Dedman College

Graduate Programs

Southern Methodist University

2017-2018 Catalog

Catalog Policy and Legal Statement

Bulletin of Southern Methodist University 2017-2018 Vol. CI

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

Every effort has been made to include in this catalog information that, at the time of preparation for publishing, 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.

Information also is available at www.smu.edu.

Notice of Nondiscrimination

Southern Methodist University (SMU) 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 the 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.

Produced by the Office of the Registrar

Southern Methodist University

Dallas TX 75275-0221

2017

Academic Calendar

Academic Year 2017-2018

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 SMU Guildhall, the Perkins School of Theology, the Dedman School of Law, the Department of Dispute Resolution and Counseling within the Simmons School of Education and Human Development, and the Master of Science in Data Science offered as an interdisciplinary program through the Dedman College of Humanities and Sciences, the Lyle School of Engineering and the Meadows School of the Arts, have different calendars.

Fall Term 2017

April 10-28, Monday-Friday: Enrollment for fall 2017 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 19, Saturday: Residence halls officially open at 9 a.m.

August 20, Sunday: Opening Convocation, McFarlin Auditorium.

August 21, Monday: First day of classes.

August 25, Friday: Last day to enroll, add a course, or drop a course without tuition billing while remaining enrolled for the term. Last day to file for graduation in December.

September 1, Friday: Last day to drop a course without academic record (tuition charges apply). Last day to withdraw from the university without academic record (withdrawal refund schedule applies). See Bursar's website for more information.

September 4, Monday: Labor Day. University closed.

September 6, 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 22-24, Friday-Sunday: Family Weekend.

September 26, Tuesday: Early intervention grades due for first-year undergraduate students.

October 4, Wednesday: Last day for continuing undergraduate students to change their majors for spring 2018 enrollment.

October 9-10, Monday-Tuesday: Fall break.

October 22, Sunday: Midterm grades due for first-year and sophomore students.

October 30, 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.

October 30-November 17, Monday-Friday: Enrollment for spring 2018 continuing students for all undergraduates and for graduates in Dedman College, Lyle and Meadows.

November 3, Friday: Last day to drop a course (grade of W).

November 3-4, Friday-Saturday: Homecoming Weekend.

November 9, Thursday: Last day for December graduation candidates to change grades of Incomplete, and to obtain a final grade for a grade of X or a missing grade from a previous term.

November 13, Monday: Students should file for May graduation. The last day to file is January 26, 2018.

November 21, Tuesday: Last day to withdraw from the University (grade of W).

November 22, Wednesday: No classes.

November 23-24, Thursday-Friday: Thanksgiving holiday. University closed.

November 29-December 4, Wednesday-Monday: No final examinations or unscheduled tests/papers.

November 30, Thursday: Last day for oral/written examinations for December graduate degree candidates.

December 4, Monday: Last day of classes.

December 5-6, Tuesday-Wednesday: Reading days.

December 7-13, Thursday-Wednesday: Examinations. (No examinations scheduled for Sunday.)

December 14, 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 16, Saturday: December Commencement Convocation. Official close of the term and conferral of degrees.

December 25-January 1, Monday-Monday: University closed.

December 25, Monday: Christmas Day.

January Interterm 2018

Note: Some areas of instruction offer selected courses during the January interterm, December 14-January 18.

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

Dallas Jan Term 2018

January 8, Monday: First day of classes.

January 9, Tuesday: Last day to declare pass/fail.

January 17, Wednesday: Last day to drop a course or withdraw from the University (grade of W).

January 18, Thursday: Last day of classes, including examinations. Also, official close of the term and conferral of degrees.

Jan Term at SMU-in-Taos 2018

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

January 5, Friday: Wellness student travel day and arrival, 2-6 p.m.

January 7, Sunday: Regular session travel day and arrival, 2-6 p.m.

January 8, Monday: First day of classes.

January 9, Tuesday: Last day to declare pass/fail.

January 15, Monday: Martin Luther King, Jr. Day. University closed.

January 16, Tuesday: Last day to drop a course or withdraw from the University (grade of W).

January 17, Wednesday: Last day of classes, including examinations.

January 18, Thursday: Departure of Students. Official close of the term and conferral of degrees.

Spring Term 2018

November 6-January 26, Monday–Friday: Enrollment for spring 2018 continuing students for all undergraduates and for 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, Monday: New Year's Day. University closed.

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

January 15, Monday: Martin Luther King, Jr. Day. University closed.

January 22, Monday: First day of classes.

January 26, Friday: Last day to enroll, add a course, or drop a course without tuition billing while remaining enrolled for the term. Last day to file for May graduation.

February 2, Friday: Last day to drop a course without academic record (tuition changes apply). Last day to withdraw from the university without academic record (withdrawal refund schedule applies). See Bursar's website for more information.

February 6, 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 26, Monday: Early intervention grades due for first-year undergraduate students.

March 6, Tuesday: Last day for continuing undergraduate students to change their majors for fall 2018 enrollment.

March 12-18, Monday–Sunday: Spring break.

March 27, Tuesday: Midterm grades due for first-year and sophomore students.

March 30, Friday: Good Friday. University closed.

April 1, Sunday: Easter Sunday.

April 4, Wednesday: 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 10–27, Tuesday–Friday: Enrollment for summer 2018 and fall 2018 continuing students for all undergraduates and for graduates in Dedman College, Lyle and Meadows.

April 11, Wednesday: Last day to drop a course (grade of W).

April 13, Friday: Last day for May graduation candidates to change grades of Incomplete, and to obtain a final grade for a grade of X or a missing grade from a previous term.

April 16, Monday: Honors Convocation, 5:30 p.m.

April 25, Wednesday: Students should file for August or December graduation. Last day to file for August graduation is June 7. Last day to file for December graduation is the last day to enroll for fall 2018.

April 27, Friday: Last day to withdraw from the University (grade of W).

May 2-7, Wednesday–Monday: No final examinations or unscheduled tests or papers.

May 3, Thursday: Last day for oral/written examinations for graduate students who are May degree candidates.

May 7, Monday: Last day of classes; follows a Friday schedule.

May 8, Tuesday: Reading day.

May 9-15, Wednesday–Tuesday: Examinations. (No examinations scheduled Sunday.)

May 16, Wednesday: Residence halls officially close for non-graduating students.

May 18, Friday: Baccalaureate.

May 19, Saturday: Commencement Convocation. Also, official close of the term and conferral of degrees.

May 20, Sunday: Residence halls officially close for graduating seniors.

May Interterm 2018

Note: Some areas of instruction may offer a limited number of selected courses during the May term, May 17-June 1. Each May term course may have unique start and end dates during May 17-June 1 to accommodate the particular needs of the course.

Dallas May Term 2018

Classes meet 4 hours a day, Monday-Friday.

May 17, Thursday: First day of classes.

May 18, 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 28, Monday: Memorial Day. University closed.

May 29, Tuesday: Last day to drop a course or withdraw from the University (grade of W).

June 1, Friday: Last day of classes, including examinations. Also, official close of the term and conferral of degrees.

June 7, Thursday: Last day to file for August graduation.

May Term at SMU-in-Taos 2018

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

May 16, Wednesday: Student travel day and arrival, 2-6 p.m.

May 17, Thursday: First day of classes.

May 29, Tuesday: Last day to drop/withdraw from the University (grade of W).

June 1, Friday: Last day of classes, including examinations. Official close of the term and conferral of degrees.

June 2, Saturday: Departure of students.

Summer Term 2018

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 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 28, Monday: Memorial Day. University closed.

June 4, Monday: First day of classes.

June 7, Thursday: Last day to enroll, add courses or drop courses without a grade record. Also, last day to file for August graduation.

June 13, Wednesday: Last day to declare pass/fail, no credit or first-year repeated course grading options.

July 4, Wednesday: Independence Day. University closed.

July 19, Thursday: Last day for August graduation candidates to change grades of Incomplete, and to obtain a final grade for a grade of X or a missing grade from a previous term.

July 26, Thursday: Last day to drop a course (grade of W).

August 1, Wednesday: Last day to withdraw from the University.

August 7, Tuesday: Last day of classes, including examinations. Official close of the term and conferral of degrees.

First Session

Classes meet 2 hours a day, Monday-Friday.

May 28, Monday: Memorial Day. University closed.

June 4, Monday: First day of classes.

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

June 7, Thursday: Last day to declare pass/fail, no credit or first-year repeated course grading options. Last day to file for August graduation.

June 26, Tuesday: Last day to drop a course (grade of W).

June 27, Wednesday: Last day to withdraw from the University**.**

July 3, Tuesday: 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 SMU-in-Taos is required for all enrollments.

June 4, Monday: Travel day and arrival of students, 2–6 p.m.

June 5, Tuesday: First day of classes.

June 26, Tuesday: Last day to drop/withdraw from the University (grade of W).

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

June 30, Saturday: Departure of students.

Second Session

Classes meet 2 hours a day, Monday-Friday.

June 7, Thursday: Last day to file for August graduation.

July 4, Wednesday: Independence Day. University closed.

July 5, Thursday: First day of classes.

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

July 10, Tuesday: Last day to declare pass/fail, no credit or first-year repeated course grading options.

July 16, Monday: Last day for August graduation candidates to change grades of Incomplete, and to obtain a final grade for a grade of X or a missing grade from a previous term.

July 26, Thursday: Last day to drop a course (grade of W).

July 30, Monday: Last day to withdraw from the University.

August 3, Friday: Last day of classes, including examinations.

August 7, Tuesday: Official close of the term and conferral of degrees.

August Term at SMU-in-Taos 2018

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

July 31, Tuesday: Travel day and arrival of students, 2–6 p.m.

August 1, Wednesday: First day of classes**.**

August 15, Wednesday: Last day to drop/withdraw from the University (grade of W).

August 16, Thursday: Last day of classes, including examinations. Official close of the term and conferral of degrees.

August 17, Friday: Departure of students.

Major Religious Holidays

(August 2017-August 2018)

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, 2017

Good Friday: March 30, 2018

Easter Sunday: April 1, 2018

Easter Sunday (Orthodox): April 8, 2018

Hindu

Janmashtami: August 15, 2017

Dasera: September 30, 2017

Diwali: October 19, 2017

Jewish*

Rosh Hashanah: September 21-22, 2017

Yom Kippur: September 30, 2017

Sukkot/Simchat Torah: October 5/6, 2017 & October 13, 2017

Purim: March 1, 2018

Hanukkah: December 12-20, 2017

Pesach (Passover): March 31-April 7, 2018

Shavuot: May 20-21, 2018

Muslim

Eid al-Adha: September 1, 2017

Islamic New Year: September 21, 2017

Ashura: October 1, 2017

Mawlid an-Nabi: December 1, 2017

Ramadan: May 16-June 14, 2018

Eid al-Fitr: June 15, 2018

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

General Information

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, shaping world changers who contribute to their communities and excel in their professions in a 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.

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 averaging more than 10,000 the past 10 years, a full-time faculty of 748 and assets of $2.9 billion - including an endowment of $1.4 billion (market value, May 31, 2016).

Offering only a handful of degree programs at its 1915 opening, the University presently awards over 100 baccalaureate degrees in more than 90 programs, with in five schools. The university also offers a variety of graduate programs in all of its seven schools.

Of the 11,739 students enrolled for the 2016 fall term, 6,521 were undergraduates and 5,218 were graduate students. The full-time equivalent enrollment was 6,406 for undergraduates and 3,825 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 46 percent female.

A majority of SMU undergraduates receive some form of financial aid. In 2016-2017, 79 percent of first-year students received some form of financial aid, and 29 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 appropriate national professional associations.

In Dedman College, the Department of Chemistry undergraduate program is accredited by 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 the Association to Advance Collegiate Schools of Business.

The Dedman School of Law is accredited by the American Bar Association.

The Guildhall receives its accreditation because SMU is an accredited institutional member of the National Association of Schools of Art and Design.

The Lyle School of Engineering undergraduate programs in civil engineering, computer engineering, computer science, electrical engineering, environmental engineering and mechanical engineering are accredited by the Engineering Accreditation Commission of The Accreditation Board for Engineering and Technology.

Programs in and/or affiliated with The Meadows School of the Arts receive their accreditation because Southern Methodist University is an accredited institutional member of the National Association of Schools of Art and Design, of Music, of Dance, and of Theater. The programs recognized under this accredited institutional membership are the art and art history programs, the Dance Division, the Music Division, the music therapy program, and the theater program. (NASM/NASAD/NASD/NAST 11250 Roger Bacon Drive, Suite 21, Reston, VA 20190-5248, Telephone: (703) 437-0700, Facsimile: (703) 437-6312, Email: info@arts-accredit.org).

Perkins School of Theology is accredited by the Commission on Accrediting of the Association of Theological Schools in the United States and Canada 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 programs, which are accredited by the State Board for Educator Certification of the Texas Education Agency. The SBEC and the TEA also accredits the M.Ed. in Accelerated School Leadership and the M.Ed. Urban Leadership. The M.S. in Counseling meets the licensure standards of the Texas State Board of Examiners of Professional Counselors and the Texas State Board of Examiners of Marriage and Family Therapists and the State Board for Educator Certification (TEA) School Counselor All Levels K-12.

Dedman College

History

Dedman College of Humanities and Sciences has been the intellectual heart of the University since SMU was founded in 1911. The college, one of the nation's premier liberal arts institutions, has earned a reputation for the breadth and depth of its graduate programs and the quality of its learning and research resources.

Graduate work at the master's level has been offered at SMU since the University first opened its doors in 1915. Doctoral work was begun in 1959. Graduate faculty members are actively engaged in research and have a strong commitment to student participation in their projects. Excellent students are attracted from all regions of the United States and from many foreign countries.

For information in addition to that given in this catalog, contact the Office of Research and Graduate Studies at 214-768-4345 or smugrad@smu.edu.

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**. 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 **Material Sciences Laboratory** processes artifact collections and conducts data entry for artifacts collected from archeological sites in the American Southwest and Texas. It conducts experimental research with clays, temper and ceramics and contains 3-D scanning equipment, a ceramic kiln, muffle furnace, drying oven, and digital and petrographic microscopes.
- The **Laboratory of Traditional Technology** is used for carrying out systematic technological and performance analyses of materials from archeological sites, as well as experimental archaeological research, to better understand variability in regional assemblages. On-site special equipment includes binocular microscopes and muffle furnaces.

- The **Medical Anthropology Laboratory**, funded by the National Institutes of Mental Health and the Hogg Foundation for Mental Health research, includes data storage, telephone and voicemail, office space for one research assistant, audio recording equipment, and a laptop installed with NVivo 10 and Atlas.ti software.
- **The Migration Laboratory**, originally funded by the National Science Foundation and the Russell Sage Foundation, includes data storage, telephone and voicemail, one desktop computer, a library of books on immigration, and office space for 2-3 graduate students.
- The **Molecular Anthropology Laboratories** specialize in the analysis of DNA from both modern and archaeological samples to address classic problems in anthropology.
- 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. Archaeological collections, including the Tony Baker Paleoindian Collection, are available for study by qualified researchers.

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, climate change determination in well profiles, and research on methane hydrates. Mapping of the crustal heat flow of North America was completed in 2004 and updated in 2011. As part of the Google.org heat flow project, the U.S. temperatures-at-depth were mapped in detail to 10 kilometers. Specialized equipment for the measurement of the 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, 13C, 31P and many other nuclei.

Degrees Offered

The degrees available through the graduate faculty of Dedman College are the M.A., M.S. and Ph.D.

- Anthropology, M.A., Ph.D.
    - Medical Anthropology, M.A.
- Molecular and Cellular Biology, M.A., M.S., Ph.D.
- Chemistry, M.S., Ph.D.
    - Chemistry, Ph.D., Materials/Polymer Track
    - Chemistry, Ph.D., Organic/Medicinal/Bioorganic Track
    - Theoretical and Computational Chemistry, Ph.D.
- Data Science, M.S.D.S.
- Geology, M.S., Ph.D.
- Geophysics, M.S., Ph.D.
    - Applied Geophysics, M.S.
- Economics, M.A., Ph.D.
    - Applied Economics Graduate Certificate
        - Applied Economics, M.A., Applied Economics Track
        - Applied Economics, M.A., International Economics and Policy Track
        - Applied Economics, M.A., Law and Economics Track
    - Applied Economics and Predictive Analytics, M.S.
- English, M.A., Ph.D.

- History, M.A., Ph.D.
- Computational and Applied Mathematics, M.S., Ph.D.
- Medieval Studies, M.A.
- Physics, M.S., Ph.D.
- Psychology, M.A., Ph.D.
- Religious Studies, M.A., Ph.D.
- Statistical Science, M.S., Ph.D.
    - Applied Statistics and Data Analytics, M.S.
    - Biostatistics, Ph.D.
- Women's and Gender Studies, Certificate

Admission

Admission may be of two types:

1. **Full**, without restriction.
2. **Nondegree**, when the student needs background courses or desires transferable graduate credit for certification or some other purpose but is not undertaking a degree program. Nondegree admission is selective. Not more than six credit hours of graduate credit earned under nondegree status may be applied toward an advanced degree in Dedman College.

No student is allowed to enroll unless notified of admission by the Office of Research and Graduate Studies.

Admission Requirements

Applicants holding the bachelor's degree from an institution of standard collegiate rank, recognized by the accrediting agencies in whose jurisdiction the college is located, may apply for admission to graduate studies. Graduates of colleges not fully recognized will be treated as special cases and required to produce evidence attesting to the quality of their programs. Any student whose bachelor's degree is not equivalent to the comparable baccalaureate degree from Southern Methodist University may be required to take sufficient additional work to make up the deficiency. All applicants must have adequate subject preparation in the chosen major field, normally an overall grade point average of 3.000 (on a 4.000 scale) and a satisfactory score on the GRE graduate school admission test.

International Students

Applicants who do not speak English as their native language are required to supply scores on the TOEFL English language proficiency test or the IELTS English competency test. The minimum TOEFL score for admission is 80 on the Internet-based test or the minimum IELTS score is 6.5, unless specified otherwise by a program or department. This requirement is waived for students who have received undergraduate degrees from an English-language institution located in the United States, Canada, United Kingdom, Ireland, Australia, New Zealand, or South Africa. The Test of Spoken English or equivalent is required for teaching assistants.

Applicants who have completed studies at and received diplomas or professional titles from institutions outside the United States should ordinarily have completed 16 years of study: 12 years at the elementary and secondary school level and four years at the university level. Eligibility is judged by grades (marks), class obtained or rank achieved in class. Evidence of class placement therefore should be specifically set forth in the official records submitted.

Applicants holding bachelor's degrees from foreign universities should not assume that these degrees will be automatically accepted in U.S. universities. Applicants who have achieved first or high second class from universities that confer classes based on grades (marks) will be preferred. Applicants holding bachelor's degrees with honors or master's

degrees have a better chance of being accepted in U.S. universities. Also, decisions will be based on the academic standing of the institutions from which the applicant has graduated. Professional diplomas and higher certificates from technical or vocational schools are normally not considered as equivalent to a bachelor's degree. Departments have the option of making authentication of transcripts part of the process of offering assistantships to international students.

Application Procedure

The online application for Dedman college graduate degrees can be accessed at gradadmission.smu.edu/apply/.

Students should contact smugrad@smu.edu for more information. A complete application should include the following:

1. The online application.
2. An official transcript for all schoolwork after high school.
3. The application fee of $75 collected online.
4. Three letters of recommendation submitted online.
5. GRE graduate school admission test scores submitted electronically.
6. TOEFL English language proficiency test scores for international applicants.
7. Writing samples required for English, history and religious studies programs.

Application Deadlines

Fall	**December 1:**	History, Psychology
	December 15:	Statistics Ph.D., Biostatistics
	January 5:	Religious Studies
	January 15:	Anthropology, Biology, Chemistry, Earth Sciences, Economics, English, Math, Physics
	January 31:	Theoretical and Computational Chemistry
	February 1:	Statistics (MASDA)
	May 1:	Final deadline (non-priority)
Spring	**November 30:**	Final deadline

Due to the extra time necessary for visa processing, international applicants are advised to have their online application completed at least two months before the final deadlines. Students who apply for departmental assistantships should submit their applications by the priority deadline as noted.

The online application for the Master of Science in the Data Science program can be accessed at apply.datascience.smu.edu. Application deadlines are available at datascience.smu.edu.

McNair Scholars Program

SMU encourages McNair Scholars to apply for graduate studies in Dedman College of Humanities and Sciences by waiving their application fee. In addition, 10 tuition fee waivers (five through Dedman College and five through the Lyle School of Engineering) are designated for admitted McNair Scholars applicants. SMU supports the aims of this program – to identify and mentor undergraduates as they prepare for graduate school – and would like to participate in helping students realize their goals. McNair Scholars should identify themselves as such on their application. Questions can be directed to smugrad@smu.edu.

Institute for Recruitment of Teachers Applicants

SMU provides an application fee waiver for IRT applicants and invites applications to Dedman College's graduate programs. Departments award assistantships based on the merits of the applicant and the limits of the budget.

Degree Requirements

General requirements of graduate degree programs are described on the following pages. Additional requirements for specific programs are contained in the corresponding departmental section.

Master's Degrees

Distribution of Courses

Each master's degree program includes a minimum of 30 credit hours of courses. At least 18 credit hours of the courses included in each student's program for a master's degree shall be those numbered 6000 or above. No courses below the 5000 level are allowed.

At least 18 credit hours of credit must be earned in the major departmental field. (In order to obtain graduate credit for these courses, however, the student must have taken at least 12 credit hours of advanced credit in the major field, or else six credit hours in that and six in a closely related field approved by the chair of the major department and the graduate dean.) The remaining hours may also be taken in the major field, or else in one or more minor fields approved as closely related to the major subject.

Credits

The great majority of courses offered meet three hours a week and have a value of three credit hours. See the Credit Hours Policy in the Enrollment and Academic Records section. The second digit of each course number indicates the value in credit hours of that course. All courses attempted for credit on a student's graduate program must average B (3.000) or better, with no grade less than C (2.000) applying toward the degree.

Transfer of Credits

Not more than six credit hours of work from another institution shall apply toward a candidate's master's program. All credit for work transferred must show grades of A or B and is subject to the approval of the major department. An official record of such work must be on file in the graduate office of Southern Methodist University at least 30 days before the student expects to receive the degree.

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.

Time Limit

No credit will be allowed toward the master's degree for courses taken more than six years before the date on which the degree is to be conferred. An exception to this policy can be made only by faculty members of the department in which the student is doing his or her major work, following a written examination of the subject matter petitioned.

Thesis

The thesis, if required, must be written under the guidance of a thesis director who is a member of the faculty. The director will be appointed by the departmental faculty after consultation with the candidate.
In submitting a thesis, the student thereby grants permission to the dean of Central University Libraries to make copies at the director's discretion, upon the request of individuals or institutions.

Examinations

Candidates may be required to pass an oral and/or written examination, which will include a defense of the thesis if applicable and will test the candidate's knowledge of the major and minor fields. This examination must be taken before or on the date set by the University calendar.

With approval of the departmental faculty, the departmental chair or the departmental director of graduate studies, as appropriate, shall appoint a committee of the graduate faculty to review the thesis (if applicable) and to conduct the examination. The departmental chair or director will notify members of the committee of their appointments and report the committee membership to the dean of the Office of Research and Graduate Studies.

The committee for master's level shall consist of at least three members, two of whom must be the major adviser or a designate, who will serve as chair, and a tenured/tenure-track member of the candidate's major department. The third member (or additional members) of the committee may be an additional member of the candidate's major department or an external reviewer, appointed with the approval of the department chair.

The examination will be conducted by the committee and by any other members of the faculty who care to attend as nonvoting members. The chair of the examining committee will set a date, hour and place for the examination that is agreeable to the committee members and the candidate. A unanimous vote of the committee is necessary for approval of the examination. Students who fail the examination may be given a second examination, at a time to be determined by the committee, but not later than one year after the initial examination. Those who fail the examination the second time are thereby disqualified for a degree.

The Degree of Doctor of Philosophy

The degree of Doctor of Philosophy is awarded in recognition of high attainment in a special field of knowledge, as evidenced by examination and by a dissertation presenting the results of significant and original research. General requirements are listed below. In many programs, however, there are additional requirements, and students should carefully check the policy in their particular program.

Qualifying Examination

The purpose of the qualifying examination is to test the student's knowledge of the field of specialization, to assess familiarity with the published research in the field, and to determine whether the student possesses critical and analytical skill necessary for completion of degree. The examination may be written and/or oral and normally is administered two or three years after matriculation in the program. When a faculty committee is responsible for this examination, the members should be drawn from the field of specialization so as to be able to assess the student's ability in breadth as well as depth. If a minor field also is involved, a faculty member in the minor area should participate in administering the qualifying examination. Even though it is not necessary for the qualifying examination committee to be the same as the dissertation committee, a significant overlap between the two committees is desirable for continuity.

A student who fails the qualifying examinations may apply for the privilege of a second examination. Failure on the second examination will render a student ineligible to continue in the Ph.D. program.

Admission to Candidacy

Admission to a graduate program does not imply admission to candidacy for the doctoral degree. To be admitted to candidacy, the student must satisfy the language requirements, if any, in the program and must pass the qualifying examination in the program of study. Upon completion of these requirements, the department will recommend to the graduate dean that the student be admitted to candidacy. The recommendation will be made within five months of the qualifying examination or satisfying the language requirement, whichever comes later.

Residency and Coursework

The Ph.D. degree normally requires at least 48 credit hours of graduate work, of which a maximum of 12 credit hours can be in dissertation research. Normally, a transfer student may be granted up to 24 hours of credit. Additional transfer credit may be granted only with the approval of the graduate dean. The 48 credit hours may include research, reading and dissertation courses. Some departments may require additional hours. (See department requirements for details.)

Continuous enrollment is required of Ph.D. students, unless they are on research leave. Students undertaking full-time research off campus may petition the department for a research leave of a maximum of two years. Students who do not enroll for two consecutive terms without formal research leave must reapply for admission to the program. Students who do not enroll for one term without formal research leave may petition the graduate dean for reinstatement of their student status. After a student has completed the required minimum credit hours toward the Ph.D. program, enrollment for research is possible for four additional terms.

The minimum residence requirement is a total of 18 credit hours completed within three terms of residence at SMU. International students may need to satisfy additional residence requirements to comply with U.S. Citizenship and Immigration Services regulations.

Time Limits

Ordinarily a student enrolled for full-time study should pass the qualifying examination by the end of the third year. An extension of one year may be granted by the dean upon submission of a petition by the student and the endorsement of the student's department. Except under unusual circumstances, extensions beyond the fourth year will not be granted.

The doctoral dissertation should be submitted and accepted within five years after the student has been admitted to candidacy. An extension of one year can be granted by the graduate dean. After this time, the students will be dropped from candidacy and can be readmitted only by passing a second qualifying examination, except under special circumstances. In such cases, new time limits will be set by the student's committee with the approval of the dean.

Time spent on research leaves will not be counted as part of the time limit. If a student must take an unavoidable leave of absence for medical or family reasons, leaves may be granted without affecting time limits. The decision to grant such a leave of absence will be made by the department and approved by the graduate dean. In the case of part-time students, time limit requirements will be interpreted appropriately to allow for their part-time status.

Ordinarily, credit is not allowed for graduate courses (including transfers) that are more than six years old at the time of the qualifying examination. Should the time limits be exceeded, a department may petition the dean to re-validate the credits. Approval is granted only in cases of exceptional merit.

Dissertation

A candidate for the doctoral degree must present an acceptable dissertation within the major field of study. It must demonstrate that the candidate has technical competence in the field and has done research of an independent character. It must add to and modify what was previously known or present a significant interpretation of the subject based on original investigation.

Prior to admission to candidacy, the candidate may be required by the department to present a prospectus for the dissertation to a faculty committee.

Dissertation Defense

The defense is an examination administered by the student's Dissertation Committee. The Dissertation Committee shall consist of 1) the major adviser, who will serve as chair; 2) at least two other full-time members of the candidate's major department; and 3) at least one external reviewer who is either a faculty member outside the candidate's department or, with the approval of the department chair and the graduate dean, a scholar not associated with the University. For all candidates the major adviser (or designate) must be a full-time member of the department. Faculty members with joint appointments (excluding courtesy appointments) are considered internal members of the departments only, and they may not serve as outside members of the committee. The Dissertation Committee is appointed by the department chair or the director of graduate studies with the approval of the dean after the presentation of the prospectus, given well before the dissertation defense.

The examination will be conducted by the committee and by any other members of the faculty who care to attend as nonvoting members. The chair of the examining committee will set a date, hour and place for the examination that is agreeable to the committee members and the candidate, with notification at least a week in advance.

Notice of the dissertation defense should be distributed to all department faculty, the dean of the college and the graduate dean. A unanimous vote of the committee is necessary for approval of the examination. Students who fail the examination may be given a second examination, at a time to be determined by the committee, but not later than one year after the initial examination. Those who fail the examination the second time are thereby disqualified for a degree.

Preparing the Dissertation for Submission

The basic requirements for preparing the dissertation are outlined in the *Dissertation and Thesis Guide* located online at www.smu.edu/graduate.

The dissertation must be completed to the satisfaction of the student's dissertation adviser and Dissertation Committee, and the Office of Research and Graduate Studies. Deadlines for the submission of dissertations are outlined at the beginning of each term. Upon successful completion of the dissertation defense, the Signature Page must be signed by the Dissertation Committee. Students are responsible for all fees, including those for electronic publishing and microfilming.

In submitting a dissertation, the student grants permission to the dean of Central University Libraries to make copies at the dean's discretion, upon the request of individuals or institutions.

Anthropology

Professor Karen Lupo, **Department Chair**

Professors: Eric G. Bing, Caroline Brettell, Karen Lupo, David Meltzer
Associate Professors: Michael Adler, Sunday Eiselt, Mark McCoy, Nia Parson, Christopher Roos, Carolyn Smith-Morris
Assistant Professors: Maryann Cairns, Kacy Hollenback, Neely Myers, Nicolas Sternsdorff-Cisterna
Lecturer: Matthew Boulanger

Anthropology, Ph.D.

The Ph.D. program in anthropology offers specializations in archaeology and in cultural anthropology (with concentrations in medical anthropology or globalization and international development). The Ph.D. degree in anthropology carries the following requirements:

1. Students must complete a minimum of 54 credit hours of approved graduate coursework at SMU, including six credit hours of dissertation coursework. Up to 24 credit hours may be waived for advanced courses taken elsewhere. In addition, students may test out of advanced courses based on prior graduate-level experiences. Please check the Department of Anthropology's website to confirm current course listings.
2. The M.A. degree en route to the Ph.D. will be awarded to students who are accepted into the graduate program and who receive a "low pass" or higher on the general M.A. examination in their subfield given at the end of two years' coursework (36 credit hours). However, only students who achieve a "pass" or higher on this examination may advance into the Ph.D. program.
3. Students must satisfy all curricular requirements as specified by the department faculty. For details, students should see the department *Redbook* (also available on the department's website at www.smu.edu/anthro).
4. Students must demonstrate an ability to function proficiently in one or more languages selected from among the following: French, German, Russian, Spanish or substitute languages approved by the department.
5. Students must demonstrate a satisfactory knowledge of analytical methods (quantitative or qualitative, as appropriate).
6. Students must pass a Ph.D. qualifying examination, including an oral defense of a dissertation proposal in their subfield.
7. Students must write and make a successful defense of a dissertation. Degree candidates may concentrate in any subfield except physical anthropology.

Cultural Anthropology

The following courses are required for the Ph.D. program in cultural anthropology:

- ANTH 5334 - History of Anthropology, Part One
- ANTH 5335 - History of Anthropology, Part Two
- ANTH 5344 - Research Methods in Ethnology
- ANTH 6320 - Regional Ethnography
- ANTH 7333 - Data Analysis
- ANTH 7342 - Seminar in Social Organization
- ANTH 7351 - Research Strategies in Ethnology

Additional Requirements

Additional credit hours will pertain to specializations in medical anthropology or globalization and international development.

Archaeology

The following courses are required for the archaeology program:

- ANTH 5334 - History of Anthropology, Part One
- ANTH 5335 - History of Anthropology, Part Two
- ANTH 6300 - World Archaeology
- ANTH 6301 - Principles of Archaeology
- ANTH 6342 - Science and the Human Past
- ANTH 6387 - Advances in the Practice of Archaeology
- ANTH 7313 - Archaeological Theory
- ANTH 7317 - Archaeological Research Strategies

Additional Requirements

Students must take at least one course from each of the first three groups listed below (Groups B, C, and D) and a second course from one of the first two groups (Group B or C), for a total of 12 credit hours. Students can select up to 18 credit hours of electives from the elective listing of archeology courses, 6 credit hours of which can be field school.

Group B

Group B courses include:

- ANTH 6302 - Statistics in Anthropology
- ANTH 6332 - Special Problems in Anthropology
- ANTH 6351 - Research in Anthropology
- ANTH 6352 - Research in Anthropology
- ANTH 6353 - Research in Anthropology
- ANTH 6354 - Research in Anthropology
- ANTH 6355 - Research in Anthropology
- ANTH 6156 - Research in Anthropology
- ANTH 6256 - Research in Anthropology
- ANTH 6383 - Geoarchaeology
- ANTH 6386 - The Archaeology of Gender and Sexuality

Group C

Group C courses include:

- ANTH 5310 - Human Osteology: Biology of the Human Skeleton
- ANTH 6325 - Introduction to Osteology I: Human-Animal Interactions
- ANTH 6333 - Laboratory Methods in Archaeology
- ANTH 6388 - Geospatial Archaeology
- ANTH 7321 - Ceramic Analysis for Archaeologists

Group D

Group D courses include:

- ANTH 6310 - The Prehistory of the American Southwest
- ANTH 6368 - North American Archaeology
- ANTH 6385 - Pacific Island Archaeology
- ANTH 7312 - Archaeology of Mesoamerica
- ANTH 7318 - Late Pleistocene Prehistory of North America

Anthropology, M.A.

The M.A. in anthropology degree is only available to students currently in the Ph.D. program in anthropology at SMU. See the Ph.D. program information for further details on earning the M.A. degree.

Medical Anthropology, M.A.

The M.A. in medical anthropology program is a training program in applied anthropology for students seeking involvement in health care agencies, hospitals, clinics and other health delivery organizations. Candidates must complete 36 credit hours of academic work. The following are required courses: ANTH 5336, ANTH 6343 (for which ANTH 5336 is prerequisite), ANTH 5344 and ANTH 6353. ANTH 7333 - Data Analysis is strongly recommended. The additional hours must be in courses related to applied training in medical anthropology or other courses focusing on health-related anthropological issues.

Courses:

ANTH 5310 - Human Osteology: Biology of the Human Skeleton

Credits: 3
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 - History of Anthropology, Part One

Credits: 3
Analytical history of anthropology from the Classical period to the 20th century. Explains the content and development of theory, method, and interpretation.

