# 2017-2018 Undergraduate Catalog Addendum

***The undergraduate catalog PDF and this addendum represent the official version of SMU's 2017-2018 Undergraduate Bulletin.***

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## New or Revised Courses:

ACCT 3391 - Ethics in Accounting
ADV 1341 - Marketing Principles of Advertising
ADV 2301 - Consumer Behavior
ANTH 2130 - Special Topics Abroad
ANTH 2230 - Special Topics Abroad
ANTH 2330 - Special Topics Abroad
ANTH 3130 - Special Topics Abroad
ANTH 3230 - Special Topics Abroad
ANTH 3340 - Special Topics Abroad
ANTH 3319 - Humanity and Global Environmental Change
ANTH 3370 - Fire on Earth: An Introduction to Pyrogeography
ANTH 3373 - Living with Fire: Past, Present, Future
APSM 3351 - Nutrition
APMS 4355 - Creating Global and Public Health Impact
ARBC 1402 - Beginning Arabic II
ARBC 2302 - Intermediate Arabic II
ARBC 3355 - Advanced Arabic Conversation
ARHS 3307 - Photography in Taos; Photographic Art, Photographic History
ARHS 3320 - Glittering Pages: Art of the Medieval Manuscript
ARHS 3362 - Picturing Children and the Family in Art, 1850 to the Present
ASCE 3300 - Intermediate Ceramics

BA 4360 – Advanced Studies in Risk Management
BB 3345 - The Ethics of Biblical Interpretation
BETC 10– - Business Elective Credit - Introductory (Transfer)
BETC 20– - Business Elective Credit - Intermediate (Transfer)
BETC 30– - Business Elective Credit - Advanced (Transfer)
BETC 40– - Business Elective Credit - Advanced (Transfer)
BIOL 2101 - Introductory Research I
BIOL 3303 - Evolution
BIOL 3304 - Genetics
BIOL 3305 - Limnology: Aquatic Biology
BIOL 3307 - Ecology
BIOL 3308 - Biology of Marine Mammals
BIOL 3323 - Biology of the Brain
BIOL 3342 - Plant Kingdom
BIOL 3343 - Field Botany
BIOL 3347 - Systematic Botany
BIOL 3350 - Cell Biology
BIOL 3354 - Parasitology
BIOL 3369 - Paleobiology

BIOL 3379 - Survey of Plant and Microbial Biochemistry
BIOL 3403 - Microbiology
BIOL 4119 - Immunobiology Laboratory
BIOL 4331 - Developmental Biology
BIOL 4398 - Honors Research I
BIOL 5110 - Biological Chemistry Laboratory
BIOL 5311 - Biological Chemistry: Metabolism
BIOL 5312 - Physical Biochemistry
BIOL 5340 - Molecular Basis of Brain Development and Degeneration
BIOL 5366 - Vertebrate Anatomy and Origins

CCPA 2308 - Introduction to Newswriting for Public Relations
CCPA 2310 - Rhetoric, Community, and Public Deliberation
CCPA 2327 - Communication Theory
CCPA 2375 - Communication Research and Data Analytics
CCPA 3300 - Free Speech and the First Amendment
CCPA 3355 - Principles of Public Relations
CCPA 3360 - Business and Professional Communication
CCPA 4397 - Fashion Industry Public Relations Strategy
CEE 3307 - Infrastructure and Environmental Systems Analysis
CEE 5325 - Disaster Management
CHEM 4313 - Modern Physical Organic Chemistry
CHEM 5185 - Laboratory Methods in Physical Chemistry
CHEM 5312 - Physical Biochemistry
CHIN 1402 - Beginning Chinese: Second Term
CHIN 2402 - Intermediate Chinese: Second Term
CRCP 3143 - Interactive Hybrid Ensemble

DANC 4091 - Dance Capstone
DANC 4191 - Dance Capstone
DANC 4291 - Dance Capstone
DANC 4391 - Dance Capstone
DANC 3376 - Dance in Contemporary Society – Online

EE 5341 - Computational Neuroscience
EMIS 3340 - Statistical Methods for Engineers and Applied Scientists
EMIS 5331 - Data Mining for Analytics

FETC 10– - Free Elective Credit - Introductory (Transfer Credit)
FETC 20– - Free Elective Credit - Intermediate (Transfer)
FETC 30– - Free Elective Credit - Intermediate (Transfer)
FETC 40– - Free Elective Credit - Advanced (Transfer)
FINA 5331 - Advanced Concepts in Financial Management
FREN 5334 - Genre Studies

GEOL 3307 - Ecology
GEOL 3369 – Paleobiology
GEOL 5366 - Vertebrate Anatomy and Origins
GEOL 5394 - Geophysical Problem-Solving
GEOL 5459 - Soils and Paleosols

GERM 2312 - Culture, Grammar, and Literature
HIST 1326 - Doing Oral History
HIST 3380 - Special Topics in Digital History
HRTS 1101 - Foundations of Community, Inclusion, and Diversity
HUM 2101 - Getting There From Here: Planning for Life After College

JAPN 1402 - Beginning Japanese: Second Term
JAPN 2402 - Intermediate Japanese: Second Term
KNW 2314 - On the Edges of Empire: India and Mexico/American Southwest

LATN 1402 - Beginning Latin II
LATN 2312 - Second-Year Latin: Second Term

MATH 3315 - Introduction to Scientific Computing
MATH 4315 - Advanced Scientific Computing
MATH 4325 - Modeling with Dynamical Systems
MATH 4337 - Boundary Value Problems and Partial Differential Equations
MATH 4355 - Groups and Rings
MATH 5316 - Introduction to Matrix Computation
MATH 5331 – Functions of a Complex Variable
ME 4338 - Thermal Systems Design
ME 4380 - Mechanical Engineering Design I
ME 5374 - Advanced CAD/CAE
MNO 3375 - Corporate Social Responsibility and Ethical Leadership
MNO 4345 - Creating Global and Public Health Impact
MSA 1001 - FACE: First–Year Arts Community Experience
MSA 1101 - FACE: First–Year Arts Community Experience
MUAS 1010 - Music Engagement

PERB 5019 - Music Theatre Workshop
PERB 5119 - Music Theatre Workshop
PHIL 3323 - Philosophy of Psychology and Neuroscience
PHIL 3324 - Consciousness: Theoretical and Empirical Approaches
PHIL 3352 - History of Western Philosophy (Modern)
PHIL 3356 - American Philosophy
PHYS 5368 - Foundations of Modern Cosmology
PHYS 5380 - Concepts of Experimental Particle Physics
PLSC 4304 - Political Science Research Methods
PLSC 4349 - Public Ethics, Democracy, and Corruption Control in Emerging Markets
PLSC 4371 - Ethics and the Law
PHYS 1010 – Honors Introductory Physics
PRW 2144 - PRW2: Physical Fitness: Scuba
PRW 2145 - PRW2: Physical Fitness: Advanced Scuba
PSYC 4310 - Cognition and the Brain
PSYC 4337 - The Science of Parenting

RELI 3347 - Dallas' Houses of Worship: Staging the Sacred in a 21st Century American City
RUSS 1402 - Beginning Russian, Second Term
RUSS 2351 - Russian Syntax and Composition

SCI 2101 - Getting There From Here: Planning for Life After College

SPAN 4346 - Texas-Mexico Borderlands: A Social, Political, Cultural, and Economic Story
SSC 2101 - Getting There From Here: Planning for Life After College
STAT 2331 - Introduction to Statistical Methods
THEA 5299 - Production Research and Development II

WL 3382 - Texas-Mexico Borderlands: A Social, Political, Cultural, and Economic Story
WL 3378 - Pompeii: Life Interrupted
WL 3364 - Cuban Civilization and Culture
WL 3374 - Sex, Gender, and Identity in Germany from the Late 19th Century to the Present

# Inactivated Courses:

KNW 2302 - John F. Kennedy: His Life, His Times, and His Legend
KNW 2310 - The Art of Science
RELI 3336 - African-American Religious History
RELI 3340 - Religious Experience
RELI 3364 - Native American Religions
WL 3370 - Shadows of Enlightenment: Human Rights in Germany

*(updated 9/1/2017)*

# Dedman College of Humanities and Sciences

## Interdisciplinary Programs and Courses

## Biophysical Sciences, B.S.

**Associate Professor** Jodi Cooley, **Director**

The B.S. degree in biophysical sciences bridges the disciplines of biology, chemistry and physics, connecting the complexity of life to the laws of physics. The program at SMU consists of core courses in biology, chemistry, physics, mathematics, and the School of Education. It includes the entire SMU pre-health curriculum and additional courses that provide advanced learning in order to provide a strong foundation for careers in medicine or research. The remaining term hours can be obtained from a selection of elective courses that are available in the degree plan. This program is advised in the SMU Department of Physics. Students obtaining a B.S. degree in Biophysical Sciences cannot receive a minor or second major in Chemistry or Physics. In addition, no advanced Biology courses, except Genetics and Cell Biology, can be double counted towards a minor or second major in Biology.

