

2013

## UTB/TSC Legacy Degree Programs and Courses 2013 – 2014

University of Texas at Brownsville

Texas Southmost College

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**UTB/TSC Legacy  
Degree Programs  
and  
Courses  
2013 – 2014**

# THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE

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### 2013 – 2014 UNDERGRADUATE PROGRAMS OF STUDY

#### BACHELOR DEGREE PROGRAMS - FOUR YEAR PROGRAMS OF STUDY

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Biology		BS.BIOL
Biomedical Science		BS.BMED
<i>Business</i>		
	Accounting	BBA.ACCT
	Entrepreneurship	BBA.ENTR
	Finance	BBA.FINA
	International Business	BBA.INTL
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	Management Information Systems	BBA.MIS
Chemistry		BS.CHEM
Communication		BA.COMM
Computational Science		BS.CMSC
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Computer Science		BS.COSC
<i>Criminal Justice</i>		
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<i>Engineering Physics</i>		
	Bioengineering	BS.ENGR.PHYS.BIOE
	Computer Engineering	BS.ENGR.PHYS.COMPE
	Electrical Engineering	BS.ENGR.PHYS.ELET
	Mechanical Engineering	BS.ENGR.PHYS.MECH
Engineering Technology		BS.ENG
English		BA.ENGL
Environmental Sciences		BS.ENVR
Government		BA.GOV
Health and Human Performance		BS.KINE
Health and Human Performance - Exercise Science		BS.KINE.ES
Health Services Technology		BAT.HST
History		BA.HIST
Law and Justice Studies		BA.LJST
Mathematics		BS.MATH
Multidisciplinary Studies		BMS.MLDS
<i>Music</i>		
	Guitar	BM.GUIT
	Instrumental	BM.INST
	Keyboard	BM.KEYB
	Vocal	BM.VOCAL
Nursing (RN to BSN)		BSN.NURS
Nursing (Generic)		BSN.RN
Psychology		BA.PSYC
Public Service		BA.PUSR
Sociology		BA.SOCI
Spanish		BA.SPAN
Spanish Translation and Interpreting		BA.TRSP

# THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE

## BACHELOR DEGREE PROGRAMS – TEACHER CERTIFICATION

### Elementary Education – Grades Early Childhood through 6<sup>th</sup> Grade

Early Childhood through 6 <sup>th</sup> Grade Bilingual Generalist	BAIS.EC-6.BILC.GEN
Early Childhood through 6 <sup>th</sup> Grade English as a Second Language Generalist	BAIS.EC-6.ESL.GEN
Early Childhood through 6 <sup>th</sup> Grade Generalist/EC through 12 <sup>th</sup> Special Education	BAIS.EC-6.SPED.GEN

### Middle School – Grades 4<sup>th</sup> through 8<sup>th</sup> Grade

English-Language Arts Grades 4 <sup>th</sup> through 8 <sup>th</sup>	BA.ENGL.4-8
Mathematics Grades 4 <sup>th</sup> through 8 <sup>th</sup>	BS.MATH.4-8
Science Grades 4 <sup>th</sup> through 8 <sup>th</sup>	BS.SCI.4-8

### High School – Grades 8<sup>th</sup> through 12<sup>th</sup>

English-Language Arts Grades 8 <sup>th</sup> through 12 <sup>th</sup>	BA.ENGL.8-12
History Grades 8 <sup>th</sup> through 12 <sup>th</sup>	BA.HIST.8-12
History/Social Studies Grades 8 <sup>th</sup> through 12 <sup>th</sup>	BA.HIST.SS.8-12
Mathematics Grades 8 <sup>th</sup> through 12 <sup>th</sup>	BS.MATH.8-12
<i>Science Grades 8<sup>th</sup> through 12<sup>th</sup></i>	
Biology	BS.BIOL.8-12
Chemistry	BS.CHEM.8-12
Environmental Sciences	BS.ENVR.8-12

### Early Childhood through 12<sup>th</sup> Grade

Art – EC through 12 <sup>th</sup>	BA.ARTS.EC-12
Health and Human Performance – EC through 12 <sup>th</sup>	BS.KINE.EC-12
<i>Music – EC through 12<sup>th</sup></i>	
Guitar	BM.GUIT.EC-12
Instrumental	BM.INST.EC-12
Keyboard	BM.KEYB.EC-12
Vocal	BM.VOCAL.EC-12
Spanish – EC through 12 <sup>th</sup>	BA.SPAN.EC-12