ANTH 5335 - History of Anthropology, Part Two

Credits: 3
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 - Health in Cross-Cultural Perspective

Credits: 3
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. Prerequisites: ANTH 3301, ANTH 3306 or approval of instructor.

ANTH 5344 - Research Methods in Ethnology

Credits: 3
Examination of methodologies and techniques appropriate for different types of ethnological research.

ANTH 5381 - Field Methods in Archaeology

Credits: 3
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 5382 - Field Methods in Archaeology

Credits: 3
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 - Field Methods in Archaeology

Credits: 6
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)

ANTH 5981 - Field Methods in Archaeology

Credits: 9
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)

ANTH 6033 - Proseminar on Ethics in Archaeology

Credits: 0
Focuses on ethical issues in current archaeology, including collaboration with descendant communities, study of human remains, repatriation of cultural property, and research collaboration in international contexts.

ANTH 6034 - Teaching Seminar

Credits: 0
Teaching seminar for graduate students.

ANTH 6049 - Graduate Full-Time Status

Credits: 0
For students not yet advanced to candidacy.

ANTH 6156 - Research in Anthropology

Credits: 1
Independent study and research.

ANTH 6256 - Research in Anthropology

Credits: 2
Independent study and research.

ANTH 6300 - World Archaeology

Credits: 3
An archaeological overview of the human trajectory, beginning with the origins of modern humans, and then looking at human interactions with specific environments, and sociocultural development over time.

ANTH 6301 - Principles of Archaeology

Credits: 3
An advanced seminar course dealing with the fundamentals of modern archaeology.

ANTH 6302 - Statistics in Anthropology

Credits: 3
This is an introductory graduate-level course describing the specific use of quantitative and statistical methods in the subdisciplines of archaeology and cultural anthropology.

ANTH 6303 - Political Economy of Health

Credits: 3
Explores topics in health and healing from a political economy perspective. Addresses social and economic factors influencing culture change and health and healing practices within a society. Examines health inequities around the globe.

ANTH 6304 - Migration, Ethnicity, and Nationalism

Credits: 3
Examines three interrelated topics: migration, ethnicity, and nationalism. Focuses on major theoretical positions and on specific ethnographic cases.

ANTH 6305 - Applied Anthropology

Credits: 3
The application of anthropological theories and methods to problems in contemporary societies, including global business, community development, health care issues, agricultural and/or environmental programs, urban planning, tourism projects, and educational policy.

ANTH 6306 - Anthropology and Education

Credits: 3
The anthropological approach to the study of schools and how an anthropological framework can provide insight into the nature of education and classroom interaction.

ANTH 6307 - Global and Public Health

Credits: 3
Overview of issues in international health, with a focus on contributions of anthropology and anthropologists to international public health issues.

ANTH 6308 - Childhood in Cross-Cultural Perspective

Credits: 3
Cross-cultural examination of infancy, childhood, and adolescence. Comparative analysis of the process of enculturation in tribal, peasant, and modern societies.

ANTH 6309 - Human Rights, Indigenous Peoples, and Nation States

Credits: 3
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 6310 - The Prehistory of the American Southwest

Credits: 3
Coverage of current theoretical and research topics in the prehistory of the American Southwest, including early human occupation, sedentariness, community organization, and regional abandonments.

ANTH 6311 - Applied Linguistics

Credits: 3
The use of insights and techniques from linguistics in achieving practical goals, particularly in the field of education, with special emphasis on bilingual education and the teaching of reading.

ANTH 6316 - Advanced Seminar in Ethnology I

Credits: 3
Varying topics.

ANTH 6317 - Advanced Seminar in Ethnology II

Credits: 3
Varying topics.

ANTH 6320 - Regional Ethnography

Credits: 3
Worldwide exploration of ethnography, exploring similarities and differences across time and space. Prepares students to write their own regional papers in preparation for their qualifying exams. Prerequisites: Second- or third-year graduate status or permission of instructor.

ANTH 6323 - Linguistic Analysis

Credits: 3
The techniques needed for linguistic fieldwork: phonological, morphological, and syntactic analysis. Prepares students to work with unwritten languages and in urban speech communities.

ANTH 6325 - Introduction to Osteology I: Human-Animal Interactions

Credits: 3
Explores the evolution of human and animal interactions through a comparative study and analysis of their skeletons. Examines variations in nature's grand design, including the origins of different skeletal features, the evolution of these features over time, and the ways humans influenced the development of many of these features through processes such as targeted hunting and selective breeding. Introduces the science of taphonomy in hands-on learning labs. Students learn how isotopic and biomolecular analyses of animal skeletal remains helps in understanding human-animal interactions.

ANTH 6327 - Gendered Lives and Global Change

Credits: 3
Analyzes globalization and its impacts on gender relations and ideology. Examines the evolving relationship between capitalism and patriarchal social systems, focusing on theories of change in men's and women's lives.

ANTH 6332 - Special Problems in Anthropology

Credits: 3
Varying topics.

ANTH 6333 - Laboratory Methods in Archaeology

Credits: 3
Detailed examination of Old World and New World techniques of artifact classification, with an emphasis on lithic typology.

ANTH 6342 - Science and the Human Past

Credits: 3
Uses of biological and physical sciences in archaeology: site discovery, dating, prehistoric ecology, diet, and technology.

ANTH 6343 - Biomedicine, Culture, and Power

Credits: 3
Examines the epistemology and history of biomedicine, medical bureaucracy, professionalism, medical education, alternative and popular medicine, economics, and health care.

ANTH 6344 - Global Population Processes: Anthropological Perspectives

Credits: 3
Focuses on an anthropological understanding of population processes in a global context. Addresses some of the major global population processes (nuptiality, fertility, mortality, and migration) and examines them within historical and cross-cultural frameworks.

ANTH 6345 - Creating Global and Public Health Impact

Credits: 3
Interdisciplinary approach to creating sustainable impact in global, public, and population health. Taught by engaging discussions, case studies, and helping local health organizations solve difficult institutional and community challenges.

ANTH 6346 - Environmental Anthropology and Development

Credits: 3
Analyzes the processes of globalization from the perspective of environmental anthropology and development.

ANTH 6347 - Seminar in Mesoamerican Ethnology

Credits: 3
Provides an understanding of contemporary Mesoamerica by examining the literature and field data from anthropological and interdisciplinary viewpoints.

ANTH 6351 - Research in Anthropology

Credits: 3

ANTH 6352 - Research in Anthropology

Credits: 3

ANTH 6353 - Research in Anthropology

Credits: 3

ANTH 6354 - Research in Anthropology

Credits: 3

ANTH 6355 - Research in Anthropology

Credits: 3

ANTH 6357 - Statistics in Archeology

Credits: 3
An introductory graduate-level course describing the specific use of quantitative and statistical methods in the subfield of archaeology.

ANTH 6363 - Transforming Local Communities in a Global Age

Credits: 3
Examination of local communities in light of theories about local/global relations. Case studies consider how global issues transform local community practice in the United States and elsewhere.

ANTH 6367 - Comparative Peasant Society

Credits: 3
Examines economic and social institutions of contemporary peasant societies, with special focus on the changes they are undergoing in the 21st century.

ANTH 6368 - North American Archaeology

Credits: 3
Prehistory from the peopling of the New World through initial contacts with European civilization; regional sequences and ecological changes.

ANTH 6377 - The Human Fossil Record

Credits: 3
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.

ANTH 6383 - Geoarchaeology

Credits: 3
An advanced survey of Earth science methods and techniques applied to archaeological research problems.

ANTH 6384 - Global Issues and Development: An Overview

Credits: 3
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.

ANTH 6385 - Pacific Island Archaeology

Credits: 3
Seminar on the use of coastlines, oceans, rivers, marshes, lakes, and islands throughout human history.

ANTH 6386 - The Archaeology of Gender and Sexuality

Credits: 3
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 6387 - Advances in the Practice of Archaeology

Credits: 3
Introduces students to applied and cultural resource management archaeology, including the laws, ethics, procedures, and expectations for the public and private spheres of archaeological practice.

ANTH 6388 - Geospatial Archaeology

Credits: 3
Methods-focused course that covers how archaeologists apply spatial technology in research.

ANTH 6390 - Current Issues in Anthropology

Credits: 3
Seminar on selected topics.

ANTH 6398 - Thesis

Credits: 3

ANTH 6399 - Thesis

Credits: 3

ANTH 7000 - Research

Credits: 0

ANTH 7312 - Archaeology of Mesoamerica

Credits: 3
Seminar on archaeological evidence for prehistoric civilization of Mexico.

ANTH 7313 - Archaeological Theory

Credits: 3
Logical and rational structure of discourse in archaeology. Evaluation of the quality of arguments, propositions, and constructs based on archaeological information.

ANTH 7317 - Archaeological Research Strategies

Credits: 3
An examination of the logistics and strategies used in project development and fieldwork, through project completion. Emphasis is upon individual student problems.

ANTH 7318 - Late Pleistocene Prehistory of North America

Credits: 3
Seminar on the late Pleistocene human occupation of North America from the time of initial colonization, with an emphasis on paleoclimates, paleoenvironments, and human adaptations.

ANTH 7321 - Ceramic Analysis for Archaeologists

Credits: 3
Examination of procedures for analyzing ceramic artifacts, with special attention to problems of style, typology, dating, and provenience.

ANTH 7333 - Data Analysis

Credits: 3
Students explore various methods of data analysis using their own data sets or those of a member of the faculty. Combines lecture and discussion with hands-on applications. Prerequisites: ANTH 5344 and ANTH 6302 (or STAT equivalent) or permission of instructor.

ANTH 7341 - Current Anthropological Literature

Credits: 3
Varied readings of current books and journal articles to explore dimensions of anthropological research and representation as well as how theory and data are integrated into well-formed written arguments.

ANTH 7342 - Seminar in Social Organization

Credits: 3
Intensive investigation of the statics and dynamics of both social organization and social structure in various populations across the globe.

ANTH 7351 - Research Strategies in Ethnology

Credits: 3
Consideration of the theoretical and practical aspects of fieldwork: preparation for research, conduct in the field, and data analysis.

ANTH 8049 - Graduate Full-Time Status

Credits: 0
For students who have passed doctoral qualifying examinations.

ANTH 8100 - Dissertation Research

Credits: 1
Dissertation research, Ph.D. candidates.

ANTH 8105 - Research

Credits: 1

ANTH 8200 - Dissertation Research

Credits: 2
Dissertation research, Ph.D. candidates.

ANTH 8398 - Dissertation Research

Credits: 3
Dissertation research, Ph.D. candidates.

ANTH 8399 - Dissertation Research

Credits: 3
Dissertation research, Ph.D. candidates.

ANTH 8698 - Dissertation Research

Credits: 6
Dissertation research, Ph.D. candidates.

ANTH 8699 - Dissertation Research

Credits: 6
Dissertation research, Ph.D. candidates.

Biological Sciences

Professor William Orr, **Department Chair**

Professors: Santosh R. D'Mello, Richard Jones, Paul Ludden, William Orr, Steven Vik, Pia Vogel
Associate Professors: Robert Harrod, John Wise
Assistant Professor: Adam Norris
Professor of Practice: Bianca Batista
Senior Lecturers: Eva Oberdörster, Teresa Strecker
Research Associate Professor: Svetlana Radyuk

Admission Requirements

In addition to meeting the minimum requirements described under Dedman College: Admission in the General Information section of this catalog, an applicant's preparation should include six credit hours of calculus or statistics, 16 credit hours of chemistry (including eight credit hours of organic chemistry) and at least four advanced courses in biology. Applicants are required to take the GRE graduate school admission test. Three letters of recommendation from individuals who know the candidate well and can speak to the candidate's ability for graduate study should be submitted before the candidate is admitted to the program.

Good Standing

A student must maintain a B average (3.000 on a 4.000 scale) and receive no more than two grades at or below the grade of C. Failure to meet these requirements will result in either probationary status or in dismissal from graduate study. Enrollment in graduate seminar is required of students each term during their first two years in residence. Courses in biochemistry and molecular biology are also required of most beginning students.

Requirements with respect to proficiency in a second language, computer programming and statistical methodology or in other cognate fields will be determined for each candidate by a departmental advisory committee.

Molecular and Cellular Biology, Ph.D.

Admission to graduate study leading to the degree of Doctor of Philosophy does not constitute formal admission to candidacy for the degree. Applicants must meet the requirements set forth in the Degree Requirements section. In addition, to *become a candidate* for the degree, a student must complete successfully all coursework recommended by the departmental advisory committee, must complete successfully a qualifying examination that includes both written and oral sections, and must defend before an appropriate faculty committee a monograph detailing the area of proposed research or a research proposal patterned after a grant proposal.

The candidate for the Ph.D. degree must enroll for the courses necessary to bring the total number of credit hours of graduate coursework to 60 (as many as 24 credit hours may be waived for students with previous graduate work in the life sciences), carry out a research program under supervision of the faculty, prepare a dissertation, successfully defend it before an audience that includes the dissertation committee of the faculty and meet a residence requirement of two years as a full-time student at SMU.

Molecular and Cellular Biology, M.A.

The M.A. in molecular and cellular biology program is designed for students who seek additional training in the biological sciences as a prerequisite to further study in professional schools or for individuals seeking additional training for secondary education.

Candidates must complete 30 credit hours in biological science with at least 12 credit hours from 6000-level courses. A three-term-hour research project is required of all students. At least one year must be spent as a full-time student at SMU.

Molecular and Cellular Biology, M.S.

The M.S. in molecular and cellular biology program is designed primarily for students who are research oriented and who wish to prepare for advanced work at the doctoral level. To become candidates for this degree, students must prepare, present and successfully defend a written research proposal.

In addition, candidates must complete 30 credit hours, including 18 credit hours at the 6000 level and BIOL 6398 - Thesis, BIOL 6399 - Thesis, and conduct a research project, the results of which must be presented orally and defended before an appropriate examining committee of the faculty. At least one year must be spent as a full-time student at SMU.

Molecular and Cellular Biology, B.S./M.S.

This degree program is designed for undergraduate students with a strong interest in a research career. It is an accelerated plan that results in both B.S. and M.S. degrees. Admission into the program is by petition and occurs during the spring term of the second year. Students may take graduate courses in the final year of their baccalaureate degree. Students should contact the department directly for a complete description of the program.

Courses:

Special Courses	
Graduate Seminar	BIOL 6120–6129
Concepts in the Biological Sciences	BIOL 6114, 6214, 6314
Research in the Biological Sciences	BIOL 6170, 6270, 6370–6373, 7000
Thesis	BIOL 6398, 6399
Selected Topics in the Biological Sciences	BIOL 7315, 7316
Full-Time Status	BIOL 8049
Dissertation	BIOL 8398, 8399, 8698, 8699, 8998, 8999

BIOL 5102 - Structural Biology Seminar

Credits: 1
Readings and discussions of the period 1933-1963 when structural molecular biology emerged. Readings include original research articles and historical reviews. Prerequisite: BIOL 5310/CHEM 5310 or consent of instructor.

BIOL 5110 - Biological Chemistry Laboratory

Credits: 1
Two 3-hour labs each week for half a term. Prerequisites: BIOL 1401, BIOL 1402. Prerequisite or corequisite: BIOL 5310/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 - Vertebrate Anatomy Laboratory

Credits: 1
A laboratory course to accompany BIOL 5366/GEOL 5366. Exercises include basic anatomy, dissections, and examinations of fossil skeletons. Corequisite: BIOL 5366/GEOL 5366.

BIOL 5304 - Molecular Biology: Control and Expression of Genetic Information

Credits: 3
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 - Genomics and Bioinformatics

Credits: 3
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 - Biological Chemistry: Macromolecular Structure and Function

Credits: 3
Introduces the structure and function of macromolecules of biological importance, with a focus on nucleic acid and protein structure, enzyme kinetics, and carbohydrate and lipid chemistry. Includes 3 hours of lecture each week. the accompanying laboratory (BIOL 5110) is strongly recommended for biology majors. If CHEM 5310 is counted towards a chemistry major or minor, it cannot be counted towards a biological sciences major or minor. Prerequisites: C- or better in CHEM 3371, CHEM 3372 and junior standing.

BIOL 5311 - Biological Chemistry: Metabolism

Credits: 3
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, CHEM 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 - Physical Biochemistry+

Credits: 3
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 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 - General and Molecular Virology

Credits: 3
Emphasis on the molecular aspects of viral replication and pathogenesis, including the roles of viruses in emerging human infectious diseases, cancer, and bioterrorism. Prerequisites: C- or better in BIOL 3304 and junior standing.

BIOL 5340 - Molecular Basis of Brain Development and Degeneration

Credits: 3
Covers the molecular biology of brain development and degeneration. Interactive course that includes lectures and student presentations of publications describing important research findings related to neurodevelopment and neurodegeneration. Recommended: BIOL 3323. Prerequisites: BIOL 1402, BIOL 3304, BIOL 3350.

BIOL 5344 - Physical Chemistry of Proteins

Credits: 3
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: BIOL 5310/CHEM 5310, CHEM 5383 and CHEM 5384, and instructor approval.

BIOL 5358 - Ecology of Parasitism

Credits: 3
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 - Host-Parasite Relationships

Credits: 3
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 5364 - Endocrine Physiology

Credits: 3
Explores the role of hormones in maintaining physiological balance. Describes cellular actions of hormones in relation to subsequent effects in the whole organism. Prerequisites: C- or better in BIOL 3304 and BIOL 3350.

BIOL 5366 - Vertebrate Anatomy and Origins

Credits: 3
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, BIOL 1402 or GEOL 1308. Corequisite: GEOL 5166.

BIOL 6049 - Graduate Full-Time Status

Credits: 0

BIOL 6111 - Literature of the Biological Sciences

Credits: 1

BIOL 6114 - Concepts in the Biological Sciences

Credits: 1
Discussion of current literature and new concepts in varied areas of the biological sciences.

BIOL 6120 - Graduate Seminar

Credits: 1

BIOL 6121 - Graduate Seminar

Credits: 1

BIOL 6122 - Graduate Seminar

Credits: 1

BIOL 6123 - Graduate Seminar

Credits: 1

BIOL 6124 - Graduate Seminar

Credits: 1

BIOL 6125 - Graduate Seminar

Credits: 1

BIOL 6126 - Graduate Seminar

Credits: 1

BIOL 6127 - Graduate Seminar

Credits: 1

BIOL 6128 - Graduate Seminar

Credits: 1

BIOL 6129 - Graduate Seminar

Credits: 1

BIOL 6170 - Graduate Research

Credits: 1
Research in the biological sciences.

BIOL 6211 - Literature of the Biological Sciences

Credits: 2

BIOL 6214 - Concepts in the Biological Sciences

Credits: 2
Discussion of current literature and new concepts in varied areas of the biological sciences.

BIOL 6222 - Concepts in Molecular Genetic Investigation

Credits: 2
This course instructs students in molecular genetic techniques: DNA isolation, restriction digestion/electrophoresis, PCR, bacterial transformation, plasmid purification, in vitro mutagenesis, genetic testing, and in silico analysis of DNA sequences.

BIOL 6270 - Graduate Research

Credits: 2
Research in the biological sciences.

BIOL 6301 - Biochemistry and Structural Biology

Credits: 3
Introduction to the structure and function of biological macromolecules, with specific emphasis on proteins, enzymes, catalytic mechanisms, and reaction kinetics.

BIOL 6303 - Concepts of Evolution

Credits: 3
A study of the principles of biological evolution. Includes natural selection, adaptation, molecular adaptation, the formation of new species, the fossil record, biogeography, and the principles of classification.

BIOL 6304 - Concepts in Genetic Analysis

Credits: 3
An introduction to the structure, function, and transmission of the genetic material.

BIOL 6306 - Human Physiology

Credits: 3
Homeostatic control mechanisms in vertebrates, focusing on humans. Includes 3 hours of lecture each week. Prerequisite: Graduate standing.

BIOL 6307 - Cell Regulatory Mechanisms

Credits: 3
Mechanisms of cell regulation and control. Includes 3 hours of lecture and discussion each week.

BIOL 6310 - Advanced Cell Biology

Credits: 3
Ultrastructure, molecular architecture, and physiologic function of cells and their organelles. Includes 3 hours of lecture and discussion each week.

BIOL 6311 - Literature of the Biological Sciences

Credits: 3

BIOL 6312 - Proteins: Structure and Function

Credits: 3
Protein structure determination, predictions of secondary and tertiary structure, enzyme mechanisms and design, and current topics in protein research.

BIOL 6314 - Concepts in the Biological Sciences

Credits: 3
Discussion of current literature and new concepts in varied areas of the biological sciences.

BIOL 6315 - Selected Topics I

Credits: 3

BIOL 6316 - Selected Topics II

Credits: 3

BIOL 6319 - Concepts in Immunology

Credits: 3
A comprehensive introduction to the immune system in all its aspects, with emphasis on the latest advances, findings, and discoveries in the field of immunology. Designed for students interested in research.

BIOL 6321 - Molecular Biology of Prokaryotes

Credits: 3
Molecular biology and biochemistry of prokaryotic cells, with emphasis on molecular genetics and regulatory mechanisms. Includes 3 hours of lecture and discussion each week.

BIOL 6322 - Molecular Biology of Eukaryotes

Credits: 3
Structure and function of eukaryotic chromosomes as mediators of gene expression during growth, differentiation, and oncogenesis. Includes 3 hours of lecture and discussion each week.

BIOL 6325 - Cellular Aging

Credits: 3
Nature of age-associated cellular changes in animals. Includes 3 hours of lecture and discussion each week. Prerequisite: Permission of instructor.

BIOL 6331 - Concepts in Developmental Biology

Credits: 3
The molecular genetic mechanisms and pathways that regulate pattern formation in invertebrates and vertebrates. Also, the application of this information in fields such as reproductive medicine, cancer research, human dysmorphology, and immunology.

BIOL 6350 - Advanced Topics in Developmental Genetics

Credits: 3
Genetic aspects of cellular and organismal development. Includes 3 hours of lecture and discussion each week. Prerequisites: BIOL 3304 and permission of instructor.

BIOL 6351 - Concepts in Cell Biology

Credits: 3
The structure and function of eukaryotic cells, with an emphasis on research methods in this field.

BIOL 6360 - Environmental and Human Toxicology

Credits: 3
Introduction to environmental toxicology, with a focus on fate, biotransformation, and biochemical and physiological impacts of pollutants on humans and wildlife. Includes 3 hours of lecture per week.

BIOL 6365 - Cancer Biology

Credits: 3
Emphasis on the molecular features of oncogenesis and human cancers, including carcinogenesis, metastasis, and roles of genetic mutations and chromosomal aberrations during neoplasia.

BIOL 6370 - Research in Biology

Credits: 3
Research in the biological sciences.

BIOL 6371 - Research in Biology

Credits: 3
Research in the biological sciences.

BIOL 6372 - Research in Biology

Credits: 3
Research in the biological sciences.

BIOL 6373 - Research in Biology

Credits: 3
Research in the biological sciences.

BIOL 6375 - Scientific Analysis and Writing: Biological Sciences

Credits: 3
Development of skills necessary for the preparation of grant applications and scientific manuscripts for publication. Includes 3 hours of lecture, discussion, and reading each week.

BIOL 6377 - Concepts in Bio/Nanotechnology

Credits: 3
Introduces state-of-the-art approaches developed to improve the production of food, pharmaceuticals, and vaccines by using microbial, plant, and animal sources. Students research and discuss the implications of bio/nanotechnology in medicine.

BIOL 6380 - Introduction to Research

Credits: 3

BIOL 6381 - Introduction to Research

Credits: 3

BIOL 6398 - Thesis

Credits: 3
Thesis in the biological sciences.

BIOL 6399 - Thesis

Credits: 3
Thesis in the biological sciences.

BIOL 6403 - Concepts in Microbiology

Credits: 4
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.

BIOL 6460 - Environmental and Human Toxicology with Lab

Credits: 4
Introduction to environmental toxicology, with a focus on fate, biotransformation, and biochemical and physiological impacts of pollutants on humans and wildlife. Includes 3 hours of lecture and one 3-hour laboratory each week.

BIOL 7000 - Research in Biology

Credits: 0
Research in the biological sciences.

BIOL 7315 - Selected Topics

Credits: 3
Selected topics in the biological sciences.

BIOL 7316 - Selected Topics

Credits: 3
Selected topics in the biological sciences.

BIOL 8049 - Graduate Full-Time Status

Credits: 0

BIOL 8398 - Dissertation

Credits: 3
Dissertation for the Ph.D. in the biological sciences.

BIOL 8399 - Dissertation

Credits: 3
Dissertation for the Ph.D. in the biological sciences.

BIOL 8698 - Dissertation

Credits: 6
Dissertation for the Ph.D. in the biological sciences.

BIOL 8699 - Dissertation

Credits: 6
Dissertation for the Ph.D. in the biological sciences.

BIOL 8998 - Dissertation

Credits: 9
Dissertation for the Ph.D. in the biological sciences.

BIOL 8999 - Dissertation

Credits: 9
Dissertation for the Ph.D. in the biological sciences.

Chemistry

Professor Elfi Kraka, **Department Chair**

Professors: John Buynak, Werner Horsthemke, Elfi Kraka, Michael Lattman, Mark Schell, David Son, Patty Wisian-Neilson
Associate Professors: Nicolay Tsarevsky, Brian Zoltowski
Assistant Professors: Isaac Garcia-Bosch, Alexander Lippert, Peng Tao
Professor of Practice: Jennifer O'Brien.
Senior Lecturers: Andrea Adams, Helen Babbili.

Admission Requirements

In addition to meeting the requirements described under Dedman College: Admission in the General Information section of this catalog, an applicant must hold a bachelor's degree with a major in chemistry. Applicants are required to take the GRE general graduate school admission test. If English is not the applicant's native language, he or she must also take the TOEFL English language proficiency test and achieve a minimum score of 80 on the Internet-based test. Three letters of recommendation from individuals who have worked with the applicant must be submitted with the application.

Good Standing

A student must maintain a B average (3.000 on a 4.000 scale) and receive no more than two grades below the grade of B-. Failure to meet these requirements will result in either probation and/or dismissal from the graduate program.

Chemistry, Ph.D., Materials/Polymer Track

Primary Core Courses

The student must complete the primary core courses. The student must then complete secondary core courses, depending on the selected track. Additional courses will be selected based on the student's interest and research program and in consultation with the student's adviser and faculty committee. A core course may be substituted with another course with approval of the Department of Chemistry graduate adviser, in consultation with the student's research adviser.

- CHEM 6110 - Chemical Communications: Literature, Writing, and Presentations
- CHEM 6111 - Practical Laboratory Methods
- CHEM 6115 - Theory of the Chemical Bonds
- CHEM 6116 - Introduction to Bioorganic and Medicinal Chemistry
- CHEM 6118 - Overview of Materials Chemistry
- CHEM 6220 - Modern Aspects of Chemistry

Materials/Polymer Track

- CHEM 5333 - Introduction to Polymer Chemistry
- CHEM 6113 - Practical Aspects of Spectroscopy
- CHEM 6114 - Chemical Kinetics

Teaching Practicum

The student will complete at least two terms of teaching practicum to enhance communication skills.

- CHEM 7111 - Teaching Practicum I
- CHEM 7112 - Teaching Practicum II

Current Topics in Research

All students must register for CHEM 6120 - Current Topics in Research, CHEM 6121 - Current Topics in Research for at least the first four terms in the program.

Cumulative Exams

The student will take up to 12 cumulative exams until the required total score is obtained.

Research Paper

At the end of the second year, the student will write a paper and orally describe the progress of his or her research, including a plan for the future research program to be completed for the dissertation. This will be presented to the department and graded by a faculty committee that includes the student's adviser.

- CHEM 7233 - Research Synopsis and Objectives

Research Proposal

At the beginning of the student's third year, the student will write an original research proposal unrelated to the student's research program and will present this to the department and successfully defend this proposal before the faculty committee.

- CHEM 7334 - Proposal Methodology

Candidacy

Upon successful completion of the above items, the student will be admitted to candidacy. The candidate must then:

Graduate Courses

Enroll in a sufficient number of graduate courses to complete at least 48 credit hours.

Presentation

Make a presentation at a professional meeting appropriate to the field of research.

- CHEM 7122 - Professional Meeting Oral Presentation

Research Program

Complete his or her research program under the supervision of the faculty.

Dissertation

Successfully write and orally defend before a faculty committee a dissertation on his or her individual research program.

- CHEM 8698 - Dissertation
- CHEM 8699 - Dissertation

Chemistry, Ph.D., Organic/Medicinal/Bioorganic Track

Primary Core Courses

The student must complete the primary core courses. The student must then complete secondary core courses, depending on the selected track. Additional courses will be selected based on the student's interest and research program and in consultation with the student's adviser and faculty committee. A secondary core course may be substituted with another course with approval of the Department of Chemistry graduate adviser, in consultation with the student's research adviser.

- CHEM 6110 - Chemical Communications: Literature, Writing, and Presentations
- CHEM 6111 - Practical Laboratory Methods
- CHEM 6115 - Theory of the Chemical Bonds
- CHEM 6116 - Introduction to Bioorganic and Medicinal Chemistry
- CHEM 6118 - Overview of Materials Chemistry
- CHEM 6220 - Modern Aspects of Chemistry

Organic/Medicinal/Bioorganic Track

- CHEM 5393 - Advanced Organic Chemistry
- CHEM 6113 - Practical Aspects of Spectroscopy
- CHEM 6119 - Synthetic Strategies

Teaching Practicum

The student will complete at least two terms of teaching practicum to enhance communication skills.

- CHEM 7111 - Teaching Practicum I
- CHEM 7112 - Teaching Practicum II

Current Topics in Research

All students must register for CHEM 6120 - Current Topics in Research, CHEM 6121 - Current Topics in Research for at least the first four terms in the program.

Cumulative Exams

The student will take up to 12 cumulative exams until the required total score is obtained.

Research Paper

At the end of the second year, the student will write a paper and orally describe the progress of his or her research, including a plan for the future research program to be completed for the dissertation. This will be presented to the department and graded by a faculty committee that includes the student's adviser.

- CHEM 7233 - Research Synopsis and Objectives

Research Proposal

At the beginning of the student's third year, the student will write an original research proposal unrelated to the student's research program and will present this to the department and successfully defend this proposal before the faculty committee.

- CHEM 7334 - Proposal Methodology

Candidacy

Upon successful completion of the above items, the student will be admitted to candidacy. The candidate must then:

Graduate Courses

Enroll in a sufficient number of graduate courses to complete at least 48 credit hours.

Presentation

Make a presentation at a professional meeting appropriate to the field of research.

- CHEM 7122 - Professional Meeting Oral Presentation

Research Program

Complete his or her research program under the supervision of the faculty.

Dissertation

Successfully write and orally defend before a faculty committee a dissertation on his or her individual research program.

- CHEM 8698 - Dissertation
- CHEM 8699 - Dissertation

Theoretical and Computational Chemistry, Ph.D.

This is the first dedicated direct bachelors-to-Ph.D. degree program in theoretical and computational chemistry based on a 4 year (66 unit) curriculum. For details see smu.edu/CATCO.

Admission Requirements

In addition to meeting the general requirements described under Dedman College: Admission in the General Information section of this catalog, the program requires GRE test scores. Applicants who do not speak English as their native language are required to supply scores on the TOEFL English language proficiency test or the IELTS English competency test. Three letters of recommendation are required.

Financial aid is available in the form of teaching/research assistantships, which include the waiver of tuition and fees.

Degree Requirements

Core Courses (19 Credit Hours)

- CHEM 6115 - Theory of the Chemical Bonds
- CHEM 6125 - Symmetry and Group Theory in Chemistry
- CHEM 6225 - Chemical Communications in Computational Chemistry
- CHEM 6325 - Introduction to Ab Initio Calculations: Hartree-Fock Theory
- CHEM 6326 - Density Functional Theory - Methodology and Application
- CHEM 6341 - Advanced Models and Concepts in Chemistry
- CHEM 6343 - Advanced Computational Chemistry
- CHEM 6344 - Computer-Assisted Drug Design: Fundamentals and Applications

Elective or Special Topics Courses (6 Credit Hours)

Choose two with the consent of advisor:

- CHEM 6345 - Going Beyond Hartree-Fock: Electron Correlation Methods
- CHEM 6346 - Calculation of Molecular Properties
- CHEM 6348 - Statistical Molecular Thermodynamics
- CSE 5333 - Quantifying the World
- CSE 5345 - Advanced Application Programming

Instructional Training - Mandatory TAship (2 Credit Hours)

- CHEM 7111 - Teaching Practicum I
- CHEM 7112 - Teaching Practicum II

Additional Requirements

- 6 Credit Hours of CHEM 6121 - Current Topics in Research (Pass/Fail)

- CHEM 7122 - Professional Meeting Oral Presentation

Candidacy

For admission to candidacy for the Ph.D. degree, the student must pass the following additional qualifying requirements:

- CHEM 7233 - Research Synopsis and Objectives
- Written summary of already published paper(s) or a summary of research results to be published and evaluated by a faculty committee
- Oral presentation of the summary and discussion of the future plans of the dissertation research program in front of a faculty committee
- Attendance at the CATCO group meetings including oral presentations of research progress in new topics in the field
- Attendance at the annual CATCO workshop (second week in December)
- Training in the use of modern computational chemistry packages and successful completion of all workshop exercises and a workshop exam
- Poster presentation at SMU's annual Research Day

Defense of Thesis

Each student must complete a significant body of research, write a dissertation (CHEM 8698) summarizing the published work (at least 5 peer-refereed articles are recommended), orally present this work before the department, and defend this work in front of a faculty committee.

Note: CATCO seniors meet at the end of each fall and spring semester to evaluate each student's progress. Students will be informed of their progress in writing.

Chemistry, M.S.

Candidates for the M.S. degree in chemistry must complete 30 credit hours of graduate work acceptable to the department, complete and defend a thesis before a committee of faculty and a general audience from the department, and satisfy all general requirements of the graduate faculty.

Courses:

CHEM 5110 - Biological Chemistry Laboratory

Credits: 1
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 - Laboratory Methods in Physical Chemistry

Credits: 1
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 5383.

CHEM 5188 - Advanced Physical Chemistry Laboratory

Credits: 1
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 - Inorganic Synthesis Laboratory

Credits: 1
Introduces advanced techniques and methods used in the synthesis of inorganic compounds. Prerequisite or corequisite: CHEM 5392.

CHEM 5306 - Introduction to Computational Chemistry

Credits: 3
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, CHEM 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 - Special Topics in Chemistry

Credits: 3
Presentation of advanced special topics in chemistry that are at the forefront of current chemical interest. Content varies from term to term.

CHEM 5310 - Biological Chemistry: Macromolecular Structure and Function

Credits: 3
Introduces the structure and function of macromolecules of biological importance, with a focus on nucleic acid and protein structure, enzyme kinetics, and carbohydrate and lipid chemistry. Includes 3 hours of lecture each week. The accompanying laboratory (CHEM 5110) is strongly recommended for chemistry majors. If CHEM 5310 is counted toward a chemistry major or minor, it cannot be counted toward a biological sciences major or minor. Prerequisites: C- or better in CHEM 3371, CHEM 3372 and junior standing.