## Requirements for the Major:

### Core Physics Courses (23 credit hours):

PHYS 1105 - Mechanics Laboratory
PHYS 1106 - Electricity & Magnetism Laboratory

PHYS 1303 - Introductory Mechanics or PHYS 1307 General Physics I
PHYS 1304 Introductory Electricity and Magnetism or PHYS 1308 General Physics II
PHYS 3305 Introduction to Modern Physics
PHYS 3344 Classical Mechanics
PHYS 3374 Thermodynamics and Statistical Mechanics
PHYS 4392 Introduction to Electromagnetic Theory
PHYS 5382 Introduction to Quantum Mechanics

## Core Chemistry Courses (25 credit hours):

CHEM 1113 General Chemistry Laboratory
CHEM 1114 General Chemistry Laboratory
CHEM 1303 General Chemistry
CHEM 1304 General Chemistry
CHEM 3117 Organic Chemistry Laboratory
CHEM 3118 Organic Chemistry Laboratory
CHEM 3371 Organic Chemistry
CHEM 3372 Organic Chemistry
CHEM 5344 Physical Chemistry of Proteins
CHEM 5383 Physical Chemistry I
CHEM 5384 Physical Chemistry II

## Core Biology Courses (20 credit hours) *(updated 11/2/2017)*:

BIOL 1301 Introductory Biology
BIOL 1101 Introductory Biology Lab
(or BIOL 1401 prior to Fall 2017) *(updated 12/15/2017)*

BIOL 1302 Introductory Biology
BIOL 1102 Introductory Biology Lab
(or BIOL 1402 prior to Fall 2017) *(updated 12/15/2017)*

BIOL 3304 Genetics
BIOL 3350 Cell Biology
BIOL 5310 Biological Chemistry: Macromolecular Structure and Function
BIOL 5311 Biological Chemistry: Metabolism

## Core Math (15 credit hours):

MATH 1337 Calculus I
MATH 1338 Calculus II
MATH 3302 Calculus III: Multi–Variable and Vector Calculus
MATH 3304 Introduction to Linear Algebra
MATH 3313 Ordinary Differential Equations

## Elective Courses (6 hours):

Choose two from the following:

Applied Physiology & Sports Management

- APSM 3321 Biomechanics
- APSM 3322 Functional Biomechanics

Physics

- PHYS 4211 Laboratory Physics I
- PHYS 4112 Laboratory Physics II (taken simultaneously with PHYS 4211)
- PHYS 4390 Special Projects in Physics
- PHYS 5383

Chemistry

- CHEM 5306 Introduction to Computational Chemistry
- CHEM 5317 Introduction to Molecular Modeling and Computer-Assisted Drug Design
- CHEM 5308 Special Topics in Chemistry

## Total: 89 credit hours

*(updated 9/1/2017)*

# Lyle School of Engineering

# 4+1 Master's Degree Program

## Requirements

For students admitted to the 4+1 Program, up to nine (9) semester credit hours of graduate courses (7000-level and above) may be applied toward fulfilling the student's undergraduate program requirements. The student must complete a minimum of 21 semester credit hours of graduate course work at SMU beyond the undergraduate residency requirement to satisfy the graduate residency requirement. In addition, the 4+1 student is permitted to take additional graduate courses while an undergraduate, up to their eighth semester, that can be marked for graduate credit only. No graduate course work for graduate-only credit will be permitted after the eighth semester, although the students will be permitted to take dual-credit graduate courses (up to 9 hours) even beyond the eighth semester. Furthermore, the student must take at least one of the courses for the graduate degree while holding graduate status, i.e., after the student graduates with the undergraduate degree.

NOTE: Undergraduate students may take graduate courses only after they have reached senior status (90 or more earned credit hours).

*(updated 9/1/2017)*

# Right to Know

9. **State-Specific Information for Appeals and Complaints**

*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.

*(updated 10/13/2017; 5/15/2018)*

# Lyle School of Engineering

## Mechanical Engineering, B.S.M.E.

In addition to the University-wide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the credit hour requirements within the mechanical engineering curriculum are distributed as follows:

### Requirements for the Major

#### Mathematics and Science (32 Credit Hours) (updated)

- MATH 1337 - Calculus I
- MATH 1338 - Calculus II
- MATH 3302 - Calculus III: Multi–Variable and Vector Calculus *(formerly MATH 2339 prior to Fall 2017)* (updated)
- MATH 3304 - Introduction to Linear Algebra *(formerly MATH 3353 prior to Fall 2017)* (updated)
- MATH 3313 - Ordinary Differential Equations *(formerly MATH 2343 prior to Fall 2017)* (updated)
- STAT 4340 - Statistical Methods for Engineers and Applied Scientists (or equivalent)

- CHEM 1303 - General Chemistry
- CHEM 1113 - General Chemistry Laboratory (added)

- PHYS 1303 - Introductory Mechanics

- PHYS 1105 - Mechanics Laboratory

- PHYS 1304 - Introductory Electricity and Magnetism

One from the following:

- BIOL 1301 - Introductory Biology
- BIOL 1101 - Introductory Biology Lab
  *(or BIOL 1401 prior to Fall 2017)* (updated)

- BIOL 1302 - Introductory Biology
- BIOL 1102 - Introductory Biology Lab
  *(or BIOL 1402 prior to Fall 2017)* (updated)

- CHEM 1304 - General Chemistry
- GEOL 1301 - Earth Systems
- GEOL 1305 - Oceanography
- GEOL 1307 - The Solar System
- GEOL 1308 - Earth and Life
- GEOL 1313 - Earthquakes and Volcanoes
- PHYS 3305 - Introduction to Modern Physics
- PHYS 3340 - Computational Physics
- PHYS 4321 - Methods of Theoretical Physics
- Math course, 3000 level or higher, approved by adviser

## Engineering (51 Credit Hours)

- ME 1302 - Introduction to Mechanical Engineering
- ME 2310 - Statics
- ME 2320 - Dynamics

- ME 2331 - Thermodynamics
- ME 2131 - Thermodynamics Laboratory

- ME 2340 - Mechanics of Deformable Bodies
- ME 2140 - Mechanics of Materials Laboratory

- ME 2342 - Fluid Mechanics
- ME 2142 - Fluid Mechanics Laboratory

- ME 2372 - Introduction to CAD

- ME 3332 - Heat and Mass Transfer
- ME 3132 - Heat Transfer Laboratory

- ME 3340 - Engineering Materials *(formerly ME 2350 prior to Fall 2017)* (updated)

- ME 3370 - Manufacturing Processes
- ME 4152 - Professional Development
- ME 4340 - Elements of Mechanical Engineering Measurements

- ME 4360 - Design and Control of Mechanical Systems
- ME 4160 - Control Laboratory

- ME 4370 - Elements of Mechanical Design
- EE 2350 - Circuit Analysis I

One from the following:

- CEE 3302 - Engineering Communications
- CSE 4360 - Technical Entrepreneurship
- EMIS 2375 - Cultural and Ethical Implications of Technology
- EMIS 3308 - Engineering Management

## Advanced Major Elective (3 Credit Hours) (added)

Any mechanical engineering course, 3000 level or higher, with approval of adviser

## Tracks (18 Credit Hours)

**(choose one)**

### Distributed Track

- ME 4380 - Mechanical Engineering Design I
- One from thermofluids required courses below
- One from dynamics and controls required courses below
- One from solid mechanics, materials, and manufacturing required courses below
- Two additional ME courses from any track's required or elective courses

### Thermofluids Track

- One from dynamics and controls required or elective courses
- One from solid mechanics, materials, and manufacturing required or elective courses

Required Courses

- ME 3341 - Intermediate Thermal Sciences
- ME 4338 - Thermal Systems Design

Electives

Two from:

- ME 4380 - Mechanical Engineering Design I

- ME 4381 - Mechanical Engineering Design II
- ME 5325 - Computational Thermal Sciences and Engineering
- ME 5332 - Heat Transfer in Biomedical Sciences
- ME 5333 - Transport Phenomena in Porous Media
- ME 5362 - Engineering Analysis with Numerical Methods
- ME 5365 - Fluid Power Systems
- ME 5371 - Introduction to Gas Dynamics and Analysis of Propulsion Systems
- ME 5390 - Undergraduate Seminar

Dynamics and Controls Track

- One from thermofluids required or elective courses
- One from solid mechanics, materials, and manufacturing required or elective courses

Required Courses

- ME 4322 - Vibrations
- ME 5374 - Advanced CAD/CAE

Electives

Two from:

- ME 4380 - Mechanical Engineering Design I
- ME 4381 - Mechanical Engineering Design II
- ME 5302 - Linear System Analysis
- ME 5320 - Intermediate Dynamics
- ME 5326 - Vehicle Dynamics
- ME 5347 - Frequency Domain Methods in Linear Control Systems
- ME 5362 - Engineering Analysis with Numerical Methods
- ME 5365 - Fluid Power Systems
- ME 5390 - Undergraduate Seminar

Solid Mechanics, Materials, and Manufacturing Track

- One from thermofluids required or elective courses
- One from dynamics and controls required or elective courses

Required Courses

- ME 5338 - Nontraditional Manufacturing Processes
- ME 5374 - Advanced CAD/CAE

Electives

Two from:

- ME 4380 - Mechanical Engineering Design I
- ME 4381 - Mechanical Engineering Design II

- ME 5361 - Matrix Structure Analysis
- ME 5362 - Engineering Analysis with Numerical Methods
- ME 5364 - Introduction to Structural Dynamics
- ME 5390 - Undergraduate Seminar

## Total: 104 Credit Hours (updated)

Any deviation from the mechanical engineering curriculum requires approval of a petition submitted by the student to the Mechanical Engineering Department faculty prior to the beginning of the term during which the student expects to complete the requirements for graduation.