## MINORS

- |               |                    |
|---------------|--------------------|
| 1 Art         | 4 French           |
| 2 Art History | 5 Military Science |
| 3 Business    | 6 Spanish          |

## INSTITUTIONAL AWARDS

Border and Transnational Studies	Mariachi Studies
Forensic Investigation	Medical Interpreting
Jazz	

**The University of Texas at Brownsville and Texas Southmost College**  
**General Education Core Curriculum**  
**2013 - 2014**

**010 - Communication (2 courses - 6 hours required)**

English 1301 – Composition I (minimum grade of C)

English 1302 – Composition II (minimum grade of C)

**011 - Additional Communication (2 courses - 6 hours required from the same language)**

Spanish 1311 – Beginning Spanish I

Spanish 1312 – Beginning Spanish II

<sup>1</sup> Spanish 2313 – Spanish for Native/Heritage Speakers I

<sup>1</sup> Spanish 2315 – Spanish for Native/Heritage Speakers II

Spanish 2311 – Intermediate Spanish I

Spanish 2312 – Intermediate Spanish II

Spanish 2316 – Career Spanish I

Spanish 2317 – Career Spanish II

<sup>2</sup> French 1311 – Beginning French I

French 1312 – Beginning French II

French 2311 – Intermediate French I

French 2312 – Intermediate French II

<sup>2</sup> German 1311 – Beginning German I

German 1312 – Beginning German II

German 2311 – Intermediate German I

German 2312 – Intermediate German II

Arabic 1311 – Beginning Arabic I

Arabic 1312 – Beginning Arabic II

Chinese 1311 – Beginning Chinese I

Chinese 1312 – Beginning Chinese II

Italian 1311 – Beginning Italian I

Italian 1312 – Beginning Italian II

Japanese 1311 – Beginning Japanese I

Japanese 1312 – Beginning Japanese II

Sign Language 1301 – Beginning American Sign Language I

Sign Language 1302 – Beginning American Sign Language II

<sup>1</sup> **SPAN 2313 and SPAN 2315** - Required for majors in Spanish (Teaching and Non-Teaching Certification), Spanish Translation and Interpreting, Bilingual Education.

<sup>2</sup> **FREN 1311 and GERM 1311** - Required for majors in Music (Instrumental, Keyboard, and Vocal, Guitar – Teaching and Instrumental, Keyboard, and Vocal - Non-Teaching Certification).

**020 - Mathematics (1 course – 3 hours required; minimum grade of C)**

<sup>3</sup> Math 1314 – College Algebra

Math 1324 – Mathematics for Business and Social Sciences I

Math 1325 – Mathematics for Business and Social Sciences II

Math 1332 – Contemporary Mathematics I

<sup>4</sup> Math 1342 – Elementary Statistical Methods

Math 1348 – Analytic Geometry

Math 1350 – Fundamentals of Mathematics for Teachers I

Math 1351 – Fundamentals of Mathematics for Teachers II

Math 2305 – Discrete Mathematics

Math 2318 – Linear Algebra

Math 2321 – Differential Equations and Linear Algebra

<sup>5</sup> Math 2412 – Pre-Calculus Mathematics

<sup>6</sup> Math 2413 – Calculus I

<sup>3</sup> **MATH 1314** - Required for majors in Business Administration (Accounting, Entrepreneurship, International Business, Finance, Management, and Marketing), Criminal Justice (Forensic Investigation), Engineering Technology, and Nursing.

<sup>4</sup> **MATH 1342** - Required for majors in Biology (4<sup>th</sup> -8<sup>th</sup> Grade Teaching) and Environmental Sciences (Teaching and Non-Teaching Certification).

<sup>5</sup> **MATH 2412** - Required for majors in Computer Information Systems Technology

<sup>6</sup> **MATH 2413** - Required for majors in Biology (Non-Teaching and 8<sup>th</sup> – 12<sup>th</sup> Grade Teaching), Biomedicine, Chemistry (Teaching and Non-Teaching), Computer Science, Computational Science, Engineering Physics (Tracks: Bioengineering, Computer Engineering, Electrical, and Mechanical), Mathematics (Teaching and Non-Teaching Certification)