CHEM 5311 - Biological Chemistry: Metabolism

Credits: 3
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, CHEM 3372.

CHEM 5312 - Physical Biochemistry

Credits: 3
Physical chemistry of macromolecules and biological membranes, with an emphasis on the thermodynamics of solutions. Prerequisites: MATH 1338; CHEM 3372, CHEM 5310. (CHEM 5383 is recommended.)

CHEM 5317 - Introduction to Molecular Modeling and Computer-Assisted Drug Design

Credits: 3
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, CHEM 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 - Understanding Chemistry

Credits: 3
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, CHEM 1304 or permission of instructor.

CHEM 5322 - Introduction to Nanotechnology

Credits: 3
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, CHEM 1304 or permission of instructor.

CHEM 5333 - Introduction to Polymer Chemistry

Credits: 3
This course provides basic information on the synthesis, physical properties, and solution properties of high molecular weight molecules. Plastics, manufacturing, and fabrication of polymers are discussed. Prerequisites: CHEM 3371 and CHEM 3372.

CHEM 5344 - Physical Chemistry of Proteins

Credits: 3
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 CHEM 5384, knowledge of basic biochemistry, and instructor approval.

CHEM 5383 - Physical Chemistry I

Credits: 3
Gas laws; kinetic molecular theory; introduction to thermodynamics, with applications to phase transitions and chemical equilibrium; chemical kinetics. Prerequisites: CHEM 1114 and CHEM 1304, PHYS 1105 and PHYS 1304 or PHYS 1308, and MATH 1337, or permission of instructor.

CHEM 5384 - Physical Chemistry II

Credits: 3
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 - Advanced Inorganic Chemistry

Credits: 3
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 - Advanced Organic Chemistry

Credits: 3
Includes 3 hours of lecture each week. Prerequisite: CHEM 3372.

CHEM 5396 - Advanced Physical Chemistry

Credits: 3
Includes 3 hours of lecture each week. Prerequisite: Permission of instructor.

CHEM 5398 - Medicinal Chemistry

Credits: 3
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, CHEM 3372.

CHEM 5486 - Instrumental Analysis

Credits: 4
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.

CHEM 6000 - Research

Credits: 0
For students who hold fellowships but who are not enrolled in any credit hour courses. No tuition.

CHEM 6049 - Graduate Full-Time Status

Credits: 0
Allows graduate students who have finished the required number of hours for the M.S. or Ph.D. degree to have access to library and computer facilities on campus. The student is expected to be writing his/her research dissertation.

CHEM 6110 - Chemical Communications: Literature, Writing, and Presentations

Credits: 1
Fundamentals of literature searching, scientific writing, oral and poster presentations, and research notebooks.

CHEM 6111 - Practical Laboratory Methods

Credits: 1
Describes the theory behind and practice of laboratory techniques necessary to perform advanced synthetic chemical research.

CHEM 6112 - Advanced Stereochemistry

Credits: 1
Advanced study in molecular geometry and relationships in space between atoms and groups in a molecule.

CHEM 6113 - Practical Aspects of Spectroscopy

Credits: 1
Basic theory and practical applications of spectroscopy for chemists.

CHEM 6114 - Chemical Kinetics

Credits: 1
Kinetics of gas-phase, surface, condensed-phase, polymer, photochemical, and enzyme reactions.

CHEM 6115 - Theory of the Chemical Bonds

Credits: 1
Covers different descriptions of covalent bonding, including the ability to predict bonding structures in molecules and methods to test these predictions.

CHEM 6116 - Introduction to Bioorganic and Medicinal Chemistry

Credits: 1
Protein structures, enzymes and receptors as drug targets, enzyme inhibitors, design of agonists, and design of antagonists.

CHEM 6117 - Chemical Periodicity: Reactivity and Structural Trends in Inorganic and Organometallic Compounds

Credits: 1
Explores periodic or recurring trends of the chemical elements in terms of their properties and chemical behavior.

CHEM 6118 - Overview of Materials Chemistry

Credits: 1
Surveys the synthesis, characterization, and applications of ceramics and glasses, polymers, metals, nanomaterials, semiconductors and conductors, and biomaterials.

CHEM 6119 - Synthetic Strategies

Credits: 1
Formation of the carbon skeleton, organometallic reagents and coupling reactions, protecting groups and chemical compatibility, and convergent synthesis.

CHEM 6120 - Current Topics in Research

Credits: 1
Review of current research as presented by visiting lecturers.

CHEM 6121 - Current Topics in Research

Credits: 1
Review of current research as presented by visiting lecturers.

CHEM 6125 - Symmetry and Group Theory in Chemistry

Credits: 1
Discusses symmetry: from how it is found in the macroscopic world to the specific application of symmetry and group theory in the microscopic world, including its fundamental role in the description of molecules via spectroscopic measurements and in quantum chemical calculations.

CHEM 6130 - Mechanisms in Organic, Organometallic, and Bioorganic Chemistry

Credits: 1
Fundamental mechanistic concepts in bioorganic, materials, medicinal, organic, and organometallic chemistry; emphasizes mechanistic similarities of seemingly different types of reactions. Prerequisite: Passing grade on entrance exam covering CHEM 3371 and 3372 or equivalent.

CHEM 6220 - Modern Aspects of Chemistry

Credits: 2
Overview of current important topics in chemistry and the relationship to research programs in the department. Prerequisite: Official admission to graduate program.

CHEM 6225 - Chemical Communications in Computational Chemistry

Credits: 2
Research in computational and theoretical chemistry including SciFinder searches, literature studies, professional data management, visualization of data, writing manuscripts using LaTex, the design of computational chemistry posters and talks, and the preparation of professional resumes. Research ethics will be discussed.

CHEM 6308 - Special Topics

Credits: 3
Presentation of advanced special topics in chemistry that are at the forefront of current chemical interest. Content varies from term to term.

CHEM 6312 - Theory of Organic Chemistry

Credits: 3
Advanced topics in organic chemistry, with a focus on physical organic concepts, mechanisms, and modern synthetic methodologies. Prerequisites: CHEM 3371, 3372.

CHEM 6325 - Introduction to Ab Initio Calculations: Hartree-Fock Theory

Credits: 3
Quantum chemical investigations of the ab initio type normally start with a Hartree-Fock calculation. Students interested in

quantum or computational chemistry have to acquire basic knowledge in Hartree-Fock theory before starting with the more advanced electron correlation theories. This course provides an introduction into Hartree-Fock theory.

CHEM 6326 - Density Functional Theory - Methodology and Application

Credits: 3
Comprehensive overview of modern Density Functional Theory, including its advantages and pitfalls, combined with in-depth training about how to apply DFT calculations to pending chemical/biochemical problems. Prerequisite: CHEM 6343 or equivalent, or permission of the instructor.

CHEM 6331 - Theory of Analytical Chemistry

Credits: 3
The theory, operations, and applications of instrumentation used in the modern chemical laboratory. Includes 2 hours of lecture and 4 hours of laboratory per week.

CHEM 6333 - Fundamental Aspects and Applications of Polymerization Techniques

Credits: 3
Provides detailed information about the fundamental aspects (kinetics, mechanism) and application of all important polymerization techniques used to prepare well-defined macromolecules, with special emphasis on controlled/living polymerizations.

CHEM 6341 - Advanced Models and Concepts in Chemistry

Credits: 3
Advanced models and concepts will be presented to understand the structure, stability, and reactivity of molecules in organic, inorganic, and polymer chemistry.

CHEM 6342 - Nanotechnology: Fundamentals and Applications

Credits: 3
Covers the fundamentals of nanotechnology, which is an interdisciplinary field that includes - among other nanosciences - nanoengineering and nanomedicine. Presents the applications of nanotechnology in a variety of disciplines.

CHEM 6343 - Advanced Computational Chemistry

Credits: 3
Provides in-depth training on how to use the computer as an efficient tool to solve chemical problems. Uses major quantum chemical packages. Designed as an interdisciplinary course for all graduate students from chemistry, biochemistry, medicinal chemistry, biology, and engineering who want a thorough overview of methods and techniques applied in computational chemistry. Prerequisite: Permission of instructor.

CHEM 6344 - Computer-Assisted Drug Design: Fundamentals and Applications

Credits: 3
Covers the fundamentals of CADD, recent and important developments in CADD methodologies, and their applications, including drug discovery, virtual screening, de novo design, and neutral networks.

CHEM 6345 - Going Beyond Hartree-Fock: Electron Correlation Methods

Credits: 3
The broad spectrum of current high-level electron correlation methods will be discussed and applied to challenging problems using a variety of quantum chemical packages installed on SMU's high performance computers. Prerequisites: CHEM 6343 and CHEM 6325 or equivalent, or permission of the instructor.

CHEM 6346 - Calculation of Molecular Properties

Credits: 3
Provides the expert knowledge necessary to choose the best method available for the calculation of a certain molecular property. Prerequisite: CHEM 6343 or equivalent, or permission of the instructor.

CHEM 6348 - Statistical Molecular Thermodynamics

Credits: 3
Introduces fundamental theories and applications of statistical mechanics and thermodynamics at the molecular level, needed to perform cutting-edge research in modern Theoretical and Computational Chemistry and Biology. Prerequisite: CHEM 5384 or permission from the instructor.

CHEM 6351 - Methods and Techniques of Research

Credits: 3
The student is introduced to experimental methods that are sufficiently advanced that they can be employed at the research level in a variety of chemical fields. In learning these methods the students will be required to master the operation of sophisticated equipment. This equipment is associated with refined experimental techniques that include infrared spectroscopy, nuclear magnetic resonance, and atomic spectroscopy.

CHEM 6352 - Methods and Techniques of Research

Credits: 3
The student is introduced to experimental methods that are sufficiently advanced that they can be employed at the research level in a variety of chemical fields. In learning these methods the students will be required to master the operation of sophisticated equipment. This equipment is associated with refined experimental techniques that include infrared spectroscopy, nuclear magnetic resonance, and atomic spectroscopy.

CHEM 6397 - Biotransformation and Biocatalysis

Credits: 3
Covers the history, application, and current trends of biotransformations and biocatalysis, with a focus on how biocatalysts are developed and used in pharmaceutical research.

CHEM 6398 - Thesis

Credits: 3
The student is introduced to experimental methods that are sufficiently advanced that they can be employed at the research level in a variety of chemical fields. In learning these methods the students will be required to master the operation of sophisticated equipment. This equipment is associated with refined experimental techniques that include infrared spectroscopy, nuclear magnetic resonance, and atomic spectroscopy.

CHEM 6399 - Thesis

Credits: 3
The student is introduced to experimental methods that are sufficiently advanced that they can be employed at the research level in a variety of chemical fields. In learning these methods the students will be required to master the operation of sophisticated equipment. This equipment is associated with refined experimental techniques that include infrared spectroscopy, nuclear magnetic resonance, and atomic spectroscopy.

CHEM 7101 - Independent Study

Credits: 1
Readings in the chemical literature on current research topics related to the student's area of research.

CHEM 7108 - Special Topics

Credits: 1
Presentation of contemporary topics in chemistry. Content varies from term to term.

CHEM 7111 - Teaching Practicum I

Credits: 1
The student will develop communication skills and will gain experience in laboratory and classroom teaching as well as one-on-one instruction.

CHEM 7112 - Teaching Practicum II

Credits: 1
The student develops communication skills and gains experience in laboratory and classroom teaching as well as one-on-one instruction. Prerequisite: CHEM 7111.

CHEM 7121 - Departmental Presentation

Credits: 1
The student will present a departmental seminar (50 to 60 minutes) on a topic, generally in bioorganic or material chemistry, that is not related to his/her research.

CHEM 7122 - Professional Meeting Oral Presentation

Credits: 1
The student develops communication and presentation skills to include giving an oral presentation on his/her research project at an appropriate professional meeting. Prerequisites: CHEM 6110, CHEM 7121.

CHEM 7151 - Research

Credits: 1
Laboratory research.

CHEM 7201 - Advanced Independent Study

Credits: 2
Readings in the chemical literature on current research topics related to the student's research.

CHEM 7208 - Special Topics

Credits: 2
Presentation of contemporary topics in chemistry. Content varies from term to term.

CHEM 7233 - Research Synopsis and Objectives

Credits: 2
The student presents research results and outlines a plan for the dissertation research with a clear understanding of prior work and literature precedence for the proposed work. Prerequisites: CHEM 6110, CHEM 6111, CHEM 6112, CHEM 6113, CHEM 6114, CHEM 6115, CHEM 6116, CHEM 6117, CHEM 6118, CHEM 6119, and CHEM 7121 or higher.

CHEM 7251 - Research

Credits: 2
Laboratory research.

CHEM 7301 - Advanced Independent Study

Credits: 3
Readings in the chemical literature on current research topics related to the student's research.

CHEM 7308 - Special Topics

Credits: 3
Presentation of contemporary topics on chemistry. Content varies from term to term.

CHEM 7334 - Proposal Methodology

Credits: 3
The student conceives and fully develops an original research idea and writes a proposal on this work. The proposal topic must be unrelated to the student's dissertation research topic. The proposal is presented to and defended before a committee of faculty. The student is judged on the novelty of the idea and the development of a sound and feasible method. Prerequisites: CHEM 6110, CHEM 6111, CHEM 6112, CHEM 6113, CHEM 6114, CHEM 6115, CHEM 6116, CHEM 6117, CHEM 6118, CHEM 6119, CHEM 7121, CHEM 7233.

CHEM 7351 - Research

Credits: 3
Laboratory research.

CHEM 8049 - Graduate Full-Time Status

Credits: 0
Graduate full-time status at the Ph.D. level.

CHEM 8698 - Dissertation

Credits: 6

CHEM 8699 - Dissertation

Credits: 6

Data Science

Associate Professor Monnie McGee, **Co-executive Director**

Professor: Lynne Stokes
Associate Professor: Monnie McGee

The Master of Science in Data Science degree is an interdisciplinary program that combines courses from SMU's Dedman College, Lyle School of Engineering and Meadows School of the Arts. The program is delivered online to provide access to working professionals and students located around the world. The program gives students who are prospective data scientists an enriched background in computer science, statistics, strategic behavior and data visualization. Graduates will be able to form relevant questions, collect and analyze appropriate data, and make informed decisions regarding the question of interest. Course instruction includes oral and written communication skills and the basics of database structure, including building, maintaining and securing databases. The website (www.datascience.smu.edu) has additional information, and the academic calendar is at www.smu.edu/registrar ("Academic Calendars and Course Catalogs" link).

Admission Requirements

Applicants to the M.S.D.S. program must hold a bachelor's degree in statistics, applied mathematics, computer science, engineering or other quantitative discipline. An application fee is required. Additional requirements are as follows:

- A basic understanding of a programming language (R, JAVA, C++, Python or similar programming language).
- Calculus I and II. Business calculus does not meet this requirement.
- A completed online application, with the following:
    - At least one and up to three letters of recommendation.
    - A statement of purpose.
    - All official academic transcripts.
    - An official GRE graduate school admission test score, which may be waived if a prospective student has five or more years of industry-related experience or has earned a master's degree in a related field.
- A satisfactory TOEFL English language proficiency test score (minimum 90) is required for an applicant whose native language is not English.

Programs

Data Science, M.S.D.S.

Degree Requirements

The minimum credit hour requirement for the M.S. in Data Science degree is 33.5 term credit hours. These credit hours include 30 credit hours of coursework, a 2 credit hour capstone two course sequence, and a 1.5 credit hour conference immersion experience. All work attempted for the master's degree must be completed with an overall GPA of 3.000 or better. A grade of D or F obtained by a student will be calculated in his or her overall GPA, but cannot be applied to his or her degree. A student who fails to achieve a minimum 3.000 GPA may be required to take additional courses to bring his or her GPA to 3.000 or better or may be asked to discontinue study in the program. **Note:** Students may have additional expenses related to the capstone and campus immersion courses.

Requirements for the Degree

Required Data Science Courses (27 Credit Hours)

- MSDS 6306 - Doing Data Science
- MSDS 6370 - Statistical Sampling
- MSDS 6371 - Statistical Foundations for Data Science
- MSDS 6372 - Applied Statistics: Inference and Modeling
- MSDS 6390 - Visualization of Information
- MSDS 7330 - File Organization and Database Management
- MSDS 7331 - Data Mining
- MSDS 7333 - Quantifying the World
- MSDS 7349 - Data and Network Security

Data Science Courses (3 Credit Hours)

Choose one:

- MSDS 6383 - Econometrics
- MSDS 6391 - Visualization of Information and Creative Coding II

Required Capstone Project and Conference Immersion (3.5 Credit Hours)

- MSDS 6110 - Immersion
- MSDS 6120 - Capstone 1A
- MSDS 6130 - Capstone 1B

Total: 33.5 Credit Hours

Courses:

MSDS 6110 - Immersion

Credits: 1.5
A three (plus) day immersion experience on SMU's Dallas campus. Students collaborate on group projects, attend information and networking sessions, and meet program faculty and leadership. Required for M.S. in data science students.

MSDS 6120 - Capstone 1A

Credits: 1
Students will spend the first of two consecutive full terms working on a collaborative group project. During the first of the two terms, students will begin their work on the project and are expected to complete at least half the project by the end of the term. Students will develop and work on their projects under faculty supervision.

MSDS 6130 - Capstone 1B

Credits: 1
Students will spend the second of two consecutive full terms working on their collaborative group project from Capstone 1A. Students will then be required to present their completed projects during the on-campus immersion, typically held near week 11 of the term.

MSDS 6210 - Immersion

Credits: 2
A three (plus) day immersion experience on SMU's Dallas campus. Students collaborate on group projects, attend information and networking sessions, and meet program faculty and leadership. Required for M.S. in data science students.

MSDS 6306 - Doing Data Science

Credits: 3
An introduction to methods, concepts, and current practice in the growing field of data science, including statistical inference, algorithms, financial modeling, data visualization, social networks, and data engineering. Reserved for students in the M.S.D.S. program.

MSDS 6370 - Statistical Sampling

Credits: 3
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. Reserved for students in the M.S.D.S. program.

MSDS 6371 - Statistical Foundations for Data Science

Credits: 3
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. Reserved for students in the M.S.D.S. program.

MSDS 6372 - Applied Statistics: Inference and Modeling

Credits: 3
Extension of techniques taught in MSDS 6371 to multivariate data, including multiple linear regression, multivariate analysis of variance, canonical regression, and principal components analysis. Emphasizes interpretation of results from analysis with SAS. Reserved for students in the M.S.D.S. program.

MSDS 6383 - Econometrics

Credits: 3
Examines the practical applications of the use of Data Sciences in the application of Econometrics and Quantitative Finance. Develops a foundation in modern Managerial Economic theory with a focus on application to real world solutions. The primary learning framework is based on utilization of real and simulated data sets for business and economic situations. Students become very familiar with the use of R in the creation of data analysis combining financial theory and statistical analysis including portfolio theory, CAPM, and econometric modeling. Prerequisite: MSDS 7331.

MSDS 6390 - Visualization of Information

Credits: 3
Introduces data visualization and creative coding utilizing the Processing programming language. Explores visual and information design principles, primarily though 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. Reserved for students in the M.S.D.S. program.

MSDS 6391 - Visualization of Information and Creative Coding II

Credits: 3
Extends the study of creative coding and visualization across numerous languages, specialized libraries/API's, and distribution platforms. Students build data-driven visualizations in Java, C++, and JavaScript, including the P5.js, three.js, and d3.js libraries. Prerequisite: MSDS 6390.

MSDS 7330 - File Organization and Database Management

Credits: 3
A survey of current database approaches and systems, and the principles of design and use of these systems. Covers query language design and implementation constraints, and applications of large databases. Includes a survey of file structures and access techniques. Also, the use of a relational database management system to implement a database design project. Reserved for students in the M.S.D.S. program.

MSDS 7331 - Data Mining

Credits: 3
Introduces data mining topics, with an emphasis on understanding concepts through an applied, hands-on approach. Includes other related topics such as data warehousing and dimensional modeling. All material covered is reinforced through hands-on implementation exercises. Reserved for students in the M.S.D.S. program.

MSDS 7333 - Quantifying the World

Credits: 3
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. Reserved for students in the M.S.D.S. program.

MSDS 7346 - Cloud Computing

Credits: 3
Introduces students to exponentially growing Cloud Computing technologies with an emphasis on the fundamental Cloud topics such as Virtualization, IaaS, PaaS, and DevOps. Includes a high-level overview of NoSQL. Covers big data topics such as Hadoop, MapReduce, Pig, Hive, and Spark. Intended to be hands-on with students working with current technologies that make Cloud possible. Prerequisite: MSDS 6306 or instructor permission.

MSDS 7349 - Data and Network Security

Credits: 3
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. Reserved for students in the M.S.D.S. program.

MSDS 8310 - Above and Beyond

Credits: 3
A research oriented, independent study experience. Prerequisite: Permission of the program director.

Earth Sciences

Professor Robert T. Gregory, **Department Chair**

Professors: Robert T. Gregory, Matthew Hornbach, Bonnie Jacobs, Louis Jacobs, Zhong Lu, Jim Quick, Brian Stump, Neil Tabor, Crayton Yapp
Associate Professors: Heather DeShon, Maria Beatrice Magnani
Assistant Professor: Rita Economos
Research Professors: Steve Bergman, Steven May, Mihan McKenna, John Wagner, Dale A. Winkler
Research Associate Professor: H. Troy Stuckey
Research Assistant Professors: Anthony Fiorillo, Peter Malin, Matthew Siegler, Alisa J. Winkler, Pierre Zippi

Geology or Geophysics Admission Requirements

The minimum requirements for admission to graduate study in the Earth sciences are those in effect for admission to the graduate programs of SMU. The candidate is required to submit scores on a recent GRE graduate school admission test. International students applying from countries where English is not the native language are required to submit scores on the TOEFL English language proficiency examination.

Geology, Ph.D.

Degree Requirements

To obtain the Ph.D. degree in geology or geophysics, the student must have:

1. Successfully passed a general qualifying examination.
2. Completed a minimum of three years of graduate academic work, at least two of which are in full-time residence on the SMU campus or at a research facility approved by the departmental faculty and the dean of graduate studies.
3. Written and made a successful public defense of a dissertation. Additional general requirements for the Ph.D. degree are outlined in the Degree Requirements section of this catalog.
4. Satisfied all curricular requirements as specified by the departmental faculty, including:

Graduate Core Courses

- GEOL 5320 - Dynamic Earth I
- GEOL 6107 - Departmental Seminar
- GEOL 6321 - Dynamic Earth II

Geophysics, Ph.D.

Degree Requirements

To obtain the Ph.D. degree in geophysics, the student must have:

1. Successfully passed a general qualifying examination.
2. Completed a minimum of three years of graduate academic work, at least two of which are in full-time residence on the SMU campus or at a research facility approved by the departmental faculty and the dean of graduate studies.

3. Written and made a successful public defense of a dissertation. Additional general requirements for the Ph.D. degree are outlined in the Degree Requirements section of this catalog.
4. Satisfied all curricular requirements as specified by the departmental faculty, including:

Graduate Core Courses

- GEOL 5320 - Dynamic Earth I
- GEOL 6107 - Departmental Seminar
- GEOL 6321 - Dynamic Earth II

Applied Geophysics, M.S.

Degree Requirements

This degree plan is specifically developed for students interested in a career in exploration in the petroleum industry. To obtain the M.S. degree in applied geophysics, the student must have:

1. Successfully completed a minimum of 33 credit hours of graduate study as specified in the curriculum or acceptable to the departmental faculty.
2. Passed a general qualifying examination.
3. Completed and successfully defended a project related to some facet of applied geophysics.

Geology, M.S.

Degree Requirements

To obtain the M.S. degree in geology, the student must have:

1. Passed a general qualifying examination.
2. Written and successfully defended a thesis.
3. Successfully completed a minimum of 30 credit hours of graduate study acceptable to the departmental faculty, including:

Graduate Core Courses

- GEOL 5320 - Dynamic Earth I
- GEOL 6107 - Departmental Seminar
- GEOL 6321 - Dynamic Earth II

Thesis Courses

- GEOL 6398 - Thesis
- GEOL 6399 - Thesis

Geophysics, M.S.

Degree Requirements

To obtain the M.S. degree in geophysics, the student must have:

1. Passed a general qualifying examination.
2. Written and successfully defended a thesis.
3. Successfully completed a minimum of 30 credit hours of graduate study acceptable to the departmental faculty, including:

Graduate Core Courses

- GEOL 5320 - Dynamic Earth I
- GEOL 6107 - Departmental Seminar
- GEOL 6321 - Dynamic Earth II

Thesis Courses

- GEOL 6398 - Thesis
- GEOL 6399 - Thesis

Courses:

GEOL 5110 - Independent Study in Geoscience

Credits: 1
Independent study of a selected topic in geoscience. Individual study under direction of a faculty member allowed for GEOL 5110 or GEOL 5210; group projects allowed for GEOL 5310.

GEOL 5166 - Vertebrate Anatomy Laboratory

Credits: 1
A laboratory course to accompany BIOL 5366/GEOL 5366. Exercises include basic anatomy, dissections, and examinations of fossil skeletons. Corequisite: GEOL 5366/BIOL 5366

GEOL 5199 - Special Topics in Earth Sciences

Credits: 1
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 - Independent Study in Geoscience

Credits: 2
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 - Special Topics in Earth Sciences

Credits: 2
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 - Independent Study in Geoscience

Credits: 3
Independent study of a selected topic in geoscience. Individual study under direction of a faculty member allowed for GEOL 5110 or GEOL 5210; group projects allowed for GEOL 5310.

GEOL 5320 - Dynamic Earth I

Credits: 3
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 5356 - Principles and Application of Remote Sensing

Credits: 3
Covers the principals of remote sensing, remote sensing collection systems, basic remote sensing image analysis and processing techniques, and the applications of remote sensing to geologic studies. Prerequisites: PHYS 1304 and MATH 1338, or permission of instructor.

GEOL 5360 - Electron Microprobe Analysis

Credits: 3
Design and operation of the instrument. Correction procedures and computer automation. Analytical techniques and mineral chemistry.

GEOL 5366 - Vertebrate Anatomy and Origins

Credits: 3
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, BIOL 1402 and GEOL 1308, or permission of instructor. The accompanying laboratory, BIOL 5166, is strongly recommended.

GEOL 5368 - Paleoecology

Credits: 3
Interactions between the living world and the Earth's changing environments through geologic time. Prerequisite: GEOL 3369 or permission of instructor.

GEOL 5369 - Introduction to Palynology

Credits: 3
Provides an overview of palynology. Taphonomic processes and applications in paleoecology, paleoclimatology, archeology, plant taxonomy, and plant evolution are considered. No prerequisites. One field trip.

GEOL 5372 - Principles of Sedimentation

Credits: 3
Study of the origin and evolution of sedimentary rocks in terms of interpretation of marine and non-marine sedimentary record.

GEOL 5374 - Petroleum Geology

Credits: 3
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 - Principles of Stratigraphy

Credits: 3
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 - Hydrogeology

Credits: 3
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 - Geochemistry

Credits: 3
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 - Theory of Digital Data Processing in Geophysics

Credits: 3
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 - Potential Field Methods in Geophysical Exploration

Credits: 3
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 - Introduction to Seismology

Credits: 3
Basic principles of seismology. Prerequisites: MATH 2343 and permission of instructor.

GEOL 5394 - Geophysical Problem-Solving

Credits: 3
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, 3304; knowledge of a programming language.

GEOL 5399 - Special Topics in Earth Sciences

Credits: 3
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 - Soils and Paleosols

Credits: 4
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, GEOL 1304, 1113, 1114, 3351. Prerequisites: One from GEOL 1301, 1305, 1307, 1308, 1313, 1315; and GEOL 3343, 3451, 3452, 3472.

GEOL 6049 - Graduate Full-Time Status

Credits: 0
Full-time status for graduate students pursuing the master's degree.

GEOL 6107 - Departmental Seminar

Credits: 1
Students attend and critically evaluate departmental lectures given by visiting scientists, visiting engineers, faculty, and fellow students. Required of all graduate students who have not yet passed their degree qualifying exam.

GEOL 6110 - Independent Study in Geoscience

Credits: 1
Independent study of a selected topic in geoscience. Individual study under direction of a faculty member allowed for GEOL 6110 or GEOL 6210; group projects allowed for GEOL 6310. Prerequisite: Permission of instructor.

GEOL 6209 - Special Topics in Geological Sciences

Credits: 2
Study of a narrowly defined topic in geological sciences.

GEOL 6210 - Independent Study in Geoscience

Credits: 2
Independent study of a selected topic in geoscience. Individual study under direction of a faculty member allowed for GEOL 6110 or 6210; group projects allowed for GEOL 6310. Prerequisite: Permission of instructor.

GEOL 6302 - Sedimentology: Clastic Environments

Credits: 3
Description and classification of terrigenous clastic sediments and sedimentary structures. Principal emphasis on analysis of modern and ancient siliciclastic depositional systems.

GEOL 6309 - Special Topics in Geological Sciences

Credits: 3
Study of a narrowly defined topic in geological sciences.

GEOL 6310 - Independent Study in Geoscience

Credits: 3
Independent study of a selected topic in geoscience. Individual study under direction of a faculty member allowed for GEOL 6110 or GEOL 6210; group projects allowed for GEOL 6310. Prerequisite: Permission of instructor.

GEOL 6321 - Dynamic Earth II

Credits: 3
Description of modern methods of measuring geologic time and the establishment of isotopic, biostratigraphic, paleomagnetic, and geochemical stratigraphies. Examination of sedimentary, biological, and geochemical cycles (such as sea-level fluctuations, climatic variations, evolutionary patterns, atmospheric-oceanic compositions, and continental positions) and their influence on the Earth's sedimentary record. A list of required prerequisite readings is available from the departmental office.

GEOL 6338 - Thermodynamics of Geological Processes

Credits: 3
Introduction to theoretical aspects of thermodynamics as they are applied in the Earth sciences to igneous, metamorphic, and sedimentary processes. Emphasis on fundamental relationships in thermodynamics and mineral equilibria in aqueous solutions, solid rocks, silicate melts, and isotopic systems.

GEOL 6340 - Structural Interpretation of Seismic Reflection Profiles

Credits: 3
The practical application of reflection seismic method to tectonic analysis of deformed belts and sedimentary basins. Includes case studies from around the world, with emphasis on integration of seismic reflection data with surface and subsurface

geological and/or geophysical information. Also, the use of restorable structural sections. Introduces the basics of seismic processing in the framework of interpretation problems. Designed for geology and geophysics students. Prerequisite: GEOL 5320 or permission of instructor.

GEOL 6341 - Basin Analysis

Credits: 3
Description of modes of origin of sedimentary basins, their thermal and subsidence history, and their patterns of sediment infill. Broad examination of modern concepts of thermal modelling, stratigraphy, sedimentology, and hydrocarbon generation. Offered only upon request.

GEOL 6363 - Environmental Geology Seminar

Credits: 3
Timely geoscience-based environmental problems and scientific, environmental, political, economic, legal, and social aspects of potential solutions. Includes selected readings, seminars, guest speakers, and research projects.

GEOL 6371 - Isotope Geochemistry and Geochronology

Credits: 3
Geochemistry of radiogenic and stable isotopes; evolution of Pb, Sr, and Nd isotope systems; application to problems in magma genesis, geothermal studies, tectonophysics, and geochronology; and application of isotopes as natural tracers.

GEOL 6375 - Theory of Heat Flow and Diffusion

Credits: 3
Heat transfer theory applied to the study of the thermal field of the Earth and terrestrial planets. Convection and conduction in geologic systems. Geochemistry of the heat-producing elements uranium, thorium, and potassium and their interrelationship with terrestrial heat flow.

GEOL 6376 - Application of Geophysical Techniques of Geothermal Exploration

Credits: 3
A detailed study of geophysical techniques with applications to geothermal exploration. Prerequisite: GEOL 6375 or permission of instructor.

GEOL 6380 - Geophysical Inverse Theory

Credits: 3
Theoretical development and application of inversion theory to problems in geophysics. Prerequisite: Permission of instructor.

GEOL 6388 - Geodynamics

Credits: 3
Advanced course that explores physics-based exposition of solid-Earth geophysical processes, including elasticity, flexure, heat transfer, gravity, fluid mechanics, rock rheology, faulting, and flows in porous media, using statistical methods. Prerequisite: Permission of the instructor.

GEOL 6390 - Principles and Application of Radar Interferometry

Credits: 3
An advanced radar remote sensing course covering the principles of radar interferometry, InSAR processing and interpretation, advanced InSAR concepts, and InSAR applications to natural hazards. Prerequisite: Permission of instructor.

GEOL 6394 - Theoretical Seismology I

Credits: 3
Continuum mechanics including viscoelastic materials, reciprocity, representation theorem, moment tensors, kinematic and dynamic source models, Green's functions, and matrix methods, including Haskell-Thompson. Prerequisite: GEOL 5392 or permission of instructor.

GEOL 6395 - Mathematical Methods of Geophysics and Theoretical Seismology II

Credits: 3
Synthetic seismograms for layered materials, transform methods in the solution of the wave equation, Cagniard-de Hoop and the generalized ray solution, first-motion approximation, WKBJ approximation, reflectivity, and full wave theory. Prerequisite: GEOL 6394 or permission of instructor.

GEOL 6396 - Exploration Seismology

Credits: 3
Covers the theoretical tools necessary for processing and interpreting seismic reflection and refraction surveys, and develops exploration sources and receivers. Includes processing techniques such as sampling theory, demultiplexing, normal move-out corrections, stacking, deconvolution, and migration. Also, the practical application of techniques to observational data. Prerequisites: GEOL 5389, GEOL 5392.

GEOL 6398 - Thesis

Credits: 3
Research and writing of the thesis with guidance from the student's thesis director.

GEOL 6399 - Thesis

Credits: 3
Research and writing of the thesis with guidance from the student's thesis director.

GEOL 7000 - Research

Credits: 0
Intensive research on a narrowly defined topic in geology.

GEOL 7100 - Research

Credits: 1
Intensive research on a narrowly defined topic in geology.

GEOL 7155 - Seminar in Geophysics

Credits: 1
Seminar on selected topics in geophysics; subject matter varies term to term.

GEOL 7158 - Seminar in Sedimentology

Credits: 1
Seminar on selected topics in sedimentology; subject matter varies term to term.

GEOL 7201 - Research in Sedimentology

Credits: 2
Research project in a selected area of sedimentology.

GEOL 7203 - Research in Stratigraphy

Credits: 2
Research project in a selected area of stratigraphy.

GEOL 7205 - Research in Paleontology

Credits: 2
Research project in a selected area of paleontology.

GEOL 7209 - Research in Mineralogy and Petrology

Credits: 2
Research project in a selected area of mineralogy and petrology.

GEOL 7213 - Research in Geophysics

Credits: 2
Research project in a selected area of geophysics.

GEOL 7215 - Research in Geochemistry

Credits: 2
Research project in a selected area of geochemistry.