# Mechanical Engineering, B.S.M.E., Engineering Management and Entrepreneurship Specializa

In addition to the University-wide requirements, which include the completion of a minimum of 120 academic credit hours for any degree, the credit hour requirements within the mechanical engineering curriculum are distributed as follows:

## Requirements for the Specialization

### Mathematics and Science (32 Credit Hours) (updated)

MATH 1337 - Calculus I
MATH 1338 - Calculus II
MATH 3302 - Calculus III: Multi–Variable and Vector Calculus *(formerly MATH 2339 prior to Fall 2017)* (updated)
MATH 3304 - Introduction to Linear Algebra *(formerly MATH 3353 prior to Fall 2017)* (updated)
MATH 3313 - Ordinary Differential Equations *(formerly MATH 2343 prior to Fall 2017)* (updated)
STAT 4340 - Statistical Methods for Engineers and Applied Scientists (or equivalent)

CHEM 1303 - General Chemistry
CHEM 1113 - General Chemistry Laboratory (added)

PHYS 1303 - Introductory Mechanics
PHYS 1105 - Mechanics Laboratory

PHYS 1304 - Introductory Electricity and Magnetism

One from the following:

- BIOL 1301 - Introductory Biology
- BIOL 1101 - Introductory Biology Lab
  *(or BIOL 1401 prior to Fall 2017)* (updated)

- BIOL 1302 - Introductory Biology
- BIOL 1102 - Introductory Biology Lab
  *(or BIOL 1402 prior to Fall 2017)* (updated)

- CHEM 1304 - General Chemistry
- GEOL 1301 - Earth Systems
- GEOL 1305 - Oceanography
- GEOL 1307 - The Solar System
- GEOL 1308 - Earth and Life
- GEOL 1313 - Earthquakes and Volcanoes
- PHYS 3305 - Introduction to Modern Physics
- PHYS 3340 - Computational Physics
- PHYS 4321 - Methods of Theoretical Physics
- Math course, 3000 level or higher, approved by adviser

## Engineering (51 Credit Hours)

EE 2350 - Circuit Analysis I
ME 1302 - Introduction to Mechanical Engineering
ME 2310 - Statics
ME 2320 - Dynamics

ME 2331 - Thermodynamics
ME 2131 - Thermodynamics Laboratory

ME 2340 - Mechanics of Deformable Bodies
ME 2140 - Mechanics of Materials Laboratory

ME 2342 - Fluid Mechanics
ME 2142 - Fluid Mechanics Laboratory

ME 2372 - Introduction to CAD

ME 3332 - Heat and Mass Transfer
ME 3132 - Heat Transfer Laboratory

ME 3340 - Engineering Materials *(formerly ME 2350 prior to Fall 2017)* (updated)
ME 3370 - Manufacturing Processes
ME 4152 - Professional Development
ME 4340 - Elements of Mechanical Engineering Measurements

ME 4360 - Design and Control of Mechanical Systems
ME 4160 - Control Laboratory

ME 4370 - Elements of Mechanical Design

One from the following:

- ME 4338 - Thermal Systems Design
- ME 4380 - Mechanical Engineering Design I
- ME 5374 - Advanced CAD/CAE

### Engineering Leadership (12 Credit Hours)

CEE 3302 - Engineering Communications
CSE 4360 - Technical Entrepreneurship
EMIS 2375 - Cultural and Ethical Implications of Technology
EMIS 3308 - Engineering Management

### Advanced Major Electives (9 Credit Hours)

ME courses, 3000 level or higher, from the thermofluids; dynamics and controls; and solid mechanics, materials, and manufacturing tracks in the B.S. in mechanical engineering degree plan.

## Total: 104 Credit Hours (updated)

Any deviation from the mechanical engineering curriculum requires approval of a petition submitted by the student to the Mechanical Engineering Department faculty prior to the beginning of the term during which the student expects to complete the requirements for graduation.

*(updated 10/26/2017)*

# Meadows School of the Arts

## Music, B.A.

### Requirements for the Major

### PERE Ensemble (5 Credit Hours)

4 large ensembles and one chamber. (updated)

## History of the Visual and Performing Arts Minor

### Requirements for the Minor

### Music (3–6 Credit Hours)

One or two from the following:

- MUHI 1302 - Introduction to Music in History and Culture (updated)
- MUHI 1321 - Music: Art of Listening
- MUHI 3301 - Survey of Music History I
- MUHI 3302 - Survey of Music History II
- MUHI 4355 - Music and Culture: Studies in Popular Music
- MUHI 4357 - Music and Emotion
- MUHI 4358 - An Historical and Aesthetic Examination of Film Music Practices From American and Other Traditions

*(updated 11/8/2017)*

# Lyle School of Engineering

## Computer Engineering, B.S.Cp.E.

### Requirements for the Degree

#### Mathematics and Science (34 Credit Hours)

MATH 1337 - Calculus I
MATH 1338 - Calculus II
MATH 3304 - Introduction to Linear Algebra
MATH 3313 - Ordinary Differential Equations
CSE 2353 - Discrete Computational Structures

CSE 3365/MATH 3315 - Introduction to Scientific Computing
or
MATH 3316 - Introduction to High-Performance Scientific Computing

CSE 4340 - Statistical Methods for Engineers and Applied Scientists (Students may fulfill the CSE 4340 requirement by taking any one of CSE 4340/STAT 4340, or EMIS 3340)
CHEM 1303 - General Chemistry
PHYS 1303 - Introductory Mechanics

PHYS 1304 - Introductory Electricity and Magnetism
PHYS 1106 - Electricity and Magnetism Laboratory

3 credit hours from the following: (updated)

- BIOL 1301 - Introductory Biology
- BIOL 1101 - Introductory Biology Lab

- BIOL 1302 - Introductory Biology
- BIOL 1102 - Introductory Biology Lab

- CHEM 1113 - General Chemistry Laboratory

- CHEM 1304 - General Chemistry
- CHEM 1114 - General Chemistry Laboratory

- GEOL 1301 - Earth Systems
- GEOL 1305 - Oceanography
- GEOL 1307 - The Solar System
- GEOL 1308 - Earth and Life
- GEOL 1313 - Earthquakes and Volcanoes
- GEOL 1315 - Introduction to Environmental Science
- PHYS 3305 - Introduction to Modern Physics

*(updated 11/8/2017)*

# Dedman College of Humanities and Sciences

## General Requirements

### Student Responsibility for Completion of Degree Plan

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

### Application for a Degree

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

Please see http://www.smu.edu/dedmanrecords for further information.

*(updated 11/15/2017)*

# Meadows School of the Arts

## Music Composition, B.M.

## Requirements for the Major

### University-wide Requirements (Varies)

## Core Courses

- MUAS 1020 - Music Pathways: Exploring Meadows and Your Future (one enrollment fall term of 1st year)
- MUAS 1010 - Concert Experience (each term of residence) (updated)
- MUTH 1129 - Musicianship I
- MUTH 1130 - Musicianship II
- MUTH 1229 - Music Theory I
- MUTH 1230 - Music Theory II
- MUTH 2129 - Musicianship III
- MUTH 2130 - Musicianship IV
- MUTH 2229 - Music Theory III
- MUTH 2230 - Music Theory IV
- MUTH 1325 - Introduction to Composition Studies (fall term of first year)
- MUTH 3350 - Form and Analysis
- MUTH 4300 - Analysis of Contemporary Music
- MUTH 4310 - Introduction to Electro-Acoustic Music
- MUTH 5360 - Advanced Orchestration
- MUTH 5370 - Survey of Counterpoint
- MUTH 3200/MUTH 3300 - Private Composition (each term of residence after first term; minimum 14 credit hours)
- MUTH 5000 - Composition Seminar (each term of residence)

- MUHI 1302 - Introduction to Music in History and Culture
- MUHI 3301 - Survey of Music History I
- MUHI 3302 - Survey of Music History II

- PERB 1131 - Class Piano I
- PERB 1132 - Class Piano II
- PERB 2131 - Class Piano III
- PERB 2132 - Class Piano IV
  or
- PERB 1233 - Advanced Class Piano I
- PERB 1234 - Advanced Class Piano II

- MURE 4201 - Senior Recital

- MUCO 3208 - Fundamentals of Choral Conducting
  or
- MUCO 3209 - Fundamentals of Instrumental Conducting

## Private Instrumental or Vocal Studies (4 Credit Hours) (updated)

Private Studies 3200 or 3100 (two to four terms, as needed)

## PERE Ensemble (8 Credit Hours) (updated)

Must include two terms of large ensemble.

## Music/AMAE Electives (7 Credit Hours)

### Community Experience (0-1 Credit Hours)

- MSA 1001 - Face: First–Year Arts Community Experience
  or
- MSA 1101 - Face: First–Year Arts Community Experience

### Free Electives

Hours vary as needed to meet University residency and degree requirements.