**030 - Natural Science (2 courses, 2 labs – 8 hours required)**

Astronomy 1303/1103 – Star and Galaxies with lab

Astronomy 1304/1104 – Solar System with lab

<sup>7</sup> Biology 1306/1106 – Biology for Science Majors I with lab

Biology 1307/1107 – Biology for Science Majors II with lab

Biology 1308/1108 – Biology for Non-Science Majors I with lab

Biology 1309/1109 – Biology for Non-Science Majors II with lab

<sup>8</sup> Biology 2301/2101 – Anatomy and Physiology I with lab

<sup>8</sup> Biology 2302/2102 – Anatomy and Physiology II with lab

Chemistry 1305/1105 – Introductory Chemistry I with lab

Chemistry 1307/1107 – Introductory Chemistry II with lab

<sup>7, 9, 11</sup> Chemistry 1311/1111 – General Chemistry I with lab

<sup>9</sup> Chemistry 1312/1112 – General Chemistry II with lab

Environmental Science 1301/1101 – Environmental Science I with lab

Environmental Science 1302/1102 – Environmental Science II with lab

<sup>10</sup> Geology 1301/1101 – Earth Sciences I with lab

<sup>10</sup> Geology 1303/1103 – Physical Geology with lab

Geology 1304/1104 – Historical Geology with lab

Geology 1347/1147 – Meteorology with lab

<sup>11</sup> Physics 1301/1101 – College Physics I with lab

Physics 1302/1102 – College Physics II with lab

Physics 1303/1103 – Stars and Galaxies with lab

Physics 1305/1105 – Elementary Physics and Acoustics with lab

Physics 1310/1110 – Elementary Physics through Video Games with lab

Physics 1315/1115 – 21<sup>st</sup> Century Energy Issues: Physical Science I

<sup>12</sup> Physics 2325/2125 – University Physics I with lab

<sup>12</sup> Physics 2326/2126 – University Physics II with lab

<sup>7</sup> **BIOL 1306/1106 and CHEM 1311/1111** – Required for majors in Criminal Justice (Forensic Investigation)

<sup>8</sup> **BIOL 2301/2101 and BIOL 2302/2102** – Required for majors in Health and Human Performance (Teaching and Non-Teaching), Health and Human Performance –Exercise Science, Health Services Technology, and Nursing

<sup>9</sup> **CHEM 1311/1111 and CHEM 1312/1112** – Required for majors in Biology (Teaching and Non-Teaching), Biomedicine, Chemistry (Teaching and Non-Teaching)

<sup>10</sup> **GEOL 1301/1101 and GEOL 1303/1103** – Required for majors in History/Social Studies 8<sup>th</sup> -12<sup>th</sup> Grade Teaching

# The University of Texas at Brownsville and Texas Southmost College

## General Education Core Curriculum 2013 - 2014

<sup>11</sup> **CHEM 1311/111 and PHYS 1301/1101** – Required for majors in Engineering Technology, Environmental Sciences (Teaching and Non-Teaching)

<sup>12</sup> **PHYS 2325/2125 and PHYS 2326/2126** – Required for majors in Computer Science, Computational Science, Engineering Physics (all tracks)

### 040 - Humanities (1 course – 3 hours required)

English 2341 – Forms of Literature

### 050 - Visual and Performing Arts (1 course – 3 hours required)

Arts 1301 – Art Appreciation

<sup>13</sup> Arts 1303 – Art History Survey I

<sup>14</sup> Music 1304 – Teaching Music in the Elementary School

Music 1306 – Music Appreciation

<sup>15</sup> Music 1308 – Music Literature and History I

<sup>13</sup> **ARTS 1303** – Required for majors in Art (Teaching and Non-Teaching)

<sup>14</sup> **MUSI 1304** – Required for majors in EC – 6<sup>th</sup> Education (Bilingual, E.S.L., and Special Education)

<sup>15</sup> **MUSI 1308** – Required for majors in Music (Teaching and Non-Teaching)

### 060 - History (2 courses – 6 hours required)

History 1301 – United States to 1877

History 1302 – United States since 1877

### 070 - Government (2 courses – 6 hours required)

Government 2301 – American and Texas Government

Government 2302 – American Government and Policy

### 080 - Social and Behavioral Sciences (1 course – 3 hours required)

Anthropology 2351 – Cultural Anthropology

Business 1301 – Business Principles

<sup>16</sup> Economics 2301 – Principles of Macroeconomics

<sup>17</sup> Geography 1303 – World Regional Geography

<sup>18</sup> Psychology 2301 – General Psychology

<sup>19</sup> Sociology 1301 – Introductory Sociology

<sup>16</sup> **ECON 2301** – Required for majors in Business Administration (Accounting, Entrepreneurship, International Business, Finance, Management, and Marketing)

<sup>17</sup> **GEOG 1303** – Required for majors in Environmental Sciences (Teaching and Non-Teaching), History/Social Studies 8<sup>th</sup> -12<sup>th</sup> Grade Teaching

