design of scenery. Requires a 50-hour lab. Division approval required for nonmajors.

THEA 2242 (2). COSTUME PRACTICUM. An introduction to the backstage crafts of theatrical costume intended to give the student a broad understanding of the basic principles and technical procedures used in the design of costumes. Requires a 50-hour lab. Division approval required for nonmajors.

THEA 2271 (2). TECHNICAL THEATRE LABORATORY. Various workshops structured to introduce a broad range of technical experience. May include properties design and construction, audio design for performing arts, advanced electrics, costume construction, and scenic construction for film and television.

THEA 2272 (2). TECHNICAL THEATRE LABORATORY. Various workshops structured to introduce a broad range of technical experience. May include properties design and construction, audio design for performing arts, advanced electrics, costume construction, and scenic construction for film and television.

THEA 2273 (2). TECHNICAL THEATRE LABORATORY. Various workshops structured to introduce a broad range of technical experience. May include properties design and construction, audio design for performing arts, advanced electrics, costume construction, and scenic construction for film and television.

THEA 2274 (2). TECHNICAL THEATRE LABORATORY. Various workshops structured to introduce a broad range of technical experience. May include properties design and construction, audio design for performing arts, advanced electrics, costume construction, and scenic construction for film and television.

THEA 2275 (2). TECHNICAL THEATRE LABORATORY. Various workshops structured to introduce a broad range of technical experience. May include properties design and construction, audio design for performing arts, advanced electrics, costume construction, and scenic construction for film and television.

THEA 2276 (2). TECHNICAL THEATRE LABORATORY. Various workshops structured to introduce a broad range of technical experience. May include properties design and construc-

tion, audio design for performing arts, advanced electrics, costume construction, and scenic construction for film and television.

THEA 2277 (2). TECHNICAL THEATRE LABORATORY. Various workshops structured to introduce a broad range of technical experience. May include properties design and construction, audio design for performing arts, advanced electrics, costume construction, and scenic construction for film and television.

THEA 2278 (2). TECHNICAL THEATRE LABORATORY. Various workshops structured to introduce a broad range of technical experience. May include properties design and construction, audio design for performing arts, advanced electrics, costume construction, and scenic construction for film and television.

THEA 2301 (3). DIRECTED STUDY. Directed study courses are not required and are taken only as needed; form and content are not predetermined. The student and the adviser decide what kind of activity or learning experience should occur. Before the end of the add-drop period, the student must arrange the course content and grading basis with the supervising faculty. Numbers are assigned to the student's year status rather than by the subject matter.

THEA 2303 (3). ACTING 1. Exploration of the actor's imagination and the nature of acting, embracing training concepts of ease, honesty, sense memory, and concentration.

THEA 2304 (3). ACTING 2. Beginning script work, in which the actor learns to analyze a scene for its events and to particularize these events in a series of expressive action tasks. Sophomore course. *Prerequisite:* THEA 2303.

THEA 2305 (3). VOICE FOR THE STAGE 1. Employing body awareness, modified yoga positions, and a variety of isolated physical actions, students deepen their experience of breath, impulse, and vibration. This process of freeing the vocal mechanism allows students to practice ease and efficiency of vocal release and to begin to make acting choices that are self-revealing. Addresses general patterns of self-editing and an initial expansion of the actor's range and flexibility in performance.

THEA 2306 (3). VOICE FOR THE STAGE 2. Students continue to practice ease and efficiency of vocal release and deepen their ability to make acting choices that are self-revealing. Vocal power, flexibility, and efficiency are enhanced and refined. Includes an introduction to phonetic information and execution of detailed speech actions.

THEA 2307 (3). MOVEMENT 1. Teaches students to individuate internal energies of the body, to use these energies in movement and creation of precise statuary mime for the stage, and to begin to synthesize physical listening skills for ensemble acting. Skills taught include juggling, hatha yoga, corporal mime, illusionistic pantomime, t'ai chi ch'uan, and improvisation of mime pieces.

THEA 2308 (3). MOVEMENT 2. Increases students' physical listening skills and practices these in unarmed stage combat. Skills taught include t'ui shou, chi sao, foil fencing (left and right), French sabre, kung fu animals, and conventions of unarmed stage combat. *Prerequisite:* THEA 2307.

THEA 2309 (3). THEATRE MOVEMENT FOR NONMAJORS. Students develop beginning skills as an acrobat, a stage fighter, an imaginative physical improviser, and a deviser of physical stories and storytelling. This hands-on course helps the student find a process that can be used to create character or to broach any movement or physical challenge presented by a role for the stage, in a public-speaking situation, or in any part of life. Designed for nonmajors.

THEA 2311 (3). THE ART OF ACTING. Basic work in acting, voice, and movement for the nonmajor. Relaxation, concentration, imagination, and the actor's exploration and use of the social world.

THEA 2319 (3). FASHION HISTORY AND CULTURE. Explores how and why people tell others who they are by what they wear. Also, the role of clothing in and reflection of various historical cultures, including the relationship between fashion, art, architecture, and the decorative arts of selected time periods. For majors and nonmajors.

THEA 2321 (3). SPECTACLE OF PERFORMANCE. Students learn to deconstruct spectacle and to analyze its influence upon themselves and society. Offers the opportunity to go backstage to experience firsthand how effects are achieved. Students are required to attend performances in a wide range of live venues and discuss what they observe, enabling them to view performance on a critical level. For majors and nonmajors.

THEA 2322 (3). TEXT ANALYSIS. Aids the first-year student in the skills necessary to read a play as an actor, a director, a playwright, a designer, and a student of drama; as such, it is an essential foundation step in the major. Explores key styles and genres of dramatic literature and important texts in the development of theatre. Includes lecture and discussion, and assignments include reading, written papers, and text-based exercises. Guest lecturers from the faculty will provide perspective on different areas of theatre production.

THEA 2333 (3). TECHNICAL DRAWING FOR THE THEATRE. Principles and practice in the techniques of drafting traditional/nontraditional types of stage scenery. Students learn how to prepare and present construction and detail drawings for use in a scene, prop, or electric shop.

THEA 2361 (3). INTRODUCTION TO STAGE MANAGEMENT. An exploration of the methods and techniques of theatrical stage management, including preproduction planning, scheduling, and conducting rehearsals and performances. Assignments are both theoretical and practical. Permission of instructor required for nonmajors and first-year students.

THEA 2371 (3). THEATRE TECHNOLOGY 1: LIGHTING MECHANICS. Introduces basic principles of stage lighting design, including the mechanics and optics of lighting instruments, electrical theory and practices, control systems, basic design concepts, and color theory. Controllable qualities of light are investigated and demonstrated through the student's participation on a lighting crew for a production. Students are expected to provide appropriate materials as needed.

THEA 2372 (3). THEATRE TECHNOLOGY 2: COSTUME CONSTRUCTION TECHNIQUES. Introduces basic costume patterning and construction methods. Covers draping, drafting, flat-patterning, terminology, equipment usage, and the skills necessary to the entire costuming process. Students are expected to provide appropriate materials as needed.

THEA 2373 (3). THEATRE TECHNOLOGY 3: STAGECRAFT. Introduces the organization of the scene shop, tool maintenance and usage, construction techniques, technical drawing development, computer applications, rigging, and time and material budgeting. Includes class projects and work on Meadows stage productions. Students are expected to provide appropriate materials as needed.

THEA 2374 (3). THEATRE TECHNOLOGY 4: INTRODUCTION TO THEATRICAL SOUND. Introduces the organization of the sound studio, maintenance and usage of equipment, recording techniques, and computer applications. Includes class projects and work on Meadows stage productions. Students are expected to provide appropriate materials as needed.

THEA 3201 (2). THEATRE PRACTICUM. Independent work with theatre faculty on a specific topic chosen by the student.

THEA 3207 (2). MOVEMENT 3. Teaches extension of energy and physical listening skills. Skills taught include quarterstaff, rapier and dagger, court sword, and broad sword. *Prerequisite:* THEA 2308.

THEA 3208 (2). MOVEMENT 4. Allows the student to process personal experience into the movement and sound of a character. Skills taught include clowning, Lecoq figures, and neutral mask. *Prerequisite:* THEA 3207.

THEA 3301 (3). DIRECTED STUDY. Directed study courses are not required and are taken only as needed; form and content are not predetermined. The student and the adviser decide what kind of activity or learning experience should occur. Before the end of the add-drop period, the student must arrange the course content and grading basis with the supervising faculty. Numbers are assigned to the student's year status rather than by the subject matter.

THEA 3302 (3). DIRECTED STUDY. Directed study courses are not required and are taken only as needed; form and content are not predetermined. The student and the adviser decide what kind of activity or learning experience should occur. Before the end of the add-drop period, the student must arrange the course content and grading basis with the supervising faculty. Numbers are assigned to the student's year status rather than by the subject matter.

THEA 3303 (3). ACTING 3. A synthesis of first- and second-year work to the end of an individual system by which actors approach the presentation of characters through their ability to present themselves effectively. *Prerequisite:* THEA 2302.

THEA 3304 (3). ACTING 4. Continuation and extension of THEA 3303, consisting of special projects in characterization studies. *Prerequisite:* THEA 3303.

THEA 3305 (3). VOICE FOR THE STAGE 3. Students refine their ability to execute detailed speech actions and identify specific phonetic changes using the International Phonetic Alphabet. Vocal power, flexibility, and malleability are enhanced. The application of voice and speech actions to heightened language and stakes in a scene is practiced and refined.

THEA 3306 (3). VOICE FOR THE STAGE 4. Vocal power, flexibility, and expressive capability are practiced in a variety of space configurations. Students refine their ability to execute detailed speech actions and identify specific phonetic changes using the phonetic alphabet. The application of voice and speech actions to accents and dialects is practiced and refined.

THEA 3307 (3). TOPICS IN THEATRE: PLAYWRITING. Conducted in a workshop structure. Led by a distinguished guest artist, each student playwright develops and refines a short play. Student actors conduct a daily reading of each play, led by a director, and take part in discussion with the playwrights and director intended to assist the playwright in the development of his/her play. Culminates with a public reading of the student-written plays.

THEA 3310 (3). SPECIAL TOPICS IN THEATRE. Focuses on specific topics pertinent to theatre performance. Subjects vary from term to term, and may include acting, voice, and movement.

THEA 3311 (3). ACTING FOR SINGERS AND DANCERS. Advanced work in acting, voice, and movement built upon the foundational performance and presentation skills required for singing and dancing. Focus is on scene study intended to reinforce the actor's development of a method of text analysis as an entry to a tactical approach (objective, obstacle, action) to acting and to facilitate the integration of text analysis and self-use as a process to create an emotionally honest, powerful, and effective moment of dramatic action on the stage. For dance majors and music vocal performance majors only. *Prerequisite:* Permission of instructor.

THEA 3312 (3). SCENE STUDY FOR NONMAJORS. Facilitates each actor's exploration of his/her full range and complexity of imaginative, intellectual, emotional, and experiential life, as well as each actor's access to these elements of self as useful tools of creative expression. Reinforces the actor's development of a method of text analysis as an entry to a tactical approach (objective, obstacle, action) to acting. Also, the integration of text analysis and self-use as a process to create an emotionally honest, powerful, and effective moment of dramatic action on the stage. *Prerequisite:* THEA 2311 or instructor permission.

THEA 3313 (3). INTRODUCTION TO DESIGN FOR THE THEATRE. An analytical study of stage design, including an introduction to the basic history, principles, and languages of stage design. Includes text analysis, elements and principles of design, and critical discussion of current theatre productions. For majors and nonmajors.

THEA 3314 (3). LIGHTING DESIGN: THEATRE, FILM, AND TELEVISION. Introduces the practice of lighting design. Students study techniques, complete projects, and make presentations in the discipline.

THEA 3316 (3). SCENE DESIGN: THEATRE, FILM, AND TELEVISION. Introduces the practice of scenic design. Students study techniques, complete projects, and make presentations in the discipline.

THEA 3318 (3). COSTUME DESIGN: THEATRE, FILM, AND TELEVISION. Introduces the practice of costume design. Students study techniques, complete projects, and make presentations in the discipline.

THEA 3319 (3). HISTORY OF DESIGN: FASHION, ARCHITECTURE, AND INTERIORS. A historical survey of fashion, interior design, and architecture, and the ways they relate to designing costumes and scenery for theatre, film, and television.

THEA 3321 (3). TOPICS IN DESIGN 1: LIGHTING. Presents approaches to lighting design and poses specific design problems for the student to solve, with attention given to color, composition, cueing, and production through presentations and discussions in class. Includes participation in productions as assistant designers and electricians. Students are expected to provide appropriate materials as needed.

THEA 3322 (3). TOPICS IN DESIGN 2: DIRECTOR-DESIGNER RELATIONSHIP. Covers design metaphors, ground plans, and terminology. Explores the relationship between a director and designer, and the elements of design as they relate to theatrical space. Students are expected to provide appropriate materials as needed.

THEA 3323 (3). TOPICS IN DESIGN 3: COSTUME. Students develop an understanding of the basic principles of costume design used to create statements about a play and its characters. Lectures and class discussions prepare students to confront specific problems in design projects. Students are expected to provide appropriate materials as needed.

THEA 3324 (3). TOPICS IN DESIGN 4: SOUND. Introduces the basic principles of theatrical sound design and the practices and skills required to develop a production's sound design and supportive technical documentation. Also, system layout, effects development, source researching, and organization. The combined hands-on presentations and class assignments allow students to develop a working knowledge of the sound designer's responsibilities and skills. Students are expected to provide appropriate materials as needed.

THEA 3331 (3). PLAYWRITING 1. Creative exploration in the development of performance scripts with emphasis on structural vocabularies of story, plot, character development, and dramatic action.

THEA 3332 (3). PLAYWRITING 2. Intermediate techniques of playwriting with emphasis on developing individual style and voice; writing one-act plays. *Prerequisite:* THEA 3331.

THEA 3341 (3). DIRECTING 1. Students research the relationship between a designer and director, and create and conceptualize various approaches to texts to gain a working vocabulary in the collaborative language among theatre artists. Culminates in a director and designer presentation or performance.

THEA 3342 (3). DIRECTING 2. Production styles and methodologies evidenced in the art of major modern directorial innovators. Directing projects required. *Prerequisites:* THEA 3341 and permission of instructor.

THEA 3351 (3). TEXTILES. Explores various fabrics and materials used in costume construction, millinery, and crafts for theatre and film. Includes skills such as dyeing, distressing, fabric painting, and various methods of fabrication. The course attempts to complete training for the designer beyond the sketch.

THEA 3357 (3). DESIGNING WITH COMPUTERS, STAGE PROJECTION. Explores tools for computer image creation (e.g., AutoCAD, MiniCAD, Adobe Photoshop) and their application.

THEA 3361 (3). STAGE MANAGEMENT 1. Fuller explanation of the methods and techniques of theatrical stage management. *Prerequisite:* THEA 2361.

THEA 3362 (3). STAGE MANAGEMENT 1. Fuller explanation of the methods and techniques of theatrical stage management. *Prerequisite:* THEA 2361.

THEA 3371 (3). AUTOMATED LIGHTING 2. Students work with Vari-Lite, Robe, and Martin automated lighting fixtures while learning advanced programming skills.

THEA 3373 (3). DRAPING I. A study of pattern making that utilizes the three-dimensional approach of draping fabric on a dress form and the approach of drafting patterns by formula. Students learn to drape a basic bodice, skirt, and collars, to create a basic sleeve pattern by formula, and to manipulate these patterns to achieve a variety of shapes.

THEA 3374 (3). DRAPING II. Exploration of period dress from a draping point of view.

THEA 3375 (3). THEATRE TECHNOLOGY 5: LIGHTING AUTOMATION. Advanced study in the field of automated lighting and control systems.

THEA 3376 (3). THEATRE TECHNOLOGY 6: ADVANCED COSTUME CONSTRUCTION TECHNIQUES. A continuation in the study of costume construction.

THEA 3377 (3). THEATRE TECHNOLOGY 7: ADVANCED STAGECRAFT. A continuation of stagecraft that explores advanced construction techniques, rigging, metal work, and the use of automation in scenery.

THEA 3378 (3). THEATRE TECHNOLOGY 8: ADVANCED TECHNIQUES IN SOUND. The use of sound to create an environment for a theatrical event will be explored. Students will complete a studio project and/or Meadows event.

THEA 3379 (3). COMPUTER-ASSISTED DESIGN I. Students learn the fundamentals of computer-assisted design, using VectorWorks and Spotlight, in application for the theatre. Emphasizes 2-D work and includes 3-D work. Drafting, as such, is not taught. *Prerequisite:* Knowledge of mechanical drawing and its conventions.

THEA 3380 (3). COMPUTER-ASSISTED DESIGN II. Uses VectorWorks as the primary drafting software, with a focus on modeling scenic and lighting designs, organization of the drawing layouts, rendering techniques, and lighting-specific CAD tools.

THEA 3381 (3). THEATRE AND DRAMA HISTORY 1. Examines key moments in the history of Western theatre and drama. Focuses on selected dramatic texts and their social and cultural contexts, and to the dynamic interactions and changing relationships among performance, audience, and society as influenced by the advent of actors, playwrights, designers, and directors, and by changes in theatre architecture and the social definition of space.

THEA 3382 (3). THEATRE AND DRAMA HISTORY 2. Examines key moments in the history of Western theatre and drama. Focuses on selected dramatic texts and their social and cultural contexts, and to the dynamic interactions and changing relationships among performance, audience, and society as influenced by the advent of actors, playwrights, designers, and directors, and by changes in theatre architecture and the social definition of space.

THEA 4101 (1). DIRECTED STUDY. Directed study courses are not required and are taken only as needed; form and content are not predetermined. The student and the adviser decide what kind of activity or learning experience should occur. Before the end of the add-drop period, the student must arrange the course content and grading basis with the supervising faculty. Numbers are assigned to the student's year status rather than by the subject matter.

THEA 4105 (1). VOICE FOR THE STAGE 5. A continuation of the voice curriculum to further enrich the actor's technique and address any outstanding issues in the work. The vocal workout keeps the actor in tune with his/her instrument while preparing to enter the profession. *Prerequisite:* Permission of instructor.

THEA 4106 (1). VOICE FOR THE STAGE 6. A continuation of the voice curriculum, including the study of the International Phonetic Alphabet, dialect and accent work, and the addition of specific skills for a variety of media. Addresses cold-reading skills, studio time and use of microphones, and commercial work for radio and television spots. *Prerequisite:* Permission of instructor.

THEA 4201 (2). DIRECTED STUDY. Directed study courses are not required and are taken only as needed; form and content are not predetermined. The student and the adviser decide what kind of activity or learning experience should occur. Before the end of the add-drop period, the student must arrange the course content and grading basis with the supervising faculty. Numbers are assigned to the student's year status rather than by the subject matter.

THEA 4207 (2). MOVEMENT 5. Explores historical movement and dance, including selected dances, movements, and manners during the 16th–20th centuries, focusing on the embodiment of the style of those periods. Emphasis is placed on the dress, movement, and manners of the Renaissance and Classic Baroque periods. *Prerequisite:* Permission of instructor.

THEA 4208 (2). MOVEMENT 6. Explores physical self-study through mask work, including neutral mask, the masks of the commedia dell'arte, the character mask, and the European clown. Also, finding a physical neutral, playing the stock masked commedia characters and their counterparts in plays by Shakespeare and Moliere, and finding one's own personal clown. *Prerequisite:* Permission of instructor.

THEA 4301 (3). DIRECTED STUDY. Directed study courses are not required and are taken only as needed; form and content are not predetermined. The student and the adviser decide what kind of activity or learning experience should occur. Before the end of the add-drop period, the student must arrange the course content and grading basis with the supervising faculty. Numbers are assigned to the student's year status rather than by the subject matter.

THEA 4303 (3). ACTING 5. An actor's approach to classic texts through scene study, monologues, and lecture and demonstration, with a focus on Shakespeare and his contemporaries.

THEA 4304 (3). ACTING 6. An actor's approach to classic texts through scene study, monologues, and lecture and demonstration, with a focus on Shakespeare and his contemporaries.

THEA 4305 (3). VOICE FOR THE STAGE 5. Vocal power, flexibility, and transformation are practiced with a variety of textual demands. Actors work in character voice in scene work and presentations. Students refine their ability to execute detailed speech actions and identify specific phonetic changes using close phonetic transcription.

THEA 4306 (3). VOICE FOR THE STAGE 6. Vocal power, flexibility, and transformation are practiced with a variety of textual, character, and space demands. Students refine their ability to

execute detailed speech actions and identify specific phonetic changes using close phonetic transcription. Students prepare a solo performance employing the skills they have learned in the entire sequence of training.

THEA 4309 (3). BUSINESS AND PROFESSIONAL ASPECTS OF THEATRE. A preparation for graduating actors that includes compiling résumés, photographs, cold readings, monologues, and scene work with a variety of scripts for repertory or summer theatre casting.

THEA 4321 (3). ADVANCED SCENE STUDY. Designed for junior, senior, and graduate theatre majors. Team taught by senior faculty. Includes intensive exploration of modern and contemporary dramatic literature. Reinforces the actor's development of a method of text analysis as an entry to a tactical approach to acting. Uses improvisational techniques and other exercises to facilitate each actor's exploration of his/her full range and complexity of imaginative, intellectual, emotional, and experiential life, as well as each actor's access to these elements of self as useful tools of creative expression. Also, the integration of text analysis and self-use as a process to create an emotionally honest, powerful, and effective moment of dramatic action on the stage.

THEA 4331 (3). PLAYWRITING 3. Advanced work in the development of performance scripts for the stage with emphasis on full-length works. *Prerequisite:* THEA 3332.

THEA 4332 (3). PLAYWRITING IV. Advanced techniques of writing for the stage, including rehearsal and performance or produced theatrical event. Focuses on professional aspects of playwriting. *Prerequisite:* THEA 4331.

THEA 4341 (3). DIRECTING 3. Advanced project studies in stage direction with emphasis on the interplay between director and other artistic collaborators (playwrights and/or designers). *Prerequisites:* THEA 3342 and permission of instructor.