## Total: 122 Credit Hours

# Music Education, B.M.

## Requirements for the Major

### Core Courses

- MUAS 1010 - Concert Experience (each term of residence) (updated)

# Music Performance: Brass and Woodwind Instruments, B.M.

## Requirements for the Major

### Core Courses

- MUAS 1010 - Concert Experience (each term of residence) (updated)

# Music Performance: Guitar, B.M.

## Requirements for the Major

### Core Courses

- MUAS 1010 - Concert Experience (each term of residence) (updated)

# Music Performance: Organ, B.M.

## Requirements for the Major

### Core Courses

- MUAS 1010 - Concert Experience (each term of residence) (updated)

## Music Performance: Percussion, B.M.

### Requirements for the Major

### Core Courses

- MUAS 1010 - Concert Experience (each term of residence) (updated)

## Music Performance: Piano, B.M

### Requirements for the Major

### Core Courses

- MUAS 1010 - Concert Experience (each term of residence) (updated)

## Music Performance: Strings, B.M.

### Requirements for the Major

### Core Courses

- MUAS 1010 - Concert Experience (each term of residence) (updated)

- PERE 5018 - Meadows Symphony Orchestra (PERE 5019 or PERE 5119 if assigned) (each term of residence) (updated)
  or
- PERE 5118 - Meadows Symphony Orchestra (PERE 5019 or PERE 5119 if assigned) (each term of residence) (updated)

## Music Performance: Voice, B.M.

### Requirements for the Major

### Core Courses

- MUAS 1010 - Concert Experience (each term of residence) (updated)

# Music Therapy, B.M.

## Requirements for the Major

### Core Courses

- MUAS 1010 - Concert Experience (each term of residence) (updated)

# Music, B.A.

## Requirements for the Major

### Core Courses

- MUAS 1010 - Concert Experience (each term of residence) (updated)

*(updated 12/8/17)*

# Dedman College of Humanities and Sciences

# Mathematics, B.S.

The B.S. degree in mathematics reflects contemporary trends in mathematics by incorporating computer science, mathematical and computational modeling, natural science and statistics courses. This degree is particularly appropriate for students who wish to proceed toward careers in industry concentrating on analytical problem solving, or toward graduate schools in any mathematical science area. Computer science, economics, electrical engineering, mechanical engineering, management science, physics and chemistry provide attractive opportunities as areas for a double major with mathematics. With a minimum of 21 approved advanced hours in the major, the following courses are required:

## Requirements for the Major

### Fundamental Mathematics (15 Credit Hours)

- MATH 1309 - Introduction to Calculus for Business and Social Science
  or
- MATH 1337 - Calculus I

- MATH 1338 - Calculus II
  or

- MATH 1340 - Consolidated Calculus

- MATH 3302 - Calculus III: Multi–Variable and Vector Calculus *(formerly MATH 2339 prior to Fall 2017)* (updated)
- MATH 3304 - Introduction to Linear Algebra
- MATH 3313 - Ordinary Differential Equations *(formerly MATH 2343 prior to Fall 2017)* (updated)

## Natural Science (6 Credit Hours)

At least 6 hours from the following:

- BIOL 1301 - Introductory Biology
- BIOL 1101 - Introductory Biology Lab
  (or BIOL 1401 prior to Fall 2017) (updated)

- BIOL 1302 - Introductory Biology
- BIOL 1102 - Introductory Biology Lab
- (or BIOL 1402 prior to Fall 2017) (updated)

- CHEM 1303 - General Chemistry
- CHEM 1304 - General Chemistry
- PHYS 1303 - Introductory Mechanics
- PHYS 1304 - Introductory Electricity and Magnetism
- One GEOL 1300-level course

## Computer Science (3 Credit Hours)

- CSE 1341 - Principles of Computer Science
  or
- CSE 1342 - Programming Concepts

## Statistics (3 Credit Hours)

- STAT 4340/CSE 4340/EMIS 3340 - Statistical Methods for Engineers and Applied Scientists
  or
- STAT 4341 - Probability and Statistics for Scientists and Engineers
  or
- EE 3360 - Statistical Methods in Electrical Engineering

## Advanced Mathematics Elective (3 Credit Hours)

- One 3000+ MATH course

## Specialization (12 Credit Hours)

- At least two courses at the 4000+ level from one specialization, including at least one MATH 4000+ course

Pure Mathematics:

Four from the following:

- MATH 3311 - Introduction to Proof and Analysis
- MATH 4338 - Analysis
- MATH 4351 - Theory of Numbers
- MATH 4355 - Groups and Rings
- MATH 4381 - Introduction to General Topology
- MATH 5331 - Functions of a Complex Variable

Applied and/or Numerical Mathematics:

- MATH 3315/CSE 3365 - Introduction to Scientific Computing
  or
- MATH 3316 - Introduction to High-Performance Scientific Computing

Three from the following:

- MATH 3334 - Mathematical Modeling and Applications
- MATH 4315 - Advanced Scientific Computing (updated)
- MATH 4325 - Modeling with Dynamical Systems
- MATH 4335 - Mathematical Biology
- MATH 4337 - Boundary Value Problems and Partial Differential Equations
- MATH 4370 - Introduction to Parallel Scientific Computing
- MATH 5315 - Introduction to Numerical Analysis
- MATH 5316 - Introduction to Matrix Computation
- MATH 5331 - Functions of a Complex Variable
- MATH 5334 - Introduction to Partial Differential Equations
- EMIS 3360 - Operations Research

Computer Science and Computer Engineering:

- MATH 3315/CSE 3365 - Introduction to Scientific Computing
  or
- MATH 3316 - Introduction to High-Performance Scientific Computing

- CSE 4381 - Digital Computer Design

Two from the following:

- MATH 4370 - Introduction to Parallel Scientific Computing
- MATH 5315 - Introduction to Numerical Analysis
- MATH 5316 - Introduction to Matrix Computation

Engineering: (updated)

- Advanced Elective must be MATH 3304
- MATH 3315/CSE 3365 - Introduction to Scientific Computing
  or

- MATH 3316 - Introduction to High-Performance Scientific Computing

One from the following:

- MATH 4315 - Advanced Scientific Computing (updated)
- MATH 4325 - Modeling with Dynamical Systems
- MATH 4337 - Boundary Value Problems and Partial Differential Equations (updated)
- MATH 4370 - Introduction to Parallel Scientific Computing
- MATH 5315 - Introduction to Numerical Analysis
- MATH 5316 - Introduction to Matrix Computation
- MATH 5331 - Functions of a Complex Variable
- MATH 5334 - Introduction to Partial Differential Equations

## Civil Engineering:

Two from the following:

- CEE 5361 - Matrix Structural Analysis and Introduction to Finite Element Methods
- CEE 5364 - Introduction to Structural Dynamics
- ME 4322 - Vibrations

## Environmental Engineering:

Two from the following:

- ME 5336- Intermediate Fluid Dynamics /MATH 6336 - Fluid Dynamics
- CEE 5331 - Air Pollution Management and Engineering
- CEE 5332 - Groundwater Hydrology and Contamination
- CEE 5334 - Fate and Transport of Contaminants

## Mechanical Engineering:

Two from the following:

- ME 4360 - Design and Control of Mechanical Systems
- ME 5302 - Linear System Analysis
- ME 5320 - Intermediate Dynamics
- ME 4322 - Vibrations
- ME 5336 - Intermediate Fluid Dynamics
- ME 5361 - Matrix Structure Analysis
- ME 5386 - Convection Heat Transfer

## Electrical Engineering:

Two from the following: (with at least one course at the 4000+ level)

- EE 3322 - Electronic Circuits II
- EE 3330 - Electromagnetic Fields and Waves
- EE 3372 - Introduction to Signal Processing
- EE 5330 - Electromagnetics: Guided Waves

- EE 5332 - Electromagnetics: Radiation and Antennas
- EE 5336 - Introduction to Integrated Photonics
- EE 5360 - Analog and Digital Control Systems
- EE 5372 - Topics in Digital Signal Processing

Operations Research:

- MATH 3315/CSE 3365 - Introduction to Scientific Computing
  or
- MATH 3316 - Introduction to High-Performance Scientific Computing

- EMIS 3360 - Operations Research (required)

One from the following:

- MATH 4370 - Introduction to Parallel Scientific Computing
- MATH 5315 - Introduction to Numerical Analysis
- MATH 5316 - Introduction to Matrix Computation

One from the following:

- EMIS 5361 - Computer Simulation Techniques
- EMIS 5362 - Production Systems Engineering

## Total: 42 Credit Hours

*(updated 12/11/2017)*

# Meadows School of the Arts

# Creative Computing, B.A.

## Requirements for the Degree

### Math, Sciences and Engineering (9 Credit Hours)

Any courses within the math, sciences or engineering disciplines may be substituted for up to 6 credit hours of the courses listed below, with adviser approval.