<sup>18</sup> **PSYC 2301** – Required for majors in History 8<sup>th</sup> -12<sup>th</sup> Grade Teaching and Health Services Technology

<sup>19</sup> **SOCI 1301** – Required for majors in Criminal Justice (all tracks), Health Services Technology, and Law and Justice Studies

### 090 - Institutionally Designated Option (2 courses – 4 hours required)

Kinesiology 1164 - Introduction to Physical Fitness and Sport *or* any one-hour activity course

Kinesiology 1100 – Advanced Life Saving

Kinesiology 1101 – Aerobic Dance and Exercise

Kinesiology 1102 – Angling and Baitcasting

Kinesiology 1103 – Archery

Kinesiology 1104 – Badminton

Kinesiology 1105 – Ballet I

Kinesiology 1106 – Ballet II

Kinesiology 1107 – Basketball

Kinesiology 1109 – Bowling

Kinesiology 1110 – Flag Football

Kinesiology 1111 – Folk and Square Dance

Kinesiology 1112 – Folklorico

Kinesiology 1113 – Golf

Kinesiology 1114 – Gymnastics

Kinesiology 1115 – Jazz and Modern Dance

Kinesiology 1116 – Jogging

Kinesiology 1117 – Paddle Tennis

Kinesiology 1118 – Pington

Kinesiology 1119 – Racquetball

Kinesiology 1120 – Sailing

Kinesiology 1121 – Self-Defense

Kinesiology 1122 – Soccer

Kinesiology 1123 – Softball

Kinesiology 1124 – Swimming

Kinesiology 1125 – Table Tennis

Kinesiology 1126 – Tap Dance

Kinesiology 1127 – Tennis I

Kinesiology 1128 – Tennis II

Kinesiology 1129 – Volleyball

Kinesiology 1130 – Weight Training

Kinesiology 1131 – Wrestling

Kinesiology 1132 – Surfing

Kinesiology 1134 – Physical Conditioning

#### **And one of these:**

<sup>20</sup> Speech 1315 – Applied Communication

Speech 1318 – Interpersonal Communication

<sup>20</sup> **SPCH 1315** – Required for majors in Computational Science and Computer Science.

## 48 Total Credit Hours

**Bachelor of Arts**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
 COLLEGE OF LIBERAL ARTS  
 VISUAL ARTS

*A Bachelor of Arts in Art will provide students with an opportunity to express themselves using a variety of creative disciplines and methods within the visual arts and prepare them for such fields as Museum Studies, Teaching, Studio Artist, Graphic Design, Art Therapy, Fashion and Marketing.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Arts in Art must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**050 – Visual and Performing Arts**

ARTS 1303 Art History Survey I

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS – 72 HOURS****1 – Core Courses for the Major – 18 hours**

ARTS 1304 Art History Survey II

ARTS 1311 Two Dimensional Design

ARTS 1312 Three Dimensional Design

ARTS 1316 Drawing I

ARTS 1317 Drawing II

ARTS 4393 Senior Exhibit

**2 - Choose 9 hours from the following:**

ARTS 2313 Computer Imaging I

ARTS 2316 Painting I

ARTS 2333 Printmaking I

ARTS 2356 Photography I

ARTS 2326 Sculpture I

ARTS 2346 Ceramics I

**3 - Choose 9 hours from the following:**

ARTS 2314 Computer Imaging II

ARTS 2317 Painting II

ARTS 2334 Printmaking II

ARTS 2357 Photography II

ARTS 2327 Sculpture II

ARTS 2347 Ceramics II

**4 - Choose 6 – 12 hours from the following:**

ARTS 3303 Italian Renaissance 1400-1650

ARTS 3338 Fundamentals of Creative and Critical Thinking in Art

ARTS 3340 History of Women in Art

ARTS 3352 Contemporary Art History

ARTS 3382 19<sup>th</sup> Century European Art

ARTS 4353 American Art History

ARTS 4354 Latin American Art and Architecture

ARTS 4355 Span Medieval, Renaissance & Baroque

ARTS 4387 Far East Art History

ARTS 4390 Topics in Art History

**5 - Choose 24 – 30 hours from the following:**

ARTS 3314 Individual Problems<sup>^</sup>

ARTS 3321 Advanced Painting <sup>^</sup>

ARTS 3323 Advanced Drawing<sup>^</sup>

ARTS 3326 Advanced Sculpture<sup>^</sup>

ARTS 3371 Advanced Ceramics<sup>^</sup>

ARTS 4331 Advanced Computer Imaging<sup>^</sup>

ARTS 4334 Advanced Printmaking<sup>^</sup>

ARTS 4359 Advanced Photography<sup>^</sup>

ARTS 4391 Studio Art General <sup>^</sup>

ARTS 4337 Internship in Art Studio<sup>^</sup>

**TOTAL CREDIT HOURS FOR GRADUATION – 120****TOTAL ADVANCED HOURS (minimum) – 36**

<sup>^</sup> May be repeated four times for credit.