THEA 4342 (3). DIRECTING 4. Advanced techniques in the interpretation of established dramatic literature and/or creation of original work for the stage. Emphasis on collaboration between director and playwright. This course is for the student seriously considering directing as a career. Time will be spent on exploring professional career choices for the young director. *Prerequisites:* THEA 4341 and permission of instructor.

THEA 4357 (3). DESIGNING WITH COMPUTERS: STAGE PROJECTION. Working with the tools necessary to create projected scenery, students learn the fundamentals of creating projected images for the stage.

THEA 4361 (3). STAGE MANAGEMENT 2. Fuller explanation of the methods and techniques of theatrical stage management. *Prerequisites:* THEA 3361, 3362.

THEA 4362 (3). STAGE MANAGEMENT 2. Fuller explanation of the methods and techniques of theatrical stage management. *Prerequisites:* THEA 3361, 3362.

THEA 4363 (3). PRODUCTION MANAGEMENT. Introduces the role of the production manager for live entertainment, including budgeting, scheduling, and business aspects.

THEA 4376 (3). LIGHTING AUTOMATION I. Presents approaches to lighting design and poses specific design problems for the students to solve, with attention given to color composition, cueing, and production values. Focuses on Vari-Lite, Robe, and Martin experimentation.

THEA 4381 (3). STUDIES IN THEATRE, DRAMA, AND PERFORMANCE. An examination of selected topics in theatre, drama, and performance. Texts, topics, and critical approaches vary.

THEA 4382 (3). STUDIES IN THEATRE, DRAMA, AND PERFORMANCE. An examination of selected topics in theatre, drama, and performance. Texts, topics, and critical approaches vary.

THEA 4383 (3). STUDIES IN THEATRE, DRAMA, AND PERFORMANCE. An examination of selected topics in theatre, drama, and performance. Texts, topics, and critical approaches vary.

THEA 4384 (3). STUDIES IN THEATRE, DRAMA, AND PERFORMANCE. An examination of selected topics in theatre, drama, and performance. Texts, topics, and critical approaches vary.

THEA 4385 (3). STUDIES IN THEATRE, DRAMA, AND PERFORMANCE. A senior-level, interdisciplinary seminar that examines cultural production through the media of art, architecture, dramaturgy, festival, and theatre.

THEA 4386 (3). EUROPEAN THEATRE, 1879–1953. A survey of major figures and movements in European theatre, beginning with the premiere of Ibsen's "A Doll's House" and culminating with the premiere of Beckett's "Waiting for Godot."

THEA 4387 (3). ART AND DRAMA IN CLASSICAL ATHENS. Intensive reading and discussion seminar focused on the relationships between the visual arts and dramatic performances as seen against the historical background of golden-age Athens during the fifth century B.C.

THEA 4491 (4). SPECIAL PROJECT 1. Provides meaningful and challenging hands-on leadership experience in the design or technical area, bringing together 3 years of the student's class-work, shop and studio experience, and growth.

THEA 4492 (4). SPECIAL PROJECT 2. Provides meaningful and challenging hands-on leadership experience in the design or technical area, bringing together 3 years of the student's class-work, shop and studio experience, and growth.

THEA 4493 (4). SUMMER THEATRE WORKSHOP 1. Students may engage in summer theatre work and gain credit toward degree completion. Enrollment and class credit must be obtained from the chair of the Division of Theatre and the program head.

THEA 4494 (4). SUMMER THEATRE WORKSHOP 2. Students may engage in summer theatre work and gain credit toward degree completion. Enrollment and class credit must be obtained from the chair of the Division of Theatre and the program head.

THEA 5001 (0). DESIGN LABORATORY I. Exploration of techniques in advanced design.

THEA 5002 (0). DESIGN LABORATORY II. More exploration of advanced design techniques.

THEA 5003 (0). DESIGN LABORATORY III. Continuing exploration of the techniques in advanced design.

THEA 5004 (0). DESIGN LABORATORY IV. More exploration of advanced design techniques.

THEA 5101 (1). DIRECTED STUDY. Directed study courses are not required and are taken only as needed; form and content are not predetermined. The student and the adviser decide what kind of activity or learning experience should occur. Before the end of the add-drop period, the student must arrange the course content and grading basis with the supervising faculty. Numbers are assigned to the student's year status rather than by the subject matter.

THEA 5103 (1). PROJECTS I. Performance/production workshops for first-year graduate acting students, directed by faculty.

THEA 5104 (1). PROJECTS II. Performance/production workshops for first-year graduate acting students, directed by faculty.

THEA 5106 (1). SINGING FOR ACTORS. Provides fundamental techniques for the embodiment and exploration of melody, rhythm, sustaining sound, shaping lyrics, etc.

THEA 5201 (2). DIRECTED STUDY. Directed study courses are not required and are taken only as needed; form and content are not predetermined. The student and the adviser decide what kind of activity or learning experience should occur. Before the end of the add-drop period, the student must arrange the course content and grading basis with the supervising faculty. Numbers are assigned to the student's year status rather than by the subject matter.

THEA 5204 (2). ACTING II. Furthering the embodiment of a fundamental acting process through exercise, discussion, reading, improvisation, and scene study. Dramaturgical materials are drawn primarily from the works of Chekhov, Ibsen, and early modern American realism.

THEA 5205 (2). MOVEMENT I. Exploration of the actor's self through immersion in physical skills for the theatre, including t'ai chi ch'uan, corporal mime, improvisation, juggling, hatha yoga, unarmed stage combat, animal-style wu shu, and foil fencing.

THEA 5206 (2). MOVEMENT 2. Exploration of the actor's self through immersion in physical skills for the theatre, including t'ai chi ch'uan, corporal mime, improvisation, juggling, hatha yoga, unarmed stage combat, animal-style wu shu, and foil fencing.

THEA 5207 (2). VOICE FOR THE STAGE I. Introduces basic principles of physical, vocal, and imaginative freedom through a series of progressive exercises and experiences. Encourages the removal of psychophysical barriers to sound production and develops the voice's sensitivity to impulse, power, flexibility, and range. Includes organic exploration of sounds of speech, using IPA pillows and sound and movement improvisations. Students develop self-scripted solo pieces, explore poetry and song, and apply voice work to modern dramatic texts.

THEA 5208 (2). VOICE FOR THE STAGE II. Introduces basic principles of physical, vocal, and imaginative freedom through a series of progressive exercises and experiences. Encourages the removal of psychophysical barriers to sound production and develops the voice's sensitivity to impulse, power, flexibility, and range. Includes organic exploration of sounds of speech, using

IPA pillows and sound and movement improvisations. Students develop self-scripted solo pieces, explore poetry and song, and apply voice work to modern dramatic texts.

THEA 5209 (2). APPLIED MOVEMENT I. Bodywork as it pertains to economy of movement, alignment, proper use, kinesthetic awareness, strength, flexibility, and freeing the physical instrument. Includes acrobatics, the Lecoq 20 movements, neutral mask, the physicalization of text, improvisation, and ensemble projects employing the physical work investigated throughout the term.

THEA 5210 (2). APPLIED MOVEMENT II. Continuation of bodywork as it pertains to economy of movement, alignment, proper use, kinesthetic awareness, strength, flexibility, and freeing the physical instrument. Includes acrobatics, the Lecoq 20 movements, neutral mask, the physicalization of text, improvisation, and ensemble projects employing the physical work investigated throughout the term.

THEA 5215 (2). TEXT ANALYSIS FOR ACTORS I. Fundamentals of decoding play texts, from reading and comprehension to personalized embodiment, in order to facilitate and render efficiently imaginative the move of the actor. Dramaturgical focus falls on realism texts from the 19th and 20th centuries.

THEA 5216 (2). TEXT ANALYSIS FOR ACTORS II. Decoding and embodying the texts of Shakespeare.

THEA 5221 (2). SCENE DESIGN I. An introductory course for designers focusing on the communication skills (visual and verbal) necessary for collaborating with the director and the other artists in the theatre. Includes a design seminar that explores the text relative to its literary, musical, social, and historical influences.

THEA 5222 (2). SCENE DESIGN II. An introductory course for designers focusing on the communication skills (visual and verbal) necessary for collaborating with the director and the other artists in the theatre. Includes a design seminar that explores the text relative to its literary, musical, social, and historical influences.

THEA 5223 (2). COSTUME DESIGN I. An introductory course for designers with emphasis on the application of design principles and the use of research materials.

THEA 5224 (2). COSTUME DESIGN II. An introductory course for designers with emphasis on the application of design principles and the use of research materials.

THEA 5225 (2). LIGHTING DESIGN I. The fundamentals of learning how to see, exploring the mind's eye, and painting with light. Includes translating theatrical moments and music into lighting sketches, storyboards, and atmospheres, and developing points of view and approaches. Also, the fundamentals of the tools of the lighting designer and assistant skills and techniques.

THEA 5226 (2). LIGHTING DESIGN II. The fundamentals of learning how to see, exploring the mind's eye, and painting with light. Includes translating theatrical moments and music into lighting sketches, storyboards, and atmospheres, and developing points of view and approaches. Also, the fundamentals of the tools of the lighting designer and assistant skills and techniques.

THEA 5241 (2). COLLABORATION: DIRECTORS AND DESIGNERS. Team taught by directing and design faculty, this course emphasizes the building of a collaborative process among theatre artists. Students research historical collaborative relationships, create and conceptualize approaches to various texts, and familiarize themselves with the approaches of artists currently working in the theatre.

THEA 5258 (2). PHOTOSHOP. A continuation of the exploration of tools for computer image creation (e.g., AutoCAD, MiniCAD, and Adobe Photoshop) and their applications.

THEA 5259 (2). ADVANCED DESIGN SKILLS. Students learn advanced skills in theatrical design practice, including hand drafting, theatrical model-making, set sketching, and digital tablet drawing. Also, fashion illustration and an introduction to textiles.

THEA 5301 (3). DIRECTED STUDY. Directed study courses are not required and are taken only as needed; form and content are not predetermined. The student and the adviser decide what kind of activity or learning experience should occur. Before the end of the add-drop period, the student must arrange the course content and grading basis with the supervising faculty. Numbers are assigned to the student's year status rather than by the subject matter.

THEA 5303 (3). ACTING I. Focuses on defining a fundamental acting process, identifying behavioral blocks, channeling impulses into uncluttered and organic psychophysical connections, and using the text as a blueprint for action. Combines a mix of exercise, improvisation,

and scene study with materials drawn from modern American realism and the early modernist plays of Ibsen, Strindberg, and Chekhov.

THEA 5304 (3). ACTING II. Focuses on defining a fundamental acting process, identifying behavioral blocks, channeling impulses into uncluttered and organic psychophysical connections, and using the text as a blueprint for action. Combines a mix of exercise, improvisation, and scene study with materials drawn from modern American realism and the early modernist plays of Ibsen, Strindberg, and Chekhov.

THEA 5319 (3). HISTORY OF DESIGN. How and why do elements of design describe a culture? Students study design elements and their role in various historical cultures, including the relationships among fashion, art, architecture, and the decorative arts of selected time periods. For majors and nonmajors.

THEA 5321 (3). TOPICS IN DESIGN I: LIGHTING. Approaches to lighting design and specific design problems for students to solve, with attention given to color composition, cueing, and production values. Focuses on Vari-Lite, Robe, and Martin experimentation.

THEA 5351 (3). SCENE DESIGN III. A continuation of the study of scene design incorporating individual class projects with the intensive study of style and genre.

THEA 5352 (3). SCENE DESIGN IV. A continuation of the study of scene design incorporating individual class projects with the intensive study of style and genre.

THEA 5353 (3). COSTUME DESIGN III. An intermediate course with emphasis on play analysis, character relationships, and techniques of presentation.

THEA 5354 (3). COSTUME DESIGN IV. Intermediate course with emphasis on play analysis, character relationships, and techniques of presentation.

THEA 5355 (3). LIGHTING DESIGN III. Continued study in the art of lighting design. Explores advanced atmosphere creation, professional techniques, and specialized approaches. Professional assistantships are assigned to selected students.

THEA 5356 (3). LIGHTING DESIGN IV. Continued study in the art of lighting design. Advanced atmosphere creation, professional techniques, and specialized approaches are explored. Professional assistantships are assigned to select students.

THEA 5357 (3). DESIGNING WITH COMPUTERS: STAGE PHOTOGRAPHY. Explores computer image creation tools (e.g., AutoCAD, MiniCAD, Adobe Photoshop) and their applications.

THEA 5371 (3). AUTOMATED LIGHTING 2. Students work with Vari-Lite, Robe, and Martin automated lighting fixtures while learning advanced programming skills.

THEA 5373 (3). DRAPING I. A study of pattern making that utilizes the three-dimensional approach of draping fabric on a dress form and the approach of drafting patterns by formula. Students learn to drape a basic bodice, skirt, and collars, to create a basic sleeve pattern by formula, and to manipulate these patterns to achieve a variety of shapes.

THEA 5374 (3). DRAPING II. Exploration of period dress from a draping point of view.

THEA 5375 (3). THEATRE TECHNOLOGY 5: LIGHTING AUTOMATION. Advanced studies in the field of automated lighting and control systems. Students explore top brands of intelligent lighting equipment, learning to program and provide simple repair and upkeep of equipment.

THEA 5379 (3). COMPUTER-ASSISTED DESIGN I. Fundamentals of computer-assisted design, using VectorWorks and Spotlight, in application for the theatre. Emphasizes 2-D work and includes 3-D work. *Prerequisite:* Knowledge of mechanical drawing and its conventions.

THEA 5380 (3). COMPUTER-ASSISTED DESIGN II. Uses VectorWorks as the primary drafting software, with a focus on modeling scenic and lighting designs, organization of the drawing layouts, rendering techniques, and lighting-specific CAD tools.

THEA 5398 (3). PRODUCTION RESEARCH AND DEVELOPMENT I. Script analysis, background research, and performance design for actors, designers, and directors.

THEA 5399 (3). PRODUCTION RESEARCH AND DEVELOPMENT II. Script analysis, background research, and performance design for actors, designers, and directors.

SIMMONS SCHOOL OF EDUCATION AND HUMAN DEVELOPMENT

GENERAL INFORMATION

The Annette Caldwell Simmons School of Education and Human Development comprises research institutes, undergraduate and graduate programs, and community enrichment and service centers that focus on areas of professional education, school leadership, dispute resolution, counseling, applied physiology and health management, sport management, sport performance leadership, personal responsibility and wellness, and liberal studies. The mission of the school is to integrate the theory, research and practice of education and human development; to promote academic rigor and interdisciplinary study; to prepare students for initial certification and professional practice; and to nurture collaboration across the academic community.

Undergraduate programs include a major and three minors in applied physiology and sport management and a major and a minor in educational studies. The school offers three doctoral degrees and nine master's degrees. Its academic departments include Teaching and Learning, Applied Physiology and Wellness, Education Policy and Leadership, Dispute Resolution and Counseling, and Lifelong Learning.

The school is housed in Annette C. Simmons Hall and Harold C. Simmons Hall, which are two of several LEED-certified buildings on campus. Key features include the Locomotor Performance Laboratory; an integrated physiology laboratory; an applied physiology laboratory equipped with a data acquisition system, an environmental research chamber, and teaching pods; a curriculum design lab; and a teaching assessment center.

The **Department of Teaching and Learning** represents SMU's commitment to the professional development of educators through innovative, research-based undergraduate and graduate programs. The department's teaching and research practices are grounded in multiple perspectives that encompass behaviorist, cognitive, social-constructivist and sociocultural approaches to scholarship. All Teaching and Learning programs prepare educators who are scholars and leaders in professionalism, experts in high-quality differentiated instruction, and able to translate research into practice. The department's undergraduate curriculum prepares students for initial teacher certification. Graduate programs focus on research, literacy and language acquisition, teaching and learning, special education, giftedness, bilingual education, ESL, STEM, and mathematics. A variety of enrichment opportunities serve the continuing education needs of practicing educators. The school promotes high-quality research that combines quantitative and qualitative methodologies, generates new hypotheses, and influences pedagogical practices in early childhood (or "EC") through grade 12 schools. The department's research efforts are supported by the Institute for Evidence-Based Education, one of the most productive literacy research centers in the nation; the institute performs research concerning reading and reading disabilities, language acquisition, and teaching and learning. The Gifted Students Institute, which also resides within the department, was founded on the premise that giftedness is a resource that should be nurtured for the benefit of all; it focuses on professional development for teachers and is an integral part of the department's work on differentiated instruction.

The **Department of Applied Physiology and Wellness** offers undergraduate and graduate degrees. The undergraduate B.S. in applied physiology and sport management offers three concentrations within the APSM major: applied physiology and health management, sport management, and sport performance leadership. Graduate programs include an M.S. in sport management and a Ph.D. in education, with an emphasis in applied physiology. The department also offers the personal responsibility and wellness courses that are required of all undergraduate students as part of the University Curriculum, and a selection of sports and fitness activity courses are available as electives. The undergraduate and graduate programs have access to the department's two laboratories: the exercise physiology and biomechanics laboratory, which is housed within Simmons Hall, and the Locomotor Performance Laboratory, which specializes in terrestrial locomotion and in relating muscle function to metabolic energy expenditure and performance.

The **Department of Education Policy and Leadership** focuses on preparing educators for leadership roles in complex educational settings, including colleges and universities. Coursework and systematic applications of knowledge are designed to ensure that the education leaders of tomorrow are able to develop and support effective teachers and other education service providers; to select and implement effective curricula and instructional programs; and to identify, implement and sustain effective organizational practices to ensure high levels of student learning and achievement. In service to this mission, the department offers the following M.Ed. degrees: an M.Ed. in accelerated school leadership, an M.Ed. in educational leadership with a specialization in higher education and an M.Ed. in educational leadership with a specialization in urban school leadership. Two doctoral programs are also offered: an Ed.D. in higher education and an Ed.D. in pre-K through grade 12 educational leadership. The department is also dedicated to the preparation and continued education of education policy leaders; to the promotion of research, development and analysis; and to the translation of research into policy and practice at the local, state, national and international levels.

The **Department of Dispute Resolution and Counseling** offers an M.S. in counseling, an M.A. in dispute resolution and a graduate certificate in dispute resolution, all of which draw on social and behavioral science theories to teach the communication skills necessary for the resolution of personal and interpersonal conflicts. Additionally, the department operates two community resource centers: the SMU Meditation Center and the Center for Family Counseling.

The **Department of Lifelong Learning** offers the Doctor of Liberal Studies, the Master of Liberal Studies and a noncredit creative writing program, all of which broaden students' perspectives, insights and understandings of the world. At the heart of the two graduate liberal studies degrees is the belief that people can continue to grow intellectually, personally and professionally throughout their lives.

INSTITUTES, CENTERS AND RESEARCH
The Institute for Evidence-Based Education
www.smu.edu/EvidenceBasedEducation

Patricia G. Mathes, Director

The Institute for Evidence-Based Education performs research concerning reading disabilities, language acquisition, and teaching and learning. The mission of the institute is to increase teacher effectiveness using a two-pronged approach that marries cutting-edge research with improved instructional practices of teachers. Since its founding in 2003, the institute and its collaborating faculty have received approximately \$16 million in external funding for various research studies focusing on

- Creating and scientifically evaluating well-designed curricular materials, strategies and tools to assist teachers in delivering highly effective instruction.
- Designing valid, reliable ongoing assessment tools to help teachers determine which students are succeeding and which need additional support.
- Examining the role technology can play in supporting teachers through ongoing, job-embedded staff development, coaching and professional communities of learning.

The institute increasingly focuses on translating research findings into daily practice in schools through activities that include

- Making available to the marketplace the curricular materials, assessments, strategies and tools developed and empirically validated by the institute.
- Supporting the implementation of curricular materials, assessments, strategies and tools through the institute's staff development.
- Helping schools to build human capital in the classroom through the institute's technology-based coaching services.
- Offering workshops that prepare educators to serve as instructional coaches to other teachers.

The Institute for Evidence-Based Education resides within the Department of Teaching and Learning. Institute faculty members teach in the Simmons School's teacher education programs, which include learning therapy, the Master Reading Teacher program and the doctoral program.

Center on Research and Evaluation
www.smu.edu/CORE

Scott Baker, Executive Director

CORE's mission is to improve the well-being of children, adults and families through knowledge creation and dissemination and through evaluations of programs designed to enhance positive outcomes for individuals and communities. This interaction between knowledge creation and the work of organizations and individuals is essential for these organizations to improve lives and communities. CORE adheres to principles of science to understand how best to improve education and human development and believes the evidence exists to substantially increase the number of individuals who are equipped to make a positive contribution to society. The center supports Simmons' faculty in its research efforts and conducts third-party evaluations for clients such as nonprofits and schools, as well as internal SMU entities.

CORE provides undergraduate and graduate students with real-world opportunities to participate in research and evaluation.

Research in Mathematics Education

www.smu.edu/RME

Leanne Ketterlin Geller, Director

RME conducts and disseminates high-quality, evidence-based research to improve students' mathematics performance in Texas. Formed in 2011 under the direction of Dr. Leanne Ketterlin Geller, RME is committed to engaging in research and outreach that will make a significant and lasting difference at the student, classroom, school, district, state and national levels. RME's mission is to cultivate positive change by educating and empowering teachers and administrators through the provision of evidence-based practices and systems to support mathematics achievement through academic growth and development of all students. Key focal areas include

- Creating systems of formative assessment to inform teacher decision-making.
- Designing evidence-based interventions for students struggling in mathematics.
- Designing and delivering professional development to support teachers' and administrators' implementation of best practices.
- Offering a dynamic community where researchers and educators can collaborate and share ideas and resources.

RME's externally funded research and development budget has grown beyond \$5 million. Efforts by RME researchers have directly impacted thousands of students across Texas and the nation. Through participation in research activities and conferences, engagement with professional development courses, dissemination of materials through the RME website, and collaborations with other organizations and publications, RME has impacted more than 25,000 educators since 2011.