GEOL 7250 - Seminar in Paleontology

Credits: 2
Seminar on selected topics in paleontology; subject matter varies term to term.

GEOL 7251 - Seminar in Stratigraphy

Credits: 2
Seminar on selected topics in stratigraphy; subject matter varies term to term.

GEOL 7252 - Seminar in Sedimentology

Credits: 2
Seminar on selected topics in sedimentology; subject matter varies term to term.

GEOL 7253 - Seminar in Petrology

Credits: 2
Seminar on selected topics in petrology; subject matter varies term to term.

GEOL 7254 - Seminar in Geochemistry

Credits: 2
Seminar on selected topics in geochemistry; subject matter varies term to term.

GEOL 7255 - Seminar in Geophysics

Credits: 2
Seminar on selected topics in geophysics; subject matter varies term to term.

GEOL 7257 - Seminar in Structural Geology

Credits: 2
Seminar on selected topics in structural geology; subject matter varies by term.

GEOL 7300 - Research

Credits: 3
Intensive research on a narrowly defined topic in geology.

GEOL 7301 - Research in Sedimentology

Credits: 3
Research project in a selected area of sedimentology.

GEOL 7303 - Research in Stratigraphy

Credits: 3
Research project in a selected area of stratigraphy.

GEOL 7305 - Research in Paleontology

Credits: 3
Research project in a selected area of paleontology.

GEOL 7309 - Research in Mineralogy and Petrology

Credits: 3
Research project in a selected area of mineralogy and petrology.

GEOL 7313 - Research in Geophysics

Credits: 3
Research project in a selected area of geophysics.

GEOL 7315 - Research in Geochemistry

Credits: 3
Research project in a selected area of geochemistry.

GEOL 7317 - Research in Geomorphology

Credits: 3
Research project in a selected area of geomorphology.

GEOL 7350 - Seminar in Paleontology

Credits: 3
Seminar on selected topics in paleontology; subject matter varies term to term.

GEOL 7351 - Seminar in Stratigraphy

Credits: 3
Seminar on selected topics in stratigraphy; subject matter varies term to term.

GEOL 7352 - Seminar in Sedimentology

Credits: 3
Seminar on selected topics in sedimentology; subject matter varies term to term.

GEOL 7353 - Seminar in Petrology

Credits: 3
Seminar on selected topics in petrology; subject matter varies term to term.

GEOL 7354 - Seminar in Geochemistry

Credits: 3
Seminar on selected topics in geochemistry; subject matter varies term to term.

GEOL 7355 - Seminar in Geophysics

Credits: 3
Seminar on selected topics in geophysics; subject matter varies term to term.

GEOL 7357 - Seminar in Structural Geology

Credits: 3
Seminar on selected topics in structural geology; subject matter varies by term.

GEOL 7380 - Research Project in Applied Geophysics

Credits: 3
Graduate-level research in applied geophysics, including interaction with ongoing programs in the industrial community.

GEOL 8049 - Graduate Full-Time Status

Credits: 0
Graduate full-time status, Ph.D. level.

GEOL 8100 - Research

Credits: 1
Research and study of selected geological topics; subject matter varies term to term.

GEOL 8398 - Dissertation Research

Credits: 3
Research and writing of the dissertation with guidance from the student's dissertation director.

GEOL 8399 - Dissertation Research

Credits: 3
Research and writing of the dissertation with guidance from the student's dissertation director.

GEOL 8698 - Dissertation Research

Credits: 6
Research and writing of the dissertation with guidance from the student's dissertation director.

GEOL 8699 - Dissertation Research

Credits: 6
Research and writing of the dissertation with guidance from the student's dissertation director.

GEOL 8998 - Dissertation Research

Credits: 9
Research and writing of the dissertation with guidance from the student's dissertation director.

GEOL 8999 - Dissertation Research

Credits: 9
Research and writing of the dissertation with guidance from the student's dissertation director.

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
Associate Professors: Bo Chen, Thomas Osang, Saltuk Ozerturk
Assistant Professors: Elira Kuka, James Lake, Rocio Madera, Omer Ozak, Nathaniel Pattison, Danila Serra
Senior Lecturers: Helen Reynolds, Elizabeth Wheaton
Lecturer: Marcela Giraldo

Economics, Ph.D.

Admission Requirements

The minimum requirements for admission are as follows:

1. Cumulative GPA of at least 3.000 (on a 4.000 scale).
2. Excellent scores on the aptitude parts (verbal and quantitative) of the GRE graduate school admission test.
3. A bachelor's degree in economics or related field. The program is also open to students from fields other than economics, such as mathematics, statistics and engineering. Applicants with degrees in fields other than economics must have taken at least 12 credit hours of economics courses, including two intermediate theory courses, one in microeconomics and one in macroeconomics.
4. Mathematical proficiency equivalent to courses in multivariate calculus (i.e., three terms of university-level calculus), probability and statistics (two terms), and linear algebra.
5. TOEFL English language proficiency test scores, if required. TOEFL scores are required of all international students who do not hold an undergraduate degree from a U.S. degree-granting institution.

Degree Requirements

Qualifying Examinations

Every student must pass written qualifying examinations in microeconomic theory and macroeconomic theory. Only students who maintain a GPA of 3.000 in the first-year required courses are allowed to take the qualifying exam. Students will normally take these exams following the end of the second term in the program.

Field Requirements

Two fields are required. Each field involves at least six credit hours of 7000-level coursework in a specified area, and each must be completed with at least a grade of *B* in each course. ECO 6375 - Econometrics III can be used, with the prior approval of the director of graduate studies, to count toward three credit hours of one six-hour field requirement.

Third-Year Requirement

By the end of their third year, all students must submit a completed Faculty Adviser Form to the director of graduate studies. By the end of their third year, all students must also complete a research paper and presentation approved by a faculty member.

Dissertation

The student must pass qualifying examinations and complete the field requirements before beginning work on the dissertation. Students should form a dissertation committee during their third year and submit the form with the committee structure by the end of that year. After the dissertation is completed, the student must defend the dissertation at a final oral examination.

Course and Credit Hour Requirements and Time Limitations

Every Ph.D. student must earn a minimum of 48 credit hours in an approved program of study. Any course taken as an elective must be at the 5000 level or above and must be approved by the director of graduate studies. Up to 24 credit hours of graduate coursework may be transferred from another institution upon approval by the department and the graduate dean. The field requirements must be completed within four years from the date the student enters the graduate program. The dissertation must be completed within five years of entering candidacy.

Good Standing

Students pursuing a Ph.D. degree are required to maintain good standing by being enrolled in at least one credit course per term. ECO 8100, which carries one credit hour, may be used for this purpose at the thesis stage. In some cases, ECO 8000 may be used for this purpose if approved by the chair. To remain in good standing, graduate students must maintain a cumulative GPA of 3.000. If in any term the student falls below this GPA, the student will be placed on probation for one term. Students will also be evaluated by their adviser or the Director of Doctoral Studies on their Academic Progress, Research Performance, and Professional Behavior. Failure to achieve satisfactory performance in any of these categories for two semesters can lead to a student being discontinued in the program.

Applied Economics and Predictive Analytics, M.S.A.E.P.A.

The M.S. in Applied Economics and Predictive Analytics degree is designed to help meet the burgeoning demand for analytics training on the part of business, government and nonprofits. This degree focuses on economic analysis and decision-making along with strong quantitative training, and brings additional skills not typically provided in analytics programs found in statistics, engineering or business programs. "Predictive analytics" refers to the process of building models that predict consumer behaviors under different circumstances and help customize product offerings that better suit the tastes and preferences of consumers; "predictive analytics" also refers to building models to predict time series variables of importance to businesses and governments (e.g., product sales and tax revenues) and to evaluate competing government programs and business strategies. The M.S. is a 36 credit hour degree.

Admission Requirements

The minimum admission requirements for the Master of Science in Applied Economics and Predictive Analytics are as follows:

- Cumulative GPA of at least 3.000 (on a 4.000 scale).
- Twelve credit hours of undergraduate economics, including two intermediate theory courses, one in microeconomics and one in macroeconomics.
- An introductory course in statistics.
- One term of calculus.
- Satisfactory GRE graduate school admission test scores if the undergraduate GPA is lower than 3.000.

Degree Requirements

The M.S. is a 36 credit hour degree.

Required Core Courses

- ECO 5350 - Introductory Econometrics
- ECO 6381 - Economic Analysis I (microeconomics)
- ECO 6382 - Economic Analysis II (macroeconomics)

Required Advanced Analytics Courses

- ECO 5375 - Economic and Business Forecasting
- ECO 6380 - Predictive Analytics for Economists

Required Business Intelligence Courses

(2 from the following)

- ECO 5340 - Decision-Making Under Uncertainty
- ECO 5341 - Strategic Behavior
- ECO 6383 - New Approaches to Managerial Economics

Required Global Perspective Courses

(1 from the following)

- ECO 6320 - Applied Monetary Theory and Policy
- ECO 6330 - International Economic and Financial Environment
- ECO 6331 - International Trade
- ECO 6333 - Trade Policy and the World Trading System

Elective Courses

(4 from the following)

Any economics courses listed below not already taken to fulfill the business intelligence and global perspective requirements.

- ECO 5340 - Decision-Making Under Uncertainty
- ECO 5341 - Strategic Behavior
- ECO 6352 - Applied Econometric Analysis
- ECO 6383 - New Approaches to Managerial Economics
- ECO 6330 - International Economic and Financial Environment
- ECO 6331 - International Trade
- ECO 6333 - Trade Policy and the World Trading System
- STAT 6307 - Introduction to Statistical Computing
- STAT 6301 - Experimental Statistics I

- STAT 6308 - SAS II and Databases

Applied Economics, M.A., Applied Economics Track

This track emphasizes the application of economic theory with quantitative skills and computer literacy as required by corporations and financial institutions in their economic decision-making processes. A rigorous theoretical economic framework is established for the study of government policy and the growing openness of the U.S. economy to international competition and economic events. At the same time, mathematical rigor is not compromised. The necessary concepts are developed from the basics but at a more deliberate pace than in a Ph.D. program.

Admission Requirements

The minimum admission requirements for the M.A. in applied economics are as follows:

- Cumulative GPA of at least 3.000 (on a 4.000 scale).
- Twelve credit hours of undergraduate economics, including two intermediate theory courses, one in microeconomics and one in macroeconomics.
- An introductory course in statistics.
- One term of calculus.
- Satisfactory GRE graduate school admission test scores if the undergraduate GPA is lower than 3.000.

Degree Requirements

Every student must earn at least 36 credit hours in an approved program of study, with at least half of the coursework being at the 6000 level. This plan does not require a master's thesis or master's papers. A comprehensive final exam is required.

All courses must be completed with a grade of *C* (2.000) or better and a *B* (3.000) average in all the courses taken in the program.

Students take three required core courses in economics that form the building blocks for further study and analysis in economics. Another three required courses provide applied training in econometrics and microeconomic analysis. Six additional courses are needed to complete the degree, two of which must be 6000-level courses. Some courses are offered in sequence, which means they are not offered every term.

Core Courses

- ECO 5350 - Introductory Econometrics
- ECO 6381 - Economic Analysis I (microeconomics)
- ECO 6382 - Economic Analysis II (microeconomics)

Required Applied Economics Courses

Three out of four:

- ECO 5375 - Economic and Business Forecasting
- ECO 6352 - Applied Econometric Analysis
- ECO 6380 - Predictive Analytics for Economists
- ECO 6383 - New Approaches to Managerial Economics

Six of the following courses

Two of which must be at the 6000 level

- ECO 5340 - Decision-Making Under Uncertainty
- ECO 5341 - Strategic Behavior
- ECO 5353 - Law and Economics
- ECO 5357 - Economics of Human Resources
- ECO 5360 - Economic Development: Macroeconomic Perspectives
- ECO 5362 - Economic Growth
- ECO 5365 - Federal Government Expenditures
- ECO 6320 - Applied Monetary Theory and Policy
- ECO 6330 - International Economic and Financial Environment
- ECO 6331 - International Trade
- ECO 6333 - Trade Policy and the World Trading System
- ECO 6391 - Financial Econometrics: Theory and Applications

Applied Economics, M.A., International Economics and Policy Track

This track is designed for students who wish to deepen their understanding of the changing global economic environment. Equal emphasis is placed on theory and practice in international economics. Students take three core courses in economic and quantitative analysis, and these serve as the building blocks for further study and analysis in economics. The three required international courses provide students with the necessary background in theory and practice of international trade, finance and policy. Students can pursue special interests in international economics through elective courses.

Admission Requirements

The minimum admission requirements for the M.A. in applied economics are as follows:

- Cumulative GPA of at least 3.000 (on a 4.000 scale).
- Twelve credit hours of undergraduate economics, including two intermediate theory courses, one in microeconomics and one in macroeconomics.
- An introductory course in statistics.
- One term of calculus.
- Satisfactory GRE graduate school admission test scores if the undergraduate GPA is lower than 3.000.

Applicants for the M.A. in applied economics enrolling in the law and economics track must also have their J.D. degree, or they must be enrolled in the Dedman School of Law.

Degree Requirements

Every student must earn at least 36 credit hours in an approved program of study, with at least half of the coursework being at the 6000 level. This plan does not require a master's thesis or master's papers. A comprehensive final exam is required.

All courses must be completed with a grade of *C* (2.000) or better and a *B* (3.000) average in the courses taken in the program.

Students take three required core courses in economics and another three required international economics courses. Six additional courses are needed to complete the degree. Students must have a total of six courses at the 6000 level.

Core Courses

- ECO 5350 - Introductory Econometrics
- ECO 6381 - Economic Analysis I (microeconomics)
- ECO 6382 - Economic Analysis II (microeconomics)

International Economics Courses

- ECO 6331 - International Trade
- ECO 6330 - International Economic and Financial Environment
- ECO 6333 - Trade Policy and the World Trading System

Three of the following Economics Courses

- ECO 5360 - Economic Development: Macroeconomic Perspectives
- ECO 5375 - Economic and Business Forecasting
- ECO 6380 - Predictive Analytics for Economists
- ECO 6337 - Emerging Markets
- ECO 6352 - Applied Econometric Analysis

Electives

Nine credit hours (three courses) of free electives

Applied Economics, M.A., Law and Economics Track

The curriculum is customized to suit the need of lawyers for more knowledge of economics, particularly applied microeconomic analysis of problems commonly encountered by lawyers and judges, and includes econometric analysis often encountered by the courts from expert witnesses on both sides of a case. Because many candidates for this degree plan prefer to pursue a degree while actively engaged in the practice of law, most courses in the degree plan are scheduled for evening hours.

Admission Requirements

The minimum admission requirements for the M.A. in applied economics are as follows:

- Cumulative GPA of at least 3.000 (on a 4.000 scale).
- Twelve credit hours of undergraduate economics, including two intermediate theory courses, one in microeconomics and one in macroeconomics.
- An introductory course in statistics.
- One term of calculus.
- Satisfactory GRE graduate school admission test scores if the undergraduate GPA is lower than 3.000.

Applicants for the M.A. in applied economics enrolling in the law and economics track must also have their J.D. degree, or they must be enrolled in the Dedman School of Law.

Degree Requirements

Every student must earn at least 36 credit hours in an approved program of study, with at least half of the coursework being at the 6000 level. This plan does not require a master's thesis or master's papers. A final exam is required.

All courses must be completed with a grade of *C* (2.000) or better and an overall *B* (3.000) average for all courses taken in the degree program.

Students with J.D. degrees working toward the M.A. in applied economics will follow this 36 credit hour nonthesis plan. Students currently in law school will be permitted to substitute nine credit hours of approved law school coursework as electives. All students are required to take at least six credit hours at the 6000 level.

Required Courses

- ECO 5341 - Strategic Behavior
- ECO 5350 - Introductory Econometrics
- ECO 5353 - Law and Economics
- ECO 6352 - Applied Econometric Analysis
- ECO 6381 - Economic Analysis I
- ECO 6383 - New Approaches to Managerial Economics

Electives

- ECO 5340 - Decision-Making Under Uncertainty
- ECO 5357 - Economics of Human Resources
- ECO 5360 - Economic Development: Macroeconomic Perspectives
- ECO 5362 - Economic Growth
- ECO 5365 - Federal Government Expenditures
- ECO 5375 - Economic and Business Forecasting
- ECO 6320 - Applied Monetary Theory and Policy
- ECO 6330 - International Economic and Financial Environment
- ECO 6380 - Predictive Analytics for Economists
- ECO 6382 - Economic Analysis II
- ECO 6391 - Financial Econometrics: Theory and Applications

Economics, M.A.

The M.A. in economics degree is only available to students currently in the Ph.D. program in economics at SMU.

Degree Requirements

Students pursuing the Ph.D. program are qualified to receive the M.A. degree after fulfilling the following requirements: 1) passing the written qualifying examinations in microeconomic theory and macroeconomic theory, and 2) completing 30 credit hours of courses in their program. These include the following required seven core courses and three elective courses:

Core Courses

- ECO 6371 - Introduction to Quantitative Economics
- ECO 6372 - Econometrics I
- ECO 6384 - Microeconomic Theory I
- ECO 6394 - Macroeconomic Theory I
- ECO 6374 - Econometrics II
- ECO 6385 - Microeconomic Theory II
- ECO 6395 - Macroeconomic Theory II

Elective Courses

- ECO 7301 - Readings in Economics
- ECO 7302 - Topics in Economic Theory
- ECO 7305 - Mathematical Economics
- ECO 7306 - Advanced Economic Theory
- ECO 7321 - Labor Economics
- ECO 7322 - Development of Human Capital
- ECO 7332 - International Macroeconomic Theory and Policy
- ECO 7333 - International Trade
- ECO 7334 - Development Economics
- ECO 7341 - Market Structure
- ECO 7342 - Imperfect Markets
- ECO 7361 - Monetary Economics
- ECO 7362 - Monetary Theory and Policy
- ECO 7376 - Macroeconometrics
- ECO 7377 - Microeconometrics
- ECO 7378 - Topics in Econometrics
- ECO 8398 - Dissertation Research

Applied Economics Graduate Certificate

Applicants to the Certificate program must have (1) a cumulative undergraduate grade-point average of at least 3.0 (on a 4.0 scale); (2) 12 hours of undergraduate economics, including two intermediate theory courses, one in price theory, and one in macroeconomics; (3) an introductory course in statistics; and (4) one semester of calculus. Applicants whose undergraduate GPA is lower than 3.0 are required to submit GRE scores. Students combined score on the verbal and quantitative sections must be at least 300.

The Certificate of Applied Economics program is focused on improving the use of statistical and data analysis tools and applying economic models in the economic decision making process of firms.

For non-SMU undergraduate students (domestic and foreign) the certificate can be especially attractive since the courses taken can be credited toward the M.A. in Applied Economics. Additionally, international students may obtain accreditation of the courses in their respective undergraduate or graduate programs.

Academic Requirements

To earn the Certificate of Applied Economics, students must complete four of the following courses offered during the Summer I and II sessions:

- ECO 5341 - Strategic Behavior
- ECO 5342 - Experimental and Behavioral Economics
- ECO 5350 - Introductory Econometrics
- ECO 5353 - Law and Economics
- ECO 5365 - Federal Government Expenditures
- ECO 5375 - Economic and Business Forecasting
- ECO 6330 - International Economic and Financial Environment
- ECO 6352 - Applied Econometric Analysis
- ECO 6383 - New Approaches to Managerial Economics
- ECO 6391 - Financial Econometrics: Theory and Applications

Courses:

General	ECO 5301, 5337, 5340, 5341, 5350, 5353, 5355, 5357, 5359, 5360, 5361, 5362, 5365, 5370, 5375, 5380, 5385, 5390, 6352
Economic Theory	ECO 6371, 6381, 6382, 6384, 6385, 6386, 6387, 6390, 6394, 6395, 6396, 7302
Advanced Theory	ECO 7305, 7306
International Economics	ECO 6330, 6331, 6333, 6339, 7332, 7333
International and Development Economics	ECO 6337, 7334
Human Resources	ECO 7321, 7322
Econometrics	ECO 6372 6374, 6375, 7075, 7275, 7377, 7378
Monetary Economics	ECO 6320, 7361, 7362
Industrial Organization	ECO 7341, 7342
Public Finance	ECO 7351, 7352
Independent Studies and Workshops	ECO 6101, 6398, 7004, 7101, 7201, 7301, 7304, 8000, 8100, 8101, 8398, 8399, 8698, 8699, 8998, 8999

ECO 5101 - Topics

Credits: 1
Topics vary. Prerequisites: C- or better in the following: ECO 3301, ECO 3302 and STAT 2301, STAT 2331, or STAT 4340.

ECO 5201 - Topics

Credits: 2
Topics vary. Prerequisites: C- or better in the following: ECO 3301, ECO 3302 and STAT 2301, STAT 2331, or STAT 4340.

ECO 5301 - Topics

Credits: 3
Topics vary. Prerequisites: Graduate standing or C- or better in the following: ECO 3301, ECO 3302 and STAT 2301, STAT 2331, or STAT 4340.

ECO 5320 - Health Economics

Credits: 3
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 - Decision-Making Under Uncertainty

Credits: 3
Provides a basis for the modeling of decision-making under conditions of incomplete information. Prerequisites: C- or better in the following: ECO 3301, ECO 3302 and STAT 2301, STAT 2331, or 2340.

ECO 5341 - Strategic Behavior

Credits: 3
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, STAT 2331, or STAT 4340.

ECO 5342 - Experimental and Behavioral Economics

Credits: 3
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, ECO 5350.

ECO 5350 - Introductory Econometrics

Credits: 3
The basic concepts of econometrics and, in particular, regression analysis, with topics geared to first-time regression users. Students may not receive credit for this course and STAT 5350. Prerequisites: Graduate standing or C- or better in the following: MATH 1309 or MATH 1337; ECO 3301; and ITOM 2305 or STAT 2301, STAT 2331, or STAT 4340.

ECO 5353 - Law and Economics

Credits: 3
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, STAT 2331, or STAT 4340.

ECO 5357 - Economics of Human Resources

Credits: 3
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, STAT 2331, or STAT 4340. ECO 4351 is recommended.

ECO 5360 - Economic Development: Macroeconomic Perspectives

Credits: 3
A macroeconomic 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, STAT 2331, or STAT 4340.

ECO 5362 - Economic Growth

Credits: 3
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, ECO 3302 and STAT 2301, STAT 2331, or STAT 4340.

ECO 5365 - Federal Government Expenditures

Credits: 3
Focuses on theoretical principles useful for analyzing the role of government intervention. Topics may vary from year to year. Prerequisites: C- or better in ECO 3301, MATH 1309 or 1337, and one of the following: STAT 2301, 2331, or 4340.

ECO 5366 - Federal Government Taxation

Credits: 3
Develops principles to be used when evaluating a specific tax and uses them to investigate specific federal revenue sources such as taxes on personal and corporate income. Prerequisites: C- or better in ECO 3301, MATH 1309 or 1337, and one of the following: STAT 2301, 2331, or 4340. Recommended: ECO 3302.

ECO 5375 - Economic and Business Forecasting

Credits: 3
Presentation of methods used by economists to forecast economic and business trends and ways of evaluating the usefulness of these methods. Students may not receive credit for this course and STAT 4375. Prerequisites: C- or better in the following: STAT 2301, 2331; or STAT 4340; or ITOM 2305 and ECO 5350.

ECO 6049 - Graduate Full-Time Status

Credits: 0
Full-time status for M.A. students.

ECO 6101 - Internship for M.A. Students

Credits: 1
Students analyze economics problems appropriate to the interning firm or organization. Can be taken only twice. Prerequisites: 3.000 GPA in economics courses and approval of faculty sponsor and director of graduate studies.

ECO 6301 - Internship for Master's Students

Credits: 3
Students analyze economic problems appropriate to the interning firm or organization and write a short report about their experiences. Can be taken only twice. Prerequisites: 3.000 GPA in economics courses and approval of faculty sponsor and director of graduate studies.

ECO 6320 - Applied Monetary Theory and Policy

Credits: 3
Covers operation of the banking sector, demand for money and control of its supply, and economic policymaking by the Federal Reserve and its importance for business decision-making at senior levels.

ECO 6330 - International Economic and Financial Environment

Credits: 3
Topics include foreign exchange markets operations, balance of payments adjustments, the international equilibrium system, and international aspects of economic policymaking. Employs mathematical modeling as appropriate and requires some research using methods of quantitative analysis. A student cannot receive credit for both ECO 6330 and ECO 7332.

ECO 6331 - International Trade

Credits: 3
Surveys the major theories of world trade; analyzes the empirical evidence regarding these theories; and develops a framework for the analysis of trade policy instruments such as tariffs, quotas, and voluntary export restraints.

ECO 6333 - Trade Policy and the World Trading System

Credits: 3
Surveys the major institutions of world trade. Analyzes the political economy of trade policy in major trading countries in conjunction with the rules of world trade as defined by the agreements of the WTO and the agenda of the World Bank and the IMF.

ECO 6352 - Applied Econometric Analysis

Credits: 3
Deals with statistical techniques that go beyond multiple regression analysis such as multinomial choice models, duration models, count models, spatial regression and panel models, logit and probit models, and count data. Emphasizes extensive computer analysis or current economic topics using advanced econometric techniques. Prerequisites: C- or better in ECO 5350 and graduate standing, or permission of instructor.

ECO 6371 - Introduction to Quantitative Economics

Credits: 3
Prepares first-year Ph.D. students for the study of economic theory and econometrics. Covers topics in mathematics and probability that are widely applied in economic theory and econometrics.

ECO 6372 - Econometrics I

Credits: 3
Theory and applications of statistical inference. Topics include probability and sampling, distribution theory, estimation, hypothesis testing, and simple regression analysis. Prerequisite: ECO 6371 or equivalent.

ECO 6374 - Econometrics II

Credits: 3
Econometric theory and methods with emphasis on regression analysis, maximum likelihood, quasi-maximum likelihood, GMM and instrumental variables, and specification testing. Prerequisite: ECO 6372.

ECO 6375 - Econometrics III

Credits: 3
Introduces advanced econometric techniques. Topics include limited dependent variables, panel data models, time series models, and resampling methods. Prerequisite: ECO 6374.

ECO 6380 - Predictive Analytics for Economists

Credits: 3
A study of data-mining techniques used by economists in the fields of applied economics, marketing, finance, and statistics. These techniques include classification methods, affinity analysis, and date reduction and exploration methods. Students may not receive credit for this course and STAT 5380. Prerequisites: Graduate standing or C or better in the following: ECO 5350, and ITOM 2305 or STAT 2301, 2331, or 4340.

ECO 6381 - Economic Analysis I

Credits: 3
Analysis of basic models of the firm under purely competitive markets and monopolistic competition and simple consumer behavior models. The exposition employs basic mathematical tools such as calculus.

ECO 6382 - Economic Analysis II

Credits: 3
Analysis of basic national income models and various modifications of these models.

ECO 6383 - New Approaches to Managerial Economics

Credits: 3
Presents recent developments in information theory, multiproduct analysis, and principal-agent theory in order to show how these developments can be usefully applied in management decision-making.

ECO 6384 - Microeconomic Theory I

Credits: 3
Basic theories of the firm under competitive and monopolistic conditions, and basic theory of consumer behavior.

ECO 6385 - Microeconomic Theory II

Credits: 3
Extensions of topics covered in ECO 6384, including monopolistic competition, intertemporal optimization, behavior under uncertainty, and welfare economics. Prerequisite: ECO 6384.

ECO 6391 - Financial Econometrics: Theory and Applications

Credits: 3
A study of selected topics in financial econometrics, including capital asset pricing models, arbitrage pricing theory, analysis of volatility in financial markets, value at risk, options and their valuation, event studies, cointegration of integrated markets, put-call parity, the term structure of interest rates, and credit default analysis. Prerequisites: C- or better in ECO 5350, ECO 4378 or FINA 4326, and ECO 4368 or FINA 4325, and one of the following: STAT 2301, 2331, or 4340.

ECO 6394 - Macroeconomic Theory I

Credits: 3
Basic theories concerning the determination of national income, employment, consumption, investment, and the general price level.

ECO 6395 - Macroeconomic Theory II

Credits: 3
The course provides theoretical and empirical underpinnings for macroeconomic models of the economy, with an emphasis on economic policy. Prerequisite: ECO 6394.

ECO 6398 - Research and/or Thesis

Credits: 3
By arrangement with the director of graduate studies. Eligible students undertake a research paper under the supervision of the faculty sponsor and give an oral presentation of the paper. Note: Can be taken only once.

ECO 7004 - Workshop for Preprospectus

Credits: 0
Analyzes research strategies of seminar speakers, faculty members, and students. Each student must present a paper directly related to his or her own prospectus.

ECO 7301 - Readings in Economics

Credits: 3
Selected topics to complement the material in the Ph.D. program.

ECO 7302 - Topics in Economic Theory

Credits: 3
Selected topics to complement the material in the micro and macro sequence.

ECO 7305 - Mathematical Economics

Credits: 3
Applications of mathematical tools to various economic problems.

ECO 7306 - Advanced Economic Theory

Credits: 3
A variety of advanced topics in theory not covered in the core theory sequence.

ECO 7321 - Labor Economics

Credits: 3
Theories and empirical testing of hypotheses concerning the behavior of labor markets.

ECO 7322 - Development of Human Capital

Credits: 3
Theories concerned with the investment in human capital and its impact on economic growth.

ECO 7332 - International Macroeconomic Theory and Policy

Credits: 3
Concepts of balance of payments equilibrium; responses to disequilibrium; national economic policies affecting international payments; and past, present, and proposed international financial institutions.

ECO 7333 - International Trade

Credits: 3
Determinants of regional specialization, gains from trade, theoretical analysis of factor movements, and of policies affecting the interspatial movement of goods and persons.

ECO 7334 - Development Economics

Credits: 3
Application of economic theory to developing economies, including population and household economies, agriculture, industry, international trade and factor movements, and investment project evaluation.

ECO 7341 - Market Structure

Credits: 3
The study of the relationships between various market structures and their impacts on economic performance.

ECO 7342 - Imperfect Markets

Credits: 3
The study of models of imperfect markets, antitrust laws and other trade regulations, and their effects on economic performance.

ECO 7361 - Monetary Economics

Credits: 3
Various theories on the role of money in economic systems, and the impact of the money market on economic aggregates and the price level.

ECO 7362 - Monetary Theory and Policy

Credits: 3
Monetary institutions and the impact of monetary policies on the different segments of the economy.

ECO 7376 - Macroeconometrics

Credits: 3
Advanced topics in time series econometrics and finance.

ECO 7377 - Microeconometrics

Credits: 3
Advanced topics in cross-section and panel data econometrics.

ECO 7378 - Topics in Econometrics

Credits: 3
Further current topics in theoretical and applied econometrics and finance. Topics will vary and reflect current student and faculty demand and instructors' interests.

ECO 7381 - Methods of Experimental Economics

Credits: 3
Provides students the foundation for understanding and using experimental methods in economic research. Offers training in fundamental methods and applies those methods to several fields of economic research. Focuses on how to clearly specify and set up research questions as well as how to bring appropriate methods to bear in answering those questions.

ECO 8000 - Research

Credits: 0
By arrangement with the director of graduate studies. Prerequisite: Department consent required.

ECO 8049 - Graduate Full-Time Status

Credits: 0
Full-time status for Ph.D. students.

ECO 8100 - Research

Credits: 1
By arrangement with the director of graduate studies. Prerequisite: Department consent required.

ECO 8101 - Internship for Ph.D. Students

Credits: 1
Students analyze economic problems appropriate to the interning firm or organization. Can be taken only twice. Prerequisites: 3.000 GPA in economics courses, 3rd-year or above Ph.D. student (earned 48 credit hours in the program), and approval of faculty sponsor and director of graduate studies.

ECO 8105 - Research

Credits: 1
By arrangement with the director of graduate studies. Prerequisite: Department consent required.

ECO 8398 - Dissertation Research

Credits: 3
Ph.D. candidates.

English

Professor Darryl Dickson-Carr, **Department Chair**

Professors: Darryl Dickson-Carr, Thomas DiPiero, Dennis Foster, Ezra Greenspan, David Haynes, Ross Murfin, Jasper Neel, Rajani Sudan, Steven Weisenburger
Associate Professors: Angela Ards, Richard Bozorth, Greg Brownderville, Michael Holahan, Daniel Moss, Beth Newman, Timothy Rosendale, Jayson Gonzales Sae-Saue, Nina Schwartz, Lisa Siraganian, Bonnie Wheeler
Assistant Professors: Timothy Cassedy, Jacob Rubin, Martha Satz
Professors of Practice: Carol Dickson-Carr, Angela Wood
Senior Lecturers: Diana Grumbles Blackman, Jo Goyne, Vanessa Hopper, Pamela Lange, Bruce Levy
Lecturers: Stephanie Amsel, Joan Arbery, Marta Harvell, Mary Catherine Mueller, Pauline Newton, Patricia Pisano, Kristen Polster, Ona Seaney, Emily Sharma, Sam Ross Sloan, Lori Ann Stephens

English, Ph.D.

Admission Requirements

Applicants to the Ph.D. program must have either an undergraduate major in English or a related field or intensive study in the liberal arts with a solid background in literature in English, normally with a GPA of at least 3.500. They must also submit scores for the GRE general graduate school admission test. In addition, a statement of purpose for graduate study and three letters of recommendation are required, along with a writing sample in which an argument on a literary topic is sustained for about 15 pages. Proficiency in a second language is strongly recommended prior to matriculation in the program.

Degree Requirements

The Ph.D. in English requires 60 credit hours, including classes, directed readings and dissertation hours. Core courses required of all students are ENGL 6310 - Advanced Literary Studies, ENGL 6311 - Survey of Literary Criticism and ENGL 6312 - Teaching Practicum. Students will also be required to complete workshops in teaching before the fall of their second year, in preparation for teaching undergraduate courses during that year and subsequent years of graduate study. In addition, students must take a minimum of six 7000-level seminars and will be expected to include in their program of study courses covering a wide range of fields. With permission, students may develop interdisciplinary approaches by taking up to two courses outside the English department.

Proficiency in a second language relevant to the student's course of study is required and should be demonstrated prior to the term in which written exams are scheduled. For certain dissertation topics, a second language may be required. Further requirements include written exams in the fall of the fourth year of study and a dissertation prospectus and oral defense of that prospectus during the spring term of the fourth year. The M.A. degree will be awarded after completion of the written exams. **Note:** For students entering with the M.A., 12 credit hours (one year of coursework) may with permission be waived and the schedule above adjusted accordingly.

Students who remain in good standing are eligible to receive fellowship support for up to six years. They must maintain a GPA of at least 3.500, demonstrate the ability to do work of appropriate quality in seminars, make continuous progress in the program and receive the recommendation of an advisory committee. They will teach two courses a year for four years beginning in the second year of study, with either their fifth or sixth year serving as a dissertation fellowship year with no course requirements or teaching responsibilities. Exceptional students may be offered a one-year postdoctoral fellowship in the English Department after fulfilling all requirements for the Ph.D.