One from the Following:

- MATH 3304 - Introduction to Linear Algebra
- MATH 3311 - Introduction to Proof and Analysis

At least 6 credit hours from the following:

- ANTH 2415 - Human Evolution: Biological and Social Beginnings of Humankind
- ANTH 2463 - The Science of Our Past: An Introduction to Archaeology

- BIOL 1301 - Introductory Biology
- BIOL 1101 - Introductory Biology Lab
  (or BIOL 1401 prior to Fall 2017) (updated)

- BIOL 1302 - Introductory Biology
- BIOL 1102 - Introductory Biology Lab
  (or BIOL 1402 prior to Fall 2017) (updated)

- BIOL 1303 - Essentials of Biology
- BIOL 1305 - The Natural Environment
- BIOL 1308 - Plant Biology
- CHEM 1301 - Chemistry for Liberal Arts
- CHEM 1303 - General Chemistry
- CHEM 1304 - General Chemistry
- CSE 2240 - Assembly Language Programming and Machine Organization
- CSE 2353 - Discrete Computational Structures
- GEOL 1301 - Earth Systems
- GEOL 1305 - Oceanography
- GEOL 1307 - The Solar System
- GEOL 1308 - Earth and Life
- GEOL 1313 - Earthquakes and Volcanoes
- PHYS 1303 - Introductory Mechanics
- PHYS 1304 - Introductory Electricity and Magnetism
- PHYS 3305 - Introduction to Modern Physics

*(updated 12/15/17)*

# Dedman College of Humanities and Sciences

## Biochemistry, B.S.

### Requirements for the Major

#### Core Biological Sciences Courses (11 Credit Hours)

- BIOL 1301 - Introductory Biology
- BIOL 1101 - Introductory Biology Lab
  (or BIOL 1401 prior to Fall 2017) (updated)

- BIOL 1302 - Introductory Biology
- BIOL 1102 - Introductory Biology Lab
  (or BIOL 1402 prior to Fall 2017) (updated)

- BIOL 3304 - Genetics

# Biological Sciences Minor

## Requirements for the Minor

### Biological Sciences (17 Credit Hours)

- BIOL 1301 - Introductory Biology
- BIOL 1101 - Introductory Biology Lab
  (or BIOL 1401 prior to Fall 2017) (updated)

- BIOL 1302 - Introductory Biology
- BIOL 1102 - Introductory Biology Lab
  (or BIOL 1402 prior to Fall 2017) (updated)

- BIOL 3304 - Genetics
- BIOL 3350 - Cell Biology
- At least 3 hours of advanced BIOL courses, including an advanced lab course

# Biological Sciences, B.A.

## Requirements for the Major

### Biological Sciences (26 Credit Hours)

Minimum of eight courses:

- BIOL 1301 - Introductory Biology
  and
- BIOL 1101 - Introductory Biology Lab
  (or BIOL 1401 prior to Fall 2017) (updated)

- BIOL 1302 - Introductory Biology
  and
- BIOL 1102 - Introductory Biology Lab
  (or BIOL 1402 prior to Fall 2017) (updated)

- BIOL 3304 - Genetics
- BIOL 3350 - Cell Biology
- At least 12 hours of advanced BIOL courses, with at least two courses with labs and at least one course at the 4000 or 5000 level

# Biological Sciences, B.S.

## Requirements for the Major

### Biological Sciences (34 Credit Hours)

Minimum of 10 courses:

- BIOL 1301 - Introductory Biology
  and
- BIOL 1101 - Introductory Biology Lab
  (or BIOL 1401 prior to Fall 2017) (updated)

- BIOL 1302 - Introductory Biology
  and
- BIOL 1102 - Introductory Biology Lab
  (or BIOL 1402 prior to Fall 2017) (updated)

- BIOL 3304 - Genetics
- BIOL 3350 - Cell Biology
- At least 20 hours of advanced BIOL courses, with at least two courses with labs and at least one course at the 4000 or 5000 level

# Environmental Sciences, B.S.

## Requirements for the Major

### Core Biology Courses (7 Credit Hours)

- BIOL 1302 - Introductory Biology
- BIOL 1102 - Introductory Biology Lab
  (or BIOL 1402 prior to Fall 2017) (updated)

- BIOL 3307 - Ecology
  or
- GEOL 3307 - Ecology

### Emphasis Courses (15-18 Credit Hours)

Biology Emphasis (18 Credit Hours)

- BIOL 1301 - Introductory Biology
- BIOL 1101 - Introductory Biology Lab
  (or BIOL 1401 prior to Fall 2017) (updated)

# Health and Society, B.A./B.S.

## Requirements for the Major

### Foundation and Capstone Courses (15–16 Credit Hours)

Track 1:

- BIOL 1301 - Introductory Biology
- BIOL 1101 - Introductory Biology Lab
  (or BIOL 1401 prior to Fall 2017) (updated)
  or
- CHEM 1303 - General Chemistry
- CHEM 1113 - General Chemistry Laboratory

Track 2:

- BIOL 1301 - Introductory Biology
- BIOL 1101 - Introductory Biology Lab
  (or BIOL 1401 prior to Fall 2017) (updated)
  or
- BIOL 1303 - Essentials of Biology
  or
- CHEM 1301 - Chemistry for Liberal Arts
- CHEM 1113 - General Chemistry Laboratory
  or
- CHEM 1303 - General Chemistry
- CHEM 1113 - General Chemistry Laboratory

### Concentration Courses (20-29 Credit Hours)

Track 1: Physiological Emphasis (28 Credit Hours)

- MATH 1337 - Calculus I
  or
- STAT 2331 - Introduction to Statistical Methods

- PSYC 2332 - Developmental Psychology

  Elective Courses

  22 hours chosen from the following (no more than 12 hours from any single department; at least 15 hours at the 3000 level or higher):

  - ANTH 2415 - Human Evolution: Biological and Social Beginnings of Humankind
  - ANTH 3303 - Self, Culture, and Mind: Introduction to Psychological Anthropology
  - ANTH 3350 - Good Eats and Forbidden Flesh: Culture, Food, and the Global Grocery Market

- ANTH 3351 - Forensic Anthropology: Lessons Taught by Bones
- ANTH 4307 - Global and Public Health
- ANTH 4343 - Biomedicine, Culture, and Power
- ANTH 4345 - Creating Global and Public Health Impact
- ANTH 5310 - Human Osteology: Biology of the Human Skeleton
- ANTH 5336 - Health in Cross-Cultural Perspective
- APSM 2441 - Human Anatomy and Physiology I with Laboratory
- APSM 2442 - Human Anatomy and Physiology II with Lab
- APSM 4349 - Health Care: From Policy to Practice

- BIOL 1302 - Introductory Biology
- BIOL 1102 - Introductory Biology Lab
  (or BIOL 1402 prior to Fall 2017) (updated)

- BIOL 3304 - Genetics
- BIOL 3350 - Cell Biology

- CHEM 1304 - General Chemistry
- CHEM 1114 - General Chemistry Laboratory

- CHEM 3371 - Organic Chemistry
- CHEM 3117 - Organic Chemistry Laboratory

- KNW 2303 - Under the Influence: Discourses of Inebriation, Addiction, and Recovery
- PSYC 2351 - Abnormal Psychology
- PSYC 3360 - Health Psychology
- PSYC 4320 - Biological Psychology
- PSYC 4321 - Behavioral Action of Drugs
- WGST 3380 - Human Sexuality

# Natural Sciences Minor

## Requirements for the Minor

- BIOL 1301 - Introductory Biology
- BIOL 1101 - Introductory Biology Lab
  (or BIOL 1401 prior to Fall 2017) (updated)

- BIOL 1302 - Introductory Biology
- BIOL 1102 - Introductory Biology Lab
  (or BIOL 1402 prior to Fall 2017) (updated)

- BIOL 3304 - Genetics
- BIOL 3350 - Cell Biology

- CHEM 1303 - General Chemistry
- CHEM 1113 - General Chemistry Laboratory

- CHEM 1304 - General Chemistry

- CHEM 1114 - General Chemistry Laboratory

- CHEM 3371 - Organic Chemistry
- CHEM 3117 - Organic Chemistry Laboratory

- CHEM 3372 - Organic Chemistry
- CHEM 3118 - Organic Chemistry Laboratory

## Total: 30 Credit Hours

*(updated 1/4/2018)*

# Admission

# Transfer Credit

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

No transfer credit is given for any correspondence course or work completed at a school that is not accredited by a regional or national accrediting agency. Only grades of C- or better in comparable courses are transferable to SMU for accepted students. Vocational-technical courses, courses below college level, credit by examination earned at another college or university, and PE activity courses in excess of two hours do not transfer. For courses not taught at SMU locations or in SMU-approved international programs, free-elective transfer credit (FETC) may be awarded for appropriate courses completed with a grade of C- or better at regionally accredited colleges or universities that meet SMU's academic standards. FETC is assigned by a faculty committee appointed to review courses for transferability, or used by the Office of the University Registrar if courses are considered transferable but lack sufficient information to determine an exact equivalency. Similarly, Business Elective Transfer Credit (BETC) is used to award transfer credit by the Cox School of Business' Office of BBA Academic Advising, Records and Special Programs, for transferable courses where there is not an equivalent business course prefix.