RME's director actively collaborates with the Bush Institute's Middle School Matters Initiative and the Meadows Center for Preventing Educational Risk at the University of Texas in Austin, and she was named director of K-12 STEM initiatives for SMU's Caruth Institute for Engineering Education in 2014.

RME faculty members teach in the Simmons School's Department of Education Policy and Leadership as well as the Department of Teaching and Learning. Additionally, faculty members disseminate their research findings locally, nationally and globally.

Gifted Students Institute

www.smu.edu/GSI

Marilyn Swanson, Director of Programming

Dedicated to the support of the cognitive and affective development of gifted youth, the Gifted Students Institute offers a range of programs and services for educators and gifted youth and their families.

The Distinguished Lecture Series offers a large selection of one-day sessions and workshops that integrate theory and practice. Lectures are delivered by guest speakers from the SMU faculty and public and private learning institutions throughout the country. The institute developed the school's gifted education teacher preparation courses that are offered through the Department of Teaching and Learning; this 12-credit-hour series of courses prepares teachers to take the TExES supplemental

certification exam in gifted education. In addition, the institute serves precollege gifted students through the Talented and Gifted Program, the College Experience Program, and several one-week student conferences.

The Budd Center: Involving Communities in Education

www.smu.edu/CCE

Regina Nippert, Executive Director

The mission of The Budd Center: Involving Communities in Education is to equip schools and nonprofits with tools and information such that they can work together to meet the extraordinary educational, social and emotional needs of children in poverty. The Budd Center uses the following strategies to accomplish its mission:

- Develops accountability measures and processes to drive collaboration and action between school systems, nonprofits and SMU.
- Trains teachers and nonprofits to use individualized student information to create curricula and targeted intervention plans.
- Connects SMU faculty and students to meaningful teaching and learning experiences.

Center for Child and Community Development

www.smu.edu/cccd

The Center for Child and Community Development is dedicated to the cognitive, affective and social, and cultural development of children in ethnically diverse communities.

Center for Family Counseling

www.smu.edu/FamilyCounseling

The Center for Family Counseling offers a variety of counseling services to members of the community, including adults, adolescents, children, groups, couples, and families struggling with personal, social or career-related issues, while providing SMU graduate counseling students with meaningful training experience via supervised therapeutic interactions.

SMU Mediation and Conflict Resolution Services

www.smu.edu/MediationClinic

Mediation, arbitration, facilitation and conflict coaching services are available to parties involved in civil, family and community disputes. Alumni, current students of the Dispute Resolution Program who have completed at least 200 training hours and other conflict resolution professionals serve as volunteer mediators and arbitrators.

The Writer's Path

www.smu.edu/CreativeWriting

The Writer's Path is a creative writing program that guides individuals in the process of writing for fiction or nonfiction publication. Progressive noncredit courses take students from the development of writing ideas, through the preparation of a draft, to the revisions and then the polish. Qualified students are eligible to participate in a trip to New York where they visit publishing houses and meet professional publishers and editors.

DEPARTMENT OF TEACHING AND LEARNING

www.smu.edu/teacher

Professor Paige Ware, Department Chair

Professors: Jill Allor, Stephanie Al Otaiba, David J. Chard, Patricia Mathes, Jonathan Stolk, Paige Ware, Paul Yovanoff. **Associate Professor:** Ken Springer. **Assistant Professors:** Doris Baker, Karla del Rosal, Diego Roman, Amy Gillespie Rouse, Candace Walkington, Anne Wilhelm. **Clinical Professor:** Abigail Pruitt. **Clinical Associate Professor:** Nancy Montgomery. **Clinical Assistant Professors:** Ann Batenburg, Roxanne Burlison, Sherril English, Amy Ferrell, Francesca Jones, Caroline Kethley, Nancy Roberts, Dara Rossi, Robert Rouse. **Research Professors:** Charles Knibb, Héctor Rivera, Moses Williams. **Adjunct Faculty:** Karen Vickery.

General Information

Home to undergraduate, postbaccalaureate and graduate programs for both aspiring and practicing educators, the Department of Teaching and Learning offers students a comprehensive curriculum of theory, research, cross-disciplinary studies and practica. The department's teaching and research practices are grounded in multiple perspectives that encompass behaviorist, cognitive, social constructivist and socio-cultural approaches to scholarship. All programs serve to prepare educators who are scholars and leaders in professionalism, committed to high-quality teaching and practice, leaders in translating research into practice and experts in differentiated instruction.

The Bachelor of Science in Educational Studies degree program assists students in obtaining credentials for teaching in elementary, secondary or all-level (EC through grade 12) settings. At the graduate level, a student may pursue an M.Ed., an M.Ed. with a concentration in certification, a Master of Bilingual Education, an M.Ed. with a concentration in reading and writing, an M.Ed. in special education, or a Master of Music in music education, as well as other credentials in areas such as gifted education, special education, reading, mathematics, bilingual education, English as a second language and learning therapy.

Teacher Preparation

Further information regarding SMU's teacher preparation opportunities is available from the Department of Teaching and Learning, Southern Methodist University, 345 Simmons Hall, PO Box 750455, Dallas TX 75275-0455; phone 214-768-2346; www.smu.edu/teacher.

Field Experience and Student Teaching. The Educator Preparation Program includes extensive field experience to help students prepare for careers in teaching. A personal/criminal background check is required prior to field experience. The student progresses from observational activities in classrooms to practice teaching. Upon completion of all coursework in the Bachelor of Science in Educational Studies degree, students have the opportunity to student teach and/or apply for an internship. The student assumes responsibility for an entire classroom in a carefully managed student-teaching experience. SMU students receive mentoring from faculty members noted for their exceptional records as both master teachers and scholars. Exemplary teachers from inner city to suburban settings also act as mentors during the field experience. Part of the field experience comes in the form of either a one-term student-teaching experience or a two-term internship. During the one-term experience, students work with an experienced teacher full-time for 15 weeks in an

assigned classroom in a preapproved Dallas-area public, private or charter school. During this student-teaching term, the student-teaching experience, which is six credit hours, is regarded as full-time enrollment status at SMU for insurance purposes. Students receiving financial aid should meet with financial aid counselors in advance of the student-teaching term to determine aid status. Student teaching ensures that graduates of the SMU teacher education program are better able to enter the teaching profession ready to meet the dynamic learning needs of today's youth.

Eligibility for Student Teaching. Before being assigned to student teaching, candidates are reviewed by the faculty to determine whether adequate progress has been made in order to assume responsibility for school-age students. Such factors as academic performance, maturity and a demonstrated sense of responsibility are considered. Students must have a 3.000 GPA in all education courses before beginning student teaching, and all qualifiers must be passed prior to the student-teaching/internship experience.

Eligibility for Internship. Students deemed by the director of the undergraduate program to be eligible for a first-year teaching position may forego student teaching to seek an internship in an accredited school in the state of Texas. As an intern, students are enrolled in three credit hours of classes each term for the academic year and work under the supervision of an SMU instructor. As required by the Texas Education Agency, the principal will assign a mentor to work with the intern at the school level. The SMU supervisor will conduct six formal observations during the year and complete a midyear conference and an effectiveness evaluation at the end of the school year. The mentor is involved in this process.

TEXES Exam. All students seeking teacher credentials are required to take and pass the two state-mandated Texas Examinations of Educator Standards tests in the desired teaching fields. Students must attend preparation debriefs and participate in an online preparation module. When a student does not pass the TExES qualifier, a faculty mentor will develop an individual plan of supplemental study to complete a retake of the TExES qualifier. The two TExES tests for grades EC through six include the EC-12 Pedagogy and Professional Responsibilities Test and the EC through grade six Generalist Test. Students preparing for teaching in fourth through eighth grade middle schools must pass the EC-12 Pedagogy and Professional Responsibilities Test and the fourth through eighth grade Generalist Test. Students preparing for teaching in high schools must pass the TExES Pedagogy and Professional Responsibilities Test for grades EC-12 and a TExES test in their content area. Music students must pass the music content test and the EC-12 Pedagogy and Professional Responsibility Test.

Recommendation to the Texas Education Agency. The Department of Teaching and Learning will recommend to TEA a student who has completed both the Bachelor of Science in Educational Studies and another degree major, taken six hours of a satisfactory student-teaching or internship experience, and passed the two Texas Examinations of Educator Standards tests.

Requirements for Admission

Bachelor's Degree. Before applying to the Bachelor of Science in Educational Studies degree program, students must declare a primary grade level/teaching field and complete at least 24 credit hours. After meeting the requirements below, students who wish to be admitted to the program must first meet with an education adviser.

<i>Required Before Applying for Admission</i>	<i>Credit Hours</i>
Education Courses	6
EDU 2350, 5327	
Desired Teaching Grade Level	18
<i>EC–6th Grade or 4th–8th Grade:</i> At least 3 hours in each of the following fields, with no grade lower than a C (2.000) English, math, social studies, and science	
<i>7th–12th Grade:</i> At least 12 hours in the student's teaching field, with no grade lower than a C (2.000)	
	<hr/> 24

Educator Preparation Program. After completing at least 45 credit hours, educational studies students can apply for the Educator Preparation Program. At least a 2.500 cumulative GPA is required for admission. Students must submit a transcript, an essay, a letter of recommendation and appropriate standardized test results. In addition, an interview with an adviser, a background check, and the State of Texas Character and Dispositions Statement are required.

Bachelor of Science in Educational Studies

The Department of Teaching and Learning offers a Bachelor of Science in Educational Studies degree that prepares students to teach at the elementary and secondary levels: early childhood through grade six, grades four through eight (middle school) and grades seven through 12 (high school). All of the courses in the program of study are based on the Texas standards for beginning teachers. Undergraduate students pursuing an approved academic major in Dedman College, Cox School of Business, Lyle School of Engineering or Meadows School of the Arts – or the applied physiology and sport management major with a concentration in sport performance leadership in the Simmons School – may also pursue a minor in educational studies from the Simmons School. Music education students complete the Education Preparation Program requirements within the Simmons School. Students cannot graduate with only the Bachelor of Science in Educational Studies degree; they must in fact complete both the Bachelor of Science in Educational Studies and another degree major.

Each student in the degree program has an education adviser who directs his/her program of study. The education adviser is committed to mentoring and supporting student learning. Students are expected to maintain high levels of performance and to develop habits of reflection as they acquire knowledge and skills of practice.

The program of study is comprised of courses in the Department of Teaching and Learning as well as courses in other departments. The total number of credit hours required will vary depending upon the grade level or the teaching field.

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Core Courses	15
EDU 2350, 4300, 5318, 5327, 5349	
Focus/Grade Level	15–18
<i>EC–6th Grade (18 hours)</i>	
EDU 5121, 5122, 5123, 5157, 5257, 5330, 5331, 5355, 5358	
<i>Grades 4–8 (18 hours)</i>	
EDU 5124, 5125, 5126, 5330, 5348, 5367, 5371, 6366	
<i>Grades 7–12 (15 hours)</i>	
EDU 5124, 5125, 5126, 5348, 5367, 5371, 6366	
	30–33

Minor in Educational Studies

The educational studies minor requires 15 hours selected from the courses in the Bachelor of Science in Educational Studies degree program, and these hours may be applied to the degree program should the student decide to pursue the Educator Preparation Program. **Note:** Completion of the minor hours alone will not allow the student to become a teacher.

<i>Requirements for the Minor</i>	<i>Credit Hours</i>
EDU 2350, 5327	6
Three from EDU 4300, 5318, 5348, 5349	9
	15

The Courses **Education (EDU)**

Early Childhood–Grade 6	EDU 2350, 5121–23, 5318, 5327, 5331, 5333, 5349, 5355, 5357–58, 5363–64, 5385–86
Middle (Grades 4–8) and High School (Grades 7–12) Courses and Certification Areas	EDU 2350, 5124–26, 5318, 5327, 4300, 5348–49, 5367, 5371, 5373–76
Elective Education Courses (These courses are not required by the state for teacher certification.)	EDU 2355, 3301

EDU 1099 (0). INTERNSHIP. This course requires a full-year assignment as the teacher of record in a public or accredited private school. Supervision by SMU faculty is required.

EDU 2348 (3). INTRODUCTION TO DIVERSE LEARNERS. A study of diversity, multicultural concepts, and inclusion. Also, explores issues, policies, and professional practice relevant to teaching.

EDU 2349 (3). PSYCHOLOGY OF ADJUSTMENT. This course introduces the field of psychology, with emphasis on how people deal with the problems and challenges of everyday life. Students learn about classical and contemporary theories, recent research, and applications of the science of psychology to everyday situations.

EDU 2350 (3). EDUCATIONAL PSYCHOLOGY. This course focuses on aspects related to the learning process, such as education theories, characteristics of learners, nature and measurements of abilities, motivation, and successful classroom practice.

EDU 2355 (3). LITERACY AND SOCIETY. A structured service learning opportunity that fosters academic growth, citizenship, leadership, and civic responsibility. Readings and course activities relate to the relationship between literacy and society. Throughout the term, students tutor local elementary school students and complete related assignments.

EDU 4099 (0). FULL-TIME STATUS. This course provides full-time status for students placed in an internship. Students must obtain permission to enroll in this course.

EDU 4300 (3). FOUNDATIONS OF TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES. Students will develop/analyze lesson plans in all content areas using TESOL competencies, emphasizing language concepts, acquisition, teaching and assessment strategies, and the role of culture in language acquisition.

EDU 5100 (1). SPECIAL TOPICS. Students work on a personalized system of instruction. Most of the work in this course is done as an independent study.

EDU 5121 (1). FIELD EXPERIENCE I: ELEMENTARY. This course gives students opportunities to work in appropriate school settings and allows them to observe a functioning classroom. Includes classroom setup, environment, organization, structure, and discipline.

EDU 5122 (1). FIELD EXPERIENCE II: ELEMENTARY. With a focus on special populations, this course places students in elementary school settings where they observe the teaching techniques used to help children with exceptional needs.

EDU 5123 (1). FIELD EXPERIENCE III: ELEMENTARY. This course gives students opportunities to work in appropriate school settings and to plan and teach lessons. Students shadow a teacher in preparation for student teaching.

EDU 5124 (1). FIELD EXPERIENCE I: SECONDARY. This course gives students opportunities to work in appropriate school settings and allows them to observe a functioning classroom. Includes classroom setup, environment, organization, structure, and discipline.

EDU 5125 (1). FIELD EXPERIENCE II: SECONDARY. Places students in elementary school settings where they observe the teaching techniques used to help children with exceptional or special needs.

EDU 5126 (1). FIELD EXPERIENCE III: SECONDARY. This course gives students opportunities to work in appropriate school settings and to plan and teach lessons. Students shadow a teacher in preparation for student teaching.

EDU 5157 (1). PRACTICUM FOR TEACHING EARLY READING AND WRITING. Provides experience applying evidence-based principles of literacy development and learning in young children, early childhood through second grade. Requires tutoring experiences in a local school. *Corequisite:* EDU 5257.

EDU 5200 (2). SPECIAL TOPICS. Students work on a personalized system of instruction. Most of the work in this course is done as an independent study.

EDU 5257 (2). METHODS FOR TEACHING EARLY READING AND WRITING. Examines evidence-based principles of literacy development and learning in young children, early childhood through second grade. Focuses on designing, adapting, and evaluating beginning literacy instruction for children. *Corequisite:* EDU 5157.

EDU 5300 (3). SPECIAL TOPICS. Students work on a personalized system of instruction. Most of the work in this course is done as an independent study.

EDU 5318 (3). FORMATIVE/SUMMATIVE ASSESSMENT. Explanation and practice of formal and informal assessment strategies, the ways assessment outcomes should inform instruction, and the methods for sharing assessment outcomes with families. All assignments relate to putting assessment skills into practice in the classroom.

EDU 5327 (3). INTEGRATING TEACHING AND LEARNING. Reviews the nature and design of educational activities: theory, research, practice of unit planning, and lesson planning for active learning that meets the needs of individual students.

EDU 5330 (3). INTEGRATED STEM STUDIES. Provides elementary- and middle-grades teachers with strategies to integrate science, technology, engineering, and mathematics in their classrooms.

EDU 5331 (3). CONTENT AREA STUDIES FOR ELEMENTARY SCHOOL. Explores science, social studies, art, music, drama, and physical education content for students EC–grade six. Also, effective teaching strategies for each content area.

EDU 5348 (3). INTRODUCTION TO DIVERSE LEARNERS. A study of diversity, multicultural concepts, and inclusion. Also, explores issues, policies, and professional practice relevant to teaching.

EDU 5349 (3). LEARNING ENVIRONMENT AND PROFESSIONALISM: EC–12. This course focuses on major issues facing teachers in establishing and maintaining a positive and productive learning environment, as well as the professional roles and responsibilities of teachers.

EDU 5355 (3). TEACHING MATHEMATICS IN ELEMENTARY SCHOOL. Evaluates learning materials and teaching methods focusing on knowledge and skills required for students EC–grade six.

EDU 5357 (3). EMERGENT LITERACY. This course examines principles of literacy learning in young children and predictable stages of oral language, writing, and reading development. All literacy classes require field experiences in local schools.

EDU 5358 (3). CONVENTIONAL LITERACY. Introduces theories, practices, and materials for teaching reading and/or writing in primary grades. All literacy classes require field experiences in local schools.

EDU 5363 (3). ELEMENTARY STUDENT TEACHING. Requires a 15-week assignment in an elementary school that has a diverse student population. Includes a seminar on campus every 2 weeks.

EDU 5364 (3). ELEMENTARY STUDENT TEACHING. This course requirement is a 15-week assignment in an elementary school that has a diverse student population. The course includes a seminar on campus every 2 weeks. Students are assigned an SMU supervisor who observes in the classroom at least four times a term. A portfolio is required.

EDU 5367 (3). CREATING SUCCESSFUL CLASSROOMS. Students will examine current research that promotes student-centered teaching and constructivist practices. Various teaching and learning strategies of teaching in effective classrooms will be the focus of the course.

EDU 5371 (3). CONTENT AREA METHODS. Students refine content knowledge, methods, and strategies specific to their content area and level of certification.

EDU 5373 (3). SECONDARY STUDENT TEACHING. Requires a 15-week assignment in a middle school and/or high school that has a diverse student population. Includes a seminar on campus every 2 weeks. Students are assigned an SMU supervisor who observes in the classroom at least four times a term. A portfolio is required.

EDU 5374 (3). SECONDARY STUDENT TEACHING. Requires a 15-week assignment in a middle school and/or high school that has a diverse student population. Includes a seminar on campus every 2 weeks. Students are assigned an SMU supervisor who observes in the classroom at least four times a term. A portfolio is required.

EDU 5375 (3). INTERNSHIP I: HIGH SCHOOL AND MIDDLE SCHOOL. This course requirement is a full-year assignment as the teacher of record in a public or accredited private school. Supervision by SMU faculty is required.

EDU 5376 (3). INTERNSHIP II: HIGH SCHOOL AND MIDDLE SCHOOL. This course requirement is a full-year assignment as the teacher of record in a public or accredited private school. Supervision by SMU faculty is required.

EDU 5385 (3). INTERNSHIP I: EC–6. This course requirement is a full-year assignment as the teacher of record in a public or accredited private school. Supervision by SMU faculty is required.

EDU 5386 (3). INTERNSHIP II: EC–6. This course requirement is a full-year assignment as the teacher of record in a public or accredited private school. Supervision by SMU faculty is required.

Education Policy and Leadership (EPL)

EPL 2307 (3). CONTEMPORARY ISSUES IN EDUCATION POLICY REFORM. Examines issues and controversies in public policy for education in the U.S. Students learn how to analyze and communicate to the public the merits of alternative proposals for educational policy change.

DEPARTMENT OF APPLIED PHYSIOLOGY AND WELLNESS

www.smu.edu/apsm

Professor Lynn Romejko Jacobs, Department Chair

Professors: Lynn Romejko Jacobs, Peter Weyand. **Associate Professor:** Scott L. Davis. **Assistant Professor:** Sushmita Purkayastha. **Clinical Assistant Professors:** David Bertrand, Megan Murphy, Chris Poole. **Professors of Practice:** Susan Holland, Michael Lysko, Michael Stone. **Senior Lecturers:** Brian Fennig, Donna Gober. **Lecturers:** Caitlin Anderson, Randy Canivel, Piotr Chelstowski, Takeshi Fujii, Jessica Gillaspy, Derek Marr, Eleanor Odenheimer-Brin, Laura Robinson, Mark Rudich, Bradley Warren. **Research Professor:** Eric Bing.

General Information

The Department of Applied Physiology and Wellness offers undergraduate and graduate programs. The B.S. with a major in applied physiology and sport management offers three concentrations: applied physiology and health management, sport management, and sport performance leadership. The department also offers minors in applied physiology, applied physiology and health management, and sport management. Its graduate programs include an M.S. in sport management and a Ph.D. in education, with an emphasis in applied physiology. The department also offers the personal responsibility and wellness courses that are required of all undergraduate students as part of the University Curriculum and a selection of sports and fitness activity courses. All UC students must take PRW1 and PRW2 in order to graduate from SMU.

Admission Requirements and Application Process

To apply for admission, students first must meet minimum GPA criteria and complete prerequisite requirements before submitting the application for admission. Admission is competitive. Students who are not accepted may reapply for admission during another term. For consideration, students must

- Have a minimum 2.000 GPA overall.
- Complete a minimum of 30 credit hours (currently enrolled hours may be included).
- Complete the two subset courses required for the selected concentration with a minimum of C- in each course.

<u>Concentration</u>	<u>Subset</u>
Applied Physiology and Health Management	APSM 2441 and one of the following: APSM 2442, 3332, 3340, 3343, or 3351
Sport Management	APSM 2310 and one of the following: APSM 3311, 3322, 3340, or 3372
Sport Performance Leadership	APSM 2340 and one of the following: APSM 3300, 3311, 3315, 3322, 3332, or 3351

- Attend a required orientation meeting for prospective majors.
- Submit a completed general application form for the APSM major program.
- Declare an area of concentration.