Students who leave the Ph.D. program after completing 30 credit hours and who have demonstrated proficiency in a second language will be allowed to take an exam in order to receive the M.A. degree.

English, M.A.

The M.A. in English degree is only available to students currently in the Ph.D. program in English at SMU. See the Ph.D. program information for further details on earning the M.A. degree.

Courses:

ENGL 6049 - Graduate Full-Time Status

Credits: 0
Independent course for students continuing work on an M.A. thesis.

ENGL 6301 - Directed Studies

Credits: 3
Directed readings in an area of the student's choice, to be approved by the director of graduate studies and the instructor.

ENGL 6302 - Directed Studies

Credits: 3
Directed readings in an area of the student's choice, to be approved by the director of graduate studies and the instructor.

ENGL 6310 - Advanced Literary Studies

Credits: 3
Readings and practice in research methods and materials, bibliography and textual editing, and the history and practices of the profession. Required of all doctoral candidates.

ENGL 6311 - Survey of Literary Criticism

Credits: 3
Readings in criticism and theory from Aristotle through contemporary approaches. Required of all doctoral candidates. Advanced literary studies.

ENGL 6312 - Teaching Practicum

Credits: 3
Course in pedagogy for English teachers at the university level. Prerequisites: Graduate standing and appointment to a graduate fellowship in the English Department.

ENGL 6313 - Rhetorical Theory

Credits: 3
Selected major figures and movements from 1920 to the present in the context of the history of rhetoric, recent philosophy, and literary theory.

ENGL 6320 - Medieval Literature

Credits: 3
Studies in medieval writers and literary-cultural history through 1500.

ENGL 6321 - Readings: Medieval Literature

Credits: 3
Prerequisites: Approval of instructor and director of graduate studies.

ENGL 6322 - Readings: Medieval Literature

Credits: 3
Prerequisites: Approval of instructor and director of graduate studies.

ENGL 6330 - Early Modern British Literature

Credits: 3
Studies in major British writers and literary-cultural history from 1500 to 1775.

ENGL 6335 - Early Modern American Literature

Credits: 3
Studies in major American writers and literary-cultural history from the discovery to 1750.

ENGL 6340 - British Literature in the Age of Revolutions

Credits: 3
Studies in major British writers and literary-cultural history from 1775 to 1900.

ENGL 6345 - American Literature in the Age of Revolutions

Credits: 3
Studies in major American writers and literary-cultural history from 1750 to 1900.

ENGL 6350 - Modern and Contemporary British Literature

Credits: 3
Studies in major British writers and literary-cultural history after 1900.

ENGL 6360 - Modern and Contemporary American Literature

Credits: 3
Studies in major American writers and literary-cultural history after 1900.

ENGL 6370 - African-American Literature

Credits: 3
Studies in African-American literary-cultural history, from Colonial to contemporary.

ENGL 6373 - Hispanic-American Literature

Credits: 3
Studies in Hispanic-American literary-cultural history, from Colonial to contemporary.

ENGL 6375 - Sex, Gender, and Literature

Credits: 3
Studies of the constructions of sexuality and gender in literature and culture, informed by historical study and current theoretical work in such fields as feminism, gender studies, and queer theory.

ENGL 6380 - History of Print Culture

Credits: 3
A literary historical survey of major developments, issues, formations, and institutions in British and/or American print culture.

ENGL 6391 - Poetry Writing Workshop

Credits: 3
Graduate-level writing and critiquing of student poetry, along with the study of poetic conventions, techniques, and theory.

ENGL 6392 - Fiction Writing Workshop

Credits: 3
Graduate-level writing and critiquing of student fiction writing along with the study of the conventions, techniques, and theories of fiction.

ENGL 6394 - Graduate Independent Study in Poetry Writing

Credits: 3
Intensive, one-on-one tutorial in the writing and revising of poetry.

ENGL 6395 - Graduate Independent Study in Poetry Writing

Credits: 3
Intensive, one-on-one tutorial in the writing and revising of poetry.

ENGL 6396 - Graduate Independent Study in Fiction Writing

Credits: 3
Intensive, one-on-one tutorial in the writing and revising of fiction.

ENGL 6397 - Graduate Independent Study in Fiction Writing

Credits: 3
Intensive, one-on-one tutorial in the writing and revising of fiction.

ENGL 6398 - Thesis

Credits: 3
Research and writing of the M.A. thesis with guidance from the student's thesis director.

ENGL 6399 - Thesis

Credits: 3
Research and writing of the M.A. thesis with guidance from the student's thesis director.

ENGL 7311 - Seminar in Literary Theory

Credits: 3
Advanced study of a topic in literary theory.

ENGL 7340 - Seminar in British Literature

Credits: 3
Advanced study of a topic in British literature.

ENGL 7350 - Seminar in American Literature

Credits: 3
Advanced study of a topic in American literature.

ENGL 7370 - Seminar in Minority Literature

Credits: 3
Advanced study of a topic in minority literature.

ENGL 7372 - Seminar in Transatlantic Literature

Credits: 3
Advanced study of a topic in transatlantic literature.

ENGL 7374 - Problems in Literary History

Credits: 3
Advanced study of problems in literary history.

ENGL 7376 - Seminar: Special Topics

Credits: 3
Advanced study of a literary topic that crosses traditional national boundaries.

ENGL 7398 - Directed Readings

Credits: 3
Directed readings in an area of the student's choice, to be approved by the director of graduate studies and the instructor.

ENGL 7399 - Directed Readings

Credits: 3
Directed readings in an area of the student's choice, to be approved by the director of graduate studies and the instructor.

ENGL 8049 - Graduate Full-Time Status

Credits: 0
Graduate full-time status at the Ph.D. level.

ENGL 8105 - Research

Credits: 1

ENGL 8398 - Dissertation

Credits: 3
Research and writing of the dissertation.

ENGL 8399 - Dissertation

Credits: 3
Research and writing of the dissertation.

History

Professor Andrew Graybill, **Department Chair**

Professors: Kenneth Andrien, John Chávez, Edward Countryman, Neil Foley, Andrew Graybill, Thomas Knock, Alexis McCrossen, Daniel Orlovsky, Kathleen Wellman
Associate Professors: Sabri Ates, Crista DeLuzio, Melissa Dowling, Jeffrey Engel, Kate Carté Engel, Kenneth Hamilton, Erin R. Hochman
Assistant Professors: Jo Guldi, Jill E. Kelly, Bianca Lopez, Ariel Ron
Adjunct Assistant Professors: David Doyle, Brandon Miller
Senior Lecturer: Laurence H. Winnie

History, Ph.D.

Offered in conjunction with the William P. Clements Center for Southwest Studies.

The History Department will award fellowships to all students accepted into the Ph.D. program. Funding is guaranteed for a period of five years for those whose work remains excellent. Fellowships include tuition, fees, health insurance and a $20,000 stipend for the academic year. In addition, the Clements Department of History has resources available for travel to professional conferences and to research archives.

Admission Requirements

All applicants for the Doctor of Philosophy in history must have a bachelor's degree from an accredited college or university (students from abroad must hold the equivalent degree), with a minimum grade point average of 3.000, and have completed at least 12 advanced credit hours in history. Applicants must submit test scores for the GRE graduate school admission exam. If English is not the applicant's native language, he or she must also take the TOEFL English language proficiency test and score 80 or higher. Students must submit a statement of purpose, an example of their written work and official transcripts. Three letters of recommendation are also required. In addition, applicants should possess a foundation in a language for research, usually Spanish, sufficient to enable them to pass an examination in translation to English in September of the first year of study. Prospective students must submit their applications and all supporting documents by December 1.

Degree Requirements

Historiography (3 Credit Hours)

In the first term, students will take HIST 6300, a historiography course that introduces them to the professional study of history. Readings vary from year to year, but cover a broad range of methodologies, perspectives and topics. The course also addresses historical writing, research techniques and historical sources.

American History (24 Credit Hours)

The major field in American history offers broad preparation. During the first two years, students take a sequence of four colloquia (12 credit hours) in which they read intensively in American history from the era of Indian-European contact to the present. The intention is that they should master the historiography of the field. These colloquia emphasize new problems, interpretations and debates vital to the study of American history.

Regional, Ethnic, or Other Specialization (18 Credit Hours)

While the department maintains strong specializations in the Southwest, the West, Mexico, Borderlands, Mexican Americans, and Native Americans, students may instead opt to develop an individualized specialization of 18 credit hours in a coherent field of study in American history approved by the Graduate Committee. Students may also wish to enrich their historical understandings by taking courses in other disciplines, such as anthropology, literature or religious studies. The courses should be chosen in consultation with the adviser. The program offers unusual opportunities for students to broaden and deepen their knowledge. Resources include the Clements Center for Southwest Studies, with its symposia, research fellows and distinguished visitors; SMU's DeGolyer Library, a repository for a remarkable collection of books and manuscripts on Mexico and the Southwest; and the Meadows Museum of Art, which houses perhaps the world's finest collections of early modern Spanish art outside of Spain. For students with more interdisciplinary interests, the Bridwell Library provides a wealth of primary sources for the study of religious history; the Underwood Library supports the study of legal history, including that of international law; and the Center for Presidential History allows for research in the domestic and foreign affairs of the United States.

Global and Comparative History (12 Credit Hours)

The third field, in global and comparative history (12 credit hours), places the American experience in larger contexts by introducing students to the theoretical and conceptual frameworks that have guided advanced research in world history in recent decades. The field also provides broad interdisciplinary views of particular topics of global significance. Students begin this field of study by taking a colloquium (three credit hours) that explores influential methodologies and theoretical perspectives in global and comparative history. After this colloquium students take three courses (nine credit hours) that treat, in comparative contexts, such themes and topics as urbanization, migration, industrialization, revolution, colonialism, postcolonialism, slavery, and gender roles.

The courses taken in the specialized and global fields may vary in both content and method; these may be graduate courses, graduate/undergraduate senior level reading seminars, and also individual directed readings. If individual interests and requirements justify doing so, a limited number of these courses may be taken in another department.

Ph.D. Research Paper Requirement

Students will write two substantial research papers during the first two years of study. The goal is to produce significant work based on primary sources and of a quality comparable to an article in a scholarly journal.

Qualifying Examination

An oral examination on three fields of concentration will be taken in the spring term of the third year of study.

Teaching Practicum

(noncredit)

In HIST 7000, a study of methods and content in the teaching of history is coupled with classroom teaching experience.

Dissertation (3 Credit Hours)

Upon completion of the dissertation, a formal defense is conducted before an examination committee of four faculty members.

Teacher Preparation

Learning to be an effective instructor is a vital part of the Ph.D. program. The centerpiece of teacher preparation, to occur in the fourth year, is a mentoring program tailored to the interests and needs of each student. In HIST 7000, students will work closely with a professor in the planning and teaching of an individual course. They will also meet with the professor to discuss topics related to teaching and participate in the teaching assistant seminar offered by SMU's Center for Teaching Excellence. Finally, students themselves will teach a course at SMU or a cooperating institution.

History, M.A.

Admission Requirements

Candidates must have a minimum of 12 credit hours of advanced-level undergraduate work in history and make acceptable scores on the general sections of the GRE general graduate school admission test. If English is not the applicant's native language, he or she must also take the TOEFL English language proficiency test and score 80 or higher. Students must submit a statement of purpose, an example of their written work and official transcripts. Three letters of recommendation are also required. Prospective students must submit their applications and all supporting documents by December 1. Students may begin the program only in the fall term.

The History Department normally requires a minimum 3.000 GPA overall and a 3.000 average in history for admittance to the M.A. program.

Candidates must present evidence of competence in a language other than English, normally through two years of undergraduate study.

Degree Requirements

The master's degree is offered on two tracks: U.S. history and global history. Students in the U.S. history track will inaugurate their study in the context of global/ comparative history and historiography, and they will develop their knowledge of the U.S. in graduate coursework and develop their specific interests in either two research papers or a thesis. Students in the global history track will begin their studies with an introduction to historiography and global and comparative history, followed by graduate coursework on the histories of various areas of the world, with specific topics developed in either two research papers or a thesis. Students may develop their interests by working with faculty knowledgeable in classical history, medieval history, early modern and modern Europe, Russia, the Islamic world, sub-Saharan Africa, the Atlantic world, Latin America, East Asia and South Asia, as well as the various regions, periods and themes of the United States.

Major Advisor

Each student will be assigned a major adviser. The major adviser and the History Department's director of graduate studies will work with each student to plan a specific course of study, which may include up to six credit hours in fields or departments outside the major field of study.

Required Credit Hours

Students are required to earn 30 credit hours of credit at the 5000 or 6000 level. A 6000-level course can include participation in an undergraduate major history course at the 3000 level, together with additional requirements that the instructor assigns. The required 30 credit hours are distributed below:

- HIST 6300 - Historiography (three credit hours)

- HIST 6315 - Global/Comparative History (three credit hours)
  or
- Another departmental graduate course (three credit hours) specifically including comparative methods and theories.

- Six courses (18 credit hours) at the 5000 or 6000 level in the History Department. Up to two courses in other departments, programs or schools (such as the Meadows School of the Arts or the Simmons School of Education and Human Development) may substitute as approved by the adviser and director of graduate studies. With approval, students following the U.S. history or global history tracks must take one course (but no more than two courses) in the alternate track.

- HIST 6398 - Thesis (three credit hours)
- HIST 6399 - Thesis (three credit hours)
  or
- Two additional graduate courses (six credit hours) can substitute for HIST 6398/HIST 6399 for those students in the **nonthesis** option.

Thesis Option

This option requires research and writing (i.e., students following this option have appropriate language skills, and they usually are en route to a Ph.D.). The student's adviser and two other professors form the three-person thesis and oral defense committee. A unanimous positive vote of the committee is necessary for the student to pass the oral examination. The thesis will demonstrate ability to define and analyze a historical problem, mastery of the pertinent historiography, and understanding of the methodological issues posed by the problem. It must also make significant use of primary source material.

Nonthesis Option

Two additional graduate courses (six credit hours) can substitute for HIST 6398/HIST 6399 for those students in the nonthesis option, and two research papers written in any course at the 5000 or 6000 level in the History Department can substitute for the thesis. Toward the end of their coursework, nonthesis students also take an oral examination over coursework, texts and other materials chosen for thematic coherence by their adviser and two other professors.

Courses:

HIST 5305 - Seminar in Hispanic-American Borderlands

Credits: 3
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 - Seminar in North American Borderlands

Credits: 3
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 - Seminar On the American West

Credits: 3
Introduction to the historiography of the American West and its contested meanings.

HIST 5312 - Seminar On Native American History

Credits: 3
Introduction to the historiography of Native Americans in United States history.

HIST 5330 - Seminar in Mexican-American History

Credits: 3
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 - Seminar in Mexican-American History

Credits: 3
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 - 20th-Century England

Credits: 3
A study of the decline and fall of 20th-century England.

HIST 5340 - Seminar in American History

Credits: 3
Intensive examination of major topics in American history.

HIST 5341 - Seminar in American History

Credits: 3
Intensive examination of major topics in American history.

HIST 5344 - American Cultural History

Credits: 3
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 - Industrialism and Reform in the U.S., 1877-1919

Credits: 3
An investigation of life in America in the Gilded Age and the Progressive Era, including industrialization, urbanization, and social conflict.

HIST 5364 - The City of God in Its Milieu

Credits: 3
An examination of St. Augustine's masterpiece, along with several of its models and analogues from the Greco-Roman and Hebrew traditions.

HIST 5367 - Russia From the Kievan Era to 1881

Credits: 3
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 - Seminar in French History

Credits: 3
An examination of key historians and of the several modes of historiographical writing that shape the vision of premodern France.

HIST 5371 - The French Revolution and Napoleon, 1789-1815

Credits: 3
The nature and causes of revolution, the French Revolution, and the career of Napoleon Bonaparte.

HIST 5374 - Recent European History: 1918 to the Present

Credits: 3
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 - Europe in the Age of Louis XIV

Credits: 3
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 - Europe Age of Enlightenment, 1715-1789

Credits: 3
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 - The United States and the Cold War

Credits: 3
History of the U.S. and the Cold War.

HIST 5380 - Augustus and the Roman Empire

Credits: 3
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 - Seminar in Latin American History

Credits: 3
Intensive examination of major topics in Latin American history.

HIST 5387 - Seminar in African History

Credits: 3
Intensive examination of special topics in African history.

HIST 5390 - Seminar in Russian History

Credits: 3
This advanced seminar covers selected topics in late Imperial Russian and Soviet history.

HIST 5391 - Athenian Democracy

Credits: 3
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 - Seminar in European History

Credits: 3
Intensive examination of major topics in European history.

HIST 5395 - A History of Iran

Credits: 3
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 - Seminar in Asian History

Credits: 3
Intensive examination of major topics in Asian history.

HIST 6000 - Research

Credits: 0
Investigation in primary historical sources.

HIST 6049 - Graduate Full-Time Status

Credits: 0
After the student has completed all coursework toward a degree, this course may be taken for full-time status while doing research and preparation of a master's thesis. Prerequisite: Approval of graduate director.

HIST 6300 - Historiography

Credits: 3
Required of all candidates, this course is designed to familiarize graduate students with the tools of historical research, the discipline's methodology, and the problems of historical writing.

HIST 6301 - Colloquium: Early American History

Credits: 3
A reading course covering the major problems in American history between 1500 and 1812.

HIST 6302 - Colloquium: American History, 1812-1877

Credits: 3
A reading course covering the major problems in American history from 1812 to 1877.

HIST 6303 - Colloquium: Late 19th-Century to Early 20th-Century America

Credits: 3
A reading course covering the major problems in American history between 1877 and 1932.

HIST 6304 - Modern America, 1929-Present

Credits: 3
A reading course that covers major issues in modern American history from the onset of the Great Depression roughly to the present day.

HIST 6305 - Colloquium: The Hispanic Southwest

Credits: 3
This readings seminar introduces graduate students to ways that scholars have interpreted the Southwest's Hispanic past under Spain and Mexico, and the ongoing Hispanic presence in the region after 1848.

HIST 6308 - Seminar in American History

Credits: 3
An examination of major topics in American history.

HIST 6309 - Seminar in North American Borderlands

Credits: 3
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 6310 - Seminar on the American West

Credits: 3
Introduction to the historiography of the American West and its contested meanings.

HIST 6312 - Seminar on Native American History

Credits: 3
Introduction to the historiography of Native Americans in United States history.

HIST 6315 - Global/Comparative History

Credits: 3
A colloquium exploring various techniques of research and analysis used by contemporary scholars to investigate major historical problems from a global or comparative perspective.

HIST 6316 - Comparisons of World-Historical Borderlands

Credits: 3
A comparative study of borderlands in distinct regions.

HIST 6317 - Frontiers of Spanish History, 218 B.C.-A.D. 1492

Credits: 3
Multicultural interaction across several kinds of frontier in premodern Spanish history, from the Second Punic War to the unifying reign of the Catholic kings.

HIST 6318 - Seminar in Temporal History

Credits: 3
Interdisciplinary seminar that covers three interrelated themes: the mental and somatic experience time, the measurement and regulation of time, and the influence of temporal ideologies and habits of mind.

HIST 6321 - Seminar: Global/Comparative History

Credits: 3
An examination of major topics in global/comparative history.

HIST 6322 - Readings in History

Credits: 3
Directed readings on specific problems or themes formulated by the student with faculty guidance.

HIST 6323 - Readings in History

Credits: 3
Directed readings on specific problems or themes formulated by the student with faculty guidance.

HIST 6325 - Readings: New Spain and Mexico

Credits: 3
A readings seminar designed to address main themes and historiographical issues in the history of Mexico since the 16th century. Prerequisite: Reading knowledge of Spanish.

HIST 6326 - Mexican-American Historiography of the Southwest

Credits: 3
An examination of the historiography of Mexican Americans, focusing on the relationship between their ethnic identity and the Southwest.

HIST 6327 - Research on the Southwest as a Region

Credits: 3

HIST 6332 - Problems in U.S. Foreign Relations

Credits: 3
Major problems in American foreign relations from the revolutionary era to the present.

HIST 6338 - Problems in United States History

Credits: 3
Major problems in American history.

HIST 6343 - Problems in Modern German History

Credits: 3
Selected issues in the history of the German-speaking peoples from the Reformation to World War II.

HIST 6344 - Problems in Modern German History

Credits: 3
Selected issues in the history of the German-speaking peoples from the Reformation to World War II.

HIST 6347 - Problems in European History

Credits: 3
Directed readings.

HIST 6348 - Problems in European History

Credits: 3
Directed readings.

HIST 6349 - Problems in Medieval History

Credits: 3
Directed readings and analyses of selected medieval documents and secondary bibliography.

HIST 6350 - Problems in Medieval History

Credits: 3
Directed readings and analyses of selected medieval documents and secondary bibliography.

HIST 6352 - Problems Medieval Spanish History

Credits: 3
Directed readings and analyses of selected medieval Spanish documents and secondary bibliography.

HIST 6353 - Problems in the History of Spain and Portugal

Credits: 3
Social, cultural, and political themes characteristic of the Iberian Peninsula from Roman times to the present.

HIST 6354 - Problems in the History of Spain and Portugal

Credits: 3
Social, cultural, and political themes characteristic of the Iberian Peninsula from Roman times to the present...

HIST 6355 - Problems in Latin American History

Credits: 3
Selected topics in Latin American history from the age of exploration and discovery to the mid-20th century.

HIST 6356 - Problems Latin American History

Credits: 3
Selected topics in Latin American history from the age of exploration and discovery to the mid-20th century.

HIST 6357 - Problems in Mexican History

Credits: 3
Major themes in the evolution of Mexican society and the place of Mexico in the history of the Americas.

HIST 6363 - The American Civil War and Reconstruction

Credits: 3
The nature, causes, and impact of the American Civil War, with emphasis upon current historiographical issues.

HIST 6370 - Colloquium: European History

Credits: 3
A reading course covering the major problems in European history.

HIST 6371 - Colloquium: European History

Credits: 3
A reading course covering the major problems in European history.

HIST 6372 - The Apotheosis of Caesar and the Fall of the Roman Republic

Credits: 3
This research seminar investigates the fall of the Roman Republic and the rise of the Roman Empire as a direct consequence of the life and death of Julius Caesar.

HIST 6385 - Problems in British History

Credits: 3

HIST 6386 - Problems in British History

Credits: 3

HIST 6387 - Topics in African History

Credits: 3
Extensive examination of special topics in African history.

HIST 6391 - Topics in South Asian History

Credits: 3
Intensive examination of special topics in South Asian history.

HIST 6392 - Topics in Chinese History

Credits: 3
Intensive examination of special topics in Chinese history.

HIST 6393 - Topics in Middle Eastern History

Credits: 3
Intensive examination of special topics in Middle Eastern history.

HIST 6398 - Thesis

Credits: 3
Research and writing of the M.A. thesis with guidance from the student's thesis director.

HIST 6399 - Thesis

Credits: 3
Research and writing of the M.A. thesis with guidance from the student's thesis director.

HIST 7000 - Teacher Preparation

Credits: 0
Teaching component of the doctoral program in which the student works closely with a professor in the planning and teaching of an individual course.

HIST 7398 - Research

Credits: 3

HIST 7399 - Research

Credits: 3

HIST 8049 - Graduate Full-Time Status, Ph.D. Level

Credits: 0
Graduate full-time status at the Ph.D. level.

HIST 8398 - Dissertation: Ph.D. Candidates

Credits: 3
Dissertation for the Ph.D. in history.

HIST 8399 - Dissertation: Ph.D. Candidates

Credits: 3
Dissertation for the Ph.D. in history.

Mathematics

Professor Alejandro Aceves, **Department Chair**

Professors: Alejandro Aceves, Vladimir Ajaev, Wei Cai, Thomas Hagstrom, Amnon Meir, Peter Moore, Douglas Reinelt, Johannes Tausch
Associate Professors: Thomas Carr, Barry Lee, Scott Norris, Benno Rumpf, Daniel Reynolds, Brandilyn Stigler, Sheng Xu, Yunkai Zhou
Assistant Professors: Andrea Barreiro, Weihua Geng, Kathryn Hedrick
Senior Lecturers: Adriana Aceves, Judy Newell
Lecturer: Carol Seets

Admission Requirements

Minimum requirements for admission to the graduate programs in mathematics are 18 credit hours in college-level mathematics courses beyond first- and second-year calculus (including differential equations, linear algebra and statistics). Undergraduate courses in numerical methods, partial differential equations, physics and computer science are particularly helpful, as would be familiarity with programming, specifically MATLAB. There is no second language requirement.

Both the M.S. and Ph.D. degree programs require GRE graduate school admission test scores (general exam only). Three letters of recommendation are required.

Computational and Applied Mathematics, Ph.D.

The Ph.D. in the computational and applied mathematics program focuses on applied mathematics, numerical analysis, and scientific computation. The program is designed to prepare future researchers and scientists for positions in industry and national laboratories, as well as academia.

Financial aid is available for Ph.D. students in the form of teaching assistantships, which include the waiver of tuition and fees.

Degree Requirements

Course requirements for the Ph.D. include those of the M.S. in computational and applied mathematics plus an additional 18 credit hours (totaling 51 credit hours of approved course work), as well as 6 hours of dissertation credit. One year in full-time residence on the SMU campus or at a research facility approved by the departmental faculty and the dean of the graduate program is also required. Students will be awarded the M.S. degree en route to the Ph.D. after having completed all requirements for the M.S. in computational and applied mathematics. Students advance to candidacy upon successfully completing all course work and the Ph.D. qualifying examination—a written examination and oral presentation of a paper based on individualized concentration courses in computational and applied mathematics. Students must prepare a dissertation proposal, to be approved by a faculty committee, prior to beginning work on the dissertation. Successful oral defense of the dissertation before a faculty committee is required for completion of the Ph.D.

Computational and Applied Mathematics, M.S.

The M.S. in computational and applied mathematics is designed to provide its graduates with knowledge and expertise in mathematics and its application to the sciences, and to provide a strong preparation for those wishing to pursue a Ph.D. in computational or applied mathematics. Program emphases include applied mathematics, numerical analysis, and scientific computation.

Degree Requirements

A total of 33 credit hours of graduate course credit beyond the bachelor's degree (usually 11 graduate courses) are required for the master's degree. Candidates must complete:

6000 level

- At least nine courses at the 6000 level

Computational Mathematics

Two courses in computational mathematics

- MATH 6315 - Numerical Methods I
- MATH 6316 - Numerical Methods II

Differential Equations and Their Applications

Two courses in differential equations and their applications

- MATH 5334 - Introduction to Partial Differential Equations
- MATH 6324 - Introduction to Dynamical Systems

Additional Requirements

A maximum of two approved courses can be taken from outside the department. An oral examination is required for graduation.

Courses:

MATH 5315 - Introduction to Numerical Analysis

Credits: 3
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 - Introduction to Matrix Computation

Credits: 3
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 - Functions of a Complex Variable

Credits: 3
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 - Introduction to Partial Differential Equations

Credits: 3
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 6110 - Mathematics Research

Credits: 1
Independent research project in the fields of computational and applied mathematics, under the direction of a faculty member.

MATH 6210 - Mathematics Research

Credits: 2
Independent research project in the fields of computational and applied mathematics, under the direction of a faculty member.

MATH 6310 - Mathematics Research

Credits: 3
Independent research project in the fields of computational and applied mathematics, under the direction of a faculty member.

MATH 6311 - Perturbation Methods

Credits: 3
Solving differential equations with a small parameter by asymptotic techniques: weakly nonlinear oscillators, perturbed eigenvalue problems, boundary layers, method of multiple scales, and the WKBJ method. Prerequisite: MATH 2343. Recommended: MATH 5334.

MATH 6312 - Advanced Asymptotic and Perturbation Methods

Credits: 3
Topics include strongly nonlinear and slowly varying oscillators, multiple scales and matched asymptotic expansions applied to partial differential equations, asymptotic evaluation of integrals and transforms, stationary phase, steepest descents, and applications. Prerequisites: MATH 5334, MATH 6311.

MATH 6315 - Numerical Methods I

Credits: 3
Covers floating point arithmetic, backward stability analysis, numerical solution of dense and sparse linear systems of equations using direct and basic iterative methods, least-squares problems and eigenvalue problems, elementary and orthogonal matrix transformations, and nonlinear systems of equations.

MATH 6316 - Numerical Methods II

Credits: 3
Covers interpolation and approximation of functions, numerical differentiation and integration, basic methods for initial value problems in ordinary differential equations, and basic approximation methods for one-dimensional initial-boundary value problems. Topics focus on algorithm development and the theory underlying each method. Prerequisites: MATH 2343, MATH 6315.

MATH 6318 - Numerical Partial Differential Equations

Credits: 3
Covers finite difference methods for elliptic, parabolic, and hyperbolic problems in partial differential equations. Also, stability, consistency, and convergence results. Attention is given to computer implementations. Prerequisites: MATH 5315 or CSE 7365, and MATH 5334.

MATH 6319 - Finite Element Analysis

Credits: 3
Finite element method for elliptic problems, theory, practice, and applications. Finite element spaces, curved elements and numerical integration, minimization algorithms, and iterative methods. Prerequisites: MATH 5315 or CSE 7365, and MATH 6316.

MATH 6320 - Iterative Methods

Credits: 3
Matrix and vector norms, conditioning, iterative methods for the solution of larger linear systems and eigenvalue problems. Krylov subspace methods. Other topics to be chosen by the instructor. Prerequisites: MATH 5316 and some programming experience.

MATH 6321 - Numerical Solution of Ordinary Differential Equations

Credits: 3
Numerical methods for initial value problems and boundary value problems for ordinary differential equations. Emphasizes practical solution of problems using MATLAB. Prerequisites: MATH 2343, MATH 5315.

MATH 6324 - Introduction to Dynamical Systems

Credits: 3
Nonlinear ordinary differential equations: equilibrium, stability, phase-plane methods, limit-cycles, and oscillations. Linear systems and diagonalization. Periodic coefficients (Floquet theory) and Pioncaré map. Difference equations (maps), period doubling, bifurcations, and chaos. Prerequisites: MATH 2343, 3353.

MATH 6325 - Dynamical Systems and Chaos

Credits: 3
Nonlinear differential equations. Stability and bifurcation theory of ODEs and maps. Forced oscillators. Subharmonic resonances. Melnikov criterion for chaos. Lorenz system. Center manifolds and normal forms. Silnikov's example. Prerequisite: MATH 6324.

MATH 6333 - Partial Differential Equations

Credits: 3
Method of eigenfunction expansion for nonhomogeneous problems. Green's functions for the heat, wave, and Laplace equations. Dirac delta functions, Fourier and Laplace transform methods, and method of characteristics. Prerequisite: MATH 5334.

MATH 6336 - Fluid Dynamics

Credits: 3
Preliminaries, concepts from vector calculus. The transport theorem, the Navier-Stokes and other governing equations. Dynamical similarity and Reynolds number. Vorticity theorems. Ideal and potential flow. The influence of viscosity and the boundary layer approximation. Prerequisite: MATH 3337.

MATH 6337 - Real and Functional Analysis

Credits: 3
Topics include continuous functions, metric and normed spaces, Banach spaces, Hilbert spaces, distributions and the Fourier transform, measure theory and function spaces, differential calculus, and variational methods. Prerequisite: MATH 4338 or approval of instructor.

MATH 6341 - Linear and Nonlinear Waves

Credits: 3
The mathematical theory of linear and nonlinear waves. Applications from water waves, traffic flow, gas dynamics, and various other fields. Topics include nonlinear hyperbolic waves (characteristics, breaking waves, shock fitting, Burger's equation) and linear dispersive waves (method of stationary phase, group velocity, wave patterns). Prerequisite: MATH 5334.

MATH 6343 - Photonics Modeling and Simulations

Credits: 3
Propagation of light in photonic structures. Using asymptotic techniques and simulations, students derive and then analyze models based on ordinary and partial linear and nonlinear differential equations. Prerequisites: MATH 5334, MATH 6324.

MATH 6346 - Advanced Fluid Dynamics

Credits: 3
Topics include surface waves in shallow and deep water, sound waves, Stokes flow equations and lubrication-type models, spreading of droplets, and coating flows. Other topics are chosen from dynamics of bubbles, film drainage, electroosmotic flow, electrowetting on dielectric, turbulence, and fluid mechanics of swimming and flying. Prerequisite: MATH 6336/ME 5336/ME 7336.

MATH 6350 - Mathematical Models in Biology

Credits: 3
The mathematical analysis and modeling of biological systems, including biomedicine, epidemiology, and ecology. Prerequisite: Consent of instructor.

MATH 6352 - Epidemiology and Immunology

Credits: 3
Modeling and analysis of diseases from epidemiology and immunology. Considers disease dynamics modeled with delay, integral, partial, and stochastic differential equations based on susceptible-infectious-removed ODEs. Prerequisites: MATH 5334, MATH 6324.

MATH 6360 - Computational Electromagnetics

Credits: 3
Numerical methods for electromagnetics, with emphasis on practical applications. Numerical discretizations covered include the method of moments, finite differences, finite elements, boundary elements, and fast multipole methods. Prerequisites: EE 7330 or MATH 5334 and proficiency in one computer language (e.g., Fortran) or permission of instructor.

MATH 6370 - Parallel Scientific Computing

Credits: 3
An introduction to parallel computing in the context of scientific computation. Prerequisites: MATH 5315 or CSE 7365 and MATH 6316 or CEE 7366.

MATH 6391 - Topics in Applied Mathematics

Credits: 3
Selected topics in the application of mathematical analysis to such fields as differential, integral, and functional equations; mechanics; hydrodynamics; mathematical biology; and economics. Prerequisite: Permission of instructor.

MATH 6395 - Topics in Computational Mathematics

Credits: 3
Selected topics of current interest, such as numerical bifurcation theory, iterative methods for linear systems, domain decomposition and multigrid methods, numerical multidimensional integration, and numerical methods for multibody problems. Prerequisite: Permission of instructor.

Medieval Studies

Associate Professor Bonnie Wheeler, **Director**

The M.A. in medieval studies is an interdisciplinary cultural studies degree program based in Dedman College and designed to encourage students to acquire not only strong disciplinary training but also broadly based sensitivity to medieval cultures, contexts and intellectual currents. It draws upon courses in the Western Middle Ages as well as upon Byzantine and Islamic subjects offered by other departments in Dedman College of Humanities and Sciences, the Meadows School of the Arts and the Perkins School of Theology. It is also intended to serve students interested in pursuing a Ph.D. degree in a medieval field, since it will enable such students to gain a broad interdisciplinary acquaintance with the Middle Ages before narrowing their work to a specialized field at the doctoral level.

Medieval Studies, M.A.