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS

*The Bachelor of Applied Arts and Sciences degree offers students with an Associate of Applied Science Degree an opportunity to achieve a Bachelors's degree. With highly in-demand and customizable specializations, the career opportunities are limitless.*

**IMPORTANT TO STUDENTS: CHECK WITH AN ACADEMIC ADVISOR FOR SPECIALIZATION SELECTION, COURSE PREREQUISITES OR ADMISSION TO PROGRAMS.**

## **A – GENERAL EDUCATION CORE – 48 HOURS**

Students seeking the Bachelor of Applied Arts and Sciences must fulfill the General Education Core requirements. For any additional information, please contact the Academic Advising Center.

## **B – AAS DEGREE OR EQUIVALENT\***

Degree Major: \_\_\_\_\_  
Institution: \_\_\_\_\_

Date: \_\_\_\_\_

## **C – DEGREE REQUIREMENTS – 36 HOURS**

Specializations must be ADVANCED hours (3000 or 4000 level)

**1 – Specialization I – 12 - 18 hours**

**2 – Specialization II – 12 - 18 hours**

**3 – Electives – 0 - 12 hours**

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 36**

\* Student wishing Prior Learning Assessment credit may contact CAEL or other agencies that provide credit for prior learning assessment . (No EXPL)



**Bachelor of Science**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY  
BIOLOGICAL SCIENCES

*Stepping stone towards a Masters degree or Ph.D. in discipline. Research or any job requiring a bachelor's degree including teaching (alternative certification) forest service, ecology, industrial etc. wildlife service and many more. Base for pre-med fields such as medical doctor, dentistry, physical therapist. Can be combined with other fields such as English to become a nature writer.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Science in Biology must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics (†)**

MATH 1342 Elementary Statistical Methods

**030 – Natural Sciences**

CHEM 1311/1111 General Chemistry I /Lab I

CHEM 1312/1112 General Chemistry II/Lab II

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS – 44 HOURS****1 – Core Courses for the Major – 28 hours**

BIOL 1306/1106 Biology for Science Majors I/Lab I

BIOL 1307/1107 Biology for Science Majors II/Lab II

BIOL 2343/2143 General Biology III/Lab III

BIOL 3303/3103 Genetics/Lab

BIOL 3309/3109 Ecology/Lab

BIOL 3312/3112 Cell and Molecular Biology/Lab

BIOL 4100 Biology Seminar

BIOL 4301 Evolution

**2 – Advanced Biology Electives – 16 hours**

(16 hours must be advanced 3000, 4000 level)

**C – SUPPORT COURSES – 16 HOURS**

CHEM 2323/2123 Organic Chemistry I/Lab I

CHEM 2325/2125 Organic Chemistry II/Lab II

MATH 2413 Calculus I

PHYS 1301/1101 College Physics I/Lab I *or* PHYS 2325/2125 University Physics I/Lab I

**C – RESTRICTED ELECTIVES – 12 HOURS\***

\*Courses must be from subject PSYC or any subject within the College of Science, Math, and Technology.

(4 hours must be advanced 3000, 4000 level)

**TOTAL CREDIT HOURS FOR GRADUATION – 120****TOTAL ADVANCED HOURS (minimum) – 36**

Admission requirements to this program: BIOL-1306/1106, BIOL-1307/1107, CHEM-1311/1111, MATH-2412 (or higher) with "C" or better grade in all these courses and Departmental approval.

† Grade of "C" or better is required for graduation.

## Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF BIOMEDICAL SCIENCES AND HEALTH PROFESSIONS  
BIOMEDICINE

*The degree explores the application of powerful modern bioscience approaches such as molecular cell biology, molecular genetics and genomics, as well as anatomy, physiology and neuroscience to human health. It is a preparatory degree for tomorrow's health care professionals and leaders and thus prepares students for successful admission to professional schools in medicine, dentistry, veterinary medicine, pharmacy, physical therapy, and physician assistant programs as well as graduate studies in biomedical sciences.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Science in Biomedical Sciences must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics (†)**

MATH 2413 Calculus I

**080 – Social and Behavioral Sciences**

PSYC 2301 General Psychology

**030 – Natural Sciences (†)**

CHEM 1311/1111 General Chemistry I/Lab I

CHEM 1312/1112 General Chemistry II/Lab II

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS – 49 HOURS**

BMED 1101 Introductory Medical Biochemistry (†)	BMED 3106 Integrated Body System III: Renal, Fluids and Electrolytes (†)
BMED 1102 Introduction to Biomedical Laboratory I (†)	BMED 3121 Independent Research I
BMED 1103 Introductory Cell Biology (†)	BMED 3107 Integrated Body System IV: Endocrine and Reproduction Systems (†)
BMED 1104 Introductory Molecular Biology (†)	BMED 3108 Integrated Body System V: Dermatology, Hematology & Musc. (†)
BMED 1105 Introductory Medical Genetics (†)	BMED 3109 Medical Syndromes (†)
BMED 1106 Introductory Medical Microbiology (†)	BMED 3122 Independent Research II
BMED 1107 Introductory Immunology (†)	BMED 4310 Medical Biochemistry
BMED 1108 Introduction Medical Neuroscience (†)	BMED 4220 Medical Bioinformatics, Genomics and Systems Biology
BMED 1109 Evolutionary Medicine (†)	BMED 4230 Human Genetics and Medical Genomics
BMED 1110 Introductory Medical Physiology (†)	BMED 4240 Medical Microbiology
BMED 1111 Introduction to Biomedical Laboratory II (†)	BMED 4250 Advanced Cell Biology
BMED 2101 Gross Anatomy (†)	BMED 3223 Independent Research III
BMED 2102 Molecules, Cells and Tissues (†)	BMED 4260 Advanced Molecular Biology
BMED 3101 Pathobiology and Host Defense (†)	BMED 4270 Introduction to Complementary and Alternative Medicine
BMED 3102 Neurochemistry (†)	BMED 4280 Advanced Medical Neuroscience
BMED 3103 Human Behavior (†)	BMED 4290 Medical Immunology
BMED 3104 Integrated Body Systems I: Cardiovascular and Pulmonary (†)	BMED 4295 Pathophysiology
BMED 3105 Integrated Body Systems II: Gastrointestinal System (†)	BMED 3224 Independent Research IV

**C – SUPPORT COURSES – 23 HOURS**

CHEM 2323/2123 Organic Chemistry I/Lab I

CHEM 2325/2125 Organic Chemistry II/Lab II

MATH 1342 Elementary Statistical Methods

MATH 2413 Calculus I (†)\*

PHYS 1301/1101 College Physics I/Lab I

PHYS 1302/1102 College Physics II/Lab II

MATH 3381 Statistics

**TOTAL CREDIT HOURS FOR GRADUATION – 120****TOTAL ADVANCED HOURS (minimum) – 36**

Admission requirements to this program: BMED 1101, BMED 1102, BMED 1103, BMED 1104, BMED 1105, BMED 1106, BMED 1107, BMED 1108, BMED 1109, BMED 1110, BMED 1111 with "C" or better grade and GPA of 2.8 or higher in all these courses. Also CHEM 1311/1111, CHEM 1312/1112, MATH 2412 (or higher) with "C" or better grade in all these courses. Overall GPA of 2.5 and Departmental approval.

† Grade of "C" or better is required for graduation.

\* MATH 2413-3 sch for general education and 1 sch for support courses.

## Bachelor of Business Administration

### THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE SCHOOL OF BUSINESS ACCOUNTING AND MANAGEMENT INFORMATION SYSTEMS

*Accountants and auditors prepare, analyze, and examine financial reports to ensure their fairness and reliability. Some accountants provide taxation advice and other consulting services to individuals and organizations or work in various capacities in non-for-profit organizations. Others serve as controllers, internal auditors, chief financial officers, and budget analysts.*

#### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Business Administration in Accounting must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 020 – Mathematics (†)

MATH 1314 College Algebra

#### 080 – Social and Behavioral Sciences (†)

ECON 2301 Principles of Macroeconomics

#### A – GENERAL EDUCATION CORE – 48 HOURS

#### B – MAJOR REQUIREMENTS

##### 1 – Business Administration Lower Division Core – 18 hours

ACCT 2301 Principles of Accounting I (†)  
ACCT 2302 Principles of Accounting II (†)  
BMIS 1310 Data Management Tools (†)  
BUSI 1301 Business Principles (†)  
BUSI 2341 Statistics (†)  
ECON 2302 Microeconomics (†)