Students approved for admission by the faculty are assigned an adviser; they may continue to take core courses and/or courses in their concentration of interest.

Degree Requirements

The applicable requirements of the major are those in effect during the academic year in which the major is declared *or* those of a subsequent academic year. If an APSM major makes a grade below *C-* in any APSM course, the student must retake the course; a grade below *C-* will not apply toward the major. The Simmons School also requires a cumulative GPA of 2.000 on all courses attempted for completion of a major or minor. All courses attempted that could count toward the major or minor are included in determining the major or minor GPA. Majors must be officially declared (or changed) through the Office of the Dean.

Student Responsibility for Completion of Degree Plan. Students are required to schedule a degree-plan conference with an APSM adviser at the time of their acceptance into the major. **Note:** Each term, students are required to attend an advising session with their assigned adviser. Detailed information concerning academic regulations and degree requirements is provided at that time. Students are individually responsible for knowing and complying with all regulations and requirements that may apply to the APSM program.

Honor Code Violations. An APSM major who commits an honor code violation while enrolled in any of the APSM courses could be expelled from the program and not allowed to continue and complete the major.

Application for a Degree. Students must submit to the Office of the Dean a formal application for graduation at the beginning of the term in which they will complete all degree requirements. Applications should be filed by the deadline date in the Official University Calendar.

Credits. A candidate for a Simmons School APSM degree must have

- A minimum total of 122 credit hours, including Universitywide requirements and requirements for the APSM major.
- A minimum total of 42 advanced credit hours (3000 level or above).
- A maximum total of two credit hours of PRW courses.
- A maximum total of six credit hours of internship credit.

Grades. A candidate for a Simmons School APSM degree must have

- A minimum cumulative GPA of 2.000 on all work attempted through enrollment at SMU.
- A minimum cumulative GPA of 2.000 on all equivalent work attempted elsewhere, if any.
- A minimum grade of *C-* on any APSM course taken in fulfillment of major or minor requirements.
- A minimum cumulative GPA of 2.000 on all work attempted for completion of major or minor requirements.
- No more than 12 hours with a grade of *P* (Pass).

Minimum Credit Requirement. A candidate for a B.S. degree in APSM from the Simmons School must take the following hours as SMU credit; that is, the credit hours must be earned in SMU courses or SMU-approved international programs.

- A minimum of 60 credit hours.
- A minimum of 18 credit hours of advanced work in the major.

Multiple Concentrations. A student may pursue up to three concentrations within the APSM major in the Simmons School by completing all requirements for each

concentration, along with the general requirements for a B.S. degree in APSM. However, these additional concentrations are not degrees. Students with multiple concentrations within the APSM major are awarded one baccalaureate degree from the Department of Applied Physiology and Wellness.

Additional Degrees. A student may also concurrently pursue a program of study leading to a degree from the Simmons School along with a degree (or degrees) from the Dedman College of Humanities and Sciences, Cox School of Business, Meadows School of the Arts, or Lyle School of Engineering. The student must obtain approval for the proposed program of study from the deans of the schools involved.

Bachelor of Science With a Major in Applied Physiology and Sport Management

The APSM program provides a rigorous curriculum for understanding the biological basis of health and fitness and the business background required of professionals in the sport, health, coaching and fitness industries. The program leads to a B.S. degree with concentrations available in applied physiology and health management, sport management, and sport performance leadership. Concentrations require coursework in the physiological sciences and business.

The core curriculum introduces the discipline; establishes the scientific basis of health, fitness and human performance; introduces the business principles and skills necessary to establish and maintain a sport- or fitness-related business; and familiarizes students with the legal and ethical aspects of the fitness, health, coaching and sport industries. Woven throughout the program are experiential learning opportunities as well as science courses structured in accordance with evidence-based practices and augmented by reviews of current research. The program culminates in a research methodology course and an internship. Students are ultimately prepared for a variety of career paths, including commercial health and fitness facility management; corporate fitness and wellness programming; graduate programs in the allied health professions (i.e., physical therapy, nursing, physician assistant); coaching; health management; sports marketing; management of professional, collegiate or amateur sport organizations; representation of professional athletes; sport public relations; and sport facility and event management.

All students must complete 15–17 hours of core courses and 24–27 hours of concentration courses to obtain the B.S. degree in APSM. The core courses and concentrations are described below.

Applied Physiology and Health Management Concentration

The applied physiology and health management concentration ensures that students are prepared to develop research-based training methods in order to advise effective lifestyle prescriptions, as well as to design and manage fitness and health facilities. The course offerings within this concentration focus on holistic fitness and health outcomes and are formulated and presented around the central theme of evidence-based practice. This strategy endows students with the analytic skills necessary to evaluate and properly incorporate research results into professional practice. The program provides students with the solid research foundation that is necessary for leaders, educators and practitioners in the prevention of chronic diseases that plague society and affect the health care system.

	<i>Credit Hours</i>
Core Courses	16
APSM 3411, 3321, 3332, 3340, 5300	
Concentration Courses	20
APSM 2441, 2442, 3343, 5351, 5610	
Elective Courses	12
At least two from APSM 4312, 4349, 3351, 4307	
Remaining hours from	
ANTH 4343	
APSM 4360, 5261, 5370	
MKTG 3310	
PHIL 3376	
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Sport Management Concentration

Due to the explosion of interest in sport as a business, curricula to prepare management professionals are growing in number and prevalence. Further, as the business of sport becomes more complex, the preparation of professionals has become increasingly sophisticated, relying heavily on successful business theories and principles. The academic discipline of sport management draws on significant research and practices from organization and information management systems, including budgeting, accounting, managing events, managing personnel and facilities, controlling, directing, evaluating, leading, writing, selling, working with media, developing publications, keeping game notes and statistics, interviewing, promoting, advertising and fundraising.

	<i>Credit Hours</i>
Core Courses	15
APSM 3311, 3322, 3332, 3340, 5300	
Concentration Courses	24
APSM 2310, 3372, 4345, 4371, 4372, 5371, 5672	
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Sport Performance Leadership Concentration

The concentration in sport performance leadership provides students with academic and experiential training pertinent to the leadership and instruction of sport. Graduates of the program are equipped with an evidence-based scientific foundation for their leadership and instructional aspirations. The program serves two objectives:

1. To enhance understanding of scientific evidence for human performance improvement in the context of sport.
2. To provide a philosophical and historical foundation for successful, safe and ethical athletic coaching.

Several features distinguish the program from those at other institutions. Most programs include classes on teaching the fundamentals of sport. Fewer programs apply the psychological component of dealing with motivation, confidence, intensity, focus and emotional well-being. Rarely do programs address the communicative aspect of coaching. SMU's program in sport performance leadership addresses all

three components, equipping students with a unique and dynamic skill set to offer the coaching marketplace. Students also complete three hours of experiential learning. This type of exposure to real-world coaching helps to assure superior preparation for graduates of the program.

	<i>Credit Hours</i>
Core Courses	15
APSM 3311, 3322, 3332, 5300	
Concentration Courses	24
APSM 2340, 3300, 3315, 3351, 4310, 4190 (3 enrollments), 4350, 5370, and either 4360 or 4380	
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Departmental Distinction

A student may be awarded departmental distinction regardless of eligibility for graduation honors. This award is conferred by the Department of Applied Physiology and Wellness based on specific criteria established by the department.

Minors in Applied Physiology and Health Management, Sport Management, and Applied Physiology

A candidate for a degree may also complete the requirements of a minor, either in the Simmons School or in one of the other undergraduate schools of the University. Coursework intended to apply toward a minor may not be taken pass/fail. If an APSM minor earns a grade below *C-* in any APSM course, the student must retake the course. In addition, the Simmons School requires a cumulative GPA of 2.000 on all courses attempted for completion of a major or minor. All courses attempted that could count toward the major/minor are included in determining the major/minor GPA. Minors must be officially declared (or changed) through the Office of the Dean.

	<i>Credit Hours</i>
Applied Physiology and Health Management Minor (23 hours)	
APSM 2441, 2442, 3311, 3322, 3351, 4349, 5351 (PSYC 3360 and APSM 3332 <i>recommended</i>)	
Sport Management Minor (18 hours)	
APSM 2310, 3332, 3340 Choice of three electives from the following: APSM 3372, 4345, 4371, 4372	
Applied Physiology Minor (23 hours)	
APSM 2441, 2442, 3411, 3422, 3351, 4412 (APSM 4349 <i>recommended</i>)	
	18–23

Personal Responsibility and Wellness

www.smu.edu/wellness

The personal responsibility and wellness courses reflect the University's philosophy that a well-rounded education enhances the physical and mental well-being of the student. PRW courses help students to become more aware of the comprehensive nature of wellness; to understand the importance of personal life management; to respond positively to imbalances in their lifestyles; to become familiar with campus wellness facilities, equipment and services; to commit to a lifetime of physical

activity and physical fitness; and to utilize opportunities the University provides and promotes in a variety of wellness areas. Each student must complete PRW1 and PRW2 as part of the University Curriculum. Additional information is found in the Universitywide Requirements section of this catalog.

Concepts of Wellness: PRW1. PRW1 introduces students to the University and explores life transition topics such as stress management, personal financial planning and healthy decision-making. PRW1 is designed to be completed during the first year of SMU enrollment.

Physical Fitness: PRW2. Extensive research supports that regular physical activity is essential for health and vitality. Students take PRW2 to establish personal fitness goals and fitness plans for the term. A variety of individual and group fitness courses are available; in both cases, students work with instructors. Each course contains central core objectives and student-learning outcomes based on health-related fitness components. Topics and activities include the following: comprehensive physical fitness assessments, cardiorespiratory workshops, resistance exercise workshops, individual goals and individual or group training, post-training assessments, counseling, and a final exam under the auspices and leadership of a qualified instructor. Grades are based on attendance, understanding of training and health principles, and satisfactory improvements toward the goals that students set for themselves. The aim is to help each student achieve immediate fitness benefits and inculcate positive, lifelong fitness habits. Grading is on a letter (A, B, C) basis. PRW2 courses are offered in the fall and spring terms. All courses share a congruent syllabus with core student-learning outcomes and assessments, as well as outcomes specific to the modality through which the core objectives are met. All health-related fitness courses meet the criteria for the required PRW2 credit. Students may take up to four additional PRW2 courses beyond the required graded course for their own personal benefit during their college career. These additional PRW2 courses can only be taken after the student has completed the PRW2 required course. Additional courses are graded on a pass/fail basis only, do not count toward the minimum hours for the degree and must meet the criteria outlined in the Pass/Fail Option section of this catalog.

The Courses

Personal Responsibility and Wellness (PRW)

PRW 1101 (1). PRW1: CONCEPTS OF WELLNESS. PRW1 is required for graduation, and it should be taken in the first term upon entering SMU. The course introduces students to the University and explores three sets of issues: 1) the role of personal responsibility in coping with college and life's other transitional periods; 2) challenges and opportunities such as managing time and stress, benefiting from diversity and autonomy, dealing with pitfalls related to alcohol and drugs, and exploring resources and activities on campus; and 3) personal finance decisions while at SMU and later in life, including managing money, using credit cards, and making major purchases. Also, introduces the e portfolio that students use to record and reflect upon their activities. Grading is on a pass/fail basis. (Fall term restricted to first-year standing only.)

PRW 2101 (1). PRW2: PHYSICAL FITNESS: BENCH AEROBICS. Offers an intense aerobic workout using benches. Also, body contouring using dumb bells, body bars, and mats. Includes selected activities designed to target health-related fitness.

PRW 2102 (1). PRW2: PHYSICAL FITNESS: JOGGING. This class provides an excellent means for improving cardiovascular endurance by running. Introduces selected activities designed to target health-related fitness. Students are expected to increase their jogging ability and set personal running goals.

PRW 2105 (1). PRW2: PHYSICAL FITNESS: WEIGHT TRAINING. Accommodates all levels of weight training experience. Proper mechanics, safety, and principles of strength building with

machines and free weights are presented and practiced. Includes selected activities designed to target health-related fitness.

PRW 2106 (1). PRW2: PHYSICAL FITNESS: WEIGHT TRAINING FOR WOMEN. Accommodates all levels of weight training experience. Proper mechanics, safety, principles of strength building, and endurance training with machines and free weights are presented and practiced in a friendly setting. Includes selected activities designed to target health-related fitness.

PRW 2110 (1). PRW2: PHYSICAL FITNESS: INDIVIDUAL FITNESS. Students develop a personal exercise program, and they test and evaluate their own strengths and weaknesses in terms of health and fitness. Accommodates all levels of fitness. Activities aim to improve cardiovascular endurance, muscular strength and endurance, and flexibility.

PRW 2112 (1). PRW2: PHYSICAL FITNESS: WALKING. Walks of 2–2.5 miles during class, and diet and nutrition information. Includes selected activities designed to target health-related fitness.

PRW 2114 (1). PRW2: PHYSICAL FITNESS: BEGINNING TRIATHLON. Students train for a sprint distance triathlon (swim, bike, run) during the term. Includes selected activities designed to target health-related fitness. The \$60 activity fee covers triathlon entry.

PRW 2115 (1). PRW2: PHYSICAL FITNESS: INTERMEDIATE TRIATHLON. Prepares the student to complete an Olympic triathlon (1.5 km swim, 40 km bike ride, and 10 km run). Covers bicycle care, training progressions, and race strategies. Includes selected activities designed to target health-related fitness. The \$60 activity fee covers triathlon entry. *Prerequisite:* Completion of a sprint distance triathlon.

PRW 2117 (1). PRW2: PHYSICAL FITNESS: BEGINNING MARATHON TRAINING. Students gain the skills and endurance needed to complete the local White Rock Marathon at the end of the term. Includes selected activities designed to target health-related fitness. The \$125 activity fee covers marathon entry.

PRW 2120 (1). PRW2: PHYSICAL FITNESS: SPINNING. Spinning utilizes specialized, stationary cycles in a controlled, group setting. This indoor class is uniquely tailored to suit a wide range of abilities. Training principles are inspired by road cycling, and the pace is self-directed. Includes selected activities designed to target health-related fitness. Special activity fee: \$10.

PRW 2122 (1). PRW2: PHYSICAL FITNESS: ROCK CLIMBING. Introduces the sport and fitness of rock climbing. Students learn safety skills and techniques necessary for successful rock climbing and have opportunities to climb outdoors and indoors. Introduces selected activities designed to target health-related fitness. Special activity fee: \$50.

PRW 2125 (1). PRW2: PHYSICAL FITNESS: GROUP FITNESS. This boot camp style class introduces a variety of group fitness activities such as kickboxing, jogging, Pilates, calisthenics, indoor rowing, and strength training.

PRW 2127 (1). PRW2: PHYSICAL FITNESS: PILATES. Pilates is a total body conditioning exercise method designed to develop the mind and body uniformly. Combines flexibility and strength activities to improve balance, flexibility, and posture and to strengthen core muscles. Aerobic components are included for a full, health-related fitness workout.

PRW 2130 (1). PRW2: PHYSICAL FITNESS: POWER YOGA. Focuses on three main areas of yoga practice: deep breathing, exercise (postures), and meditation. Includes selected activities designed to target health-related fitness.

PRW 2132 (1). PRW2: PHYSICAL FITNESS: JUDO. Judo (“gentle way”) is a safe combat sport that applies maximum efficiency with minimum effort. Students learn the basic skills of judo and techniques for self-defense, particularly against stronger opponents. Also, presents judo’s spiritual aspect of relating to others in more harmonious and effective ways.

PRW 2133 (1). PRW2: PHYSICAL FITNESS: RACQUETBALL I. Classes are held on Dedman Center’s racquetball courts and are designed to accommodate all levels of physical skill. Rules, safety, skill techniques, strategy, and competitive play are progressively introduced throughout the term. Activities include workouts designed to target health-related fitness.

PRW 2135 (1). PRW2: PHYSICAL FITNESS: MOUNTAIN SPORTS. Includes several hikes, a river raft trip, a mountain bike trip, a volleyball tournament, and selected activities designed to target health-related fitness. Special activity fee: \$750 to cover rafting, rock climbing, fly-fishing, horseback riding, and other mountain sports activities. (SMU-in-Taos)

PRW 2140 (1). PRW2: PHYSICAL FITNESS: INTERMEDIATE SWIMMING. For the intermediate to advanced swimmer. Provides an opportunity to refine swimming stroke techniques and to gain more advanced swimming skills and aerobic fitness. Includes selected activities designed to target health-related fitness.

PRW 2144 (1). PRW2: PHYSICAL FITNESS: SCUBA. Students need only basic swimming skills to participate. Presents basic physics and physiology (in class) and practical scuba methods and techniques. Includes an introduction to animal behavior so divers can better understand their own behavior underwater. On balance, class time is divided equally among academics, pool work, fitness activities, and open-water diving at area lakes. Students earn certification as open-water scuba divers upon completion of the course. Special activity fee: \$175.

PRW 2145 (1). PRW2: PHYSICAL FITNESS: ADVANCED SCUBA. Introduces several diving specialties: night diving, wreck diving, search and recovery, and overhead environments. The course is 1/3 academics, 1/3 pool work, and 1/3 open water diving at one of the in-state, area lakes. Also introduces the use of advanced equipment such as lift bags, diver propulsion vehicles, and full-face masks. Students meet experienced and accomplished divers and earn advanced scuba certification upon completion of the class. Fitness activities designed to target health-related fitness are included. Special activity fee: \$175.

PRW 2151 (1). PRW2: PHYSICAL FITNESS: SELF-DEFENSE. Teaches students how to prepare physically and mentally for an attack using the ancient Japanese martial art jujitsu and a mix of other martial arts techniques (aikido, judo, kickboxing, and various schools of karate). Includes lessons in blocking, striking, joint locks, release and escape, the proper method of falling, and defense while lying on the ground. Includes fitness activities designed to target health-related fitness.

PRW 2161 (1). PRW2: PHYSICAL FITNESS: BASKETBALL. Teaches the fundamentals of playing basketball using team drills and offensive and defensive formations and strategy. Augments skill development with game-like conditions. Includes fitness activities designed to target health-related fitness.

PRW 2190 (1). PRW2: PHYSICAL FITNESS: OPTIONAL. Acknowledges the fitness commitments of special groups such as athletes, cheerleaders, pompom squad members, and military service personnel. Students must demonstrate knowledge of health-related fitness concepts and produce an offseason personal fitness plan. Instructor approval required.

Applied Physiology and Sport Management (APSM)

Elective Courses

These courses are elective courses offered to APSM students with faculty approval.

APSM 4159, 4259, 4359, 5160,
5260, 5261, 5360, 5361

APSM 2310 (3). CONTEMPORARY ISSUES IN SPORT MANAGEMENT. Explores the functional areas of business, management principles, contemporary issues, and future considerations for organizations within the fitness and sports industries. Gateway course for sport management concentration majors; successful completion is mandatory to be invited into the program. First-year, sophomore, or junior standing only (less than 90 hours).

APSM 2340 (3). COACHING AND LEADERSHIP FOR PERFORMANCE. Examines what coaches do, the qualities of expert coaches, strategies for effective and cohesive programs, a sound coaching philosophy, and the art and science of coaching. Serves as the gateway course to the major. Students must complete this course with a C- or better to be eligible to declare sport performance leadership as a major. *Prerequisite:* First-year, sophomore, or junior standing (less than 90 hours).

APSM 2441 (4). HUMAN ANATOMY AND PHYSIOLOGY I WITH LABORATORY. A systemic approach to the study of the human body, with a focus on the anatomical structure and function of the human neuromusculoskeletal systems. Gateway course for applied physiology and enterprise concentration majors; successful completion is mandatory to be invited into program. Lab fee: \$30.

APSM 2442 (4). HUMAN ANATOMY AND PHYSIOLOGY II WITH LAB. Examines the gross anatomy and physiology of the endocrine, cardiovascular, respiratory, digestive, and urinary

systems, and their relationship with human health and performance. Lab fee: \$30. *Prerequisite:* APSM 2441. APSM majors and minors only.

APSM 3300 (3). ANATOMY FOR MOVEMENT. Explores the anatomy of bones and muscles and their role in normal muscle function and common gross motor movements.

APSM 3311 (3). EXERCISE PHYSIOLOGY. Uses an organ system approach to examine the body's responses and adaptations to exercise and movement. *Prerequisite:* APSM 2310 or 2340.

APSM 3315 (3). COMMUNICATION IN SPORT. Facilitates the improvement of communication skills for coaches through the introduction of various communication styles and techniques and furthers an understanding of conflict resolution and negotiation. *Prerequisites:* DISC 1311, 1312.

APSM 3322 (3). BIOMECHANICS. Introduces the scientific basis of support and motion in humans and other vertebrate animals, drawing equally on musculoskeletal biology and Newtonian mechanics. *Prerequisite:* APSM 2310 or 2340.

APSM 3332 (3). LEGAL AND ETHICAL ASPECTS OF APPLIED PHYSIOLOGY AND SPORTS MANAGEMENT. Explores legal and ethical implications related to careers within the fitness and sport industries as well as ethical practices and legalities related to safety, risk management, personnel, and contracts. *Prerequisite:* APSM 2310, 2340, or 2441.

APSM 3340 (3). APPLIED MANAGEMENT SKILLS IN SPORTS AND FITNESS. An extensive study of organizational functions, methods of operation, and types of ownership. Also, the role of organizations in contemporary society as they relate to fitness and sport enterprises today. *Prerequisite:* APSM 2310 or 2441.

APSM 3343 (3). HEALTH PROMOTION PRACTICE. Focuses on understanding, influencing, and modifying health status and behaviors in populations. Explores the assessment, planning, execution, and evaluation of health promotion programming, as well as different applications and delivery methods of health promotion.

APSM 3351 (3). NUTRITION. An examination of the role that nutrition plays in health and optimal function, including the impact of nutrition on obesity, heart disease, stroke, cancer, eating disorders, and specific populations.

APSM 3372 (3). ADVANCED PUBLIC RELATIONS IN SPORT. An overview of communications specific to the sport industry, including public relations, media relations, and community relations. *Prerequisite:* APSM 2310.