Associate Professor Bonnie Wheeler, **Director**

Degree Requirements

Students must earn 30 credit hours, with the following requirements:

1. Twenty-four credit hours to be taken in graduate-level courses and seminars, to be distributed in at least three broad subject areas in medieval studies: a) history, b) literature, and c) music and visual arts. No more than 12 credit hours and no less than three credit hours may be applied in each area. Students are encouraged to take courses in philosophy, religious studies and church history when available.
2. Three credit hours in nonmedieval courses may be taken in the student's major disciplinary area of concentration with approval of the director of medieval studies.
3. Competence, demonstrated by examination, in intermediate Latin and one other world or medieval language.
4. A thesis carrying six credit hours of credit linking materials and methods of more than one discipline, to be guided by a committee of the director of Medieval Studies and professors from the two major subject areas covered by the thesis.

Curriculum

Competence in intermediate Latin and one other world or medieval language must be demonstrated by examination. The Dallas Medieval Consortium makes it possible for SMU students to enroll in regularly offered advanced Latin courses at the University of Dallas.

Historical Discourse

A model program for a student interested particularly in historical discourse might include:

- HIST 5364 - The City of God in Its Milieu
- HIST 5370 - Seminar in French History
- HIST 5378 – Medieval Renaissances
- HIST 6385 - Problems in British History

Additional Courses

In addition, the student might take:

- HX 8321 - The History of Christian Doctrine I

Literary Discourse

A student primarily interested in literary discourse might take:

- ENGL 6320 - Medieval Literature
- ENGL 6321 - Readings: Medieval Literature
- ENGL 6322 - Readings: Medieval Literature
- HIST 5364 - The City of God in Its Milieu
- HIST 6352 - Problems Medieval Spanish History
- ARHS 6322 - Art and the Italian Commune
- ARHS 6324 - Art and Cultures of Medieval Spain
- HX 8321 - The History of Christian Doctrine I

Visual Arts

A student primarily interested in the visual arts might put together a very coherent program using:

- ARHS 6322 - Art and the Italian Commune
- ARHS 6324 - Art and Cultures of Medieval Spain
- ARHS 6325 - The Gothic Cathedral and Its World
- ARHS 6320 - Medieval Art
- HIST 5364 - The City of God in Its Milieu
- HIST 6350 - Problems in Medieval History
- ENGL 6320 - Medieval Literature
- HX 8308 - Varieties of Medieval Theology

Regularly Offered Courses

Regularly offered courses include the following:

Dedman College Courses

- ENGL 6320 - Medieval Literature (medieval literary-cultural history through 1500)
- ENGL 6321 - Readings: Medieval Literature
- ENGL 6322 - Readings: Medieval Literature
- FREN 5370 - Seminar in French Literature (when applicable)
- HIST 5378 - Medieval Renaissances
- HIST 6349 - Problems in Medieval History
- HIST 6350 - Problems in Medieval History
- HIST 6352 - Problems Medieval Spanish History
- HIST 6385 - Problems in British History (when applicable)
- MDVL 5301 - Independent Studies

- MDVL 5302 - Independent Studies
- MDVL 5398 - Independent Studies
- MDVL 5399 - Independent Studies
- MDVL 6398 - Thesis
- MDVL 6399 - Thesis
- SPAN 5310 - Spanish Literature Before 1700
- HIST 5364 - The City of God in Its Milieu
- HIST 5370 - Seminar in French History

Meadows School of the Arts Courses

- ARHS 5320 - Seminar On Medieval Art
- ARHS 5322 - Seminar On Convivencia: Jewish, Islamic, and Christian Art in Medieval Spain
- ARHS 6320 - Medieval Art
- ARHS 6322 - Art and the Italian Commune
- ARHS 6324 - Art and Cultures of Medieval Spain
- ARHS 6325 - The Gothic Cathedral and Its World
- ARHS 6399 - The Medieval Jewish-Christian Dialogue in Art and Text
- MUHI 6392 - Directed Studies in Music History

Perkins School of Theology Courses

- HX 8308 - Varieties of Medieval Theology
- HX 8321 - The History of Christian Doctrine I

Courses:

MDVL 5301 - Independent Studies

Credits: 3
Research and writing in medieval fields on special topics at the forefront of current intellectual interest.

MDVL 5302 - Independent Studies

Credits: 3
Research and writing in medieval fields on special topics at the forefront of current intellectual interest.

MDVL 5398 - Independent Studies

Credits: 3
Research and writing in medieval fields on special topics at the forefront of current intellectual interest.

MDVL 5399 - Independent Studies

Credits: 3
Research and writing in medieval fields on special topics at the forefront of current intellectual interest.

MDVL 6049 - Graduate Full-Time Status

Credits: 0
Independent course for students continuing work on an M.A. thesis.

MDVL 6308 - Towns, Trade, and Revolution in the Medieval West

Credits: 3
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 6318 - Byzantine History, 285-1453

Credits: 3
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 6398 - Thesis

Credits: 3
Research and writing the M.A. thesis with guidance from the student's thesis director.

MDVL 6399 - Thesis

Credits: 3
Research and writing the M.A. thesis with guidance from the student's thesis director.

Multidisciplinary Studies

Programs

- Data Science, M.S.D.S. (p. 63)
- Medieval Studies, M.A. (p. 124)
- Women’s and Gender Studies Graduate Certificate (p. 179)

Physics

Professor Ryszard Stroynowsk, **Department Chair**

Professors: Thomas Coan, Robert Kehoe, Fred Olness, Ryszard Stroynowski, Jingbo Ye
Associate Professors: Jodi Cooley-Sekula, Pavel Nadolsky, Stephen Sekula, Roberto Vega
Senior Lecturers: Simon Dalley, Randall Scalise
Lecturer: Durdana Balakishiyeva
Research Professor: Datao Gong
Research Associate Professor: Tiankuan Liu
Research Assistant Professors: Sami Kama, Chonghan Liu

Physics, Ph.D.

Degree Requirements

Candidates for the Ph.D. degree must satisfactorily complete eight core courses, four elective graduate courses in physics, and at least 48 credit hours of graduate courses in total. Students typically take the core sequence of courses during their first two years, and may take electives during their second and later years, according to their interests and in consultation with their research adviser.

Core Courses

The department offers 10 core courses with emphasis on particle physics, which include:

- PHYS 6321 - Classical Mechanics
- PHYS 6335 - Quantum Mechanics
- PHYS 6336 - Quantum Mechanics
- PHYS 6351 - Statistical Mechanics
- PHYS 7311 - Electromagnetic Theory
- PHYS 7312 - Electromagnetic Theory
- PHYS 7314 - Quantum Field Theory I
- PHYS 7315 - Quantum Field Theory II
- PHYS 5395 - Introduction to Elementary Particles
- PHYS 7361 - Elementary Particles II

Elective Courses

The department offers several elective courses.

Research Courses

After completing core courses and electives, students typically sign up for 8000-level research courses under their adviser until reaching the required 48 hours.

Comprehensive Qualifying Exam

In order to advance to Ph.D. candidacy, SMU also requires students to pass a comprehensive qualifying exam, usually given within the first two years. In Physics, this takes the form of a four-part written exam. Topics include Mechanics, Quantum Mechanics, Electrodynamics, and Statistical Mechanics. Exams are given annually, typically just prior to the start of the fall semester. Students are allowed two attempts to pass all four sections and must do so before the end of their fifth semester. We also ask incoming students to take the exam for purposes of placement, but do not count this against their two attempts.

Physics, M.S.

Degree Requirements

Students enrolled in the M.S. in physics program in physics must complete either 33 credit hours of approved graduate coursework or 30 credit hours of courses, including a research thesis. Every student's degree plan must contain at least 18 credit hours of graduate-level work in physics, including a prescribed sequence of three courses. Students also must pass a comprehensive exam, or, if applicable, defend their thesis.

Courses:

PHYS 5161 - Selected Topics in Physics For High School Teachers

Credits: 1
Additional information is available from the department.

PHYS 5337 - Introduction to Solid State Physics

Credits: 3
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 - Concepts of Experimental Particle Physics

Credits: 3
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 - Introduction to Quantum Mechanics

Credits: 3
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, and PHYS 4321 or MATH 3353.

PHYS 5383 - Advanced Quantum Mechanics

Credits: 3
Applications and approximation methods in quantum mechanics. Also, applications to laser physics, solid-state physics, molecular physics, and scattering. Prerequisite: PHYS 5382.

PHYS 5384 - Quantum Physics II

Credits: 3
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 - Electromagnetic Waves and Optics

Credits: 3
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 - Introduction to Elementary Particles

Credits: 3
Modern theories of elementary particles, including relativistic kinematics, Feynman diagrams, quantum electrodynamics, quarks, weak interactions, and gauge theories. Prerequisite: PHYS 5383.

PHYS 5398 - Applications of Quantum Mechanics

Credits: 3
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.

PHYS 6049 - Graduate Full-Time Status

Credits: 0

PHYS 6321 - Classical Mechanics

Credits: 3
Topics in classical mechanics, including the mechanics of a system of particles, the two-body central-force problem, Lagrange's and Hamilton's formulations, the special theory of relativity, Hamilton-Jacobi theory, and continuous systems and fields.

PHYS 6335 - Quantum Mechanics

Credits: 3
Fundamental principles of quantum theory with applications to one-dimensional problems, the free particle, and the hydrogen atom; the spinning electron. Perturbation theory with applications to atomic spectra; systems of identical particles; scattering theory; Dirac theory of the electron. Prerequisites: PHYS 5382 or equivalent, MATH 3313.

PHYS 6336 - Quantum Mechanics

Credits: 3
Fundamental principles of quantum theory with applications to one-dimensional problems, the free particle, and the hydrogen atom; the spinning electron. Perturbation theory with applications to atomic spectra; systems of identical particles; scattering theory; Dirac theory of the electron. Prerequisites: PHYS 5382 or equivalent, MATH 3313.

PHYS 6338 - Condensed Matter Physics

Credits: 3
Plasmons, polaritons, and polarons. Optical properties of solids. Superconductivity. Atomic and collective magnetism. Atomic and collective electrical phenomena. Prerequisite: PHYS 5337 or permission of instructor.

PHYS 6341 - Nuclear Physics

Credits: 3
General properties of the nucleus; the two-nucleon problem; radioactivity; beta decay; interaction of charged particles and radiation with matter; detection methods; nuclear models; nuclear reactions; neutron physics. Prerequisite: PHYS 6335 or permission of instructor.

PHYS 6351 - Statistical Mechanics

Credits: 3
Derivation of classical and quantum statistical distribution functions; partition functions; the laws of thermodynamics; ensemble theory; applications to gases and solids. Prerequisite: PHYS 3374 or permission of instructor.

PHYS 6361 - Selected Topics

Credits: 3
Content varies term to term.

PHYS 6398 - Thesis

Credits: 3
Research and writing of the thesis with guidance from the student's thesis director.

PHYS 6399 - Thesis

Credits: 3
Research and writing of the thesis with guidance from the student's thesis director.

PHYS 7170 - Current Topics in Physics

Credits: 1
Seminar course on current topics in physics.

PHYS 7305 - Methods of Theoretical Physics

Credits: 3
Mathematical methods; theory of analytic functions, evaluation of integrals, linear vector spaces, special functions, integral equations, tensor analysis, calculus of variations, group theory. Prerequisites: Working knowledge of complex variable, Fourier transforms, and partial differential equations.

PHYS 7311 - Electromagnetic Theory

Credits: 3
Boundary-value problems in electrostatics; dielectrics; magnetic media; Maxwell's equations; electromagnetic waves; refraction and reflection; wave guides and cavities. Electromagnetic radiation; diffraction and interference; plasma physics; special relativity; dynamics of charged particles; multipole expansion. Prerequisite: PHYS 5393 or permission of instructor.

PHYS 7312 - Electromagnetic Theory

Credits: 3
Boundary-value problems in electrostatics; dielectrics; magnetic media; Maxwell's equations; electromagnetic waves; refraction and reflection; wave guides and cavities. Electromagnetic radiation; diffraction and interference; plasma physics; special relativity; dynamics of charged particles; multipole expansion. Prerequisite: PHYS 5393 or permission of instructor.

PHYS 7314 - Quantum Field Theory I

Credits: 3
Classical fields; symmetry transformations and conservation laws; the quantum theory of radiation; relativistic quantum mechanics of spin-1/2 particles, second quantization and the theory of interaction fields. Covariant perturbation theory; collision phenomena in quantum electrodynamics; renormalization. Prerequisite: PHYS 6336.

PHYS 7315 - Quantum Field Theory II

Credits: 3
Path integral formulation; renormalization group; symmetry structure; formal aspects; nonabelian gauge theories. Prerequisite: PHYS 7314 or permission of instructor.

PHYS 7321 - Atomic Physics

Credits: 3
The central-field model of atomic structure, the Hartree methods; angular momentum and the vector model of the atom; antisymmetry and the determinantal method: theory of multiplets; magnetics properties of atoms. Prerequisites: PHYS 6336 or working knowledge of quantum mechanics and permission of instructor.

PHYS 7330 - Physics of Quantum Electronics

Credits: 3
Interactions of electromagnetic radiation with atomic systems; absorption and dispersion, line-broadening mechanisms, amplification. Quantum theory of light scattering: Rayleigh, Raman, and Brillouin scattering. Theory of lasers. Coherent pulse propagation. Nonlinear optical processes. Prerequisites: PHYS 6336, or working knowledge of quantum mechanics, and permission of instructor.

PHYS 7341 - Theoretical Nuclear Physics

Credits: 3
Properties of nuclear forces; many-body theory of nuclear models; analysis of scattering experiments. Interaction between nucleons and radiation; pion physics; weak interactions. Prerequisites: PHYS 6336 and PHYS 6341.

PHYS 7350 - General Relativity

Credits: 3
Einstein's theory, black holes, gravitational waves, and cosmology. Prerequisite: PHYS 6321 or permission of instructor.

PHYS 7360 - Elementary Particles I

Credits: 3
Physics of the standard model; quarks and leptons; internal symmetries, grand unified theories. Prerequisite: Permission of instructor.

PHYS 7361 - Elementary Particles II

Credits: 3
Continues PHYS 7360 with emphasis on current topics. Prerequisite: PHYS 7360 or permission of instructor.

PHYS 8049 - Graduate Full-Time Status

Credits: 0

PHYS 8100 - Research

Credits: 1
Research and study of selected physics topics; content varies term to term.

PHYS 8200 - Research

Credits: 2
Research and study of selected physics topics; content varies term to term.

PHYS 8300 - Research

Credits: 3
Research and study of selected physics topics; content varies term to term.

PHYS 8361 - Special Topics in Physics

Credits: 3
Content varies term to term.

PHYS 8362 - Special Topics in Physics

Credits: 3
Content varies term to term.

PHYS 8398 - Dissertation

Credits: 3
Research and writing of the dissertation.

PHYS 8399 - Dissertation

Credits: 3
Research and writing of the dissertation.

PHYS 8400 - Research

Credits: 4
Research and study of selected physics topics; content varies term to term.

PHYS 8500 - Research

Credits: 5
Research and study of selected physics topics; content varies term to term.

PHYS 8600 - Research

Credits: 6
Research and study of selected physics topics; content varies term to term.

PHYS 8700 - Research

Credits: 7
Research and study of selected physics topics; content varies term to term.

PHYS 8800 - Research

Credits: 8
Research and study of selected physics topics; content varies term to term.

PHYS 8900 - Research

Credits: 9
Research and study of selected physics topics; content varies term to term.

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, Chrystyna Kouros, Alicia Meuret, David Rosenfield, Lorelei Simpson Rowe
Assistant Professors: Michael Chmielewski, Nathan Hudson, Priscilla Lui, Benjamin A. Tabak
Senior Lecturers: Michael Crow, Susan Hornstein, Chris Logan
Lecturer: James Calvert
Clinical Assistant Professor: Naomi Tabak

Psychology, Ph.D.

The Ph.D. program in clinical psychology is a 70-hour program designed to prepare a student for a professional career in research, teaching and/or the clinical applications of empirically supported psychological methods. The four major requirements for the Ph.D. degree consist of departmental research requirements, coursework, practica, and a formal clinical internship.

Degree Requirements

Research Requirements and Qualifications for Candidacy

Students are expected to conduct research throughout their enrollment in the clinical psychology doctoral program. To facilitate their involvement and training in research, the program will include several research benchmarks that students must complete prior to graduation. Research benchmarks must be completed in accordance with the Dedman College graduate catalog. A brief description of the research benchmarks follows. For specific details, students are referred to the *Graduate Student Handbook* (also online).

First-Year Research

First-year students will work on research projects with their faculty adviser. This research experience is intended to provide students with exposure to a research area and help shape the skills necessary to develop hypotheses, analyze data and communicate the results.

Thesis

First Research Benchmark

Students are expected to complete a student-directed empirical research project that will constitute their thesis. Students will present an oral defense of a thesis proposal (prior to initiating thesis research) to a thesis committee consisting of three faculty members. The thesis proposal is expected to occur prior to July 31 of the second year. An M.A. degree will be awarded en route for doctoral candidates who successfully complete their thesis requirement.

Presentation of Research at a Professional Conference or Publication of Research in a Professional Journal

Second Research Benchmark

All graduate students are required to publish at least two manuscripts in peer-reviewed outlets, at any level of authorship, prior to graduation. Although two publications are required to meet this benchmark, graduate students should be active in presentation of research throughout their graduate career (e.g., at least one conference presentation or publication per year after the first year).

Review Article

Third Research Benchmark

To demonstrate in-depth knowledge of their research area and to demonstrate their capability to interpret and synthesize theories and data in this area, students will write a review article on a topic related to their area of research. This benchmark should be completed by the middle of the third year (February 1st).

Dissertation

Fourth Research Benchmark

The dissertation is an original empirical research project with the potential to contribute to the knowledge base in their specific area of clinical psychology. Before a student can begin the dissertation, the student must be advanced to candidacy (described below). Students must formally propose the project to the dissertation committee. Successful completion of the dissertation will be determined by an oral defense before the student's dissertation committee.

It is expected that students will propose their dissertation by September 30 of the year they intend to apply for internship.

Candidacy Requirements

Candidacy requirements consist of completion of the first three research benchmarks. Students must also complete the core clinical courses to qualify for advancement to candidacy. Advancement to candidacy is necessary for students to initiate dissertation research and to apply for an internship. Students are required to complete their candidacy requirements by the end of their third year (August 31) in the program. An extension of one year may be granted by the dean upon submission of a petition endorsed by the department.

- PSYC 6324 - Research Methods
- PSYC 6314 - Seminar in Adult Psychopathology
- PSYC 6351 - Theories and Methods of Psychotherapy
- PSYC 6353 - Integrative Psychological Assessment
- PSYC 6363 - Professional Issues in Psychology: Ethics and Diversity

Required Courses

The following courses (39 credit hours) are required:

- PSYC 6091 - Integrated Practicum Seminar
- PSYC 6092 - Integrated Practicum Seminar
- PSYC 6093 - Integrated Practicum Seminar
- PSYC 6094 - Integrated Practicum Seminar

- PSYC 6095 - Integrated Practicum Seminar
- PSYC 6096 - Integrated Practicum Seminar
- PSYC 6097 - Integrated Practicum Seminar
- PSYC 6098 - Integrated Practicum Seminar
- PSYC 6305 - Quantitative Methods I
- PSYC 6307 - Quantitative Methods II
- PSYC 6314 - Seminar in Adult Psychopathology
- PSYC 6317 - Seminar in Physiological Psychology
- PSYC 6324 - Research Methods
- PSYC 6334 - Seminar in Developmental Psychopathology
- PSYC 6351 - Theories and Methods of Psychotherapy
- PSYC 6353 - Integrative Psychological Assessment
- PSYC 6355 - Methods of Psychotherapy/Assessment (includes Interviewing)
- PSYC 6363 - Professional Issues in Psychology: Ethics and Diversity
- PSYC 6364 - Foundations in Psychology: Social & Cognitive Psychology, & the History & Systems of Psychology (Cognitive, Social, History)
- PSYC 6398 - Thesis
- PSYC 7091 - Practicum in Psychology
- PSYC 7092 - Practicum in Psychology
- PSYC 7093 - Practicum in Psychology
- PSYC 7094 - Practicum in Psychology
- PSYC 7095 - Practicum in Psychology
- PSYC 7096 - Practicum in Psychology
- PSYC 7097 - Practicum in Psychology
- PSYC 7098 - Practicum in Psychology
- PSYC 8396 - Dissertation

Additional Courses

In addition, students will enroll in:

- PSYC 8091 - Clinical Internship I
- PSYC 8092 - Clinical Internship II

Elective Coursework

Elective courses (up to 31 credit hours) can be taken from Psychology Department courses at the 6000 level or above. Courses from other departments or schools can also be taken with approval of the director of graduate studies.

Quantitative Methods Minor

12 hours in additional coursework in advanced statistical methods are available as an elective minor, with courses in SEM, HSLM, IRT, and other advanced methods within and outside the department.

Clinical Practica

Students will participate in practicum training beginning in their second year. Purposes of clinical practica are to:

- Provide students training, supervision, and experience in the use of empirically supported methods of intervention and assessment.
- Offer students training, supervision, and experiences in working with a diverse sample of clients.
- Expose students to nonacademic sites in which psychological research is conducted.

Grade Point Average

To be in good standing in the Ph.D. program, students are expected to obtain a grade of *B* or better in each course. A course with a grade of *C* must be retaken. Two or more courses with a grade of *C* may result in dismissal.

Periodic Performance Reviews

Student performance will be reviewed each year and twice in the first year, assessing performance in research, clinical skills, and assigned duties.

Psychology, M.A.

The M.A. in psychology degree is only available to students currently in the Ph.D. program in clinical psychology at SMU. See the Ph.D. program information for further details on earning the M.A. degree.

Courses:

PSYC 6091 - Integrated Practicum Seminar

Credits: 0
Students participate in an off-campus practicum but also meet biweekly with faculty to review cases, learn supervision techniques, and review procedures for assessment and treatment. Instructor consent and Ph.D. practicum enrollment required.

PSYC 6092 - Integrated Practicum Seminar

Credits: 0
Students participate in an off-campus practicum but also meet biweekly with faculty to review cases, learn supervision techniques, and review procedures for assessment and treatment. Instructor consent and Ph.D. practicum enrollment required.

PSYC 6093 - Integrated Practicum Seminar

Credits: 0
Students participate in an off-campus practicum but also meet biweekly with faculty to review cases, learn supervision techniques, and review procedures for assessment and treatment. Instructor consent and Ph.D. practicum enrollment required.

PSYC 6094 - Integrated Practicum Seminar

Credits: 0
Students participate in an off-campus practicum but also meet biweekly with faculty to review cases, learn supervision techniques, and review procedures for assessment and treatment. Instructor consent and Ph.D. practicum enrollment required.

PSYC 6095 - Integrated Practicum Seminar

Credits: 0
Students participate in an off-campus practicum but also meet biweekly with faculty to review cases, learn supervision techniques, and review procedures for assessment and treatment. Instructor consent and Ph.D. practicum enrollment required.

PSYC 6096 - Integrated Practicum Seminar

Credits: 0
Students in an off-campus practicum but also meet biweekly with faculty to review cases, learn supervision techniques, and review procedures for assessment and treatment. Instructor consent and Ph.D. practicum enrollment required.

PSYC 6097 - Integrated Practicum Seminar

Credits: 0
Students participate in an off-campus practicum but also meet biweekly with faculty to review cases, learn supervision techniques, and review procedures for assessment and treatment. Instructor consent and Ph.D. practicum enrollment required.

PSYC 6098 - Integrated Practicum Seminar

Credits: 0
Students in an off-campus practicum but also meet biweekly with faculty to review cases, learn supervision techniques, and review procedures for assessment and treatment. Instructor consent and Ph.D. practicum enrollment required.

PSYC 6305 - Quantitative Methods I

Credits: 3
Theoretical bases of quantitative methods used in experimental research designs. Topics will include rules of probability, random variables and their distributions, statistical inference, tests of hypotheses and confidence intervals for population means, and analysis of variance. Prerequisite: Permission of instructor.

PSYC 6307 - Quantitative Methods II

Credits: 3
Theoretical bases of quantitative methods used in quasi- and nonexperimental research designs. Topics include correlation, regression, multiple regression, partial and multiple correlation, and nonparametric approaches. Prerequisite: Permission of instructor.

PSYC 6309 - Seminar in Health Psychology

Credits: 3
Current theories and research in health psychology.

PSYC 6311 - Seminar in Social Psychology

Credits: 3
Current theories and research on the social influences of behavior.

PSYC 6312 - Seminar in Developmental Psychology

Credits: 3
Current theories and research in developmental psychology.

PSYC 6314 - Seminar in Adult Psychopathology

Credits: 3
The presentation and discussion of selected topics involving research in psychopathology.

PSYC 6316 - Seminar in Cognitive Psychology I

Credits: 3
An in-depth examination of selected topics in the general areas of human learning, memory, thinking, and related experiences.

PSYC 6317 - Seminar in Physiological Psychology

Credits: 3
Provides comprehensive exposure to a selected area or problem in physiological psychology. Areas receiving such treatment might include limbic system-behavior relationships, biological bases of motivation, and biological bases of learning and memory.

PSYC 6318 - Seminar in Sensation and Perception

Credits: 3
Study physical stimuli, physiological receptors, and psychological processes involved in extracting information from the physical world.

PSYC 6322 - Contemporary Scientific Psychology Issues II

Credits: 3
Examination of current issues and areas of scientific psychological research, including developmental psychology, cognition, biopsychology, and social and personality psychology.

PSYC 6323 - Structural Equation Modeling

Credits: 3
Introduces the basic theory of structural equation modeling, which is a system of regression models with observed and unobserved variables. Focuses on SEM behavioral and social science applications.

PSYC 6324 - Research Methods

Credits: 3
Seminar addressing issues of research design and implementations in clinical psychology. Topics include validity and reliability of clinical assessment, experimental and quasi-experimental designs, causal inference, interpretation of data, and research ethics.

PSYC 6330 - Seminar in Psychopharmacology

Credits: 3
Introduces psychotropic drugs and their uses, with a focus on the relationship between psychology and psychiatry in practice.

PSYC 6331 - Psychotherapy Practicum I

Credits: 3
Combined didactic/lecture and laboratory practicum experience for second-year graduate students. Emphasis is placed on assessment of and brief psychotherapy for medical patients in the Baylor Hospital Trauma Unit.

PSYC 6332 - Psychotherapy Practicum II

Credits: 3
Continuation into the second term of a combined didactic/lecture and laboratory practicum experience for second-year graduate students. Emphasis is placed on assessment of and brief psychotherapy for medical patients in the Baylor Hospital Trauma Unit.

PSYC 6334 - Seminar in Developmental Psychopathology

Credits: 3
Advanced seminar examining theories and data on psychopathology in childhood and adolescence.

PSYC 6340 - Psychobiology of Emotion

Credits: 3
Provides an empirically based foundation in the psychobiology processes involved in human emotion (e.g., anger, fear, anxiety, and depression) that underlie interventions for clinically elevated levels of these emotions.

PSYC 6351 - Theories and Methods of Psychotherapy

Credits: 3
Discussion of research concerning the efficacy and effectiveness of individual psychotherapy; discussion about and training in the major theoretical methods of individual psychotherapy; ethics of individual psychotherapy. Open to psychology graduate students only.

PSYC 6353 - Integrative Psychological Assessment

Credits: 3
Application of psychological methods to the study of the individual; rationale of test construction and interpretation; problems in the prediction of human behavior; and theory and practice in psychological assessment techniques to measure personality, intelligence, and behavior. The focus throughout is on the integration of diverse sources of data to better inform psychodiagnostic decision-making. Open to psychology graduate students only.

PSYC 6354 - Assessment Practicum

Credits: 3
On-campus practicum for Ph.D. students to learn to administer and interpret cognitive, achievement, personality, and behavioral psychological tests; to conduct feedback sessions; and to generate appropriate reports. Instructor consent and Ph.D. student status required.

PSYC 6355 - Methods of Psychotherapy/Assessment

Credits: 3
Emphasizes fundamental clinical skills of interviewing and diagnostic assessment.

PSYC 6356 - Theories and Methods of Couple and Family Therapy

Credits: 3
Introduction to theories of marriage, family, and divorce counseling. Also, research on these approaches, with a focus on the types of interaction between spouses and between family members.

PSYC 6357 - Seminar in Interviewing Skills

Credits: 3
For Ph.D. and M.A. students in psychology. Students are taught interviewing techniques, basic supportive counseling skills, and effective communication and planning of clinical therapy sessions. Employs didactic and experiential methods of instruction.

PSYC 6360 - Ethics in Psychology

Credits: 3
Reviews the current ethical code of conduct followed by professional psychologists. Ethical principles will be discussed in terms of their legal, social, and philosophical relevance.

PSYC 6361 - Assessment Practicum II

Credits: 3
Second term of an on-campus practicum course for Ph.D. students to learn to administer and interpret a variety of psychological tests, to conduct feedback sessions, and to generate reports based upon these assessments.

PSYC 6362 - Advanced Special Topics

Credits: 3
An advanced seminar on selected topics in various sub-areas of psychological research.

PSYC 6363 - Professional Issues in Psychology: Ethics and Diversity

Credits: 3
Introduces two key domains in professional psychology: ethics and diversity. Students learn the ethical code of conduct followed by psychologists and discuss research and theory covering individual differences and diversity in psychology. Prerequisite: Instructor approval.

PSYC 6364 - Foundations in Psychology: Social & Cognitive Psychology, & the History & Systems of Psychology

Credits: 3
Three 4-week miniseminars that provide a foundational knowledge in social and cognitive psychology and in the history and systems of psychology. Prerequisite: Instructor approval.

PSYC 6366 - Supervision and Consultation in Psychology

Credits: 3
An in-depth examination of current methods, procedures, and efficacy of models of clinical supervision and both inter-mural and intra-mural psychological consultation. Perquisite: Admission to Psychology Ph.D. Program or permission of the instructor.

PSYC 6371 - Research on Psychology

Credits: 3
Supervised individual empirical research on selected problems. A research proposal must be submitted to and approved by the instructor before admission.

PSYC 6372 - Research in Psychology

Credits: 3
Supervised individual empirical research on selected problems. A research proposal must be submitted to and approved by the instructor before admission.

PSYC 6398 - Thesis

Credits: 3
Academic credit for design, data collection, analysis, and writing of student master's thesis.

PSYC 7091 - Practicum in Psychology

Credits: 0
Students conduct psychological assessments and interventions in a field placement under the direct supervision of an approved supervisor.

PSYC 7092 - Practicum in Psychology

Credits: 0
Students conduct psychological assessments and interventions in a field placement under the direct supervision of an approved supervisor.

PSYC 7093 - Practicum in Psychology

Credits: 0
Students conduct psychological assessments and interventions in a field placement under the direct supervision of an approved supervisor.

PSYC 7094 - Practicum in Psychology

Credits: 0
Students conduct psychological assessments and interventions in a field placement under the direct supervision of an approved supervisor.

PSYC 7095 - Practicum in Psychology

Credits: 0
Students conduct psychological assessments and interventions in a field placement under the direct supervision of an approved supervisor.

PSYC 7096 - Practicum in Psychology

Credits: 0
Students conduct psychological assessments and interventions in a field placement under the direct supervision of an approved supervisor.

PSYC 7097 - Practicum in Psychology

Credits: 0
Students conduct psychological assessments and interventions in a field placement under the direct supervision of an approved supervisor.

PSYC 7098 - Practicum in Psychology

Credits: 0
Students conduct psychological assessments and interventions in a field placement under the direct supervision of an approved supervisor.

PSYC 7171 - Research

Credits: 1
Academic credit for data collection, analysis, and writing of student research project.

PSYC 7172 - Research

Credits: 1
Academic credit for data collection, analysis, and writing of student research project.

PSYC 7271 - Research

Credits: 2
Academic credit for data collection, analysis, and writing of student research project.

PSYC 7272 - Research

Credits: 2
Academic credit for data collection, analysis, and writing of student research project.

PSYC 7361 - Advanced Special Topics

Credits: 3

PSYC 7362 - Advanced Special Topics

Credits: 3
An advanced seminar on selected topics in various sub-areas of psychological research.

PSYC 7371 - Research

Credits: 3
Academic credit for data collection, analysis, and writing of student research project.

PSYC 7372 - Research

Credits: 3
Academic credit for data collection, analysis, and writing of student research project.

PSYC 8049 - Graduate Full-Time Status

Credits: 0
Continuing graduate students who are finished with coursework but completing their thesis/dissertation research.

PSYC 8091 - Clinical Internship I

Credits: 0
The first term that the student has been matched with a formal internship training site. This is a full-time, supervised clinical position.

PSYC 8092 - Clinical Internship II

Credits: 0
The second term that the student continues at a formal internship training site. This is a full-time, supervised clinical position.

PSYC 8096 - Dissertation

Credits: 0
Design, data collection, analysis, and writing of student doctoral dissertation.

PSYC 8105 - Research

Credits: 1

PSYC 8391 - Directed Studies

Credits: 3
Advanced study on selected topics in various sub-areas of psychological research.

PSYC 8392 - Directed Studies

Credits: 3
Advanced study on selected topics in various sub-areas of psychological research.

PSYC 8396 - Dissertation

Credits: 3
Academic credit for design, data collection, analysis, and writing of student doctoral dissertation.

PSYC 8397 - Dissertation

Credits: 3
Academic credit for design, data collection, analysis, and writing of student doctoral dissertation.

Religious Studies

Professor Carl Johan Elverskog, **Department Chair**

Professors: William Barnard, Mark Chancey, Carl Johan Elverskog, Serge Frolov
Associate Professors: Richard Cogley, Jill DeTemple, John Lamoreaux, Steven Lindquist
Professor of Practice: Shira Lander

Programs and Fields of Study. The Graduate Program in Religious Studies comprises programs of study leading to the M.A. and Ph.D. degrees. The primary goal of both degree programs is to prepare persons for academic leadership in the field and hence for professional careers as teacher-scholars in colleges, universities and schools of theology. The M.A. degree program also aims to accommodate the qualified nonprofessional student interested in advanced work in religious studies within the context of the liberal arts and sciences. Students specialize in one of the following six fields of study:

Hebrew Bible/Old Testament	Systematic theology
New Testament	Religious ethics (Christian ethics)
The Christian tradition	Religion and culture

Language Requirement. All students are expected to demonstrate a reading competence in at least one approved language other than English upon matriculation, by passing an examination in that language in the August examination period preceding the first term of study. Ph.D. students will be expected to pass an examination in a second approved language by the beginning of the second year. (For students in the two biblical fields, the examination in the second language is to be taken no later than May of the first year.) The approved languages in which examinations may be taken in both degree programs are French, Spanish, German, Greek, Hebrew and Latin. Another pertinent language may be substituted with the approval of the steering committee. It is strongly recommended that Ph.D. students enter the program with a solid reading knowledge of the two (or more) languages in which they expect to be examined, since there is little time or opportunity for basic language acquisition during graduate study.

Religious Studies, Ph.D.