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

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

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

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

# Cox School of Business

## Admission

### Admission of External Transfer Students to a Business Major/B.B.A. Degree Program

**Notes**

- For admission purposes to the Cox B.B.A. program, the all-college cumulative GPA is recorded at the end of the term the student completes the business subset courses AND has at least 39 cumulative credit hours. The all-college cumulative GPA includes all SMU coursework and courses completed at all other colleges if these courses have content-based equivalents at SMU. If credit is nontransferable because the grade earned is below *C*-, but the course is equivalent in content to an SMU course, the grade will count toward the all-college cumulative GPA.
- Current University grading policy, as summarized under Academic Forgiveness in the General Policies section of this catalog, permits forgiveness of academic work taken 10 or more years prior to the term of admission. Academic work forgiven under this policy will not be included in the all-college cumulative GPA.
- Students must have passing grades in all subset courses before entering the Cox School.
- When evaluating courses taken at other colleges or universities, the Cox School will use the grades and credit hours designated by the school at which the courses were taken. Business Elective Transfer Credit (BETC) is used to award transfer credit for transferable courses where there is not an equivalent business course prefix. The Cox School will not recalculate grades earned at schools that use grading systems different from SMU's nor change the number of credit hours for a course.

Transfer students who have not completed the business subset courses may be eligible for admission to SMU as prebusiness majors and will then follow the admission requirements outlined above for current SMU students. Those who have completed the subset courses but who do not meet Cox admission requirements may be eligible for admission to SMU via the extended subset option or for admission to SMU to pursue a nonbusiness major.

# SMU Abroad

## Programs and Courses

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

SMU Abroad students will be charged SMU tuition at the SMU tuition rate on campus, as well as miscellaneous fees and a fee for mandatory international health insurance. Students will be billed by SMU at the usual time. SMU in turn will pay the academic costs of the abroad program. Details on SMU Abroad costs and billing procedures are available on the SMU Abroad website.

*(updated 1/24/2018; effective for the 2017-2018 catalog)*

# Enrollment and Academic Records

## Grade Policies

### Grade Replacement Repeat

Effective for courses taken Fall 2017 or later, students may repeat up to six courses taken at SMU for which grades of D+ or lower were received. The grade from the repeated course, even if lower, will be the grade used to calculate the student's GPA. A course may be repeated only once under this policy.

Students must repeat the exact same course originally taken to be considered a repeat. The course must be taken at SMU. Not every course is offered again and thus may not be available to be repeated.  Students cannot take or repeat a course that is a prerequisite for a course already satisfactorily completed.

The student must declare to his or her academic records office by the last day to drop a course (with a grade of W) which courses he or she will repeat under this policy. Once the declaration is made, it is irrevocable. Only the credit hours of the repeated course and not the initial credit hours count toward the number needed for graduation. Both the initial and the second grades are shown on the student's permanent academic record. Probation, suspension and dismissal, as determined by the initial grade, stands. Students are cautioned that for some purposes, such as admission into an academic program, both grades or only the initial grade may be used.

Note: This policy replaces the former First-Year Repeat policy. Any repeats taken under the First-Year Repeat policy will count against the total Grade Replacement Repeats allowed.

*Students who entered SMU during 2016-17 under the 2016-2017 First Year Repeat policy may repeat classes taken before Fall 2017, per the guidelines of that policy.

## Grade Average Repeat

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

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

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

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

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

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

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

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

*(updated 2/13/2018)*

# Admission

## Credit by Examination

### Examinations Administered in High School

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

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

| *AP Examination* | *Scores* | *Credits* | *Course(s) Credited* |
|---|---|---|---|
| American History | 4, 5 | 6 hrs | HIST 2311, HIST 2312 |
| Art | 4, 5 | 3 hrs | ASDR 1300/ASPH 1300/ASPT 1300(student's choice) |
| Art History | 4, 5 | 6 hrs | ARHS 1303, ARHS 1304 *(updated)* |
| Biology | 4, 5 | 8 hrs | BIOL 1301/ BIOL 1101, BIOL 1302/BIOL 1102 |
| Chemistry | 4, 5 | 4 hrs | CHEM 1303/CHEM 1113 |
| Computer Science A, AB | 4, 5 | 3 hrs | CSE 1341 |
| Economics: | | | |
| Macro | 4, 5 | 3 hrs | ECO 1312 |
| Micro | 4, 5 | 3 hrs | ECO 1311/PREX 4002 |
| English Language/C or Litature/C | 4, 5 | 6 hrs | DISC 1311, DISC 1312 |
| Environmental Science | 4, 5 | 3 hrs | GEOL 1315 |
| European History | 4, 5 | 6 hrs | HIST 2365, HIST 2366 |
| Government: | | | |
| American | 4, 5 | 3 hrs | PLSC 1320 |
| Comparative | 4, 5 | 3 hrs | PLSC 1340 |
| Human Geography | 4, 5 | 3 hrs | HUM 10XX (3 hours) |
| Languages (Language or Literature): | | | |
| Chinese Language/Culture | 4, 5 | 8 hrs | CHIN 1401, CHIN 1402 |

| | | | |
|---|---|---|---|
| French | 4, 5 | 8 hrs | FREN 1401, FREN 1402 |
| German | 4, 5 | 8 hrs | GERM 1401, GERM 1402 |
| Italian | 4, 5 | 8 hrs | ITAL 1401, ITAL 1402 |
| Japanese Language/Culture | 4, 5 | 8 hrs | JAPN 1401, JAPN 1402 |
| Latin | 4, 5 | 8 hrs | LATN 1401, LATN 1402 |
| Spanish | 4, 5 | 8 hrs | SPAN 1401, SPAN 1402 |
| Mathematics: | | | |
| Calculus AB | 4, 5 | 3 hrs | MATH 1337 |
| Calculus BC | 3 if AB sub-score of 4 | 3 hrs | MATH 1337 |
| Calculus BC | 4, 5 | 6 hrs | MATH 1337, MATH 1338 |
| Music Theory | 4, 5 | 6 hrs | FETC 10XX (6 hours) |
| Physics: | | | |
| Physics 1 | 4, 5 | 3 hrs | SCI 10XX (3 hours) |
| Physics 2 | 4, 5 | 3 hrs | SCI 10YY (3 hours) |
| Physics C (Mech) | 4, 5 | 3 hrs | PHYS 1303 |
| Physics C (E&M) | 4, 5 | 3 hrs | PHYS 1304 |
| Psychology | 4, 5 | 3 hrs | PSYC 1300 |
| Statistics | 4, 5 | 3 hrs | STAT 2331 |
| World History | 4, 5 | 3 hrs | HUM 10YY (3 hours) |

**Notes**

- AP credit in the sciences may be used to satisfy the Science and Engineering breadth requirement of the University Curriculum. The UC's Natural and Applied Science depth requirement must be satisfied through coursework at SMU or through transfer credit of a science course with lab from an accredited college or university.
- Physics does not award placement credit for labs.
- Duplicate credit is not allowed toward an SMU degree. Students who enroll in classes that duplicate Advanced Placement, International Baccalaureate or other test credit awards will lose these credits after the fifth day of the term. Once credit is revoked, it may not be awarded again. Students must report any credit by exam no later than the end of their first term of enrollment.

*(updated 4/19/2018)*

# Dedman College of Humanities and Sciences

## International Studies, B.A.

### Requirements for the Major

# Regional Specialization (15 Credit Hours)

## Humanities and Arts

### African/Middle Eastern Studies

- ARHS 3392 - Islamic Art and Architecture: The Creation of a New Art
- RELI 3329 - Islam
- RELI 3362 - Islam and the West
- WL 3330 - Migration, Occupation, and Independence in North African Cinema (updated)
- WL 3341 - The Failure of Humanity in Rwanda (updated)
- WL 3349 - The African Diaspora: Literature and History of Black Liberation
- WL 3355 - Tradition, Community, and Identity in African Cinema (updated)

### Latin American and Iberian Studies

- ANTH 3312 - Mesoamerican Archaeology
- ARHS 1308 - Epic of Latin America
- ARHS 1350 - Art in the Portuguese Empire
- ARHS 3324 - Art and Cultures of Medieval Spain
- ARHS 3328 - Latin American History Through Visual Culture (updated)
- ARHS 3338 - Sacred and Profane: Spanish Art and Architecture
- ARHS 3339 - El Greco to Goya: Spanish Painting of the Golden Age
- ARHS 3344 - Paintings at the Prado (SMU-in-Spain)
- ARHS 3360 - Modern Painters in Spain (SMU-in-Spain)
- ARHS 3363 - Topics in Brazilian Art and Architecture
- ARHS 3376 - Latin American Art
- ARHS 3377 - Art and Architecture of Hispanic New Mexico
- ARHS 3379 - Power and Spectacle: The Arts of Spain and New Spain
- ARHS 3382 - Art and Experience in Inka Peru
- ARHS 3383 - The Ancient Maya: Art and History
- ARHS 3385 - The Aztecs Before and After the Conquest: Mesoamerica, 1400-1600
- ARHS 3391 - Visual Culture in Colonial Mexico
- ENGL 3363 - Chicana/Chicano Literature
- RELI 3353 - Identity and the Sacred in the Southwest
- SPAN 3374 - Topics in Spanish-American Civilization (also SMU-in-Xalapa)
- SPAN 4391 - Commercial Spanish for International Trade
- SPAN 4395 - Introduction to Hispanic Literature
- SPAN 5310 - Spanish Literature Before 1700
- SPAN 5311 - Spanish Literature Since 1700
- SPAN 5315 - Spanish-American Literature to 1888
- SPAN 5316 - Spanish-American Literature Since 1888
- SPAN 5321 - The Renaissance and Golden Age: Prose Fiction
- SPAN 5323 - 19th-Century Prose Fiction
- SPAN 5325 - 20th-Century Peninsular Prose Fiction
- SPAN 5334 - The Novel, Post-Civil War
- SPAN 5335 - Genre Studies (Spain)
- SPAN 5336 - Spanish-American Novel (also SMU-in-Xalapa)
- SPAN 5337 - Spanish-American Essay
- SPAN 5338 - Spanish–American Short Story (also SMU-in-Xalapa)