APSM 3411 (4). EXERCISE PHYSIOLOGY WITH LABORATORY. Examines the physiological mechanisms underlying human movement. Topics include muscle physiology, respiration, cardiac function, circulation, energy metabolism, and their application to training. Students are expected to have a basic understanding of algebra, general chemistry, and anatomy and/or physiology prior to enrollment. Lab fee: \$30. *Prerequisites:* APSM 2441, 2442.

APSM 3422 (4). BIOMECHANICS WITH LABORATORY. Introduces the scientific basis of support and motion in humans and other vertebrate animals, drawing equally on musculoskeletal biology and Newtonian mechanics. Lab fee: \$30. *Recommended:* PHYS 1303, MATH 1304. *Prerequisite:* APSM 2441.

APSM 4159 (1). INDEPENDENT STUDY IN APPLIED PHYSIOLOGY AND SPORT MANAGEMENT. For APSM majors or minors seeking to increase their experiential presence and/or research capabilities. Enrollment is by faculty invitation only. *Prerequisite:* APSM 2310 or 2441.

APSM 4190 (1). EXPERIENTIAL LEARNING LAB. Explores practical and theoretical aspects of the discipline with hands-on experience in the sport-coaching industry. Possible topics and/or activities include shadowing a coach, working on a community outreach project, and satisfying professional certification requirements. A total of 3 credit hours from among APSM 4190, 4290, and 4390 are required for the sport performance leadership concentration. *Prerequisites:* Instructor approval and junior standing (minimum of 60+ hours).

APSM 4259 (2). INDEPENDENT STUDY IN APPLIED PHYSIOLOGY AND SPORT MANAGEMENT. For APSM majors or minors seeking to increase their experiential presence and/or research capabilities. Enrollment is by faculty invitation only. *Prerequisite:* APSM 2310 or 2441.

APSM 4290 (2). EXPERIENTIAL LEARNING LAB. Explores practical and theoretical aspects of the discipline with hands-on experience in the sport-coaching industry. Possible topics and/or activities include shadowing a coach, working on a community outreach project, and satisfying professional certification requirements. A total of 3 credit hours from among APSM

4190, 4290, and 4390 are required for the sport performance leadership concentration. *Prerequisites:* Instructor approval and junior standing (minimum of 60+ hours).

APSM 4307 (3). GLOBAL AND PUBLIC HEALTH. Provides an overview of issues in international health, with a focus on contributions of anthropology and anthropologists to international public health issues. *Prerequisites:* 60 credit hours or more. Reserved for applied physiology and sport management majors in the applied physiology and health management concentration program.

APSM 4310 (3). PSYCHOLOGY OF SPORT. Explores various psychological theories and research related to sport and exercise behavior. *Prerequisite:* APSM 2340.

APSM 4345 (3). SPORTS MARKETING. This course provides a strategic framework to understand market dynamics, trends, consumer behavior, products, delivery systems, and marketing and promotional strategies that shape and drive the sports marketing industry. *Prerequisite:* APSM 2310.

APSM 4349 (3). HEALTH CARE: FROM POLICY TO PRACTICE. Explores the development and transformation of health care policy and the environmental factors that influence the delivery of health care services. Also, financial, economical, and operational issues related to health care.

APSM 4350 (3). MOTOR LEARNING. Focuses on the principles of learning as they relate to the acquisition and development of motor skills, motor performance, and motor learning throughout life. Also, learning in the context of sports and performance-related skills acquisition. *Prerequisite:* APSM 3300.

APSM 4359 (3). INDEPENDENT STUDY IN APPLIED PHYSIOLOGY AND SPORT MANAGEMENT. For APSM majors or minors seeking to increase their experiential presence and/or research capabilities. Enrollment is by faculty invitation only. *Prerequisite:* APSM 2310 or 2441.

APSM 4360 (3). STRENGTH AND CONDITIONING PROGRAMS. Examines the essentials of strength training and conditioning that are key to completion of the Certified Strength and Conditioning Specialist certification and the Certified Personal Trainer certification. *Prerequisites:* APSM 2340, 3300, 3311, and 3351.

APSM 4371 (3). REVENUE IN SPORTS. This course covers sports industry revenue topics, including professional league and team revenue generation, franchise ownership and valuation, corporate sponsorship, sports media revenue, and industry selling practices. *Prerequisite:* APSM 2310.

APSM 4372 (3). SPORT FACILITY AND EVENT MANAGEMENT. This course examines the principles of sport facility planning, design, and management. Topics include venue design, operations, revenue streams, budgeting, personnel, security, media relations, crisis control, and legal considerations. *Prerequisite:* APSM 2310.

APSM 4380 (3). TECHNOLOGY AND SPORT. Provides an overview of the role technology plays in modern coaching, specifically in student-athlete development, monitoring, and recruitment. Emphasizes organization of team and individual video analysis, tactics of competition, and administration of an athletic program. Also, scouting opponents, determining playing time, and making annual training plans. *Prerequisites:* APSM 3300, 3311, 3322.

APSM 4390 (3). EXPERIENTIAL LEARNING LAB. Explores practical and theoretical aspects of the discipline with hands-on experience in the sport-coaching industry. Possible topics and/or activities include shadowing a coach, working on a community outreach project, and satisfying professional certification requirements. A total of 3 credit hours from among APSM 4190, 4290, and 4390 are required for the sport performance leadership concentration. *Prerequisites:* Instructor approval and junior standing (minimum of 60+ hours).

APSM 4412 (4). ADVANCED EXERCISE PHYSIOLOGY. Introduces measurement techniques used to assess physiological responses to exercise. Students take measurements on themselves (or one another if they prefer) in structured laboratory experiences. Lab fee: \$30. *Prerequisites:* APSM 2441, 2442, 3411, 3422. APSM majors and minors only.

APSM 5160 (1). TEACHING PRACTICUM. Students assist the instructor in conducting a course in which they have previously excelled. Maximum of 3 credit hours allowed. *Prerequisites:* Junior or senior standing, A- or better for any previous enrollment in this course, and instructor approval.

APSM 5260 (2). TEACHING PRACTICUM. Students assist the instructor in conducting a course in which they have previously excelled. Maximum of 3 credit hours allowed. *Prerequisites:* Junior or senior standing, A- or better for any previous enrollment in this course, and instructor approval.

APSM 5261 (2). RESEARCH PRACTICUM IN APPLIED PHYSIOLOGY. Intended for students considering a career in laboratory-based biological research. Students conduct supervised research with an APSM research faculty member in his/her laboratory. Enrollment is by invitation from an APSM research faculty member in whose lab the research is conducted. *Prerequisites:* APSM 2441, 2442, 3311.

APSM 5300 (3). SENIOR PROJECT. Teaches the process of formal inquiry to plan, execute, and report results regarding a scientific question of interest. *Prerequisite:* STAT 2301 or 2331. Reserved for APSM majors. Senior standing only (at least 90 credit hours required).

APSM 5351 (3). FITNESS AND HEALTH ENTERPRISE. Prepares students who aspire to careers in the health and fitness industries. Topics include the fundamentals of entrepreneurship, leadership, salesmanship, certification, and liability. Requires visits to off-campus fitness and health-related facilities for which students must provide their own transportation. *Prerequisites:* APSM 2441 or 4441, and junior-year standing.

APSM 5360 (3). TEACHING PRACTICUM. Students assist the instructor in conducting a course in which they have previously excelled. Maximum of 3 credit hours allowed. *Prerequisites:* Junior or senior standing, A- or better for any previous enrollment in this course, and instructor approval.

APSM 5361 (3). RESEARCH PRACTICUM IN APPLIED PHYSIOLOGY. Intended for students considering a career in laboratory-based biological research. Students conduct supervised research with an APSM research faculty member in his/her laboratory. Enrollment is by invitation from an APSM research faculty member in whose lab the research is conducted. *Prerequisites:* APSM 2441, 2442, 3311.

APSM 5362 (3). DIRECTED STUDIES IN APPLIED PHYSIOLOGY. This directed research course is necessary to be considered for departmental distinction. Students must have an APSM faculty sponsor and a written structured course plan to enroll. *Prerequisites:* Instructor invitation, APSM 5361, senior standing, 3.000 overall GPA, and 3.500 GPA within the major.

APSM 5363 (3). DIRECTED STUDIES IN SPORT MANAGEMENT. This directed research course is necessary to be considered for departmental distinction. Students must have an APSM faculty sponsor and a written structured course plan to enroll. *Prerequisites:* Instructor approval, APSM 4359, senior standing, 3.000 overall GPA, and 3.500 GPA within the major.

APSM 5364 (3). DIRECTED STUDIES IN APPLIED PHYSIOLOGY AND ENTERPRISE. This directed research course is necessary to be considered for departmental distinction. Students must have an APSM faculty sponsor and a written structured course plan to enroll. *Prerequisites:* Instructor approval; APSM 4159, 4259, or 4359; senior standing; 3.000 overall GPA; and 3.500 GPA within the major.

APSM 5370 (3). EXERCISE PROGRAM DESIGN. Focuses on evidence-based exercise prescriptions that promote health and maximize performance in the elite and recreational athlete. *Prerequisites:* APSM 2340, 3300, 3311, and 4360.

APSM 5371 (3). SPORT MANAGEMENT PRACTICUM. Prepares students for a career in the sport industry, including sport management. Students assess and clarify their personal skills and competencies to better align with their career goals within the sport marketplace. (Students are required to provide their own transportation to and from their assigned off-campus sports-related events.) *Prerequisite:* Junior standing. *Recommended:* APSM 3372, 4345, 4371, 4372.

APSM 5461 (4). RESEARCH PRACTICUM IN APPLIED PHYSIOLOGY. Intended for students considering a career in laboratory-based biological research. Students conduct supervised research with an APSM research faculty member in his/her laboratory. Enrollment is by invitation from an APSM research faculty member in whose lab the research is conducted. *Prerequisites:* APSM 2441, 2442, 3311.

APSM 5561 (5). RESEARCH PRACTICUM IN APPLIED PHYSIOLOGY. Intended for students considering a career in laboratory-based biological research. Students conduct supervised research with an APSM research faculty member in his/her laboratory. Enrollment is by invitation from an APSM research faculty member in whose lab the research is conducted. *Prerequisites:* APSM 2441, 2442, 3311.

APSM 5610 (6). APPLIED PHYSIOLOGY AND ENTERPRISE INTERNSHIP. Experiential learning at a local fitness or health organization as an intern for a total of 250 hours. (Students are required to provide their own transportation to and from their assigned off-campus fitness and/or health-related internship site.) *Prerequisites:* APSM 5351 and senior standing. Reserved for APSM majors.

APSM 5661 (6). RESEARCH PRACTICUM IN APPLIED PHYSIOLOGY. Intended for students considering a career in laboratory-based biological research. Students conduct supervised research with an APSM research faculty member in his/her laboratory. Enrollment is by invitation from an APSM research faculty member in whose lab the research is conducted. *Prerequisites:* APSM 2441, 2442, 3311.

APSM 5672 (6). SPORT MANAGEMENT INTERNSHIP. Experiential learning at a local sports industry organization as an intern for a total of 250 hours. (Students are required to provide their own transportation to and from their assigned off-campus sports-related internship site.) *Prerequisites:* APSM 5371 and senior standing. Reserved for APSM majors.

Human Development (HDEV)

The Simmons School offers a selection of HDEV courses that address learning and career development skills. These courses are largely available as electives.

HDEV 1110 (1). READING AND LEARNING STRATEGIES. A one-term graded course that counts as a University free elective. Designed to improve reading and learning efficiency, this course is directed to undergraduate students who want to acquire advanced reading and learning techniques.

HDEV 1211 (2). SUCCESS STRATEGIES. Students learn study skills and other strategies for creating success in their academic, professional, and personal lives. Includes self-assessment and journal writing to identify academic strengths and challenges. Provides an opportunity to explore the campus resources to succeed at SMU.

HDEV 1306 (3). DEVELOPMENTAL MATHEMATICS. This course refreshes and strengthens algebraic skills, especially those needed for success in precalculus. Only SMU students who are approved to take this course on the SMU campus may receive credit. This course is not eligible for transfer credit from other institutions.

HDEV 1307 (3). ESSENTIALS OF COLLEGE WRITING. This course emphasis is placed on reading comprehension, grammar, and punctuation mastery appropriate to university-level thinking. Only SMU students who are approved to take this course on the SMU campus may receive credit. This course is not eligible for transfer credit from other institutions.

HDEV 1308 (3). PSYCHOLOGY OF LEARNING. This course is a theoretical overview of how human learning occurs. Only SMU students who are approved to take this course on the SMU campus may receive credit. This course is not eligible for transfer credit from other institutions.

HDEV 1401 (4). AMERICAN SIGN LANGUAGE I. An introductory study of grammar and language, with an emphasis on developing question-and-answer skills. The student learns conversational strategies to help maintain a conversation.

HDEV 1402 (4). AMERICAN SIGN LANGUAGE II. Examines the development of receptive and expressive language skills. The student learns to express, negotiate, and interpret meaning in American Sign Language.

HDEV 2101 (1). PRACTICUM: GROUP LEADERSHIP. Unique leadership experience that gives students a laboratory for assessing learned concepts and skills about leadership. Includes discussions on empowerment, public speaking, ethics, and citizenship.

HDEV 2102 (1). PRACTICUM: GROUP LEADERSHIP. A practicum either on campus or in the community for a minimum of 15 clock hours. *Prerequisite:* HDEV/EDU 2101.

HDEV 2170 (1). VOLUNTEER ACTIVITY. Students explore the well-being that comes from serving others and develop the skills and knowledge necessary to increase their individual effectiveness as a volunteer. Covers placement, communication with project personnel, and problem-solving. Students perform a minimum of 30 hours of volunteer work in a community agency, reflect on issues raised by the volunteer experience, submit weekly journals, and complete a project evaluation at the end of the term. Satisfies the GEC Wellness II requirement, but does not satisfy the UC Personal Responsibility and Wellness II requirement.

HDEV 2201 (2). DIVERSITY: FITTING INTO A WORLD OF DIFFERENCE. This course is a study of human diversity and identity development. Students learn about their own identities and about fitting into the communities of which they are a part. Topics include elements of oppression, cycle of socialization, identity development models, privilege, race, sex, gender, sexuality, ability, ethnicity, class, and faith.

HDEV 2308 (3). CAREER DEVELOPMENT THEORY AND PRACTICE. A study of the history of theories and practice in career development. Topics include leaders in vocational education, legislative initiatives, social issues, and organizations involved in and impacting career development. Also, the study and application of career development and choice, and traditional and emerging career development theories, models, and strategies. Using these models and strategies, students develop abilities to work constructively to build individualized career plans. The format includes lecture, discussion, demonstration, and experiential components.

HDEV 2310 (3). LEADERSHIP DYNAMICS: THEORY, PRACTICE, AND INNOVATION. An examination of the theories and skills necessary for the development of effective leadership.

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Alejandro Aceves, *Professor of Mathematics, Department of Mathematics Chair*,
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Maria del Pilar Melgarejo Acosta, *Professor of Practice of Spanish*, Ph.D., Pittsburgh
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Eric G. Bing, *Professor of Anthropology*, M.D., Harvard, Ph.D., California (Los
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Gordon Eastridge Birrell, *Associate Professor of German*, Ph.D., Stanford

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Olga L.V. Colbert, *Associate Professor of Spanish*, Ph.D., Stanford
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- Heather DeShon, *Associate Professor of Earth Sciences*, Ph.D., California (Santa Cruz)
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- Jill DeTemple, *Associate Professor of Religious Studies*, Ph.D., North Carolina (Chapel Hill)
- Cara Diaconoff, *Professor of Practice of Creative Writing*, Ph.D., Utah
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- Thomas DiPiero, *Professor of English, Professor of French*, Ph.D., Cornell
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Tom Perkowski, *Assistant Dean for Executive M.B.A. Program*

John Roeder, *Assistant Dean for Graduate Admissions*

Administration

Barbara P. Mohrle, *Director of BBA Academic Advising and Records*

Paula Hill Strasser, *Director of Edwin L. Cox Business Leadership Institute and MBA Business Leadership Center*

Lisa Tran, *Director of Career Management Center*

Mary D. Powell, *Executive Assistant to the Dean*

Cox Faculty

Vishal Ahuja, *Assistant Professor of Information Technology and Operations Management, Ph.D., Chicago*

Ellen Parker Allen, *Clinical Professor of Information Technology and Operations Management, Ph.D., SMU*

Jeffrey W. Allen, *Clinical Professor of Finance, Ph.D., Purdue*

Richard Gordon Alm, *Writer-in-Residence for the William J. O'Neil Center for Global Markets and Freedom, M.A., Kansas*

Thomas E. Barry, *Professor of Marketing, Ph.D., North Texas*

Amit Basu, *Professor of Information Technology and Operations Management, Carr P. Collins, Jr. Chair in Management Information Science, Ph.D., Rochester*

Charles A. Besio, *Senior Lecturer in Marketing, Center for Marketing Management Studies Director, M.B.A., SMU*

Sreekumar R. Bhaskaran, *Associate Professor of Information Technology and Operations Management, Ph.D., Texas (Austin)*

Gauri Bhat, *Assistant Professor of Accounting, Ph.D., Toronto (Ontario)*

Nilabhra Bhattacharya, *Associate Professor of Accounting, Ph.D., Georgia (Athens)*

Michael Howard Braun, *Associate Professor of Marketing, Ph.D., Pennsylvania*

Richard A. Briesch, *Professor of Marketing, Ph.D., Northwestern*

William B. Brueggeman, *Professor of Real Estate, Clara R. and Leo F. Corrigan, Sr. Endowed Chair in Real Estate, Ph.D., Ohio State*

Barry J. Bryan, *Professor of Practice in Accounting, M.S.A. Program Director, Ph.D., Texas A&M*

Jay B. Carson, *Professor of Practice in Management and Organizations, Ph.D., Maryland*

Indraneel Chakraborty, *Assistant Professor of Finance, Ph.D., Pennsylvania (Philadelphia)*

James C. Collins, Jr., *Senior Lecturer in Information Technology and Operations Management, M.S.I.E., SMU*

William Michael Cox, *Executive-in-Residence of Strategy, Entrepreneurship and Business Economics, Ph.D., Tulane*

David Carroll Croson, *Clinical Professor of Strategy, Entrepreneurship and Business Economics, Ph.D., Harvard*

Michael L. Davis, *Clinical Professor of Strategy, Entrepreneurship and Business Economics, Ph.D., SMU*

Hemang A. Desai, *Professor of Accounting, Robert B. Cullum Professor in Accounting, Department of Accounting Chair, Ph.D., Tulane*

William R. Dillon, *Professor of Marketing, Herman W. Lay Chair of Marketing, Ph.D., City University of New York*

Cox Faculty (continued)

- Edward J. Fox, *Associate Professor of Marketing, W. R. and Judy Howell Director of the JCPenney Center for Retail Excellence*, Ph.D., Pennsylvania (Philadelphia)
- Judith H. Foxman, *Senior Lecturer in Marketing*, M.B.A., SMU
- Mel Fugate, *Associate Professor of Management and Organizations*, Ph.D., Arizona State
- Amar Gande, *Associate Professor of Finance*, Ph.D., New York
- Bezalel Gavish, *Professor of Information Technology and Operations Management, Eugene J. and Ruth F. Constantin, Jr. Distinguished Chair in Business*, Ph.D., Technion, Israel Institute of Technology
- J. Douglas Hanna, *Associate Professor of Accounting*, Ph.D., Cornell
- Daniel J. Howard, *Professor of Marketing*, Ph.D., Ohio State
- Weizhao Simon Huang, *Assistant Professor of Finance*, Ph.D., Yale
- Ellen F. Jackofsky, *Associate Professor of Management and Organizations*, Ph.D., Texas (Dallas)
- Stacey Elizabeth Jacobsen, *Assistant Professor of Finance*, Ph.D., Indiana
- Ruihao Ke, *Assistant Professor of Accounting*, Ph.D., UCLA
- Bo Kyung Kim, *Assistant Professor of Strategy, Entrepreneurship and Business Economics*, Ph.D., Michigan (Ann Arbor)
- Barbara W. Kincaid, *Senior Lecturer in Business Law*, J.D., SMU
- Julian Kolev, *Assistant Professor of Strategy, Entrepreneurship and Business Economics*, Ph.D., Harvard
- Maribeth Kuenzi, *Associate Professor of Management and Organizations*, Ph.D., Central Florida
- Mattia Landoni, *Assistant Professor of Finance*, Ph.D., Columbia
- Robert A. Lawson, *Professor of Practice in Strategy, Entrepreneurship and Business Economics, Jerome M. Fullinwider Endowed Centennial Chair in Economic Freedom, William J. O'Neil Center for Global Markets and Freedom Director*, Ph.D., Florida State
- David T. Lei, *Associate Professor of Strategy, Entrepreneurship and Business Economics*, Ph.D., Columbia
- Zining Li, *Assistant Professor of Accounting*, Ph.D., Minnesota
- James S. Linck, *Professor of Finance, Distinguished Chair in Finance*, Ph.D., Arizona State
- Andrew C. MacKinlay, *Assistant Professor of Finance*, Ph.D., Pennsylvania
- Joseph Magliolo, III, *Professor of Accounting, Distinguished Chair in Accounting*, Ph.D., Stanford
- Simon S. Mak, *Professor of Practice of Strategy, Entrepreneurship and Business Economics, Caruth Institute Associate Director*, Ph.D., SMU
- Stanimir Markov, *Associate Professor of Accounting*, Ph.D., Rochester
- William F. Maxwell, *Professor of Finance, Mary Jo Vaughn Rauscher Chair of Financial Investments, Alternative Assets Management Center Director, Kitt Trading Center overseer, Don Jackson Center for Financial Studies Director*, Ph.D., George Washington

Cox Faculty (continued)