Admission Requirements

The deadline for completed applications is January 5. The requirements for admission to the Ph.D. degree program are, specifically

1. The B.A. degree or its equivalent from an accredited institution.
2. A cumulative grade point average of 3.000 or above on a 4.000 scale.
3. A satisfactory score on the GRE general graduate school admission test, ordinarily including a combined score of 310 or greater on the verbal and quantitative sections.
4. Sufficient previous study in religion or related areas to be able to satisfy the requirements of the degree program.
5. When English is not the applicant's native language, a satisfactory TOEFL English language proficiency test score also is required. Internet-based version: 79-80 or better (preferably 100 or above); or paper-based version: 550 or better (preferably 600 or above).

Degree Requirements

Required Courses

Satisfactory completion of 48 credit hours of approved coursework, including the four courses of the core seminar in religious studies:

- RELI 6301 - The Philosophical Study of Religion
- RELI 6302 - Approaches to Asian Religions
- RELI 6303 - History, Theory, and Method in Religious Studies
- RELI 6304 - Contemporary Approaches

Reading Competence

Demonstrating, by examination, a reading competence in two approved languages, other than English, relevant to the field of study. (For students in the two fields of biblical studies, four languages are required. Examinations must be passed in both Hebrew and Greek as well as in two additional languages.)

Comprehensive Field Examinations

Passing four comprehensive field examinations on the subjects designated for examination in the student's field, each consisting of a six-hour written examination based on the bibliography agreed upon with the examiner.

Dissertation Proposal

Securing the steering committee's approval of a dissertation proposal endorsed by the student's adviser, two other members of the Graduate Program in Religious Studies faculty and one reader from outside the Graduate Program in Religious Studies faculty.

Practice Teaching Requirement

Satisfactorily meeting the practice teaching requirement.

Doctoral Dissertation

Satisfactorily completing the doctoral dissertation.

Oral Examination

Passing an oral examination covering the student's entire course of study as well as the dissertation.

Religious Studies, M.A.

Admission Requirements

The deadline for completed applications is January 5. The requirements for admission to the M.A. degree program are, specifically

1. The B.A. degree or its equivalent from an accredited institution.
2. A cumulative grade point average of 3.000 or above on a 4.000 scale.
3. A satisfactory score on the GRE general graduate school admission test, ordinarily including a combined score of 310 or greater on the verbal and quantitative sections.
4. Sufficient previous study in religion or related areas to be able to satisfy the requirements of the degree program.
5. When English is not the applicant's native language, a satisfactory TOEFL English language proficiency test score also is required. Internet-based version: 79-80 or better (preferably 100 or above); or paper-based version: 550 or better (preferably 600 or above).

Degree Requirements

Required Courses

Satisfactory completion of 30 credit hours of approved coursework, including the four courses of the core seminar in religious studies:

- RELI 6301 - The Philosophical Study of Religion
- RELI 6302 - Approaches to Asian Religions
- RELI 6303 - History, Theory, and Method in Religious Studies
- RELI 6304 - Contemporary Approaches

Reading Competence

- Demonstrating, by examination, a reading competence in an approved language, other than English, relevant to the field of study.

Master's Thesis

- Satisfactory completion of a master's thesis.

Concentration

The student is encouraged to develop an area of concentration in his or her 18 credit hours of undesignated coursework. A maximum of six credit hours may be taken in independent study courses. Concentrations in areas of scholarship represented primarily in the Department of Religious Studies in Dedman College are especially welcome. Students whose main interests are in areas represented in the typical theological curriculum are advised to consider the Master of Theological Studies degree in Perkins School of Theology as an alternative to the M.A. degree in the Graduate Program in Religious Studies.

Courses:

Perkins School of Theology Courses

BB 8345 - Scripture and Christian Ethics

GR 7302 - Greek Exegesis

HB 7302 - Hebrew Exegesis

HR 8360 - Eastern Spiritual Traditions and Christian Mysticism

HX 8308 - Varieties of Medieval Theology

HX 8321 - The History of Christian Doctrine I

HX 8322 - The History of Christian Doctrine II

HX 8325 - Ecumenical Movement

HX 8354 - History of African-American Christianity

HX 8360 - Studies in Wesley

HX 8367 - Studies in World Methodism

MT 8305 - Historical Studies in Christian Ethics

MT 8345 - African-American Liberation Theology

MT 8352 - Contemporary Moral Issues

MT 8354 - Studies in Theological Ethics

MT 8383 - Process Theology and Social Ethics

MT 8385 - Malcolm and Martin and Theological Ethics

MT 8375 - The Poor in John Wesley's Ethics

MT 8377 - Studies in Reinhold Niebuhr

NT 8365 - Evil, Suffering, and Death in the New Testament

NT 8379 - Issues in Pauline Theology

OT 8345 - Ancient Text and the Modern Reader

OT 8351 - Major Motifs of Biblical Theology

ST 8311 - Contemporary Theology

ST 8318 - The Person and Work of Jesus Christ

ST 8327 - North American Hispanic Theology

ST 8345 - African-American Liberation Theology

ST 8359 - God and Creation

TC 8308 - Contemporary Issues in the Philosophy of Religion

TC 8325 Bioethics

TC 8340 - The Christian, the Church, and the Public Good

WX 8322 Christianity in Asia

WX 8328 - Theological Issues in World Christianity

Religious Studies

Independent and Directed Studies	
Philosophy of Religion	RELI 7300–7309
Philosophical Theology	RELI 7310–7319
Religion and Culture	RELI 7320–7334
History of Christianity	RELI 7335–7349
Systematic Theology	RELI 7350–7364
Religious Ethics	RELI 7365–7379
Old Testament	RELI 7380–7389
New Testament	RELI 7390–7399

RELI 6049 - Graduate Full-Time Status

Credits: 0

RELI 6301 - The Philosophical Study of Religion

Credits: 3
The work of this seminar will focus on aims, methods, and problems in the philosophical study of religion.

RELI 6302 - Approaches to Asian Religions

Credits: 3
This seminar is a historical and theoretical inquiry into Asian religions. These traditions will be investigated through three broadly defined methods of theoretical approaches: textual studies, anthropology, and social/intellectual history.

RELI 6303 - History, Theory, and Method in Religious Studies

Credits: 3
This course will introduce several of the principal approaches to the study of religion in the post-Enlightenment West, focusing on canonical thinkers from various disciplines, especially anthropology, sociology, and psychology.

RELI 6304 - Contemporary Approaches

Credits: 3
This seminar provides an orientation to the critical study of religion in its contemporary context, with specific attention to emerging issues and modes of inquiry.

RELI 6398 - Thesis

Credits: 3
Thesis research.

RELI 6399 - Thesis

Credits: 3
Thesis research.

RELI 7300 - Philosophy of Religion I

Credits: 3
Special topics in philosophy of religion.

RELI 7301 - Philosophy of Religion II

Credits: 3
Special topics in philosophy of religion.

RELI 7302 - Philosophy of Religion III

Credits: 3
Special topics in philosophy of religion.

RELI 7303 - Philosophy of Religion IV

Credits: 3
Special topics in philosophy of religion.

RELI 7304 - Philosophy of Religion V

Credits: 3
Special topics in philosophy of religion.

RELI 7305 - Philosophy of Religion VI

Credits: 3
Special topics in philosophy of religion.

RELI 7306 - Philosophy of Religion VII

Credits: 3
Special topics in philosophy of religion.

RELI 7307 - Philosophy of Religion VIII

Credits: 3
Special topics in philosophy of religion.

RELI 7308 - Philosophy of Religion IX

Credits: 3
Special topics in philosophy of religion.

RELI 7309 - Philosophy of Religion X

Credits: 3
Special topics in philosophy of religion.

RELI 7310 - Philosophical Theology I

Credits: 3
Special topics in philosophical theology.

RELI 7311 - Philosophical Theology II

Credits: 3
Special topics in philosophical theology.

RELI 7312 - Philosophical Theology III

Credits: 3
Special topics in philosophical theology.

RELI 7313 - Philosophical Theology IV

Credits: 3
Special topics in philosophical theology.

RELI 7314 - Philosophical Theology V

Credits: 3
Special topics in philosophical theology.

RELI 7315 - Philosophical Theology VI

Credits: 3
Special topics in philosophical theology.

RELI 7316 - Philosophical Theology VII

Credits: 3
Special topics in philosophical theology.

RELI 7317 - Philosophical Theology VIII

Credits: 3
Special topics in philosophical theology.

RELI 7318 - Philosophical Theology IX

Credits: 3
Special topics in philosophical theology.

RELI 7319 - Philosophical Theology X

Credits: 3
Special topics in philosophical theology.

RELI 7320 - Religion and Culture I

Credits: 3
Special topics in religion and culture.

RELI 7321 - Religion and Culture II

Credits: 3
Special topics in religion and culture.

RELI 7322 - Religion and Culture III

Credits: 3
Special topics in religion and culture.

RELI 7323 - Religion and Culture IV

Credits: 3
Special topics in religion and culture.

RELI 7324 - Religion and Culture V

Credits: 3
Special topics in religion and culture.

RELI 7325 - Religion and Culture VI

Credits: 3
Special topics in religion and culture.

RELI 7326 - Religion and Culture VII

Credits: 3
Special topics in religion and culture.

RELI 7327 - Religion and Culture VIII

Credits: 3
Special topics in religion and culture.

RELI 7328 - Religion and Culture IX

Credits: 3
Special topics in religion and culture.

RELI 7329 - Religion and Culture X

Credits: 3
Special topics in religion and culture.

RELI 7330 - Religion and Culture XI

Credits: 3
Special topics in religion and culture.

RELI 7331 - Religion and Culture XII

Credits: 3
Special topics in religion and culture.

RELI 7332 - Religion and Culture XIII

Credits: 3
Special topics in religion and culture.

RELI 7333 - Religion and Culture XIV

Credits: 3
Special topics in religion and culture.

RELI 7334 - Religion and Culture XV

Credits: 3
Special topics in religion and culture.

RELI 7335 - History of Christianity I

Credits: 3
Special topics in the history of Christianity.

RELI 7336 - History of Christianity II

Credits: 3
Special topics in the history of Christianity.

RELI 7337 - History of Christianity III

Credits: 3
Special topics in the history of Christianity.

RELI 7338 - History of Christianity IV

Credits: 3
Special topics in the history of Christianity.

RELI 7339 - History of Christianity V

Credits: 3
Special topics in the history of Christianity.

RELI 7340 - History of Christianity VI

Credits: 3
Special topics in the history of Christianity.

RELI 7341 - History of Christianity VII

Credits: 3
Special topics in the history of Christianity.

RELI 7342 - History of Christianity VIII

Credits: 3
Special topics in the history of Christianity.

RELI 7343 - History of Christianity IX

Credits: 3
Special topics in the history of Christianity.

RELI 7344 - History of Christianity X

Credits: 3
Special topics in the history of Christianity.

RELI 7345 - History of Christianity XI

Credits: 3
Special topics in the history of Christianity.

RELI 7346 - History of Christianity XII

Credits: 3
Special topics in the history of Christianity.

RELI 7347 - History of Christianity XIII

Credits: 3
Special topics in the history of Christianity.

RELI 7348 - History of Christianity XIV

Credits: 3
Special topics in the history of Christianity.

RELI 7349 - History of Christianity XV

Credits: 3
Special topics in the history of Christianity.

RELI 7350 - Systematic Theology I

Credits: 3
Special topics in systematic theology.

RELI 7351 - Systematic Theology II

Credits: 3
Special topics in systematic theology.

RELI 7352 - Systematic Theology III

Credits: 3
Special topics in systematic theology.

RELI 7353 - Systematic Theology IV

Credits: 3
Special topics in systematic theology.

RELI 7354 - Systematic Theology V

Credits: 3
Special topics in systematic theology.

RELI 7355 - Systematic Theology VI

Credits: 3
Special topics in systematic theology.

RELI 7356 - Systematic Theology VII

Credits: 3
Special topics in systematic theology.

RELI 7357 - Systematic Theology VIII

Credits: 3
Special topics in systematic theology.

RELI 7358 - Systematic Theology IX

Credits: 3
Special topics in systematic theology.

RELI 7359 - Systematic Theology X

Credits: 3
Special topics in systematic theology.

RELI 7360 - Systematic Theology XI

Credits: 3
Special topics in systematic theology.

RELI 7361 - Systematic Theology XII

Credits: 3
Special topics in systematic theology.

RELI 7362 - Systematic Theology XIII

Credits: 3
Special topics in systematic theology.

RELI 7363 - Systematic Theology XIV

Credits: 3
Special topics in systematic theology.

RELI 7364 - Systematic Theology XV

Credits: 3
Special topics in systematic theology.

RELI 7365 - Religious Ethics I

Credits: 3
Special topics in religious ethics.

RELI 7366 - Religious Ethics II

Credits: 3
Special topics in religious ethics.

RELI 7367 - Religious Ethics III

Credits: 3
Special topics in religious ethics.

RELI 7368 - Religious Ethics IV

Credits: 3
Special topics in religious ethics.

RELI 7369 - Religious Ethics V

Credits: 3
Special topics in religious ethics.

RELI 7370 - Religious Ethics VI

Credits: 3
Special topics in religious ethics.

RELI 7371 - Religious Ethics VII

Credits: 3
Special topics in religious ethics.

RELI 7372 - Religious Ethics VIII

Credits: 3
Special topics in religious ethics.

RELI 7373 - Religious Ethics IX

Credits: 3
Special topics in religious ethics.

RELI 7374 - Religious Ethics X

Credits: 3
Special topics in religious ethics.

RELI 7375 - Religious Ethics XI

Credits: 3
Special topics in religious ethics.

RELI 7376 - Religious Ethics XII

Credits: 3
Special topics in religious ethics.

RELI 7377 - Religious Ethics XIII

Credits: 3
Special topics in religious ethics.

RELI 7378 - Religious Ethics XIV

Credits: 3
Special topics in religious ethics.

RELI 7379 - Religious Ethics XV

Credits: 3
Special topics in religious ethics.

RELI 7380 - Old Testament I

Credits: 3
Special topics on the Old Testament.

RELI 7381 - Old Testament II

Credits: 3
Special topics on the Old Testament.

RELI 7382 - Old Testament III

Credits: 3
Special topics on the Old Testament.

RELI 7383 - Old Testament IV

Credits: 3
Special topics on the Old Testament.

RELI 7384 - Old Testament V

Credits: 3
Special topics on the Old Testament.

RELI 7385 - Old Testament VI

Credits: 3
Special topics on the Old Testament.

RELI 7386 - Old Testament VII

Credits: 3
Special topics on the Old Testament.

RELI 7387 - Old Testament VIII

Credits: 3
Special topics on the Old Testament.

RELI 7388 - Old Testament IX

Credits: 3
Special topics on the Old Testament.

RELI 7389 - Old Testament X

Credits: 3
Special topics on the Old Testament.

RELI 7390 - New Testament I

Credits: 3
Special topics on the New Testament.

RELI 7391 - New Testament II

Credits: 3
Special topics on the New Testament.

RELI 7392 - New Testament III

Credits: 3
Special topics on the New Testament.

RELI 7393 - New Testament IV

Credits: 3
Special topics on the New Testament.

RELI 7394 - New Testament V

Credits: 3
Special topics on the New Testament.

RELI 7395 - New Testament VI

Credits: 3
Special topics on the New Testament.

RELI 7396 - New Testament VII

Credits: 3
Special topics on the New Testament.

RELI 7397 - New Testament VIII

Credits: 3
Special topics on the New Testament.

RELI 7398 - New Testament IX

Credits: 3
Special topics on the New Testament.

RELI 7399 - New Testament X

Credits: 3
Special topics on the New Testament.

RELI 8049 - Graduate Full-Time Status

Credits: 0
Indicates the student has full-time status.

RELI 8100 - Research

Credits: 1
Dissertation research.

RELI 8105 - Research

Credits: 1

RELI 8300 - Studies on the History of Doctrine

Credits: 3
A cumulative examination of the basic doctrines and theologies that have shaped the Christian tradition. During fall term, the course surveys the formation of the patristic, Byzantine, and medieval Western theological traditions. During spring term, it covers the late medieval and Reformation periods as well as selected developments of the Enlightenment era through Schleiermacher.

RELI 8301 - Studies on the History of Doctrine

Credits: 3
A cumulative examination of the basic doctrines and theologies that have shaped the Christian tradition. During fall term, the course surveys the formation of the patristic, Byzantine, and medieval Western theological traditions. During spring term, it covers the late medieval and Reformation periods as well as selected developments of the Enlightenment era through Schleiermacher.

RELI 8320 - Advanced Systematic Theology

Credits: 3
An advanced investigation of selected problems in systematic theology. The topic is announced when the course is offered.

RELI 8321 - Advanced Systematic Theology

Credits: 3
An advanced investigation of selected problems in systematic theology. The topic is announced when the course is offered.

RELI 8340 - Pentateuch

Credits: 3
Intensive study of selected texts and issues in the Pentateuch of the Old Testament. The specific texts or topics will be chosen in consultation with the students enrolled. A knowledge of biblical Hebrew is presupposed.

RELI 8341 - Pentateuch

Credits: 3
Intensive study of selected texts and issues in the Pentateuch of the Old Testament. The specific texts or topics will be chosen in consultation with the students enrolled. A knowledge of biblical Hebrew is presupposed.

RELI 8342 - The Prophets

Credits: 3
Intensive study of selected texts and issues in the prophetic literature of the Old Testament. The specific texts or topics will be chosen in consultation with the students enrolled. A knowledge of biblical Hebrew is presupposed.

RELI 8350 - Seminar on the New Testament

Credits: 3
A topical study of one or more literary, historical, or theological issues pertinent to the interpretation of the New Testament. A knowledge of Hellenistic Greek is presupposed. The specific topic(s) will be determined in consultation with the students enrolled.

RELI 8351 - Seminar on the New Testament

Credits: 3
A topical study of one or more literary, historical, or theological issues pertinent to the interpretation of the New Testament. A knowledge of Hellenistic Greek is presupposed. The specific topic(s) will be determined in consultation with the students enrolled.

RELI 8352 - New Testament Gospels

Credits: 3
Intensive study of selected texts and issues in the New Testament Gospels. The specific texts or topics will be chosen in consultation with the students enrolled. A knowledge of New Testament Greek is presupposed.

RELI 8353 - New Testament Gospels

Credits: 3
Intensive study of selected texts and issues in the New Testament Gospels. The specific texts or topics will be chosen in consultation with the students enrolled. A knowledge of New Testament Greek is presupposed.

RELI 8354 - Pauline Epistles

Credits: 3
Intensive study of selected texts and issues in the Pauline Epistles. The specific texts or topics will be chosen in consultation with the students enrolled. A knowledge of New Testament Greek is presupposed.

RELI 8355 - Pauline Epistles

Credits: 3
Intensive study of selected texts and issues in the Pauline Epistles. The specific texts or topics will be chosen in consultation with the students enrolled. A knowledge of New Testament Greek is presupposed.

RELI 8356 - Advanced Study of New Testament Writings

Credits: 3
Intensive study of selected texts and issues in such writings as the Catholic Epistles, Hebrews, and the Apocalypse. The specific texts or topics will be chosen in consultation with the students enrolled. A knowledge of New Testament Greek is presupposed.

RELI 8357 - Advanced Study of New Testament Writings

Credits: 3
Intensive study of selected texts and issues in such writings as the Catholic Epistles, Hebrews, and the Apocalypse. The specific texts or topics will be chosen in consultation with the students enrolled. A knowledge of New Testament Greek is presupposed.

Statistical Science

Professor Lynne Stokes, **Department Chair**

Professors: Ronald Butler, 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: Mahesh Fernando, Bivin Sadler

The Department of Statistical Science offers the following graduate degree programs: the Ph.D. in statistical science, the Ph.D. in biostatistics and the M.S. in applied statistics and data analytics. The courses in the Ph.D. curriculum provide students with the strong theoretical foundation in mathematical statistics, probability and stochastic processes along with applied courses covering the intricacies of statistical practice needed for students pursuing a well-rounded, research-oriented Ph.D. degree. The Ph.D. in biostatistics is conferred by the Department of Statistical Science at SMU in partnership with faculty in the Department of Clinical Sciences at the University of Texas Southwestern Medical Center at Dallas. Students attain a strong mathematical and statistical foundation such as that provided in the Ph.D. in statistical science curriculum, but they will also take courses and become involved in research projects that prepare them for a research career in biostatistics. The M.S. in applied statistics and data analytics degree program is designed to provide training that is ideally suited to produce graduates who are proficient in statistical methods while at the same time are trained in topics such as data base management, data mining and the use of SAS and other statistical software that are necessary tools of today's data analysts.

Note: In both Ph.D. programs, a student will advance to candidacy after he or she passes comprehensive and qualifying exams, prepares a written prospectus, gives an oral presentation in a research area on which the dissertation will be based, and receives approval of the prospectus from his or her dissertation committee.

Biostatistics, Ph.D.

Admission Requirements

The requirements for admission to the Ph.D. program in biostatistics are the same as those for the Ph.D. in statistical science. Some background in biology or medicine is preferred but is not a requirement for admission.

Degree Requirements

The degree requirements and required curriculum for the Ph.D. in biostatistics are similar to those for statistical science, with additional courses such as:

- Statistical methods in clinical trials (design and analysis of clinical trials).
- Introductory epidemiology.
- Statistical methods for genomic/genetic data analysis.

Additional Requirements

Coursework will be completed in two years (four courses per term, with the final two years consisting primarily of research). In addition, as with the Ph.D. in statistical science, the student must:

Comprehensive Exams

Pass the Comprehensive (Basic) Exams, typically at the end of the first year.

Ph.D. Qualifying Exam

Pass the Ph.D. Qualifying Exam, typically taken at the end of the second year, which assesses the student's readiness for research.

Dissertation

Write and make a successful defense of the dissertation.

Statistical Science, Ph.D.

Admission Requirement

Applicants to the Ph.D. program in statistical science must hold a bachelor's degree and must have taken mathematics courses through advanced calculus and linear algebra. Applicants must have taken the GRE graduate school admission test and have excellent English communication skills. International students applying from countries where English is not the native language are required to provide scores on the TOEFL English language proficiency test.

Degree Requirements

To qualify for the Ph.D. degree in statistical science, the student must:

Curricular Requirements

Satisfy all curricular requirements as specified by the University (at least 48 credit hours, no more than 12 of which can be in dissertation research) and by the departmental faculty.

Required Courses

Complete the following courses:

- STAT 6324 - Computational Statistics
- STAT 6327 - Mathematical Statistics
- STAT 6328 - Mathematical Statistics
- STAT 6336 - Statistical Analysis
- STAT 6337 - Statistical Analysis
- STAT 6345 - Linear Regression
- STAT 6366 - Statistical Consulting
- STAT 6371 - Probability Theory
- STAT 7327 - Advanced Statistical Inference

Comprehensive Exams

Pass the comprehensive (basic) exams, typically at the end of the first year.

Ph.D. Qualifying Exam

Pass the Ph.D. qualifying exam, which is given to assess the student's readiness for research.

Graduate Academic Work

Complete a minimum of three years of graduate academic work, at least one of which is in full-time residence on the campus of SMU or at a research facility approved by the departmental faculty and the dean of research and graduate studies.

Dissertation

Write and make a successful defense of the dissertation.

Applied Statistics and Data Analytics, M.S.

Admission Requirements

Applicants to the M.S. in applied statistics and data analytics degree program (also known as "MASDA") must hold a bachelor's degree, must have taken a course in statistics and must have taken calculus courses through multivariate calculus. Applicants must have taken the GRE graduate school admission test and have excellent English communication skills. International students applying from countries where English is not the native language are required to provide scores on the TOEFL English language proficiency test.

Degree Requirements

Required Courses

To qualify for the M.S. in applied statistics and data analytics, the student must successfully complete at least 36 credit hours of study acceptable to the departmental faculty (at least 18 of which are 6000-level courses or above). The following are required:

- STAT 6307 - Introduction to Statistical Computing
- STAT 6301 - Experimental Statistics I
- STAT 6302 - Experimental Statistics II
- STAT 6311 - Introduction to Mathematical Statistics
- STAT 6312 - Mathematical Statistics II
- STAT 6324 - Computational Statistics
- STAT 6308 - SAS II and Databases
- STAT 6366 - Statistical Consulting

Major Consulting Project

The student must complete one or more major consulting projects under the supervision of departmental faculty members. For at least one of these projects, written and oral presentations of the findings are required.

Note: The website www.smu.edu/Dedman/Academics/Departments/Statistics has more information ("Applied M.S. Program" link).

Statistical Science, M.S.

Students in the statistical science Ph.D. program can qualify for the M.S. in statistical science, which is different from the M.S. in applied statistics and data analytics.

Degree Requirements

To obtain the M.S. in statistical science, the student must successfully complete at least 36 credit hours of study acceptable to the departmental faculty, including:

- STAT 6324 - Computational Statistics
- STAT 6327 - Mathematical Statistics
- STAT 6328 - Mathematical Statistics
- STAT 6336 - Statistical Analysis
- STAT 6337 - Statistical Analysis
- STAT 6345 - Linear Regression

Additional Requirements

Students must pass the comprehensive (basic) exams at an appropriate level.

Courses:

STAT 5110 - Independent Study in Statistical Science

Credits: 1
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 5310 - Independent Study in Statistical Science

Credits: 3
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 5350 - Introductory Econometrics

Credits: 3
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 MATH 1337; ECO 3301; and ITOM 2305 or STAT 2301, STAT 2331, or STAT 4340.

STAT 5370 - Survey Sampling

Credits: 3
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. Prerequisite: STAT 2301 or STAT 2331.

STAT 5380 - Data Mining Techniques for Economists

Credits: 3
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.

STAT 6049 - Graduate Full-Time Status

Credits: 0
Enrollment in this course certifies that the student is a full-time graduate student in good academic standing.

STAT 6301 - Experimental Statistics I

Credits: 3
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 6307. Senior UG and MASDA students only.

STAT 6302 - Experimental Statistics II

Credits: 3
Extension of techniques in STAT 6301 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 6301, STAT 6307 - Senior UG and MASDA students only.

STAT 6306 - Introduction to Data Science

Credits: 3
An introduction to methods, concepts, and current practice in the growing field of data science, including statistical inference, algorithms, financial modeling, data visualization, social networks, and data engineering. Prerequisite: Enrollment in the applied statistics and data analytics program or the data science program, or permission of instructor.

STAT 6307 - Introduction to Statistical Computing

Credits: 3
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 2301 or 2331. Senior UG and MASDA students only.

STAT 6308 - SAS II and Databases

Credits: 3
Covers topics in data management and statistical analysis techniques, including data cleaning and verification; reading, writing, and manipulating data using DDE and SQL techniques; programming macros; combining, interleaving, stacking, and transposing data sets; customizing output using ODS; and advanced data analysis techniques. Prerequisite: STAT 5304 or permission of instructor.

STAT 6311 - Introduction to Mathematical Statistics

Credits: 3
Topics include: probability; probability distributions; mathematical expectation; discrete and continuous random variables and their distributions; sampling distributions; moment generating function; functions of random variables; confidence intervals. Prerequisite: MATH 3302.

STAT 6312 - Mathematical Statistics II

Credits: 3
Second course in mathematical statistics. Topics include order statistics, limiting distributions, central limit theorem, point estimation, testing statistical hypotheses, Bayesian procedures, and nonparametric methods. Prerequisites: STAT 6311, MASDA students and undergraduate seniors only.

STAT 6316 - Applied Statistics II

Credits: 3
Advanced methods of statistical analysis applied to contemporary scientific, environmental, or societal issues. The focus is on using statistical methods to assist in solving or enlightening the decision-making processes in these areas.

STAT 6324 - Computational Statistics

Credits: 3
Introduces computational methods in statistics with emphasis on the use of statistical software packages, statistical simulation, numerical methods, and related topics. Topics include introduction to R and other statistical software for statistical analysis and graphics; generating random deviates from various distributions; and the use of Monte Carlo methods for solving optimization problems. Prerequisite: STAT 5373 or STAT 6327 or concurrent enrollment in these courses. STAT MASDA or STAT Ph.D. students only.

STAT 6327 - Mathematical Statistics

Credits: 3
Theory of probability distributions. Random variables and functions of random variables. Multivariate and conditional distributions. Sampling distributions; order statistics. Expected value, transformations, and approximations. Prerequisite: Advanced calculus or permission of instructor.

STAT 6328 - Mathematical Statistics

Credits: 3
Sufficiency and completeness. Unbiased, maximum likelihood and Bayes point estimators, minimizing risk. Confidence sets. Most powerful, uniformly MP and likelihood ratio tests. Large-sample approximations; contingency table analysis. Prerequisite: STAT 6327.

STAT 6336 - Statistical Analysis

Credits: 3
Emphasis on application of statistical principles in the design of experiments. Complete and fractional factorials, blocking, nesting, replication, randomization. Analysis of data from one and two samples assuming normal distributions and independent errors. Discussion of paired sample analyses and of nonparametric location tests.

STAT 6337 - Statistical Analysis

Credits: 3
Analysis of data from classical multifactor experimental designs with fixed and random effects. Multiple comparisons and contrasts of main effects and interactions. Introduction to regression analysis. Prerequisite: STAT 6336.

STAT 6345 - Linear Regression

Credits: 3
The classical tools of linear regression based upon least squares estimation and inference through the assumption of normally distributed errors. Topics in model formulation, data transformations, variable selection, and regression diagnostics for influential observations. Collinear predictors and biased estimation. Survey of alternatives to least squares. Prerequisites: STAT 6337.

STAT 6346 - Advanced Regression Analysis

Credits: 3
Alternatives to least squares estimation. Theory and applications of generalized linear models. Estimation, asymptotic distribution theory, and tests for model parameters. Techniques for detecting influential observations, collinearities, measurement error modeling. Prerequisite: STAT 6345 or permission of instructor.

STAT 6347 - Spline Approximation in Statistics

Credits: 3

STAT 6350 - Analysis of Lifetime Data

Credits: 3
Statistical theory and methodology for the analysis of lifetime data from complete and censored samples. Statistical lifetime distributions, types of censoring, graphical techniques, nonparametric and parametric estimation, and lifetime regression models. Prerequisites: STAT 6324, STAT 6327, STAT 6328, STAT 6336, STAT 6337, or equivalent.

STAT 6355 - Applied Multivariate Analysis

Credits: 3
Statistical methods of analysis of multivariate data, tests, and estimation of multivariate normal parameters; Hotelling's T2,

discriminant analysis, canonical correlation, principal components, and factor analysis. Emphasizes applications. Prerequisites: STAT 6337.

STAT 6358 - Topics in Biostatistics

Credits: 3
Introduction to various statistical methods that are widely used in the biosciences, especially biomedical research. Subject matter includes survival analysis, contingency tables, logistic regression, analysis of longitudinal data, design of clinical experiments, epidemiology, and statistical genetics; topics may vary with instructor. Prerequisite: STAT 6328 or permission of instructor.

STAT 6360 - Statistical Methods in Epidemiology

Credits: 3
Introduces epidemiologic principles and statistical methods used in biomedical research. Topics involve the design, analysis, and interpretation of biomedical study results. Prerequisites: STAT 5371, STAT 5372, STAT 5373, STAT 5374, and STAT 5304 (or equivalent) or consent of instructor.

STAT 6363 - Time Series Analysis

Credits: 3
Statistical methods of analyzing time series. Autocorrelation function and spectrum. Autoregressive and moving average processes. More general models, forecasting, stochastic model building. Prerequisite: Permission of instructor.

STAT 6366 - Statistical Consulting

Credits: 3
Instruction in nonstatistical issues arising in a consulting experience, including interpersonal interaction, session management, scheduling, data management, and oral and written communication. Examines technical methods useful for common consulting questions and provides consulting experience with a client from the community.

STAT 6367 - Statistical Consulting

Credits: 3
The practice and art of statistical consulting in a collaborative environment.

STAT 6370 - Stochastic Models

Credits: 3
Model building with stochastic processes in applied sciences. Phenomena with uncertain outcomes are formulated as stochastic models and their properties are analyzed. Some specific problems discussed come from areas such as population growth, queueing, reliability, time series, and social and behavioral processes. Statistical properties of the models are emphasized. Prerequisites: STAT 4340 or STAT 4341 and graduate standing.

STAT 6371 - Probability Theory

Credits: 3
An introduction to measure theoretic probability. Random variables, expectation, conditional expectation, characteristic functions. Prerequisite: STAT 6327 or permission of instructor.

STAT 6372 - Queueing Theory

Credits: 3
Queueing theory provides the theoretical basis for the analysis of stochastic service systems. The underlying stochastic processes are point processes of which Markov and renewal processes are two major examples. The course emphasizes the formulation of queueing models and their behavioral and statistical analyses using Markov and renewal techniques. Prerequisite: An introductory course in stochastic processes (e.g., STAT 6370/CSE 6370, STAT 6376, STAT 6379, EE 5306).

STAT 6376 - Stochastic Process

Credits: 3
Random walk, Markov processes, Poisson processes, waiting times, spectral density functions, applications to random noise problems. Prerequisite: STAT 6327.

STAT 6377 - Multivariate Categorical Data

Credits: 3
Structural models for counting data. Introduces the general log-linear model for contingency tables, likelihood-ratio tests, hierarchical models, and partitioning of likelihood-ratio statistics. Prerequisites: STAT 6328, STAT 6337 or permission of instructor.

STAT 6380 - Mathematical Theory of Sampling

Credits: 3
Theoretical basis for estimation from simple random stratified, cluster, and two-stage designs. Also, ratio and regression estimators and nonsampling errors, including nonresponse. Prerequisite: STAT 6328.

STAT 6385 - Survey of Nonparametric Statistics

Credits: 3
Topics include robust and distribution-free techniques; order statistics, EDF statistics, quantiles, asymptotic distributions and tolerance intervals; linear rank statistics for one-, two-, and several-sample problems involving location and scale; runs; multiple comparison; rank correlation; and asymptotic relative efficiency. Prerequisite: STAT 6328.

STAT 6386 - Nonparametric Statistics

Credits: 3
Continuation of topics covered in STAT 6385, including linear rank statistics and asymptotic relative efficiency. Additional topics include U-statistics, robustness, M-estimation, minimum distance estimation, adaptive procedures, density estimation, aligned ranks, jackknifing, and bootstrapping. Prerequisite: STAT 6385.

STAT 6390 - Bayesian Statistics

Credits: 3
The decision theory and Bayesian approaches to statistics. Includes decision rules, admissibility, complete classes, Bayes and minimax rule, likelihood principle, empirical Bayes rules, and personal probability. Prerequisite: STAT 6328.

STAT 6391 - Bayesian Hierarchical Modeling

Credits: 3
This course focuses on how to account for spatial, temporal, and other complex correlation structures and on how to incorporate prior information into a statistical analysis using modern computer software packages (i.e., WinBUGS and R). Prerequisite: STAT 6390.

STAT 6395 - Selected Topics in Statistics

Credits: 3
Discussion of statistical theory and methodology on specialized topics of interest.

STAT 6397 - Statistical Methods in Clinical Trials

Credits: 3
An introduction to clinical trials for the biostatistician. Covers issues in the design, analysis, and operation of clinical trials, emphasizing the underlying statistical basis of modeling and inference. Topics include both practical and theoretical considerations in trial design and analysis. Prerequisites: STAT 6327 and STAT 6328.