##### 2 – Business Administration Upper Division Core – 30 hours

BLAW 3337 Business Law I \*\*  
BUSI 3343 Decision Analysis \*\*  
ENGL 3322 Business Communications  
MANA 3361 Principles of Management  
MARK 3371 Principles of Marketing

ACCT 3351 Accounting Information Systems\*\*  
FINA 3380 Managerial Finance \*\*  
ACCT 4350 Ethics for Accountants\*\*  
MANA 3363 Operations Management \*\*  
\*BUSI 4369 Strategic Management\*\*

##### 3 – Accounting Major – 24 hours

ACCT 3321 Intermediate Accounting I (†) \*\*  
ACCT 3322 Intermediate Accounting II (†) \*\*  
ACCT 3323 Federal Income Tax (†) \*\*  
ACCT 3324 Cost Management (†)\*\*  
ACCT 4321 Advanced Accounting \*\*  
ACCT 4324 Auditing (†) \*\*  
ACCT 4331 Accounting Research \*\*

##### Select a course from the following list:

ACCT 3325 Governmental and Not-For-Profit Accounting \*\*  
ACCT 4323 Contemporary Accounting Theory \*\*  
ACCT 4327 Advanced Managerial Accounting \*\*  
ACCT 4328 Seminar in Auditing \*\*  
ACCT 4329 Corporation and Partnership Tax \*\*  
ACCT 4351 Fraud Examination  
ACCT 4377 Topics in Accounting

#### TOTAL CREDIT HOURS FOR GRADUATION – 120

#### TOTAL ADVANCED HOURS (minimum) – 36

† Grade of "C" or better is required for graduation.

\* Need Departmental Approval.

\*\* Student must obtain approval for admission to Upper Division.

Admission to Upper Division: completed, or be within 6 hrs. of completing ALL lower level BBA required courses, and have a 2.5 GPA. For graduation, a student must have a 2.5 cumulative GPA, a 2.5 GPA in the major, and a 2.5 GPA in the upper division core.

## Bachelor of Business Administration

### THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE SCHOOL OF BUSINESS MANAGEMENT AND MARKETING

*Entrepreneurship is the undertaking of the organization, operations, and implicated risks of creating a new business venture with the goal of reaping high profits. An entrepreneur has many options to choose from as a career from starting a new business, buying an existing business, becoming a service or consulting firm or even buying a franchise.*

#### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Business Administration in Entrepreneurship must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 020 – Mathematics (†)

MATH 1314 College Algebra

#### 080 – Social and Behavioral Sciences (†)

ECON 2301 Principles of Macroeconomics

#### A – GENERAL EDUCATION CORE – 48 HOURS

#### B – MAJOR REQUIREMENTS

##### 1 – Business Administration Lower Division Core – 18 hours

ACCT 2301 Principles of Accounting I (†)  
ACCT 2302 Principles of Accounting II (†)  
BMIS 1310 Data Management Tools (†)  
BUSI 1301 Business Principles (†)  
BUSI 2341 Statistics (†)  
ECON 2302 Microeconomics (†)

##### 2 – Business Administration Upper Division Core – 30 hours

BLAW 3337 Business Law I\*\*  
BUSI 3343 Decision Analysis \*\*  
ENGL 3322 Business Communications  
MANA 3361 Principles of Management  
MARK 3371 Principles of Marketing  
BMIS 3351 Information Systems in Organizations \*\*  
FINA 3380 Managerial Finance \*\*  
MANA 4352 Business and Society \*\*  
MANA 3363 Operations Management \*\*  
\*BUSI 4369 Strategic Management \*\*

##### 3 – Entrepreneurship Major – 24 hours

ACCT 3324 Cost Management \*\*  
BMIS 3303 E-Commerce Strategies \*\*  
ENTR 3340 New Venture Creation and Innovation  
ENTR 4360 Entrepreneurial Finance \*\*  
INTL 4371 International Marketing \*\*  
MANA 4366 Small Business Management \*\*  
MARK 3372 Consumer Behavior \*\* or BUSI 4345 Business Internship \*\*\*  
MARK 4378 Marketing Research \*\*

#### TOTAL CREDIT HOURS FOR GRADUATION – 120

#### TOTAL ADVANCED HOURS (minimum) – 36

† Grade of "C" or better is required for graduation.

\* Need Departmental approval.

\*\* Student must obtain approval for admission to Upper Division.