- Darius P. Miller, *Professor of Finance, Caruth Chair of Financial Management*, Ph.D., California (Irvine)
- Sal Mistry, *Visiting Professor of Practice in Management and Organizations*, Ph.D., Texas A&M
- Gary T. Moskowitz, *Professor of Practice of Strategy, Entrepreneurship and Business Economics*, Ph.D., Pennsylvania
- Rajiv Mukherjee, *Assistant Professor of Information Technology and Operations Management*, Ph.D., Texas (Austin)
- Albert W. Niemi, Jr., *Professor of Finance, Tolleson Chair in Business Leadership*, Ph.D., Connecticut
- Hyungshin Park, *Assistant Professor of Accounting*, Ph.D., North Carolina (Chapel Hill)
- Robin L. Pinkley, *Professor of Management and Organizations*, Ph.D., North Carolina (Chapel Hill)
- Amy V. Puelz, *Clinical Professor of Information Technology and Operations Management*, Ph.D., Nebraska (Lincoln)
- Robert Puelz, *Associate Professor of Insurance and Financial Services, Charles L. Dexter Chair of Insurance*, Ph.D., Georgia
- Miguel A. Quiñones, *Professor of Management and Organizations, O. Paul Corley Distinguished Chair in Organizational Behavior and Administration*, Ph.D., Michigan State
- Robert W. Rasberry, *Assistant Professor of Management and Organizations*, Ph.D., Kansas
- Susan M. Riffe, *Clinical Professor in Accounting*, Ph.D., Southern California
- Harvey Rosenblum, *Professor of Practice of Strategy, Entrepreneurship and Business Economics*, Ph.D., California (Santa Barbara)
- Mukunathan Santhanakrishnan, *Professor of Practice of Finance*, Ph.D., Arizona State
- Ravindra V. Sastry, *Assistant Professor of Finance*, Ph.D., Columbia
- R. Canan Savaskan-Ebert, *Associate Professor of Information Technology and Operations Management*, Ph.D., INSEAD
- Ulrike Schultze, *Associate Professor of Information Technology and Operations Management*, Ph.D., Case Western Reserve
- John H. Semple, *Professor of Information Technology and Operations Management, Charles Wyly Professor of Management Information Sciences*, Ph.D., Texas (Austin)
- Raj Sethuraman, *Professor of Marketing, Department of Marketing Chair*, Ph.D., Northwestern
- Wayne H. Shaw, *Professor of Accounting and Helmut Sohmen Endowed Professor in Corporate Governance*, Ph.D., Texas (Austin)
- Donald Shelly, *Professor of Practice in Finance, Fabacher Endowed Professor of Alternative Asset Management, Alternative Assets Management Center Director, Kitt Investment & Trading Center Director*, M.B.A., Michigan (Ann Arbor)
- Tasadduq Shervani, *Associate Professor of Marketing*, Ph.D., Southern California
- James L. Smith, *Professor of Finance, Maguire Chair of Oil and Gas Management*, Ph.D., Harvard

Cox Faculty (continued)

Gregory A. Sommers, *Professor of Practice in Accounting*, Ph.D., Ohio State
Hettie Tabor, *Executive-in-Residence of Information Systems*, M.S. candidate, SMU
Fangyun T. Tan, *Assistant Professor of Information Technology and Operations Management*, Ph.D., Pennsylvania
Jacquelyn S. Thomas, *Associate Professor of Marketing*, Ph.D., Northwestern
Rex W. Thompson, *Professor of Finance*, Ph.D., Rochester
Donald M. VandeWalle, *Associate Professor of Management and Organizations*, Ph.D., Minnesota
Kumar Venkataraman, *Professor of Finance*, Ph.D., Arizona State
Michel R. Vetsuypens, *Professor of Finance*, Ph.D., Rochester
Glenn Voss, *Professor of Marketing*, Ph.D., Texas A&M
Zannie G. Voss, *Professor of Marketing*, Ph.D., Institut D'Administration des Entreprises
Dimitris Vrettos, *Assistant Professor of Accounting*, Ph.D., Michigan State
Nathan G. Walcott, *Professor of Practice in Finance*, Ph.D., Washington
Gordon Walker, *Professor of Strategy, Entrepreneurship and Business Economics*,
David B. Miller Endowed Professor in Business, Department of Strategy, Entrepreneurship and Business Economics Chair, Ph.D., Pennsylvania
Morgan K. Ward, *Assistant Professor of Marketing*, Ph.D., Texas (Austin)
Catherine Weber, *Senior Lecturer in Business Law*, J.D., SMU
Kara Elyse Wells, *Assistant Professor of Accounting*, Ph.D., Southern California

Cox Emeritus Professors

Marvin L. Carlson, *Professor Emeritus of Accounting*, Ph.D., Wisconsin
Andrew H. Chen, *Professor Emeritus of Finance*, Ph.D., Berkeley
Alan B. Coleman, *Professor Emeritus of Finance*, Ph.D., Stanford
Elbert B. Greynolds, Jr., *Professor Emeritus of Accounting*, Ph.D., Georgia State
Richard W. Hansen, *Professor Emeritus of Marketing*, Ph.D., Minnesota
Thomas V. Hedges, *Professor Emeritus of Accounting*, D.B.A., Indiana
Roger A. Kerin, *Professor Emeritus of Marketing*, Ph.D., Minnesota
Chun H. Lam, *Professor Emeritus of Finance*, Ph.D., Duke
Richard O. Mason, *Professor Emeritus of Management Sciences*, Ph.D., California (Berkeley)
John W. Slocum, Jr., *Professor Emeritus of Management and Organizations*, Ph.D., Washington
Marion G. Sobol, *Professor Emeritus of Information Technology and Operations Management*, Ph.D., Michigan (Ann Arbor)
John A. Stieber, *Professor Emeritus of Finance*, M.A., SMU
Michael F. van Breda, *Professor Emeritus of Accounting*, Ph.D., Stanford
Rhonald D. Walker, *Professor Emeritus of Accounting/Business Law and Taxation*, J.D., SMU
Frank A. Young, *Professor Emeritus of Insurance*, M.A., Michigan

LYLE SCHOOL OF ENGINEERING

Office of the Academic Dean

Marc P. Christensen, *Dean of Bobby B. Lyle School of Engineering*

M. Volkan Otugen, *Senior Associate Dean*

Panos Papamichalis, *Associate Dean for Academic Affairs*

DeeDee Conway, *Assistant Dean for Finance and Information*

Ann C. Fielder, *Assistant Dean for Development and Communications*

Mickey Saloma, *Assistant Dean for Recruitment and Retention*

Administration

Frederick R. Chang, *Director of the Darwin Deason Institute for Cyber Security*

Eva Csaky, *Director of the Hunt Institute for Engineering Humanity*

Delores M. Etter, *Director of the Caruth Institute for Engineering Education*

John B. Kiser, *Executive Director of the Hart Center for Engineering Leadership*

Kate Canales, *Director of Design and Innovation*

Jim Dees, *Senior Director of Graduate Student Experience and Enrollment Management*

Teri Trevino, *Financial Officer*

Marc Valerin, *Director of Graduate and Executive Admissions*

Betsy F. Willis, *Director of Undergraduate Advising and Student Records*

Misti Compton, *Executive Assistant to the Dean*

Lyle Faculty

Khaled F. Abdelghany, *Associate Professor of Civil and Environmental Engineering, Department of Civil and Environmental Engineering Chair, Ph.D., Texas*

Leslie-Ann Asmus, *Senior Lecturer of Engineering Management, Information and Systems, Ph.D., George Mason*

Richard S. Barr, *Associate Professor of Engineering Management, Information and Systems, Ph.D., Texas*

Ali Beskok, *Professor of Mechanical Engineering, Department of Mechanical Engineering Chair, Ph.D., Princeton*

Elena V. Borzova, *Senior Lecturer of Mechanical Engineering, Ph.D., SMU*

Jerome K. Butler, P.E., *University Distinguished Professor of Electrical Engineering, Ph.D., Kansas*

Gyungsu Byun, *Associate Professor of Electrical Engineering, Ph.D., California (Los Angeles)*

Joseph D. Camp, *Associate Professor of Electrical Engineering, J. Lindsay Embrey Trustee Professor, Ph.D., Rice*

Sila Çetinkaya, *Professor of Engineering Management, Information, and Systems, Cecil H. Green Professor of Engineering, Department of Engineering Management, Information and Systems Chair, Ph.D., McMaster*

Frederick R. Chang, *Professor of Computer Science and Engineering, Bobby B. Lyle Endowed Centennial Distinguished Chair in Cyber Security, Ph.D., Oregon*

Marc P. Christensen, P.E., *Professor of Electrical Engineering, Bobby B. Lyle Endowed Professor of Engineering Innovation, Ph.D., George Mason*

Lyle Faculty (continued)

- Adam L. Cohen, *Clinical Associate Professor of Mechanical Engineering*, B.S., Massachusetts Institute of Technology
- Gretchen H. Coleman, *Lecturer of Engineering Management, Information and Systems*, M.B.A., Texas (Arlington)
- Frank P. Coyle, *Senior Lecturer of Computer Science and Engineering*, Ph.D., SMU
- Carlos E. Davila, *Associate Professor of Electrical Engineering*, Ph.D., Texas
- Scott C. Douglas, *Professor of Electrical Engineering*, Ph.D., Stanford
- James G. Dunham, P.E., *Associate Professor of Electrical Engineering*, Ph.D., Stanford
- Jennifer A. Dworak, *Associate Professor of Computer Science and Engineering*, Ph.D., Texas A&M
- John H. Easton, *Lecturer of Civil and Environmental Engineering*, Ph.D., Alabama (Birmingham)
- Usama S. El Shamy, P.E., *Associate Professor of Civil and Environmental Engineering*, Ph.D., Rensselaer Polytechnic Institute
- Daniel W. Engels, *Associate Professor of Computer Science and Engineering, Master of Science in Data Science Co-executive Director*, Ph.D., Massachusetts Institute of Technology
- Delores M. Etter, *Professor of Electrical Engineering, Texas Instruments Distinguished Chair in Engineering Education*, Ph.D., New Mexico
- Donald E. Evans, *Lecturer of Computer Science and Engineering*, D.M.A., North Texas
- Gary A. Evans, P.E., *Professor of Electrical Engineering*, Ph.D., California Institute of Technology
- Mark E. Fontenot, *Clinical Technical Professor of Computer Science and Engineering*, M.S., SMU
- Xin-Lin Gao, *Professor of Mechanical Engineering*, Ph.D., Wisconsin-Madison
- Rachel P. Goodman, *Lecturer of Engineering Management, Information and Systems*, M.S., SMU
- W. Milton Gosney, P.E., *Professor of Electrical Engineering and Cecil and Ida Green Chair of Engineering*, Ph.D., California (Berkeley)
- Ira Greenberg, *Professor of Creative Computation*, M.F.A., Pennsylvania
- Ping Gui, *Associate Professor of Electrical Engineering*, Ph.D., Delaware
- Michael Hahsler, *Assistant Professor of Engineering Management, Information and Systems*, Ph.D., Wirtschaftsuniversität Wien
- LiGuo Huang, *Associate Professor of Computer Science and Engineering*, Ph.D., Southern California
- Yildirim Hürmüzlü, *Professor of Mechanical Engineering*, Ph.D., Drexel
- Tindaro Ioppolo, *Assistant Professor of Mechanical Engineering, Brown Foundation, Inc. Professor of Engineering*, Ph.D., New York: Polytechnic Institute
- Mohammad Khodayar, *Assistant Professor of Electrical Engineering*, Ph.D., Illinois Institute of Technology
- Alireza Khotanzad, P.E., *Professor of Electrical Engineering*, Ph.D., Purdue
- M. Scott Kingsley, *Senior Lecturer of Electrical Engineering*, D.E., SMU

Lyle Faculty (continued)

- Radovan B. Kovacevic, *Professor of Mechanical Engineering, Herman Brown Chair in Engineering*, Ph.D., Montenegro (Yugoslavia)
- Paul S. Krueger, *Professor of Mechanical Engineering*, Ph.D., California Institute of Technology
- José L. Lage, P.E., *Professor of Mechanical Engineering*, Ph.D., Duke
- Eric C. Larson, *Assistant Professor of Computer Science and Engineering*, Ph.D., Washington
- Choon S. Lee, *Associate Professor of Electrical Engineering*, Ph.D., Illinois (Urbana-Champaign)
- Charles M. Lovas, P.E., *Associate Professor of Mechanical Engineering*, Ph.D., Notre Dame
- Theodore W. Manikas, *Lecturer of Computer Science and Engineering*, Ph.D., Pittsburgh
- David W. Matula, *Professor of Computer Science and Engineering*, Ph.D., California (Berkeley)
- Tyler W. Moore, *Assistant Professor of Computer Science and Engineering*, Ph.D., Cambridge
- Dona T. Mularkey, *Senior Lecturer of Mechanical Engineering*, Ph.D., Vanderbilt
- Sukumaran V.S. Nair, P.E., *University Distinguished Professor of Computer Science and Engineering, Department of Computer Science and Engineering Chair*, Ph.D., Illinois (Urbana-Champaign)
- Eli V. Olinick, *Associate Professor of Engineering Management, Information and Systems*, Ph.D., California (Berkeley)
- M. Volkan Otugen, *Professor of Mechanical Engineering, George R. Brown Chair in Mechanical Engineering*, Ph.D., Drexel
- Panos E. Papamichalis, P.E., *Professor of Electrical Engineering*, Ph.D., Georgia Institute of Technology
- Behrouz Peikari, P.E., *Professor of Electrical Engineering*, Ph.D., California (Berkeley)
- Andrew N. Quicksall, *Associate Professor of Environmental Science, J. Lindsey Embrey Trustee Professor*, Ph.D., Dartmouth
- Peter E. Raad, P.E., *Professor of Mechanical Engineering*, Ph.D., Tennessee (Knoxville)
- Dinesh Rajan, *Professor of Electrical Engineering, Department of Electrical Engineering Chair*, Ph.D., Rice
- Edmond Richer, *Associate Professor of Mechanical Engineering, Robert C. Womack Endowed Chair in Engineering*, Ph.D., SMU
- S. Sevinc Sengor, *Assistant Professor of Civil and Environmental Engineering*, Ph.D., California (Davis)
- Thomas F. Siems, *Senior Lecturer of Engineering Management, Information and Systems*, Ph.D., SMU
- Brett Story, *Assistant Professor of Civil and Environmental Engineering*, Ph.D., Texas A&M
- Jerrell T. Stracener, *Professor of Practice of Engineering Management, Information and Systems*, Ph.D., SMU

Lyle Faculty (continued)

Wenjie Sun, *Assistant Professor of Civil and Environmental Engineering*, Ph.D., Arizona

Stephen A. Szygenda, P.E., *Professor of Computer Science and Engineering, Cecil H. Green Chair of Engineering*, Ph.D., Northwestern

Mitchell A. Thornton, P.E., *Professor of Computer Science and Engineering, Professor of Electrical Engineering*, Ph.D., SMU

Jeff Tian, P.E., *Professor of Computer Science and Engineering, Professor of Engineering Management, Information and Systems*, Ph.D., Maryland

Wei Tong, *Professor of Mechanical Engineering*, Ph.D., Brown

Halit Üster, *Professor of Civil and Environmental Engineering, Professor of Engineering Management, Information and Systems*, Ph.D., McMaster

David A. Willis, *Associate Professor of Civil and Environmental Engineering, Associate Professor of Mechanical Engineering*, Ph.D., Purdue

Jeong Ho You, *Assistant Professor of Mechanical Engineering*, Ph.D., Illinois (Urbana-Champaign)

Lyle Emeritus Faculty

H. Charles Baker, *Professor Emeritus of Electrical Engineering*, Ph.D., Texas

Margaret H. Dunham, P.E., *Professor Emerita of Computer Science and Engineering*, Ph.D., SMU

Someshwar C. Gupta, P.E., *Professor Emeritus of Electrical Engineering*, Ph.D., California (Berkeley)

Richard Helgason, *Professor Emeritus of Computer Science and Engineering, Professor Emeritus of Engineering Management, Information and Systems*, Ph.D., SMU

Bijan Mohraz, P.E., *Professor Emeritus of Civil and Environmental Engineering, Professor Emeritus of Mechanical Engineering*, Ph.D., Illinois (Urbana-Champaign)

David B. Johnson, P.E., *Professor Emeritus of Mechanical Engineering*, Ph.D., Stanford

Paul F. Packman, P.E., *Professor Emeritus of Mechanical Engineering*, Ph.D., Syracuse

Mandyam D. Srinath, P.E., *Professor Emeritus of Electrical Engineering*, Ph.D., Illinois (Urbana-Champaign)

Hal Watson, Jr., P.E., *Professor Emeritus of Mechanical Engineering*, Ph.D., Texas

Lyle Adjunct Faculty

Note: The list of faculty adjuncts provided here is advisory only. In any given term, a particular adjunct may not be able to teach because of other commitments. This is especially true because many of SMU's adjuncts are professionals and scholars who are in high demand.

Jane C. Ahrens, *Adjunct Lecturer of Civil and Environmental Engineering*, M.Arch., Texas (Arlington) (Gresham, Smith and Partners)

Jeffrey D. Alcantara, *Adjunct Lecturer of Computer Science and Engineering*, B.E.D., Texas A&M (Reel FX Creative Studios)

Bogdan V. Antohe, *Adjunct Professor of Mechanical Engineering*, Ph.D., SMU (MicroFab)

Lyle Adjunct Faculty (continued)

- Karl J. Arunski, *Adjunct Lecturer of Engineering Management, Information and Systems*, M.S.E.E., Washington (Raytheon)
- Charles W. Beall, *Adjunct Professor of Engineering Management, Information and Systems*, Ph.D., Southern California
- Robert L. Bell, *Adjunct Lecturer of Engineering Management, Information and Systems*, M.E.E.E., Brigham Young (Lockheed Martin)
- William D. Bell, *Adjunct Professor of Engineering Management, Information and Systems*, D.E., SMU (U.S. Department of Defense)
- Eduardo Blanco, *Adjunct Professor of Computer Science and Engineering*, Ph.D., Texas (Dallas) (Lymba Corporation)
- Andrew W. Blanton, *Adjunct Lecturer of Computer Science and Engineering*, M.F.A., North Texas (UNT Moebius Journal)
- Samir Bougacha, P.E. *Adjunct Professor of Civil and Environmental Engineering*, Ph.D., Texas (Parsons Brinckerhoff)
- Mark K. Boyd, P.E., *Adjunct Professor of Civil and Environmental Engineering*, Ph.D., SMU (LCA Environmental)
- Timothy Boyd, *Adjunct Lecturer of Computer Science and Engineering*, M.S., SMU (Raytheon)
- William A. Bralick, Jr., *Adjunct Professor of Computer Science and Engineering*, Ph.D., Pennsylvania State (Paladin Logic Inc.)
- Ben A. Calloni, P.E., *Adjunct Professor of Computer Science and Engineering*, Ph.D., Texas Tech (Lockheed Martin)
- Hakki C. Cankaya, *Adjunct Professor of Computer Science and Engineering, Adjunct Professor of Electrical Engineering*, Ph.D., SMU
- Robert Casagrande, *Adjunct Lecturer of Civil and Environmental Engineering*, M.B.A., SMU
- Sudipto Chakraborty, *Adjunct Professor of Electrical Engineering*, Ph.D., Georgia Institute of Technology (Texas Instruments Inc.)
- George W. Chollar, *Adjunct Professor of Engineering Management, Information and Systems*, Ph.D., Texas Tech (The Statistical Design Institute)
- Christian P. Christensen, *Adjunct Lecturer of Computer Science and Engineering*, M.S., SMU
- Randall J. Clendening, *Adjunct Professor of Engineering Management, Information and Systems*, Ph.D., George Washington University (Boeing)
- Joseph R. Cleveland, *Adjunct Professor of Electrical Engineering*, Ph.D., Iowa State (Samsung, retired)
- Eric B. Cluff, *Adjunct Lecturer of Mechanical Engineering*, M.S., SMU (Abbott Labs)
- Howard S. Cowin, *Adjunct Lecturer of Engineering Management, Information and Systems*, M.S.E., California State (Northridge) (Lockheed Martin)
- Weiping Dai, P.E., *Adjunct Professor of Civil and Environmental Engineering*, Ph.D., Carnegie Mellon (Trinity Consultants)
- Christopher M. Davis, *Adjunct Lecturer of Engineering Management, Information and Systems*, M.B.A., Texas (ForeScout Technologies)
- H. Elizabeth del Monte, *Adjunct Lecturer of Civil and Environmental Engineering*, M.Arch., Rice (The Return on Innovation Project)

Lyle Adjunct Faculty (continued)