STAT 6398 - Thesis

Credits: 3
Research on statistical theory and methodology.

STAT 6399 - Thesis

Credits: 3
Research on statistical theory and methodology.

STAT 7011 - Supervised Internship

Credits: 0
Supervised experience in statistical consulting carried out as an internship in approved work settings outside the SMU Statistical Consulting Center.

STAT 7012 - Supervised Internship

Credits: 0
Supervised experience in statistical consulting carried out as an internship in approved work settings outside the Center for Statistical Consulting.

STAT 7013 - Supervised Internship

Credits: 0
Supervised experience in statistical consulting carried out as an internship in approved work settings outside the SMU Statistical Consulting Center.

STAT 7100 - Seminar

Credits: 1
Oral presentations of statistical literature.

STAT 7110 - Supervised Internship

Credits: 1
Supervised experience in statistical consulting carried out as an internship in approved work settings outside the SMU Statistical Consulting Center. Reports from the internship are required for completion of the course.

STAT 7111 - Seminar in Statistical Literature

Credits: 1
Reports from papers in statistical journals, bibliographical problems, etc.

STAT 7112 - Seminar in Statistical Literature

Credits: 1
Reports from papers in statistical journals, bibliographical problems, etc.

STAT 7300 - Seminar

Credits: 3
Oral presentations of statistical literature.

STAT 7327 - Advanced Statistical Inference

Credits: 3
General statistical inference; estimation (point and interval estimates, Bayes and minimax, etc.); tests of hypotheses (invariant, unbiased, most stringent, etc.). Prerequisite: STAT 6371.

STAT 7328 - Advanced Statistical Inference

Credits: 3
Additional topics in statistical inference. Prerequisite: STAT 7327.

STAT 7362 - Topics in Statistics

Credits: 3
Lectures and readings on state-of-the-art statistical issues using emerging statistical theory and methods.

STAT 7363 - Time Series Analysis II

Credits: 3
For advanced graduate students who intend to do research in spectral analysis or who have a major interest in time series. Prerequisites: STAT 6363, STAT 6376 or permission of instructor.

STAT 8049 - Graduate Full-Time Status

Credits: 0
Enrollment in this course certifies that the student is a full-time graduate student in good academic standing.

STAT 8105 - Research

Credits: 1

STAT 8196 - Dissertation

Credits: 1
Doctoral research on statistical theory and methodology.

STAT 8197 - Dissertation

Credits: 1
Doctoral research on statistical theory and methodology.

STAT 8198 - Dissertation

Credits: 1
Doctoral research on statistical theory and methodology.

STAT 8199 - Dissertation

Credits: 1
Doctoral research on statistical theory and methodology.

STAT 8313 - Research in Statistical Inference

Credits: 3
Research on statistical theory and methodology.

STAT 8396 - Dissertation

Credits: 3
Doctoral research on statistical theory and methodology.

STAT 8397 - Dissertation

Credits: 3
Doctoral research on statistical theory and methodology.

STAT 8398 - Dissertation

Credits: 3
Doctoral research on statistical theory and methodology.

STAT 8399 - Dissertation

Credits: 3
Doctoral research on statistical theory and methodology.

STAT 8697 - Dissertation

Credits: 6
Doctoral research on statistical theory and methodology.

STAT 8698 - Dissertation

Credits: 6
Doctoral research on statistical theory and methodology.

STAT 8699 - Dissertation

Credits: 6
Dissertation in the statistical sciences.

Women's and Gender Studies

Senior Lecturer Josephine Caldwell-Ryan, **Director**

The graduate certificate offered by the Women's and Gender Studies Program is designed to integrate knowledge about women, gender and sexuality into the chosen field of study of SMU graduate students. Offered through the Women's and Gender Studies Program and jointly based in the Dedman College Graduate Program, the Perkins School of Theology and the Dedman School of Law, the certificate provides an additional credential for interested students who are seeking employment in fields where familiarity with scholarship on women, gender and/or sexuality may be an asset, or who are looking to enhance their graduate studies. The courses represent several disciplines, including anthropology, art history, history, literary studies, media studies, theology and law.

Admission Requirements

The student must be pursuing an advanced degree in an SMU graduate program, and must enroll for the program through Dedman College (for Dedman and Meadows students), the Perkins School of Theology (for theology students) or the Dedman School of Law (for law students). An additional application fee is not required. Formal enrollment must include a proposed program plan for completion of the certificate developed with the director of Women's and Gender Studies Program or the appropriate adviser in Perkins School of Theology or Dedman School of Law.

Women's and Gender Studies Graduate Certificate

Senior Lecturer Josephine Caldwell-Ryan **Director**

Academic Requirements

Academic requirements include 15 credit hours, as follows:

Advanced Feminist Theory

The advanced feminist theory course. The course includes "classic" literature from feminist, womanist and *mujerista* perspectives and addresses current theoretical issues across several disciplines. Offered in the fall term of every even-numbered year, it is team-taught by faculty associated with Dedman College, the Perkins School of Theology and the Dedman School of Law.

- WGST 6300 - Advanced Feminist Theory
- TC 8375 - Advanced Feminist Theory

Four Additional Courses

Four additional courses relevant to the intent of the certificate. Students typically take four courses in their area of graduate studies with content appropriate to the certificate as documented by the syllabus and subject to the director's approval. In the interest of the interdisciplinary foundation of women's studies, students may also take up to six hours of upper-level Dedman College or Meadows undergraduate women's and gender studies courses from those pre-approved for such credit by the Women's and Gender Studies program. They may pursue that option under the following circumstances:

- The students arrange a separate syllabus and assignments in conjunction with the professor of record.

- The syllabus and assignments must be approved by the Graduate Certificate Committee of the Women's and Gender Studies Program.
- The students register for such courses using the appropriate graduate-level number (WGST 5310 for 3000-level courses and WGST 6310 for 4000-level courses). WGST 5310 can be taken only once.

Additional Requirements

Students must also complete a major research project or a supervised internship in a setting that addresses issues relevant to the intent of the program. This project should be included in the program plan (see the Admission Requirements section). For Ph.D. students, the project normally involves an article-length research paper written for coursework; however, if relevant it could include a performance, internship, exhibit or other project approved by the appropriate adviser. Supervised internship settings for Perkins Master of Divinity students will require a learning goal for women's studies, and it shall be done in consultation with the Perkins Internship Office.

Notes

Note: Students in Dedman School of Law and Perkins are encouraged to petition the director of the Women's and Gender Studies Program for credit in their own departments for graduate courses, including independent studies courses, in which they engage in study appropriate to the intent of the certificate. Appropriate courses taken during matriculation at SMU, but prior to enrollment in the certificate program, may count toward program hours. Students in Dedman School of Law should consult the Law School's adviser for the program about appropriate courses. All students may satisfy some of the requirements by taking three to six credit hours outside of their own school or program from the list of courses pre-approved by the Women's and Gender Studies Program.

Students must also complete a major research project or a supervised internship in a setting that addresses issues relevant to the intent of the program. This project should be included in the program plan (Admission Requirements section). For Ph.D. students, the project normally involves an article-length research paper written for coursework; however, if relevant it could include a performance, internship, exhibit or other project approved by the appropriate adviser. Supervised internship settings for Perkins Master of Divinity students will require a learning goal for women's studies, and it shall be done in consultation with the Perkins Internship Office.

Note: Courses at the 4000 level or below must be taken with the numbers WGST 5310 and WGST 6310, in accordance with the academic requirements stated above.

Courses:

WGST 5310 - Special Topics in Women's and Gender Studies I

Credits: 3
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.

WGST 6109 - Independent Studies

Credits: 1
Directed readings with instruction-based faculty guidance. Approval of director is required.

WGST 6209 - Independent Studies

Credits: 2
Directed readings with discussion-based faculty guidance. Approval of director is required.

WGST 6300 - Advanced Feminist Theory

Credits: 3
Explores feminist theories that seek to explain women's subordination historically and cross-culturally; examines gender as a principle of social organization; and addresses the linkages among gender, ethnicity, and class from the vantage of multiple disciplines.

WGST 6309 - Independent Studies

Credits: 3
Directed readings with discussion-based faculty guidance. Approval of director is required.

WGST 6310 - Special Topics in Women's and Gender Studies II

Credits: 3
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 one additional member of the WGST-affiliated faculty (that is, a faculty member who teaches courses in the WGST program). Prerequisite: Enrollment in the WGST certificate program.

Tuition, Fees and Financial Aid

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 ("Policies and Forms" 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 students 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.

Students who elect to register for courses outside of their school of record will pay the tuition rate of their school of record.

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 ("Policies and Forms" 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. Payment plan options are not available for intersession terms including JanTerm, MayTerm and August terms.

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 214-768-2799.

Graduate and Professional Student Aid

University grants, scholarships, fellowships and assistantships are awarded in the school or department in which the graduate student will enroll. Schools and departments that offer master's or Ph.D. degrees offer a significant number of tuition scholarships and teaching or research assistantships each year. For more information, students should contact the appropriate school or department.

Grants and loans for Texas residents, private and federal loans, and employment programs may be available by filing the Free Application for Federal Student Aid. The FAFSA may be completed online at www.fafsa.gov. The SMU Title IV school code number is 003613.

More information is available online at www.smu.edu/financial_aid.

Enrollment and Academic Records

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 University-wide 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 www.smu.edu/FERPA. 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, which is used to verify each student's identity and is provided without additional charges. The student should furnish the SMU ID number on all forms when requested, as this number is the primary means the University has to verify the identity for each 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 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 both a home and local (mailing) address, both a home and local telephone number and contact information 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.

International students are required to provide a residence address (physical street address where they are currently living) as their mailing (local) address. International students will be prevented from enrolling if a U.S. address is not provided.

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 mobile/cell telephone numbers, as they are one means of communicating with students during an emergency. Mobile/cell telephone numbers may also be used by University officials conducting routine business. Students who do not have a mobile/cell telephone 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 mobile/cell 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 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.

Complaint Procedures for Students With Disabilities

The complaint procedures for students with disabilities are available in the Disability Accommodations & Success Strategies office and online at www.smu.edu/Provost/ALEC/DASS.

Credit Hour Loads

The unit of measure for the valuation of courses is the credit hour. Based upon the federal definition of a credit hour, each credit hour requires one hour of direct faculty instruction and a minimum of two hours per week of preparation on the part of students for approximately 15 weeks a semester. Most courses are valued for three credit hours, i.e., three contact hours per week and at least six hours of preparation. For three credit hour courses deployed via different course types, modes of delivery, or calendars, total number of direct contact hours should be equal to or greater than 45 hours with the total of out of class work total equal to or greater than 90 hours. Courses that deviate from this standard must provide documentation illustrating how the number of contact hours and/or work outside the course equate to this standard within the term in which the course is offered.

Enrollment for nine hours of coursework per term is recognized as a full load for students engaged in graduate studies. Individuals who enroll for fewer than these minimum hours are designated as part-time students.

A graduate student

- working on the completion of a thesis, dissertation or performance recital requirement on a full-time or part-time basis;
- enrolled in an internship or co-op program;
- enrolled as a third-year theatre major working on the completion of required production projects;
- or having an instructor appointment as part of a teaching fellowship, but not enrolled for the required number of hours;

may be certified as a full-time or part-time student if the student

- is enrolled officially for at least one course and
- is recognized by his or her director or academic dean or the Dean of Graduate Studies as working on the completion of the thesis, dissertation or internship requirement on a full-time or part-time basis.

In other special situations, a student not enrolled for the required number of hours may be certified as a full-time or part-time student if the student is officially enrolled for at least one course and is recognized by the academic dean or director as a full-time or part-time student, and if such recognition is approved by the provost.

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.

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.

Transfer Courses From Other Institutions

Policies for transfer credit are found under Transfer of Credits in the Degree Requirements section of this catalog.

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. The school's records office monitors progress 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.

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 a Petition for Enrollment Policy Exception. Petitions are to be submitted to the Office of Research and Graduate Studies within six months of the term in which the discrepancy appeared; contact information for submitting a Petition for Enrollment Policy Exception can be viewed on the University Registrar's Office website at www.smu.edu/EnrollmentServices/Registrar/Enrollment/EnrollmentPolicyException. 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 (Withdrew) 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 Student & Scholar Services office prior to dropping a course. If dropping a course will cause the student to be enrolled in fewer than the required number of hours to remain a full-time student, the student's immigration status could be affected. After the consultation, the International Student &

Scholar Services 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.

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 the required number of hours to remain a full-time student, 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 Financial Aid.

Withdrawal From the University

Policies on refunds for withdrawal from the University are found in the Financial Information section and in the *Financial Information Bulletin*, which can be accessed online at www.smu.edu/bursar ("Policies and Forms" link). 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 tenth class day of the fall or spring semester 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 ("Policies and Forms" link). A student who withdraws after the tenth class day of the fall or spring semester 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 Dr. Bob Smith 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.

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.
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.

Class Attendance

Regular class attendance is required. At the beginning of the course, the instructor of each class announces 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*.

Absence Due to Illness

The Dr. Bob Smith 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.

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.

Digit	*Credit Hours*
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 graduate academic record maintained by the University Registrar's Office.

Grades	*Description*	*Grade Points per Term Hour*
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/Withdrew	*

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

Grade of F, D, W and Missing/Blank

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 for the term. The grade of *W* may not be revoked or changed to another grade because the act of officially dropping/withdrawing is irrevocable.

The grade of *X* is a temporary administrative grade used when an official grade has not been received from the instructor. The grade of *X* will be changed to *F* if a grade is not received within 60 days of the end of the term. Graduation candidates must clear all *X*'s prior to the deadline on the Official University Calendar, which may allow less time than 60 days. Failure to do so can result in removal from the degree candidacy list and/or conversion of the grade of *X* to the grade of *F*.

A missing or blank grade also indicates an official grade has not been received from the instructor. Graduation candidates must receive a grade for all course enrollments prior to the deadline on the Official University Calendar. Failure to do so can result in removal from the degree candidacy list and/or the assignment of a grade of *F*.

Grade of Incomplete

A student may temporarily receive a grade of Incomplete (*I*) if a substantial portion 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.

The grade of *I* is normally changed to a final grade within one year but no later than the time of graduation.

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 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. 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 Point Average

A student's grade point average (cumulative GPA) is computed by multiplying the credit 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 unless the grade is for thesis work. 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

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 (transcript). Both grades will be included in the calculation of the student's cumulative 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.

Pass/Fail Option

Students should consult with their advisers before declaring the pass/fail option for any course, as some courses may not be taken pass/fail.

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.

Academic Advising and Satisfactory Progress Policies

Academic Advising

For an effective advising relationship, the student must be prepared when meeting with the adviser. The student must initiate the advising appointment. 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, records office or major department. 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.

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.

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

Failure to meet established minimum acceptable standards of academic or disciplinary performance can result in probation, suspension or dismissal. Information regarding disciplinary action can be found under Code of Conduct in the Student Affairs section of this catalog.

Graduate students must maintain a cumulative GPA of 3.000. If in any term the student falls below this cumulative GPA, the student will be placed on probation for one regular term. If at the end of the term of probation the cumulative GPA is not up to 3.000, the student may be removed from the program at the discretion of the dean's office.

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.

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. Students suspended from one school are suspended from the University.

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 without permission from their school of record.

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.

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 student's school of record office.

Transfer Coursework

Policies for transfer credit are found under Transfer Courses From Other Institutions in the General Policies section of this catalog and under Transfer of Credits in the Degree Requirements section of this catalog.

Graduation Policies

Apply to Graduate

Students must file an Application for Candidacy to Graduate 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).

Commencement Participation

An All-University Commencement Convocation is held in May for students enrolled and on schedule to complete degree requirements during the spring term. Psychology Ph.D. students enrolled and on schedule 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 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.

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.

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 requirements for graduation current at the time of readmission.

Educational Facilities and Services

SMU Libraries

www.smu.edu/libraries

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 with over four million volumes. Service to Southern Methodist University students, faculty and staff is the primary goal of all libraries at SMU. 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

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.

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 holdings of the museum number more than 3,500 objects including 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, Dalí, 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 shop and special event rooms. Additional information is available at www.meadowsmuseumdallas.org.

Office of Information Technology

The Office of Information Technology provides computing, information processing, and communications resources to satisfy the needs of faculty, students, and staff. 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 and access to other research institutions Wi-Fi networks through eduroam.

All students receive an SMU email account, which will remain active after graduation. The email account may be accessed online via Office 365 (office365.smu.edu). Students also have access to a variety of Web-based services such as my.SMU, personal blog space (people.smu.edu), unlimited cloud storage space (smu.edu/box), and the Canvas Learning Management System (smu.edu/canvas). Academic information, including grade history, financial information, and class registration, is available through the my.SMU system.

OIT also provides complimentary on-campus IT support. Located in Fondren Library West, the IT Help Desk provides technical assistance for most computing issues Monday through Thursday from 8 a.m. to 9 p.m., Fridays from 8 a.m. to 6 p.m., Saturdays from 12 p.m. to 5 p.m., and Sundays from 11 a.m. to 8 p.m. during the regular semester. Times will vary for breaks and summer. Phone or in-house support is available for on- and off-campus connectivity issues. The IT Help Desk also offers phone support for the Microsoft Office Suite and other common applications. The OIT website (smu.edu/oit) provides information, step-by-step instructions, and answers to many frequently asked questions. Training On-Demand is also available through lyndaCampus (smu.edu/lynda) for additional software.

Although most students have a personal laptop, SMU provides a number of public computer labs. Typically, the labs contain both Mac and PC workstations and support a variety of applications. Printing is also available through our PaperCut Pay-for-Print System (smu.edu/printing). If needing to purchase a personal copy of the software, discounts on software and computer hardware purchases are available throughout the year. More information can be found on the OIT website at smu.edu/oit.

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

Educational Programs

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 language and 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 (0). 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 class-room setting. The course is free of charge, noncredit bearing, and transcripted as pass or fail. *Prerequisite:* ESL Program approval required.

ESL 1002 (0). 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 transcripted as pass or fail. ESL 1001 is recommended as a precursor but is not a prerequisite. *Prerequisite:* ESL Program approval required.

ESL 20XX (0). 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, nontranscripted 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 transcripted 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 transcripted 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 transcripted as pass or fail. *Prerequisite:* ESL Program approval required.

ESL 6001, 6002 (0). SEMINAR FOR INTERNATIONAL TEACHING ASSISTANTS. Graduate students who speak English as a second language prepare for their teaching responsibilities with undergraduate students taking University Curriculum courses. The main components include language skills needed as international teaching assistants, ITA-related teaching methodology, cross-cultural communication within the American classroom, and presentation skills. Also, examination of case studies, microteaching demonstrations, and periodic out-of-class individual consultations on the student's language and pedagogical skills. The course is free of charge, noncredit bearing, and transcripted as pass or fail. *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-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.

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, more than 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.

Oak Ridge Associated Universities

Note: Only available for graduate students in either Dedman College of Humanities and Sciences or Lyle School of Engineering.

Since 1953, students and faculty of Southern Methodist University have benefited from its membership in Oak Ridge Associated Universities. ORAU is a consortium of colleges and universities and a management and operating contractor for the U.S.

Department of Energy located in Oak Ridge, Tennessee. ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowship, scholarship and research appointments; and to organize research alliances among its members.

Through the Oak Ridge Institute for Science and Education (the U.S. Department of Energy facility that ORAU operates), undergraduates, graduates, postgraduates and faculty enjoy access to a multitude of opportunities for study and research. Students can participate in programs covering a wide variety of disciplines, including business, Earth sciences, epidemiology, engineering, physics, geological sciences, pharmacology, ocean sciences, biomedical sciences, nuclear chemistry and mathematics.

ORAU's Office of Partnership Development seeks opportunities for partnerships and alliances among ORAU's members, private industry and major federal facilities. Activities include faculty development programs, such as the Ralph E. Powe Junior Faculty Enhancement Awards, the Visiting Industrial Scientist Program and various services to chief research officers.

For more information about ORAU and its programs, students should contact Dr. James E. Quick, ORAU councilor for SMU (214-768-4345), Monnie E. Champion, ORAU corporate secretary (423-576-3306), or visit the ORAU website at www.orau.org.

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 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/CAPE/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 Life and Housing

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 co-curricular learning.

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.

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

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 Conduct Council. A student who is appealing a sanction may remain in school until the decision and penalty are reviewed, unless otherwise determined by the Dean of Student Life, the Vice President for Student Affairs, or their designee. 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.

Hegi Family Career Development Center

www.smu.edu/career

The Hegi Family Career Development Center at SMU is dedicated to serving the needs of SMU students and alumni and assisting employers in reaching qualified candidates from SMU. The Career Development Center staff guides and encourages students and alumni in the development of skills necessary for lifelong career management and offers opportunities for employers to recruit students through campus events and online resources. At Hegi, the staff cares about helping students develop into well-rounded individuals, and is dedicated to values of consistency, authenticity and commitment to excellence.

Career Express Drop-in Hours. The Career Center offers 15-minute sessions to drop-ins on a first-come, first-served, basis. In these sessions, students can discuss career options or get help editing a resume. Additional information is available on our website at www.smu.edu/career.

Counseling Appointments. The Career Center also provides opportunities for counseling appointments with a staff member. These longer sessions can help students navigate the more complex issues of career development including, self-understanding, goal creation and career strategies.

Peer Mentors. Peer Mentors are highly trained student leaders who help fellow students navigate the career development process, including assisting with drop-ins, editing cover letters and resumes, and representing Hegi at campus events.

Career Development Ambassadors. CDA is a student organization designed to provide career development opportunities on the SMU Campus. CDAs organize events for the SMU community, which inspire engagement in the career development process, develop students' career tools, and provide networking opportunities.

Experiential Learning. Want to learn more about an industry, company or specific job? Experiential learning is the best way to do so. Below are some easy ways to get connected:

- **Coffee Chats**: Meet an employer in an informal setting to learn about their career journey.
- **Mentors**: Connect and develop a relationship with an SMU alum who is in a career you are interested in.
- **Externship**: Shadow an SMU alum for the day and learn about their career path and what they do on a daily basis. The SMU Connection program is a partnership with Alumni Relations, which provides students exposure to today's competitive and ever-changing job market.
- **Informational Interview**: Have a conversation with an alum and/or employer for an hour to learn out their education and career path.

Employer Events. Our Office cultivates meaningful relationships with organizations and employers who are invested in networking with dynamic, talented and skilled students across SMU's liberal and communication arts communities. Throughout the year, the Career Center hosts 2-4 Career and Internship Fairs, along with a host of Employer Industry Panels, Company Information Sessions and Industry Training and Development Workshops. These events offer students an opportunity to work with employers and alumni and to learn the skills necessary to be successful in the workplace.

Student Life

The Office of the Dean of Student Life (www.smu.edu/studentlife) educates students and the SMU community by providing purposeful opportunities for learning, growing, 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 200 extracurricular opportunities for SMU students through academic and professional associations, campus programming councils, community service coalitions, fraternities and sororities, governing boards, nine honor societies, multicultural organizations, political clubs, club sports, religious organizations, and 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 is located on the third floor of the Hughes-Trigg Student Center, Suite 314. Additionally, Suite 300 is the hub of activity and resources for several SMU student organizations. Many out-of-class programs planned and

implemented by students are considered co-curricular 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 some of the benefits associated with out-of-class participation. 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.

Student Center

www.smu.edu/htrigg

The Hughes-Trigg Student Center supports the University's mission by serving as the hub of student life and student activities. The Student Center serves as the "living room" of the university and provides services, conveniences, amenities and programming designed to enhance the student experience on campus. The Student Center staff strives to provide a safe and communal environment to meet the diverse needs of all individuals. Our building includes a 6400 square foot ballroom, a tiered, amphitheater-style forum classroom, a 500-person capacity auditorium, two dining areas, a post office, an art gallery, office and meeting space for student organizations, several lounging and quiet areas, in which to study, and six meeting rooms.

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 *SMU Campus Weekly*, 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 and 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 & 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 passionate about issues of injustice and oppression. Student organizations advised here include the Women's Interest Network; Intersect; Campus YWCA; Women in Science and Engineering; and Spectrum, a 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

The Dr. Bob Smith Health Center provides SMU students with comprehensive outpatient services, including primary medical care, counseling services, health education and laboratory, radiology and pharmacy services. The new 33,000-square-foot state-of-the-art clinic facility is centrally located on campus at 6211 Bishop Boulevard. The Health Center is certified by the Accreditation Association for Ambulatory Health Care (AAAHC) for meeting rigorous nationally recognized standards and committing to delivering the highest quality of care.

Outpatient Medical Services. The Dr. Bob Smith Health Center provides a wide range of health services allowing students to receive quality outpatient care on campus. Services available include the treatment of acute illnesses, care of injuries, minor medical procedures, physical exams, STD testing, immunizations, allergy injections, laboratory testing and x-rays. The clinic is staffed by physicians, registered nurses and medical assistants. Physicians are available 8:30 a.m. to 4:30 p.m., Monday through Friday. For appointments and health information, students may call 214-768-2141 or visit studenthealth.smu.edu.

Acute/After Hours Care. Students should call 911 for immediate response to life-threatening injuries or illnesses. For other urgent concerns after clinic hours, students should seek a local hospital or urgent care center. A listing of several hospital emergency rooms and after-hours urgent care facilities is provided for general reference on the Health Center website (smu.edu/healthcenter)

Costs. The Health Services Fee, which is included in general student fees, covers routine medical visits and counseling appointments at the Health Center. Charges are assessed separately for lab services, x-rays, immunizations, medical supplies, pharmacy and specialty care. Claims are filed for students participating in the SMU Student Health Insurance Plan. Students with other insurance plans may request an itemized receipt for insurance reimbursement.

Mandatory Health Insurance Policy. SMU students are required to maintain insurance coverage as a condition of their enrollment. The University offers the SMU Student Health Insurance Plan (SHIP), which is administered by the Health Center's Student Insurance Office. The plan provides extensive coverage at a reasonable cost for most on- and off- campus medical care. Information is available at smu.edu/healthinsurance.

Domestic students taking nine or more credit hours and international students taking one credit hour or more are automatically enrolled in the Student Health Insurance Plan (SHIP) each semester unless they expressly waive coverage in my.SMU.edu. Domestic students' waiver submittal deadline is available online at smu.edu/healthinsurance.

Pharmacy. A full service pharmacy is conveniently located in the Dr. Bob Smith Health Center to meet students' prescription needs from 8:30 a.m. to 5; 00 p.m., Monday through Friday. The pharmacy is in network with most insurance plans Prescriptions and refills may be transmitted directly to the pharmacy from the physician.

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

Texas state law requires all new students entering an institution of higher education under the age of 22 to provide proof of immunization for bacterial meningitis. The meningitis vaccine or a booster dose must have been received during the five-year period prior to enrollment and at least ten days before the start of classes. 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. The Health Center does not issue excuses from classes for illness. Please refer to www.smu.edu/healthcenter for the Class Excuse Policy.

Confidentiality and Privacy. Confidentiality and privacy of student health information is of paramount importance at the Dr. Bob Smith Health Center. The Health Center follows all applicable state and federal laws related to the disclosure of medical and mental health information, and applies to the highest professional standards of care and privacy. All student-patient health service records information is confidential. No information about a student can be released to any third party without the student's written permission.

Release of Medical Information. A copy of medical records may be released to a physician only with a written release by the student. A patient may sign a release allowing the Health Center to discuss specific medical information with their parents, significant others or health care representatives.

Office of Health Education and Promotion. The Health Center provides health education programs and services to enhance the well-being of SMU students in support of their learning and success. Information is presented to help students make informed and healthy choices. The SMU health educator works with students to promote activities that create a healthy environment for the SMU community.

Counseling Services. CS 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 the counseling website at www.smu.edu/counseling.

Testing Services. Testing Services offers fee-based testing to the Dallas-area community. These services include on-campus administration of national testing programs such as the LSAT, MPRE, GRE and others. Other testing offered includes credit by exam (CLEP), and correspondence examinations for local distance learners enrolled in other universities. For additional information, students should visit smu.edu/testingprogram or 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 170,000 square foot 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 Starbucks in the lobby area. These facilities are open to SMU students, faculty, staff and paying 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 golf, racquetball, tennis, and dodgeball. 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. Teams and individuals register online at www.imleagues.com/smu.

Club Sports. Club sports offer an opportunity for students interested in concentrated training and participation in a sport. These recognized student organizations offer competition with other university/college club teams in baseball, cycling, ice hockey, men's and women's lacrosse, polo, rugby, 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 out-door, 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, caving 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 and vocational development as well as 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 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 have a positive impact on social change. CEL advises and supports two student-run service-based organizations, Alternative Breaks and Mustang Heroes, which provide students the opportunity to participate in service trips in Dallas and throughout the United States. 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 Summit, the Mustang Intersections Leadership Retreat for Diversity and Social Change, and the Lonestar LeaderShape Institute. CEL also supports student leadership development through the Caswell Leadership Program, a grant opportunity for a group of selected students to develop projects focused on organizational leadership, faith-based leadership, community-based leadership, environmental leadership, fraternity and sorority leadership, or culturally competent 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. For more information, visit our website at www.smu.edu/StudentAffairs/Multicultural.

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 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 during their first two years at SMU. 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 2016–2017, upperclass and graduate students are not required to live on campus but may apply on a space-available basis.

Applications for Residence

New graduate students should submit the completed application and housing license agreement to RLSH with a check or money order for $100 made payable to Southern Methodist University for the nonrefundable housing deposit. 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.

Graduate Residence Accommodations

The Department of Residence Life and Student Housing operates one apartment residence hall designated for graduate 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.

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

Each apartment is equipped with a telephone, local telephone service, voice mail system and wireless Ethernet connections to the University's computer system. All residence halls are air-conditioned and some have individually climate-controlled rooms. Washing machines and dryers are located in all residence halls. Meal plans are not required in the graduate hall. 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.

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
   1. Current degree programs and other educational and training programs.
   2. Instructional, laboratory and other physical facilities relating to the academic program.
   3. Faculty and other instructional personnel.
   4. 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
   1. *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. http://www.smu.edu/Academics/StudentAchievement
   2. *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.
   3. *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

   1. Financial assistance available to students enrolled in the institution.
   2. 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.
   3. 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

   1. Tuition and fees.
   2. Living on campus.
   3. Optional and course fees.
   4. Financial policies.
   5. Administrative fees and deposits.
   6. Payment options.
   7. 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
   Altshuler Learning Enhancement Center
   214-768-1470

   1. Description of the process for establishing eligibility for services and documentation guidelines.
   2. Listings of the various on- and off-campus resources.
   3. Discussions of transitioning to postsecondary education.
   4. Tips for faculty on teaching and making accommodations.

6. **Athletics**

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

   1. Athletic program participation rates and financial aid support.
   2. Graduation or completion rates of student athletes.
   3. Athletic program operating expenses and revenues.
   4. 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/Default/PoliciesResources/FacultyResources/Committees
b. Student Code of Conduct
www.smu.edu/StudentAffairs/StudentLife/StudentHandbook/ConductCode
c. Office of Institutional Access and Equity
www.smu.edu/IAE
d. Financial Responsibility and Confidentiality
www.smu.edu/EnrollmentServices/FinancialAndConfidentiality
e. Honor Code
www.smu.edu/StudentAffairs/StudentLife/StudentHandbook/HonorCode
f. Appeal of Grade
www.smu.edu/catalogs
g. Academic Grievance and Appeals Procedures for Students with Disabilities
www.smu.edu/Provost/ALEC/DASS/DisabilityAccommodations/AppealsandGrievances
h. Appeal from financial aid decisions, including financial aid decisions based on lack of satisfactory academic progress
www.smu.edu/catalogs
i. Policy for Non-Renewal of Athletic Aid
www.smumustangs.com/compliance

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@thecb.state.tx.us. Additional information about the Texas student complaints process may be found at www.thecb.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, 2044 Galisteo Street, Suite 4, Santa Fe, NM 87505-2100; telephone 505-476-8400. Additional information about the New Mexico student complaints process may be found online at www.hed.state.nm.us or by contacting private.schools@state.nm.us.

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Vacant, *Executive Director of Hegi Family Career Development Center*

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Reva Pollack, *Assistant Dean of Graduate Studies*

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David Doyle, Jr., *Assistant Dean and Director of the University Honors Program*

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Adriana Aceves, *Senior Lecturer of Mathematics*, M.S., Arizona

Alejandro Aceves, *Professor of Mathematics, Department of Mathematics Chair*, Ph.D., Arizona

Andrea Adams, *Senior Lecturer of Chemistry*, M.S., SMU

Michael A. Adler, *Associate Professor of Anthropology*, Ph.D., Michigan

Vladimir Ajaev, *Professor of Mathematics*, Ph.D., Northwestern

Omar Al-Rashdan, *Lecturer of Arabic, Lecturer of French,* M.A., North Texas

Brandy Alvarez, *Senior Lecturer of Italian*, M.A., Yale

Stephanie Amsel, *Lecturer of English*, M.A., Texas (San Antonio)

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Joan Arbery, *Lecturer of English,* Ph.D., Notre Dame

Angela Ards, *Associate Professor of English,* Ph.D., Princeton

Gizem Arlsan, *Lecturer of German,* Ph.D., Cornell

Sabri Ates, *Associate Professor of History*, Ph.D., New York

Helen Babbili, *Senior Lecturer of Chemistry*, M.S., Kakatiya

Durdana Balakishiyeva, *Lecturer of Physics*, Ph.D., Syracuse

Austin Baldwin, *Associate Professor of Psychology*, Ph.D., Minnesota

Nathan S. Balke, *Dedman Family Distinguished Professor in Economics,* Ph.D., Northwestern

G. William Barnard, *Professor of Religious Studies*, Ph.D., Chicago

Eric Barnes, *Professor of Philosophy,* Ph.D., Indiana

Andrea Barreiro, *Assistant Professor of Mathematics*, Ph.D., New York

Bianca Batista, *Professor of Practice of Biological Sciences*, Ph.D., Texas (Austin)

Raveendra N. Batra, *Professor of Economics*, Ph.D., Southern Illinois

Steve Bergman, *Research Professor of Earth Sciences*, Ph.D., Princeton

Denis Bettaver, *Lecturer of French*, M.A., Texas (Arlington)

Eric G. Bing, *Professor of Anthropology*, M.D., Harvard, Ph.D., California (Los Angeles)

Donna Binkowski, *Professor of Practice of Spanish*, Ph.D., Illinois (Urbana-Champaign)

Diana Grumbles Blackman, *Senior Lecturer of English, Discernment and Discourse Director*, M.A., SMU

Sarah Bogard, *Lecturer of Spanish*, Ph.D., Virginia

Damiano Bonuomo, *Lecturer of Italian*, M.A., Florida

Matthew Boulanger, *Lecturer of Anthropology*, Ph.D., Missouri (Columbia)

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Debra Branch, *Senior Lecturer of Sociology*, Ph.D., Ohio

Teresa Brentegani, *Senior Lecturer of Italian*, B.A., Milan

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