- SPAN 5339 - Spanish-American Poetry
- SPAN 5361 - Don Quixote: The Idea, the Character, the Book
- SPAN 5365 - Contemporary Spanish Women Writers
- SPAN 5370 - Rewriting Discovery and Exploration in the Spanish Borderlands
- SPAN 5375 - Contemporary Fiction by Latin American Women Writers
- WL 3303/SPAN 3373 - Topics in Spanish Civilization
- WL 3306 - Chicano Cultural Heritage

*(updated 5/14/2018)*

# Cox School of Business

## Management, B.B.A.

### Requirements for the Major

#### Electives (6 Credit Hours) (updated)

Selected from the following:

- MNO 3373 - Negotiations
- MNO 3375 - Corporate Social Responsibility and Ethical Leadership
- MNO 4330 - Introduction to Consulting and Change Management

- MNO 4371 - Leadership and Culture
- or
- MNO 4372 - Leadership and Culture in the Southwest (if not taken for core requirement)

- RMI 4340 - Employee Benefits
- CISB 2379 - Identifying Entrepreneurial Opportunities
- CISB 4398 - Managing the Entrepreneurial Business
- CISB 5397 - Entrepreneurship: Starting a Business (if senior core is completed with STRA 5370)
- ITOM 4307 - Business Modeling with Spreadsheets (ACCT 4307 will not count for the major)
- STRA 5370 - Strategic Management in a Global Economy (if senior core is completed with CISB 5397)

*(updated 5/15/2018)*

# Lyle School of Engineering

## Mechanical Engineering, B.S.M.E., Premedical/Biomedical Specialization

### Requirements for the Specialization

## Mathematics and Science (56 Credit Hours)

- MATH 1337 - Calculus I
- MATH 1338 - Calculus II
- MATH 3302 - Calculus III: Multi–Variable and Vector Calculus *(formerly MATH 2339 prior to Fall 2017)* (updated)
- MATH 3304 - Introduction to Linear Algebra *(formerly MATH 3353 prior to Fall 2017)* (updated)
- MATH 3313 - Ordinary Differential Equations *(formerly MATH 2343 prior to Fall 2017)* (updated)

- STAT 4340 - Statistical Methods for Engineers and Applied Scientists
  or
- equivalent

- BIOL 1301 - Introductory Biology
- BIOL 1101 - Introductory Biology Lab
  *(or BIOL 1401 prior to Fall 2017)* (updated)

- BIOL 1302 - Introductory Biology
- BIOL 1102 - Introductory Biology Lab
  *(or BIOL 1402 prior to Fall 2017)* (updated)

- BIOL 3304 - Genetics
- BIOL 3350 - Cell Biology

- CHEM 1303 - General Chemistry
- CHEM 1113 - General Chemistry Laboratory

- CHEM 1304 - General Chemistry
- CHEM 1114 - General Chemistry Laboratory

- CHEM 3371 - Organic Chemistry
- CHEM 3117 - Organic Chemistry Laboratory

- CHEM 3372 - Organic Chemistry
- CHEM 3118 - Organic Chemistry Laboratory

- PHYS 1303 - Introductory Mechanics
- PHYS 1105 - Mechanics Laboratory

- PHYS 1304 - Introductory Electricity and Magnetism
- PHYS 1106 - Electricity and Magnetism Laboratory

## Engineering (50 Credit Hours)

- EE 2350 - Circuit Analysis I
- ME 1302 - Introduction to Mechanical Engineering

- ME 2310 - Statics
- ME 2320 - Dynamics

- ME 2331 - Thermodynamics
- ME 2131 - Thermodynamics Laboratory

- ME 2340 - Mechanics of Deformable Bodies
- ME 2140 - Mechanics of Materials Laboratory

- ME 2342 - Fluid Mechanics
- ME 2142 - Fluid Mechanics Laboratory

- ME 2372 - Introduction to CAD

- ME 3332 - Heat and Mass Transfer
- ME 3132 - Heat Transfer Laboratory
-
- ME 3340 - Engineering Materials *(formerly ME 2350 prior to Fall 2017)* (updated)
- ME 3370 - Manufacturing Processes
- ME 4152 - Professional Development
- ME 4340 - Elements of Mechanical Engineering Measurements

- ME 4360 - Design and Control of Mechanical Systems
- ME 4370 - Elements of Mechanical Design

# Mechanical Engineering, B.S.M.E./Mathematics, B.S.

## Requirements for the Major

### Mathematics and Science (37 Credit Hours)

- MATH 1337 - Calculus I
- MATH 1338 - Calculus II
- MATH 3302 - Calculus III: Multi–Variable and Vector Calculus *(formerly MATH 2339 prior to Fall 2017)* (updated)
- MATH 3304 - Introduction to Linear Algebra *(formerly MATH 3353 prior to Fall 2017)* (updated)
- MATH 3313 - Ordinary Differential Equations *(formerly MATH 2343 prior to Fall 2017)* (updated)
- MATH 3315 - Introduction to Scientific Computing
- MATH 4337 - Boundary Value Problems and Partial Differential Equations

- STAT 4340 - Statistical Methods for Engineers and Applied Scientists
  or
- equivalent

- One advanced elective as defined in the description of the mathematics major
- CHEM 1303 - General Chemistry
- PHYS 1303 - Introductory Mechanics
- PHYS 1105 - Mechanics Laboratory

- PHYS 1304 - Introductory Electricity and Magnetism

### Engineering (54 Credit Hours)

- CSE 1341 - Principles of Computer Science
- EE 2350 - Circuit Analysis I
- ME 1302 - Introduction to Mechanical Engineering
- ME 2310 - Statics
- ME 2320 - Dynamics

- ME 2331 - Thermodynamics
- ME 2131 - Thermodynamics Laboratory

- ME 2340 - Mechanics of Deformable Bodies
- ME 2140 - Mechanics of Materials Laboratory

- ME 2342 - Fluid Mechanics
- ME 2142 - Fluid Mechanics Laboratory

- ME 2372 - Introduction to CAD

- ME 3332 - Heat and Mass Transfer
- ME 3132 - Heat Transfer Laboratory

- ME 3340 - Engineering Materials *(formerly ME 2350 prior to Fall 2017)* (updated)
- ME 3370 - Manufacturing Processes
- ME 4152 - Professional Development
- ME 4340 - Elements of Mechanical Engineering Measurements

- ME 4360 - Design and Control of Mechanical Systems
- ME 4160 - Control Laboratory

- ME 4370 - Elements of Mechanical Design

# Mechanical Engineering, B.S.M.E./Physics, B.S.

## Requirements for the Major

### Mathematics and Science (58 Credit Hours)

- MATH 1337 - Calculus I

- MATH 1338 - Calculus II
- MATH 3302 - Calculus III: Multi–Variable and Vector Calculus *(formerly MATH 2339 prior to Fall 2017)* (updated)
- MATH 3304 - Introduction to Linear Algebra *(formerly MATH 2339 prior to Fall 2017)* (updated)
- MATH 3313 - Ordinary Differential Equations *(formerly MATH 2343 prior to Fall 2017)* (updated)

- STAT 4340 - Statistical Methods for Engineers and Applied Scientists
- or
- equivalent

- CHEM 1303 - General Chemistry

- PHYS 1303 - Introductory Mechanics
- PHYS 1105 - Mechanics Laboratory

- PHYS 1304 - Introductory Electricity and Magnetism
- PHYS 1106 - Electricity and Magnetism Laboratory

- PHYS 3305 - Introduction to Modern Physics
- PHYS 3344 - Classical Mechanics
- PHYS 3374 - Thermodynamics and Statistical Mechanics
- PHYS 4211 - Laboratory Physics I
- PHYS 4321 - Methods of Theoretical Physics
- PHYS 4392 - Introduction to Electromagnetic Theory
- PHYS 5382 - Introduction to Quantum Mechanics
- PHYS 5383 - Advanced Quantum Mechanics
- Two advanced physics electives

## Engineering (48 Credit Hours)

- EE 2350 - Circuit Analysis I
- ME 1302 - Introduction to Mechanical Engineering
- ME 2310 - Statics

- ME 2331 - Thermodynamics
- ME 2131 - Thermodynamics Laboratory

- ME 2340 - Mechanics of Deformable Bodies
- ME 2140 - Mechanics of Materials Laboratory

- ME 2342 - Fluid Mechanics
- ME 2142 - Fluid Mechanics Laboratory

- ME 2372 - Introduction to CAD

- ME 3332 - Heat and Mass Transfer
- ME 3132 - Heat Transfer Laboratory

- ME 3340 - Engineering Materials *(formerly ME 2350 prior to Fall 2017)* (updated)
- ME 3370 - Manufacturing Processes
- ME 4152 - Professional Development
- ME 4340 - Elements of Mechanical Engineering Measurements

- ME 4360 - Design and Control of Mechanical Systems
- ME 4160 - Control Laboratory

- ME 4370 - Elements of Mechanical Design

One from the following:

- ME 4338 - Thermal Systems Design
- ME 4380 - Mechanical Engineering Design I
- ME 5374 - Advanced CAD/CAE

# Mechanical Engineering Minor

## Requirements for the Minor

### Four from (12 Credit Hours)

- ME 2310 - Statics
- ME 2320 - Dynamics
- ME 2331 - Thermodynamics
- ME 2340 - Mechanics of Deformable Bodies
- ME 2342 - Fluid Mechanics

### One from (3 Credit Hours)

- ME 3340 - Engineering Materials *(formerly ME 2350 prior to Fall 2017)* (updated)
- ME 3370 - Manufacturing Processes

### Total: 15 Credit Hours

*(updated 5/16/2018)*

# Right to Know

**8. Student Appeals and Complaints**

Student with complaints and/or grievances must first seek to resolve them with Southern Methodist University through its processes described below. In all instances and with all offices

and representatives of the university, all complaints are handled impartially and in a timely manner by professionals in the subject area of the complaint. No adverse action will be taken against anyone filing a formal complaint or grievance with Southern Methodist University.
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.