- Darin DeRita, *Adjunct Lecturer of Computer Science and Engineering*, B.S., Texas (Dallas) (Raytheon)
- Roger O. Dickey, P.E., *Adjunct Professor of Civil and Environmental Engineering*, Ph.D., SMU
- Theodore A. Dumas, Ph.E., *Adjunct Lecturer of Mechanical Engineering*, M.S.C.E., SMU
- Maya El Dayeh, *Adjunct Professor of Computer Science and Engineering*, Ph.D., SMU
- Aaron L. Estes, *Adjunct Lecturer of Computer Science and Engineering*, M.S., SMU
- John Fattaruso, *Adjunct Professor of Electrical Engineering*, Ph.D., California (Berkeley)
- Edward Forest, *Adjunct Professor of Civil and Environmental Engineering*, Ph.D., Princeton
- Dennis J. Frailey, *Adjunct Professor of Computer Science and Engineering*, Ph.D., Purdue (Raytheon, retired)
- John R. Graham, III, *Adjunct Lecturer of Engineering Management, Information and Systems*, M.B.A., Wright Statue (Technisource)
- Hope Hagar, *Adjunct Lecturer of Civil and Environmental Engineering*, M.A., SMU
- Anwar Hirany, P.E., *Adjunct Professor of Civil and Environmental Engineering*, Ph.D., Cornell (EPRI)
- Hossam H. H'mimy, *Adjunct Professor of Electrical Engineering*, Ph.D., SMU (Ericsson)
- Michael E. Hopper, P.E., *Adjunct Professor of Engineering Management, Information and Systems*, D.E., SMU
- Manal Hourri, *Adjunct Professor of Computer Science and Engineering*, Ph.D., SMU
- Kenneth R. Howard, *Adjunct Lecturer of Computer Science and Engineering*, M.B.A., Saint Mary's (Improving Enterprises)
- Sina Iman, *Adjunct Lecturer of Civil and Environmental Engineering*, M.S.C.E., SMU (DAL-TECH Engineering)
- Mihaela Iridon, *Adjunct Professor of Computer Science and Engineering*, Ph.D., SMU
- Robert H. Jones, *Adjunct Professor of Engineering Management, Information and Systems*, Ph.D., SMU (Oncor)
- Kaushik Josiam, *Adjunct Professor of Electrical Engineering*, Ph.D., SMU (Samsung)
- Kalpalatha (Latha) Kambham, *Adjunct Professor of Civil and Environmental Engineering*, Ph.D., New Orleans (Trinity Consultants)
- Shantanu Kangude, *Adjunct Professor of Electrical Engineering*, Ph.D., Georgia Institute of Technology (Texas Instruments)
- Bhanu Kapoor, *Adjunct Professor of Computer Science and Engineering*, Ph.D., SMU (consultant/owner, Mismasic)
- Mohamed M.I. Khalil, *Adjunct Professor of Computer Science and Engineering*, Ph.D., New Mexico State
- Kamran Z. Khan, *Adjunct Lecturer of Computer Science and Engineering*, M.S., Texas (Dallas) (MCI WorldCom)
- Clark D. Kinnaird, P.E., *Adjunct Professor of Electrical Engineering*, Ph.D., SMU (Texas Instruments)

Lyle Adjunct Faculty (continued)

- R. Mallik Kotamarti, *Adjunct Professor of Computer Science and Engineering*, Ph.D., SMU
- Paul Krier, *Adjunct Lecturer of Computer Science and Engineering*, M.S., SMU (Raytheon)
- Karl C. Lewis, *Adjunct Professor of Computer Science and Engineering*, D.Eng., SMU (Perot Systems)
- Lun Li, *Adjunct Professor of Computer Science and Engineering*, Ph.D., SMU
- John I. Lipp, *Adjunct Professor of Engineering Management, Information and Systems*, Ph.D., Michigan Tech (Lockheed Martin)
- D. Kall Loper, *Adjunct Professor of Computer Science and Engineering*, Ph.D., Michigan State
- Mehedy Mashnad, P.E., *Adjunct Professor of Civil and Environmental Engineering*, Ph.D., Illinois (Urbana-Champaign) (Walter P. Moore and Associates)
- Matthew R. McBride, *Adjunct Lecturer of Computer Science and Engineering*, M.S., SMU (Bank of America)
- Steven D. McCauley, *Adjunct Lecturer of Civil and Environmental Engineering*, M.S., Texas Tech (El Centro College)
- James K. McCloud, *Adjunct Lecturer of Engineering Management, Information and Systems*, M.B.A., Rollins
- Lee D. McFearin, *Adjunct Professor of Computer Science and Engineering*, Ph.D., SMU
- M. Wade Meaders, *Adjunct Lecturer of Mechanical Engineering*, M.S., SMU (Halliburton)
- Freeman L. Moore, *Adjunct Professor of Computer Science and Engineering*, Ph.D., North Texas (Raytheon, retired)
- William H. Muto, *Adjunct Professor of Engineering Management, Information and Systems*, Ph.D., Virginia Tech (Abbott Labs)
- Anurag Nagar, *Adjunct Professor of Computer Science and Engineering*, Ph.D., SMU
- Padmaraj M.V. Nair, *Adjunct Professor of Computer Science and Engineering*, Ph.D., SMU
- Mofid Nakhaei, *Adjunct Professor of Civil and Environmental Engineering*, Ph.D., SMU (Parson Brinckerhoff Inc.)
- William P. Nanry, *Adjunct Professor of Engineering Management, Information and Systems*, Ph.D., Texas (Lockheed Martin)
- David J. Nowacki, *Adjunct Lecturer of Mechanical Engineering*, M.B.A., M.S., Louisiana State
- Robert S. Oshana, *Adjunct Lecturer of Computer Science and Engineering, Adjunct Lecturer of Engineering Management, Information and Systems*, M.S., SMU (Object Space Inc.)
- John J. Pfister, *Adjunct Lecturer of Computer Science and Engineering*, M.C.S., Texas A&M (Texas Instruments, retired)
- Oscar K. Pickels, *Adjunct Lecturer of Engineering Management, Information and Systems*, M.B.A., SMU
- Christopher Pilcher, *Adjunct Professor of Electrical Engineering*, Ph.D., SMU

Lyle Adjunct Faculty (continued)

- Sally R. Pinon, *Adjunct Lecturer of Civil and Environmental Engineering*, M.A., Texas (Arlington)
- Leonid Popokh, *Adjunct Lecturer of Computer Science and Engineering*, M.S., Texas (Dallas)
- Sohail Rafiqi, *Adjunct Lecturer of Computer Science and Engineering*, M.S., SMU
- Jon D. Rauscher, *Adjunct Professor of Civil and Environmental Engineering*, Ph.D., Colorado State (U.S. Environmental Protection Agency)
- Mohamed O. Rayes, *Adjunct Professor of Computer Science and Engineering*, Ph.D., Kent State
- Luis G. Resendis, *Adjunct Lecturer of Computer Science and Engineering*, M.S., SMU
- James B. Rodenkirch, *Adjunct Lecturer of Engineering Management, Information and Systems*, M.S., SMU
- Christopher A. Rynas, *Adjunct Lecturer of Engineering Management, Information and Systems*, M.S.E., Texas Tech (Raytheon)
- Kaiser Saeed, *Adjunct Lecturer of Electrical Engineering*, M.B.A., Dallas (IBM)
- Mark E. Sampson, *Adjunct Lecturer of Engineering Management, Information and Systems*, M.S., Southern California (UGS)
- Nandlal M. Singh, *Adjunct Professor of Engineering Management, Information and Systems*, D.E., SMU (MinMax Technologies)
- Stephen C. Skinner, *Adjunct Professor of Engineering Management, Information and Systems*, Ph.D., SMU (Bell Helicopter)
- Gheorghe M. Spiride, *Adjunct Professor of Computer Science and Engineering, Adjunct Professor of Engineering Management, Information and Systems*, Ph.D., SMU (Nortel Networks)
- Kamakshi Sridhar, *Adjunct Professor of Electrical Engineering*, Ph.D., Massachusetts Institute of Technology (Alcatel-Lucent)
- Bennett Stokes, *Adjunct Professor of Civil and Environmental Engineering*, J.D., Texas
- Patricia A. Taylor, *Adjunct Professor of Civil and Environmental Engineering*, Ph.D., SMU (U.S. Environmental Protection Agency)
- Allen D. Tilley, *Adjunct Lecturer of Mechanical Engineering*, M.B.A., SMU
- Philip K. Turner, *Adjunct Professor of Civil and Environmental Engineering*, Ph.D., North Texas (U.S. Environmental Protection Agency)
- Russell A. Vacante, *Adjunct Professor of Engineering Management, Information and Systems*, Ph.D., State University of New York (Buffalo) (RMS Partnership Inc.)
- Raymond E. Van Dyke, *Adjunct Professor of Computer Science and Engineering*, J.D., North Carolina (Chapel Hill)
- John W. Via, III, *Adjunct Professor of Engineering Management, Information and Systems*, D.E., SMU (Alcon Laboratories)
- Andrew K. Weaver, *Adjunct Lecturer of Mechanical Engineering*, M.A., Navy; M.P.A., Troy State
- James R. Webb, *Adjunct Professor and M.S.M. Program Director of Mechanical Engineering*, Ph.D., Dallas
- Jennifer Webb, *Adjunct Professor of Electrical Engineering*, Ph.D., Illinois (Urbana-Champaign)

Lyle Adjunct Faculty (continued)

Timothy D. Woods, *Adjunct Professor of Engineering Management, Information and Systems*, Ph.D., SMU (Lockheed Martin)

John R. Yarrow, *Adjunct Lecturer of Engineering Management, Information and Systems*, M.S., North Texas (XO Communications)

Rumanda K. Young, *Adjunct Professor of Civil and Environmental Engineering*, Ph.D., Texas (Arlington) (U.S. Army Corps of Engineers)

Hossam A. Zaki, *Adjunct Professor of Engineering Management, Information and Systems*, Ph.D., SMU (Zilliant)

Jessie Marshall Zarazaga, *Adjunct Lecturer of Civil and Environmental Engineering*, M.Arch., Cambridge

MEADOWS SCHOOL OF THE ARTS

Office of the Academic Dean

Samuel S. Holland, *Algur H. Meadows Dean of Algur H. Meadows School of the Arts*

Kevin Paul Hofeditz, *Senior Associate Dean*

David Sedman, *Associate Dean for Administration*

Karen Drennan, *Assistant Dean for Marketing and Communications*

Kris Muñoz Vetter, *Executive Director, Principal Gifts and Assistant Dean for Development and External Affairs*

Corinna Nash-Wnuk, *Assistant Dean for Admissions and Enrollment Management*

Administration

Mark Roglán, *Linda P. and William A. Custard Director of the Meadows Museum and Centennial Chair*

Deanna Johnson, *Assistant to the Dean*

Chuck Donaldson, *Undergraduate Degree Counselor*

Pam Henderson, *Director of Scholarships and Financial Aid*

Jay Hengst, *Director of Facilities and Events*

Joe Hoselton, *Graduate Admissions and Strategic Enrollment Management*

Ellen Schlachter Jackson, *Director of Annual Giving and Alumni Relations*

Jennifer R. Smith, *Student Academic Services Coordinator*

Janet Stephens, *Undergraduate Degree Counselor*

Cynthia Watson, *Director of Business and Finance*

Margaret Weinkauff, *Director of Development, Major Gift Fundraising*

Zannie Giraud Voss, *Director of the National Center for Arts Research*

Meadows Faculty

Joaquín Achúcarro, *Professor of Music, Joel Estes Tate Chair in Piano*

Matthew Albert, *Artist-in-Residence of Music, Chamber Music Director*, M.M., Northwestern

Sarah Allen, *Associate Professor of Music Education*, Ph.D., Texas

Patricia Alvey, *Professor of Advertising*, Ph.D., Texas

Christopher Anderson, *Associate Professor of Sacred Music*, Ph.D., Duke

Yong Bakos, *Visiting Professor of Creative Computation*, M.S., Regis

Meadows Faculty (continued)

- Beatriz Balanta, *Assistant Professor of Art History*, Ph.D., Duke
- Willie Baronet, *Stan Richards Professor of Advertising*, M.F.A., Texas (Dallas)
- Barbara Bastable, *Lecturer of Music Therapy*, M.A., Texas Woman's, MT-BC
- Jacob Batsell, *Assistant Professor of Journalism*, M.A., Texas
- Chelsea R. Bell, *Professor of Practice in Journalism, Fashion Media Program Director*, M.F.A., North Texas, M.Ed., Sul Ross State
- Susan Benton, *Assistant Professor of Arts Management and Arts Entrepreneurship*, J.D., SMU
- Shelley C. Berg, *Professor of Dance*, Ph.D., New York
- Janis Bergman-Carton, *Associate Professor of Art History*, Ph.D., Texas
- Rhonda Blair, *Professor of Theatre*, Ph.D., Kansas
- Mary Walling Blackburn, *Assistant Professor of Art*, M.F.A., New York
- Tom Booth, *Lecturer of Trumpet*, Assistant Principal Trumpet DSO, M.M., Illinois
- Emanuel Borok, *Artist-in-Residence of Violin*, Concertmaster DSO 1985–2010, B.M., Gnessin Academy of Music
- Danny Buraczeski, *Professor of Dance*, B.A., Bucknell
- Brad Cassil, *Lecturer of Theatre*, B.F.A., California Institute of the Arts
- Michael Connolly, *Associate Professor of Theatre*, Ph.D., Indiana
- Michael Corris, *Professor of Art*, Ph.D., University College London
- James Crawford, *Associate Professor of Theatre*, M.F.A., California (San Diego)
- Benard Cummings, *Assistant Professor of Theatre*, M.F.A., Yale
- Jack Delaney, *Professor of Music, Bands Director*, D.M.A., Cincinnati College Conservatory of Music
- Patricia Harrington Delaney, *Associate Professor of Dance, Division of Dance Chair*, M.F.A., SMU
- Andrés Díaz, *Professor of Cello*, B.M., Artist Diploma, New England Conservatory
- Dale Dietert, *Senior Lecturer of Voice*, M.M., Texas
- Maria Dixon, *Associate Professor of Communication Studies*, Ph.D., Missouri
- Christopher Dolder, *Associate Professor of Dance*, M.F.A., Mills
- Sandra C. Duhé, *Associate Professor of Communication Studies, Division of Communication Studies Chair*, Ph.D., Texas (Dallas)
- Virginia Dupuy, *Professor of Voice*, M.M., Texas
- Steven Edwards, *Professor of Advertising, Temerlin Advertising Institute Director*, Ph.D., Texas
- Stefan Engels, *Professor of Music, Leah Young Fullinwider Centennial Chair in Music Performance*, D.M.A., Northwestern
- Valerie Evans, *Professor of Practice in Journalism*, B.A., Northern Illinois
- Mark Feezell, *Senior Lecturer in Music Theory*, Ph.D., North Texas
- Barnaby Fitzgerald, *Professor of Art*, M.F.A., Yale
- Gary Foster, *Senior Lecturer of Music Theory*, Ph.D., Louisiana State
- Hugh Clifton Forbis, *Associate Professor of Voice*, M.M., SMU
- Robert Frank, *Associate Professor of Music Theory and Composition, Chair of Composition*, Ph.D., North Texas

Meadows Faculty (continued)

- Amy Freund, *Assistant Professor of Art History, Kleinheinz Family Endowment for the Arts and Education Endowed Chair in Art History*, Ph.D., California (Berkeley)
- Kathleen Gallagher, *Assistant Professor of Arts Management and Arts Entrepreneurship*, Ph.D., Colorado (Denver)
- Paula Goldberg, *Lecturer of Film and Media Arts*, M.F.A., Rutgers
- Marsha Grasselli, *Lecturer of Theatre, Production Manager*, M.F.A., Goodman
- Ira Greenberg, *Professor of Creative Computation*, M.F.A., Pennsylvania
- Jack Greenman, *Associate Professor of Theatre*, M.F.A., California (Irvine)
- Randall C. Griffin, *University Distinguished Professor of Art History, Department of Art History Chair ad interim*, Ph.D., Delaware
- Sean Griffin, *Professor of Film and Media Arts*, Ph.D., Southern California
- Kevin Gunter, *Lecturer of Piano and Class Piano*, M.M., SMU
- Pam Harris Hackett, *Executive-in-Residence in Journalism*, B.S., Texas
- Blake Hackler, *Assistant Professor of Theatre*, M.F.A., Yale
- David Haderler, *Executive-in-Residence in Advertising*, M.A., North Texas
- Hank Hammett, *Senior Lecturer of Music, Opera Director*, M.M., Texas
- Kevin Hanlon, *Associate Professor of Composition*, D.M.A., Texas
- Jim Hart, *Assistant Professor of Practice of Arts Management and Arts Entrepreneurship, Arts Entrepreneurship Director*, M.F.A., Yale
- C. Michael Hawn, *Professor of Sacred Music*, D.M.A., Southern Baptist Theological Seminary
- Kevin Heffernan, *Associate Professor of Film and Media Arts*, Ph.D., Wisconsin (Madison)
- Adam Herring, *Associate Professor of Art History*, Ph.D., Yale
- Kevin Paul Hofeditz, *Professor of Theatre*, M.F.A., Missouri (Kansas City)
- Samuel S. Holland, *Professor of Music, Piano Pedagogy Chair*, Ph.D., Oklahoma
- Michele Houston, *Professor of Practice in Journalism*, M.A., North Texas
- Pamela Elrod Huffman, *Associate Professor of Music, Choral Activities Director*, D.M.A., Illinois
- Debora Hunter, *Associate Professor of Art*, M.F.A., Rhode Island School of Design
- Cara Jacocks, *Assistant Professor of Communication Studies*, Ph.D., Texas A&M
- David Karp, *Professor of Piano*, D.M.A., Colorado
- Alice Kendrick, *Professor of Advertising*, Ph.D., Tennessee (Knoxville)
- Mark Kerins, *Associate Professor of Film and Media Arts*, Ph.D., Northwestern
- Chee-Yun Kim, *Artist-in-Residence, Violinist*
- Eunjin Kim, *Assistant Professor of Advertising*, Ph.D., Missouri
- Rita Kirk, *Professor of Communication Studies*, Ph.D., Missouri
- Matthew Kline, *Senior Lecturer of Piano Pedagogy and Preparation, Piano Preparatory Department Associate Director*, M.M., SMU
- Derek Kompore, *Associate Professor of Film and Media Arts, Division of Film and Media Arts Chair*, Ph.D., Wisconsin (Madison)
- Camille Kraeplin, *Associate Professor of Journalism*, Ph.D., Texas

Meadows Faculty (continued)

- Robert Krout, *Professor of Music Therapy, Music Therapy Director*, Ed.D., Columbia, MT-BC
- Peter Kupfer, *Assistant Professor of Music History and Literature*, Ph.D., Chicago
- Carrie La Ferle, *Professor of Advertising*, Ph.D., Texas
- Stephanie Langin-Hooper, *Assistant Professor of Art History, Karl Kilinski, II Endowed Chair in Hellenic Visual Culture*, Ph.D., California (Berkeley)
- Bill Lengfelder, *Professor of Theatre*, M.F.A., Lindenwood College
- Carol Leone, *Associate Professor of Piano, Piano Department Chair*, D.M.A., North Texas
- Owen Lynch, *Associate Professor of Communication Studies*, Ph.D., Texas A&M
- Catharine Lysinger, *Senior Lecturer of Piano Pedagogy and Preparation, Piano Preparatory Department Director*, D.M.A., Houston
- David L. Mancini, *Associate Professor of Music Theory, Division of Music Director*, Ph.D., Yale
- Stephanie Martin, *Assistant Professor of Communication Studies*, Ph.D., California (San Diego)
- Cheryl Mendenhall, *Lecturer of Advertising*, M.F.A., Tennessee (Knoxville)
- Jamal Mohamed, *Lecturer of Percussion, World Music Ensemble Director*
- Brian Molanphy, *Assistant Professor of Art*, M.F.A., Pennsylvania State
- Barbara Hill Moore, *Professor of Voice*, M.S., Illinois
- Alfred Mouledous, *Professor of Piano*, M.M., Eastman School of Music
- Sidharth Muralidharan, *Assistant Professor of Advertising*, Ph.D., Southern Mississippi (Hattiesburg)
- Melissa Murray, *Lecturer of Music Theory, Division of Music Associate Director for Recruitment*, M.M., SMU
- Peter-J.E. Noble, *Executive-in-Residence in Advertising*, M.A., Texas
- Larry Palmer, *Professor of Organ/Harpsichord*, A.Mus.D., Eastman School of Music
- Russell Parkman, *Associate Professor of Theatre*, M.A., Illinois
- Leslie Peck, *Associate Professor of Dance, Balanchine Trust Repetiteur and Principal Dancer*
- Tony Pederson, *Professor of Journalism, Belo Foundation Endowed Distinguished Chair in Journalism*, M.A., Ohio State
- Paul Phillips, *Professor of Music, Martha Raley Peak Centennial Chair, Meadows Symphony Orchestra Director*, D.M.A., Eastman School of Music
- Lisa Pon, *Associate Professor of Art History*, Ph.D., Harvard
- Will Power, *Artist-in-Residence in Theatre*, B.A., San Francisco State
- Jésus Ramos-Kittrell, *Assistant Professor of Music History and Literature*, Ph.D., Texas
- Brittany Ransom, *Assistant Professor of Art*, M.F.A., Illinois (Chicago)
- Sara Romersberger, *Associate Professor of Theatre*, M.A. (Certified in Mime), Illinois
- Christopher Salinas, *Senior Lecturer of Communication Studies*, Ph.D., Wayne State
- Anne Schilling, *Associate Professor of Theatre*, M.A., Central School of Speech and Drama (London)

Meadows Faculty (continued)

- Julie Scott, *Associate Professor of Practice in Music Education*, Ph.D., Eastman School of Music
- David Sedman, *Associate Professor of Film and Media Arts*, Ph.D., Bowling Green
- Noah Simblist, *Associate Professor of Art, Division of Art Chair*, M.F.A., Washington
- Gretchen Smith, *Associate Professor of Theatre*, Ph.D., Indiana
- Jason Smith, *Lecturer of Voice, Vocal Coach*, M.M., Florida State
- Claudia Stephens, *Associate Professor of Theatre*, M.F.A., Carnegie Mellon
- Eric Stryker, *Assistant Professor of Art History*, Ph.D., Yale
- Jayne Suhler, *Professor of Practice in Journalism*, M.A., Texas
- James W. Sullivan, *Professor of Art*, M.F.A., California State (Long Beach)
- Karen Thomas, *Professor of Practice in Journalism*, M.S., Columbia
- Thomas W. Tunks, *Professor of Music*, Ph.D., Michigan State
- Mark N. Vamos, *Journalist-in-Residence, William J. O'Neil Chair in Business Journalism*, M.S., Columbia
- Philip Van Keuren, *Professor of Art*, M.F.A., SMU
- Mary Vernon, *Professor of Art*, M.A., New Mexico
- Zannie Giraud Voss, *Professor of Arts Management and Arts Entrepreneurship, Division of Arts Management and Arts Entrepreneurship Chair*, Ph.D., IAE, Aix-en-Provence (France)
- Ben Voth, *Associate Professor of Communication Studies, Debate and Speech Director*, Ph.D., Kansas
- Zachary Wallmark, *Assistant Professor of Musicology*, Ph.D., California (Los Angeles)
- Xi Wang, *Associate Professor of Music Theory*, Ph.D., Cornell
- Anne Westwick, *Lecturer of Dance*, M.F.A., Mills College
- Stanley Wojewodski, Jr., *Meadows Distinguished Professor of Directing, Division of Theatre Chair*, M.F.A., Catholic
- Myra Woodruff, *Professor of Dance*, B.A., New York, International Artist, Instructor and Choreographer, Graham Technique Scholar
- Steve Woods, *Professor of Theatre*, M.F.A., New Orleans
- Rick Worland, *Professor of Film and Media Arts*, Ph.D., California (Los Angeles)
- Hye Jin Yoon, *Assistant Professor of Advertising*, Ph.D., Georgia