*(updated 11/19/2018)*

# Dedman College of Humanities and Sciences

## Mathematics, B.S.

### Requirements for the Major

#### Fundamental Mathematics (15 Credit Hours)

- MATH 1309 - Introduction to Calculus for Business and Social Science or MATH 1337 - Calculus I and MATH 1338 - Calculus II
  or
- MATH 1340 - Consolidated Calculus

- MATH 3302 - Calculus III: Multi–Variable and Vector Calculus *(formerly MATH 2339 prior to Fall 2017)*
- MATH 3304 - Introduction to Linear Algebra *(formerly MATH 3353 prior to Fall 2017)*
- MATH 3313 - Ordinary Differential Equations *(formerly MATH 2343 prior to Fall 2017)*

**Natural Science (6 Credit Hours) (*updated* 12/8/2017)**

*At least 6 hours from the following*:

- BIOL 1301 - Introductory Biology
- BIOL 1101 - Introductory Biology Lab
  *(or BIOL 1401 prior to Fall 2017)*

- BIOL 1302 - Introductory Biology
- BIOL 1102 - Introductory Biology Lab
  *(or BIOL 1402 prior to Fall 2017)*

- CHEM 1303 - General Chemistry
- CHEM 1304 - General Chemistry
- PHYS 1303 - Introductory Mechanics
- PHYS 1304 - Introductory Electricity and Magnetism
- One GEOL 1300-level course

**Computer Science (3 Credit Hours)**

- CSE 1341 - Principles of Computer Science
  or
- CSE 1342 - Programming Concepts

**Statistics (3 Credit Hours)**

- STAT 4340/CSE 4340/EMIS 3340 - Statistical Methods for Engineers and Applied Scientists
  or
- STAT 4341 - Probability and Statistics for Scientists and Engineers
  or
- EE 3360 - Statistical Methods in Electrical Engineering

**Advanced Mathematics Elective (3 Credit Hours)**

- One 3000+ MATH course

**Specialization (12 Credit Hours)**

*At least two courses at the 4000+ level from one specialization, including at least one MATH 4000+ course*

**Pure Mathematics:**

Four from the following:

- MATH 3311 - Introduction to Proof and Analysis
- MATH 4338 - Analysis
- MATH 4351 - Theory of Numbers
- MATH 4355 - Groups and Rings
- MATH 4381 - Introduction to General Topology
- MATH 5331 - Functions of a Complex Variable

**Applied and/or Numerical Mathematics:**

- MATH 3315/CSE 3365 - Introduction to Scientific Computing
  or
- MATH 3316 - Introduction to High-Performance Scientific Computing

**Three from the following:**

- MATH 3334 - Mathematical Modeling and Applications
- MATH 4315 - Advanced Scientific Computing *(*updated* 12/8/2017)*
- MATH 4325 - Modeling with Dynamical Systems
- MATH 4335 - Mathematical Biology
- MATH 4337 - Boundary Value Problems and Partial Differential Equations
- MATH 4370 - Introduction to Parallel Scientific Computing
- MATH 5315 - Introduction to Numerical Analysis
- MATH 5316 - Introduction to Matrix Computation
- MATH 5331 - Functions of a Complex Variable
- MATH 5334 - Introduction to Partial Differential Equations
- EMIS 3360 - Operations Research

**Computer Science and Computer Engineering:**

- MATH 3315/CSE 3365 - Introduction to Scientific Computing
  or
- MATH 3316 - Introduction to High-Performance Scientific Computing

- CSE 4381 - Digital Computer Design

**Two from the following:**

- MATH 4315 - Advanced Scientific Computing
- MATH 4370 - Introduction to Parallel Scientific Computing
- MATH 5315 - Introduction to Numerical Analysis
- MATH 5316 - Introduction to Matrix Computation

**Engineering: (*updated* 12/8/2017)**

- ~~Advanced Elective must be MATH 3304~~

- MATH 3315/CSE 3365 - Introduction to Scientific Computing
  or
- MATH 3316 - Introduction to High-Performance Scientific Computing

**One from the following:**

- MATH 4315 - Advanced Scientific Computing
- MATH 4325 - Modeling with Dynamical Systems
- MATH 4337 - Boundary Value Problems and Partial Differential Equations
- MATH 4370 - Introduction to Parallel Scientific Computing
- MATH 5315 - Introduction to Numerical Analysis
- MATH 5316 - Introduction to Matrix Computation
- MATH 5331 - Functions of a Complex Variable
- MATH 5334 - Introduction to Partial Differential Equations

**Civil Engineering:**

Two from the following:

- CEE 5361 - Matrix Structural Analysis and Introduction to Finite Element Methods
- CEE 5364 - Introduction to Structural Dynamics
- ME 4322 - Vibrations

**Environmental Engineering:**

Two from the following:

- ME 5336- Intermediate Fluid Dynamics /MATH 6336 - Fluid Dynamics
- CEE 5331 - Air Pollution Management and Engineering
- CEE 5332 - Groundwater Hydrology and Contamination
- CEE 5334 - Fate and Transport of Contaminants

**Mechanical Engineering:**

Two from the following:

- ME 4360 - Design and Control of Mechanical Systems
- ME 5302 - Linear System Analysis
- ME 5320 - Intermediate Dynamics
- ME 4322 - Vibrations
- ME 5336 - Intermediate Fluid Dynamics
- ME 5361 - Matrix Structure Analysis
- ME 5386 - Convection Heat Transfer

**Electrical Engineering:**

Two from the following: (with at least one course at the 4000+ level)

- EE 3322 - Electronic Circuits II
- EE 3330 - Electromagnetic Fields and Waves
- EE 3372 - Introduction to Signal Processing
- EE 5330 - Electromagnetics: Guided Waves
- EE 5332 - Electromagnetics: Radiation and Antennas
- EE 5336 - Introduction to Integrated Photonics
- EE 5360 - Analog and Digital Control Systems
- EE 5372 - Topics in Digital Signal Processing

**Operations Research:**

- MATH 3315/CSE 3365 - Introduction to Scientific Computing
  or
- MATH 3316 - Introduction to High-Performance Scientific Computing

- EMIS 3360 - Operations Research (required)

**One from the following:**

- MATH 4315 - Advanced Scientific Computing
- MATH 4370 - Introduction to Parallel Scientific Computing
- MATH 5315 - Introduction to Numerical Analysis
- MATH 5316 - Introduction to Matrix Computation

**One from the following:**

- EMIS 5361 - Computer Simulation Techniques
- EMIS 5362 - Production Systems Engineering

**Total: 42 Credit Hours**

*(updated 1/24/2019)*

# Cox School of Business

## Real Estate, Risk Management and Business Law

### Courses

### Business Law

**BL 3300 - Special Topics: International Business Law**
*Credits: 3*
Special topics in international business law taught abroad.

**BL 3310 - Business Law Concepts**

*Credits: 3*

Addresses legal issues encountered in personal and business situations. Includes cyber law, litigation management, arbitration, intellectual property, white–collar crime, real estate purchase fundamentals, standard apartment leases, contract basics, business formation structures, employee management, and wealth management tools. Elective for minor in business. Cox majors and minors in business administration will not receive credit for this course and may not enroll in it.

**BL 3335 - Business Law**

*Credits: 3*

Emphasizes the nature, formation, and application of law with a macro view; also public law and regulation of business. Prerequisites: ACCT 2301; ECO 1311 and ECO 1312; MATH 1309 or MATH 1337; and STAT 2301 or one from the following: CSE 4340; EMIS 3340; ITOM 2305; STAT 2331, STAT 4340. Reserved for Cox majors.

**BL 4300 - Special Topics: International Business Law**

*Credits: 3*

Offered through SMU Abroad. Prerequisite: Junior standing.

**BL 4340 - Law for the Entrepreneur**

*Credits: 3*

Examines critical legal issues encountered by private domestic enterprises during the first years of operation. Topics include the hiring of counsel, alternatives for entity formation, establishment of a board of directors, debt and equity financing, real estate leases, criminal and civil liabilities, and litigation and risk management strategies. Prerequisite: BL 3335. Reserved for Cox majors.