Meadows Emeritus Professors

- Robert Beard, *Professor Emeritus of Dance*, M.F.A., SMU
- Annemarie Weyl Carr, *Professor Emerita of Art History*, Ph.D., Michigan
- Robert B. Chambers, *Professor Emeritus of Stage Design*, M.A., Kansas
- Alessandra Comini, *Professor Emerita of Art History*, Ph.D., Columbia
- Charles Eagle, *Professor Emeritus of Music Therapy*
- Elizabeth A. Ferguson, *Professor Emerita of Dance*, M.F.A., SMU
- John Gartley, *Professor Emeritus of Cinema*, Ph.D., Michigan
- Kenneth Hart, *Professor Emeritus of Sacred Music*, D.M.A., Cincinnati
- Charley Helfert, *Professor Emeritus of Theatre*, Ph.D., Wisconsin (Madison)
- Arthur B. Koch, *Professor Emeritus of Art*, M.S.A., Washington

Meadows Emeritus Professors (continued)

Karen Kriete, *Professor Emerita of Dance*
Margaret Loft, *Professor Emerita of Theatre*
John McElroy, *Professor Emeritus of Art, M.S., Florida State*
David McHam, *Professor Emeritus of Communications, M.S., Columbia*
Dale Moffitt, *Professor Emeritus of Theatre, Ph.D., Washington State*
Jim Morris, *Professor Emeritus of Communications, Ed.D., North Texas*
James A. Ode, *Professor Emeritus of Music Education, D.M.A., Performer's Certificate, Eastman School of Music*
Cecil O'Neal, *Professor Emeritus of Theatre, B.A., Wisconsin*
G. Donald Pasquella, *Professor Emeritus of Communications, M.A., Iowa*
Darwin Payne, *Professor Emeritus of Communications, Ph.D., Texas*
Simon Sargon, *Professor Emeritus of Composition, M.S., Juilliard School of Music*
Laurence Scholder, *Professor Emeritus of Art, M.A., Iowa*
Don Umphrey, *Professor Emeritus of Advertising, Ph.D., Texas*
P. Gregory Warden, *Professor Emeritus of Art History, Ph.D., Bryn Mawr*
Stephen D. Wilder, *Professor Emeritus of Art, M.F.A., Wisconsin*

Meadows Artist Staff

Richard Abrahamson, *Staff Musician, Juilliard School of Music*
David Brown, *Piano Technician, B.A., Coe College*
Tara Emerson, *Accompanist, M.M., South Carolina*
Liudmila Georgievskaya, *Accompanist, Moscow State Conservatory*
Ryan Goolsby, *Studio Technician, M.F.A., Texas Christian*
Eliseo Gutierrez, *Scene Shop Foreman*
Don Hopkins, *Mustang Band Director*
Janice Lindstrom, *Music Therapy Supervisor, M.A., M.T.-B.C., Texas Woman's*
Chris Mount, *Master Electrician, B.F.A., Texas (Arlington)*
Melissa Panzarello, *Costume Shop Manager, M.F.A., Florida State*
Mina Polevoy, *Part-time Staff Musician*
JT Ringer, *Prop Master, B.F.A., Emerson College*
Eugenie Stallings, *Costumer, B.A., Texas*
Tommy Tucker, *Mustang Band Staff*
Janeen Vestal, *Part-time Staff Musician, B.M., SMU*
Alan Wagner, *Division of Music Associate Director for Academic Affairs, Ph.D., Florida State*

Meadows Adjunct Faculty

Note: The list of faculty adjuncts provided here is advisory only. In any given term, a particular adjunct may not be able to teach because of other commitments. This is especially true because many of SMU's adjuncts are professionals and scholars who are in high demand.

Christopher Adkins, *Adjunct Professor of Cello*, Principal Cello DSO, M.M.A., Yale
Dawn Askew, *Adjunct Lecturer of Theatre*, *Master Electrician*, B.A., Southwestern
Oklahoma State

Belinda Baldwin, *Adjunct Lecturer of Advertising*, Ph.D., Southern California
Deborah Baron, *Adjunct Assistant Professor of Flute*, Assistant Principal Flute DSO,
M.M., Juilliard School of Music

Carolyn Barta, *Adjunct Professor of Practice in Journalism*, M.A., Texas
Alessio Bax, *Adjunct Assistant Professor of Piano*, Artist Certificate, M.M., SMU
Jason Biggs, *Adjunct Lecturer of Theatre*, B.M., SMU

Linda Blase, *Adjunct Lecturer of Theatre*, M.F.A., Trinity
Trey Bowles, *Adjunct Lecturer of Arts Management and Arts Entrepreneurship*,
B.B.A., Baylor

John Bryant, *Adjunct Lecturer of Percussion*
Kathy Chamberlain, *Adjunct Lecturer of Dance*

Kalman Cherry, *Adjunct Associate Professor of Percussion*, Principal Timpani DSO
(retired), Artist Diploma, Curtis Institute of Music

Lucille Chung, *Adjunct Lecturer of Piano*, International Concert Artist, M.M., Artist
Certificate, SMU

Kim Corbet, *Adjunct Assistant Professor of Music History and Literature*, M.M.,
Texas Christian

Sue Cruse, *Adjunct Lecturer of Music Education*, D.M.A., Houston
Albert Drake, *Adjunct Lecturer of Dance*, B.F.A., SMU

Donald Fabian, *Adjunct Associate Professor of Saxophone*, M.M., Michigan State
Paul Garner, *Adjunct Associate Professor of Clarinet*, Associate Principal Clarinet
DSO, M.M., Kansas

Jean Larson Garver, *Adjunct Associate Professor of Flute*, Principal Flute DSO
(retired), M.M., Texas

Martha Gerhart, *Adjunct Assistant Professor of Voice*, *Vocal Coach*, M.M., Colorado
Matthew Good, *Adjunct Associate Professor of Tuba*, Principal Tuba DSO, B.M.,
Curtis Institute of Music

Robert Guthrie, *Adjunct Professor of Guitar*, *Guitar Ensemble Director*, B.M., North
Carolina School of the Arts

John Hall, *Adjunct Lecturer of Advertising*, B.A., Oklahoma
Zac Hammer, *Adjunct Lecturer of Dance*, B.F.A., SMU

Erin Hannigan, *Adjunct Associate Professor of Oboe*, Principal Oboe DSO, M.M.,
Eastman School of Music

Lane Harder, *Adjunct Assistant Professor of Music Theory and Composition*, Ph.D.,
Texas

Robert Hart, *Adjunct Lecturer of Journalism*, B.A., Texas (Arlington)

Sally Helppie, *Adjunct Lecturer of Film and Media Arts*, J.D., California (Los Angeles)

Meadows Adjunct Faculty (continued)

- Haley Hoops, *Adjunct Lecturer of Horn*, DSO, M.M., Northwestern
- Adam Houglund, *Visiting Artist-in-Residence of Dance*, B.F.A., Julliard
- Douglas Howard, *Adjunct Professor of Percussion*, Principal Percussion DSO, M.M., Catholic
- Gregory Hustis, *Adjunct Professor of Horn*, Principal Horn DSO (retired), B.M., Curtis Institute of Music
- Tearlach Hutcheson, *Adjunct Lecturer of Film and Media Arts*, M.A., Colorado
- Lynne Jackson, *Adjunct Assistant Professor of Music Education*, M.M., Michigan
- JoLynne Jensen, *Adjunct Lecturer of Arts Management and Arts Entrepreneurship*, Ph.B., Wayne State
- Brian Jones, *Adjunct Lecturer of Percussion*, Professional Certificate, Temple
- Susan Kress, *Adjunct Professor of Art*, M.F.A., Southern Illinois
- Camille King, *Adjunct Assistant Professor of Voice*, B.A., California
- Diane Kitzman, *Adjunct Associate Professor of Violin*, Principal Violin DSO, B.A., Michigan
- John Kitzman, *Adjunct Professor of Trombone*, Principal Trombone DSO, B.M., Michigan
- Drew Lang, *Adjunct Lecturer of Percussion*, M.M., Arizona
- Suzanne Larkin, *Adjunct Lecturer of Advertising*, M.F.A., Texas A&M (Commerce)
- Gordon Law, *Adjunct Lecturer of Advertising*, B.S., Oklahoma State
- Steve Leary, *Adjunct Lecturer of Theatre, Technical Director*, B.A., Cameron
- Linda Leavell, *Adjunct Lecturer of Journalism*, B.A., Texas
- Thomas Lederer, *Adjunct Associate Professor of Double Bass*, Co-principal Double Bass DSO, B.F.A., Carnegie Mellon
- Jon Lee, *Adjunct Lecturer of Music, Percussion Ensemble Director*, M.M., SMU
- Steve Lee, *Adjunct Lecturer of Communication Studies*, M.A., Texas (Arlington)
- J.D. Margetts, *Adjunct Lecturer of Theatre, Assistant Technical Director*, M.F.A., Northern Illinois
- David Matthews, *Adjunct Assistant Professor of Music*, B.M., North Texas
- Morgan May, *Adjunct Lecturer of ESL*, M.Ed., SMU
- Brian Merrill, *Adjunct Associate Professor of Music Education*, M.M.E., North Texas
- Maureen Mixtacki, *Adjunct Lecturer of Arts Management and Arts Entrepreneurship*, B.B.A., Notre Dame
- Naoko Nakamura, *Adjunct Lecturer of Harp*, M.M., Rice
- Bruce Orr, *Adjunct Lecturer of Advertising*, M.B.A., Illinois
- Deborah Perkins, *Adjunct Assistant Professor of Music Education*, Ph.D., North Texas
- Brian Perry, *Adjunct Lecturer of Double Bass*, DSO, M.M., Boston
- Wilfred Roberts, *Adjunct Professor of Bassoon*, Principal Bassoon DSO, B.M., Oberlin College Conservatory of Music
- Mark Roglán, *Adjunct Associate Professor of Art History*, Ph.D., Autónoma de Madrid
- Ellen Rose, *Adjunct Associate Professor of Viola*, Principal Viola DSO, M.M., Juilliard School of Music

Meadows Adjunct Faculty (continued)

Jennifer Schuder, *Adjunct Lecturer of Arts Management and Arts Entrepreneurship*, M.S., Texas

Lauren Smart, *Adjunct Lecturer of Journalism*, M.A., Syracuse

Dylan Smith, *Adjunct Lecturer of Jazz*, M.M., SMU

Edward Lee Smith, *Adjunct Lecturer of Percussion*

Barbara Sudweeks, *Adjunct Associate Professor of Viola*, Associate Principal Viola DSO, Curtis Institute of Music

Jean-Jacques Taylor, *Adjunct Lecturer of Journalism*, B.A., Ohio State

Bruce Tomaso, *Adjunct Lecturer of Journalism*, B.A., Texas

Kelly Trager, *Adjunct Assistant Professor of Arts Management and Arts Entrepreneurship*, J.D., New York (Brooklyn)

Kara Kirkendoll Welch, *Adjunct Assistant Professor of Flute*, DSO, M.M., SMU

Margaret Williams, *Adjunct Professor of Arts Management and Arts Entrepreneurship*, M.A., MBA, SMU

Kathy Windrow, *Adjunct Lecturer of Theatre*, M.A., M.F.A., SMU

SIMMONS SCHOOL OF EDUCATION AND HUMAN DEVELOPMENT

Office of the Academic Dean

David J. Chard, *Leon Simmons Endowed Dean of Annette Caldwell Simmons School of Education and Human Development*

Kathryn Canterbury, *Assistant Dean for Research and Grants Accounting*

Yolette Gacia, *Assistant Dean for External Affairs and Outreach*

Rebecca Hood, *Senior Assistant Dean for Finance and Operations*

Administration

Patricia Addington, *Director of Development*

Scott Baker, *Executive Director of Center on Research and Evaluation*

Lisa Bell, *Assistant to the Dean*

Tony Cuevas, *Director of Instructional Design and Learning Technology*

Suzanne Frank, *Director of The Writer's Path*

Michele Mrak, *Director of Graduate Liberal Studies*

Regina Nippert, *Executive Director of The Budd Center: Involving Communities in Education*

Jonathan D. Stolk, *Director of the Caruth Institute for Engineering Education*

Marilyn Swanson, *Director of Programming for Gifted Students Institute*

Simmons Faculty

Jill Allor, *Professor of Teaching and Learning*, Ed.D., Vanderbilt

Stephanie Al Otaiba, *Patsy and Ray Caldwell Centennial Chair and Professor of Teaching and Learning*, Ph.D., Vanderbilt

Caitlin Anderson, *Lecturer of Applied Physiology and Wellness*, M.S., Texas A&M

Doris Baker, *Assistant Professor of Teaching and Learning*, Ph.D., Oregon

B. Harold Barkley, Jr., *Clinical Associate Professor of Dispute Resolution and Counseling, Department Chair*, Ph.D., North Texas

Simmons Faculty (continued)

- Robert Barner, *Lecturer of Dispute Resolution and Counseling*, Ph.D., Fielding Institute
- Ann Batenburg, *Clinical Assistant Professor of Teaching and Learning*, Ph.D., Iowa
- Dan Berebitsky, *Assistant Professor of Education Policy and Leadership*, Ph.D., Michigan
- David Bertrand, *Clinical Assistant Professor of Applied Physiology and Wellness*, M.S., Baylor
- Eric Bing, *Research Professor of Applied Physiology and Wellness*, M.D., Harvard
- Watt Lesley Black, Jr., *Clinical Associate Professor of Education Policy and Leadership*, Ph.D., North Texas
- Roxanne Burluson, *Clinical Assistant Professor of Teaching and Learning*, M.S., Texas (Arlington)
- Randy Canivel, *Lecturer of Applied Physiology and Wellness*, M.S., Midwestern State
- David J. Chard, *Professor of Teaching and Learning, Department of Lifelong Learning Chair*, Ph.D., Oregon
- Piotr Chelstowski, *Lecturer of Applied Physiology and Wellness*, M.A., M.S., Warsaw
- Scott L. Davis, *Associate Professor of Applied Physiology and Wellness*, Ph.D., Utah
- Karla del Rosal, *Assistant Professor of Teaching and Learning*, Ph.D., Colorado (Boulder)
- Sherril English, *Clinical Assistant Professor of Teaching and Learning*, M.S., Texas A&M
- Brian Fennig, *Senior Lecturer of Applied Physiology and Wellness*, M.L.A., M.Ed., SMU, Stephen F. Austin
- S. Kiersten Ferguson, *Clinical Assistant Professor of Education Policy and Leadership*, Ph.D., Texas (Austin)
- Amy Ferrell, *Clinical Assistant Professor of Teaching and Learning*, M.Ed., Rutgers
- Takeshi Fujii, *Lecturer of Applied Physiology and Wellness*, Ed.D., Missouri-Columbia
- Denisa Gandara, *Clinical Assistant Professor of Education Policy and Leadership*, A.B.D., Georgia
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- Dale E. Davis, *Professor Emeritus of Teacher Preparation*
- Deborah Diffily, *Professor Emerita of Teaching and Learning*, Ph.D., North Texas
- Paul Gordon Hook, *Professor Emeritus of Physical Education*, Ph.D., North Texas
- Jiang (JoAnn) Lan, *Professor Emerita of Teaching and Learning*, Ed.D., Northern Illinois
- G. Reid Lyon, *Professor Emeritus of Education Policy and Leadership*, Ph.D., New Mexico
- George McMillion, *Professor Emeritus of Physical Education*
- William Pulte, *Professor Emeritus of Teaching and Learning*

Simmons Emeritus Faculty (continued)

Bryan Robbins, *Professor Emeritus of Physical Education*

R. Jack Roberts, *Professor Emeritus*

Patricia K. Webb, *Professor Emerita of Teacher Preparation*, Ed.D., North Texas

Simmons Adjunct Faculty

Note: The list of faculty adjuncts provided here is advisory only. In any given term, a particular adjunct may not be able to teach because of other commitments. This is especially true because many of SMU's adjuncts are professionals and scholars who are in high demand.

Diane Goode, *Adjunct Lecturer of Lifelong Learning*, Ph.D., Texas (Dallas)

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Karen Vickery, *Adjunct Lecturer of Teaching and Learning*, Ed.D., Texas A&M
(Commerce)

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ADDENDUM

The following text updates were not included in the print version of the 2015–2016 Undergraduate Catalog but are valid for the 2015–2016 academic year.

JOURNALISM

Programs of Study (page 524)

Journalism students will study multimedia journalism, learning the basic skills and conventions of broadcast journalism, print journalism and the emerging skill set needed to practice journalism on the Internet. The major requires 37 credit hours within the division. Journalism majors may count no more than 40 hours of JOUR courses toward graduation. Courses may be used to fulfill only one of the student's divisional requirements (i.e., a student may not fulfill two divisional requirements with one course). **Note:** All journalism majors must declare and complete a second major or a minor of their choosing. The fashion media major and minor do not meet this requirement. Only JOUR-courses passed with a grade of C- or better will count for credit toward the major [or minor](#) in journalism [or in fashion media](#).

Bachelor of Arts in Fashion Media (pages 525–526)

All fashion media majors must declare and complete a second major or a minor of their choosing. The journalism major and minor do not meet this requirement. Required courses must be passed with a grade of C- or better to count for credit toward the major in fashion media.

<i>Requirements for the Degree</i>	<i>Credit Hours</i>
Universitywide Requirements	Varies
Introductory Core	7
JOUR 2103 Writing and Editing Tutorial and Lab	
JOUR 2302 Ethics of Convergent Media	
JOUR 2312 Reporting I	
Written Media Skills (one from the following)	3
JOUR 2313 Reporting II	
JOUR 3362 Magazine Writing	
JOUR 3370 Fashion Journalism	
JOUR 3382 Feature Writing	
Visual Media Skills (one from the following)	3
— ASPH 1300 Basics of Photography	
JOUR 2304 Basic Video and Audio Production	
Critical Studies	6
ANTH 2301 Introductory Cultural Anthropology	
<i>One from the following:</i>	
ANTH 3310/CFB 3310 Gender and Sex Roles: A Cross-Cultural Perspective	
ARHS 1333 Introduction to Visual Culture	
ARHS 3350 Modern Art and Media Culture, 1789–1870	
ARHS 3369 Contemporary Art: 1965–Present	
COMM 3341/CFB 3341 Ethnicity, Culture, and Gender: Introduction to Critical Studies in Communication	

JOUR 4360 Women and Minorities in the Media
 PSYC 3371 Psychology of Women
 SOCI 3345 Construction of Social Identities in the Media
 SOCI 3371 Sociology of Gender
 WGST 2322/CFA 3302 Gender: Images and Perspectives

Advanced Core 9

JOUR 2310 Fashion, Media, and Culture
 JOUR 3326 Media and the Art of Fashion Design
 JOUR 3327 Media and the Business of Fashion

Capstone 3

JOUR 4398 Digital Journalism

Electives 6

Two additional courses from written media skills, visual media skills, or critical studies, or chosen from the following:

- ADV 1300 Survey of Advertising
- ADV 1360 Creative Production [for the Noncreative Track](#)
- ARHS 3355 History of Photography II: 1940–Present
- ARHS 3367 History of Photography I: Origins–1940
- [ASPH 1300 Basics of Photography](#)
- ASPH 3300 Black-and-White Photography I
- COMM 5304 Topics in Communications: Fashion Media and Public Relations
- Any JOUR course (excluding internships)

Minor or Second Major and Free Electives

Hours vary as needed to meet University residency and degree requirements

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Minor in Fashion Media (pages 527–528)

The fashion media minor is an interdisciplinary program of study that exposes students to fashion media coursework and prepares them for further academic study or workplace internships.

Requirements for the Minor *Credit Hours*

Core 3

JOUR 2310 Fashion, Media, and Culture

Critical Studies (one from the following) 3

- ANTH 2301 Introductory Cultural Anthropology
- ANTH 3310 Gender and Sex Roles
- ARHS 1333 Introduction to Visual Culture
- ARHS 3350 Modern Art and Media Culture
- JOUR 4360 Women and Minorities in Media
- PSYC 3371 Psychology of Women
- SOCI 3345 Media Ethics and Gender
- SOCI 3371 Sociology of Gender
- WGST 2322/CFA 3302 Gender: Images and Perspectives

Visual Media Skills (one from the following) 3

- ADV 1360 Creative Production
 ([advertising majors may substitute ADV 3390](#))
- ASPH 1300 Basics of Photography
- JOUR 2304 Basic Video and Audio Production

Written Media Skills	7
JOUR 2103 Writing and Editing Tutorial and Lab	
JOUR 2312 Reporting I	
<i>One from the following:</i>	
JOUR 2313 Reporting II	
JOUR 3362 Magazine Writing	
JOUR 3382 Feature Writing	
Elective	3
One additional course from critical studies, visual media skills, or written media skills, or one from the following:	
ADV 1300 Survey of Advertising	
ARHS 3355 History of Photography II	
ARHS 3367 History of Photography I	
JOUR 2302 Ethics of Convergent Media	
JOUR 3326 Media and the Art of Fashion Design	
JOUR 3327 Media and Business of Fashion	
JOUR 4398 Digital Journalism	
Fashion Media Skills	3
ASPH 3330 Fashion Photography	
COMM 5304 Topics in Communications: Fashion Media and Public Relations	
JOUR 3370 Fashion Journalism	