\*\*\* Student must obtain approval for admission to Upper Division and must have a 2.75 cumulative GPA.

Admission to Upper Division: completed, or be within 6 hrs. of completing ALL lower level BBA required courses, and have a 2.5 GPA.  
For graduation, a student must have a 2.5 cumulative GPA, a 2.5 GPA in the major, and a 2.5 GPA in the upper division core.

**Bachelor of Business Administration**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
SCHOOL OF BUSINESS  
FINANCE AND ECONOMICS

*Finance is a subject dealing with the allocation and management of financial resources. A degree in Finance prepares graduates for rewarding careers at corporations, brokerage firms, banks, credit unions, mutual funds, pension funds, insurance companies, and financial planning companies.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Business Administration in Finance must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics (†)**

MATH 1314 College Algebra

**080 – Social and Behavioral Sciences (†)**

ECON 2301 Principles of Macroeconomics

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS****1 – Business Administration Lower Division Core – 18 hours**

ACCT 2301 Principles of Accounting I (†)  
ACCT 2302 Principles of Accounting II (†)  
BMIS 1310 Data Management Tools (†)  
BUSI 1301 Business Principles (†)  
BUSI 2341 Statistics (†)  
ECON 2302 Microeconomics (†)

**2 – Business Administration Upper Division Core – 30 hours**

BLAW 3337 Business Law I\*\*  
BUSI 3343 Decision Analysis \*\*  
ENGL 3322 Business Communications  
MANA 3361 Principles of Management  
MARK 3371 Principles of Marketing  
BMIS 3351 Information Systems in Organizations \*\*  
FINA 3380 Managerial Finance \*\*  
MANA 4352 Business and Society \*\*  
MANA 3363 Operations Management \*\*  
\*BUSI 4369 Strategic Management \*\*

**3 – Finance Major – 24 hours**

FINA 3382 Investment Principles \*\*  
FINA 3383 Advanced Investment Analysis \*\*  
FINA 4380 Corporate Finance \*\*  
FINA 4385 Financial Institutions & Markets \*\*  
FINA 4387 Topics Finance \*\*  
FINA 4388 Financial Statement Analysis \*\*  
FINA 4389 Commercial Banking \*\*  
INTL 4381 International Finance & Economics \*\*

**TOTAL CREDIT HOURS FOR GRADUATION – 120****TOTAL ADVANCED HOURS (minimum) – 36**

† Grade of "C" or better is required for graduation.

\* Need Departmental approval.

\*\* Student must obtain approval for admission to Upper Division.

Admission to Upper Division: completed, or be within 6 hrs. of completing ALL lower level BBA required courses, and have a 2.5 GPA. For graduation, a student must have a 2.5 cumulative GPA, a 2.5 GPA in the major, and a 2.5 GPA in the upper division core.

**Bachelor of Business Administration**THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
SCHOOL OF BUSINESS  
MANAGEMENT AND MARKETING

*International Business is conducting business on a global scale and these individuals must be knowledgeable in the basic business activities of finance, business law, accounting, management, and marketing and at the same time understand how factors such as politics, economics, and cultural differences affect these. Careers include international sales managers, logistics analysts, import/export agents, supply chain managers, foreign trade specialists and international economists.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Business Administration in International Business must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics (†)**

MATH 1314 College Algebra

**080 – Social and Behavioral Sciences (†)**

ECON 2301 Principles of Macroeconomics

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS****1 – Business Administration Lower Division Core – 18 hours**

ACCT 2301 Principles of Accounting I (†)  
 ACCT 2302 Principles of Accounting II (†)  
 BMIS 1310 Data Management Tools (†)  
 BUSI 1301 Business Principles (†)  
 BUSI 2341 Statistics (†)  
 ECON 2302 Microeconomics (†)

**2 – Business Administration Upper Division Core – 30 hours**

BLAW 3337 Business Law I \*\*  
 BUSI 3343 Decision Analysis \*\*  
 ENGL 3322 Business Communications  
 MANA 3361 Principles of Management  
 MARK 3371 Principles of Marketing  
 BMIS 3351 Information Systems in Organizations \*\*  
 FINA 3380 Managerial Finance \*\*  
 MANA 4352 Business and Society \*\*  
 MANA 3363 Operations Management \*\*  
 \*BUSI 4369 Strategic Management \*\*

**3 – International Business Major – 24 hours**

BMIS 3303 E-Commerce Strategies \*\*  
 INTL 3331 International Law \*\*  
 INTL 3392 Supply Chain Management \*\*  
 INTL 4361 International Management \*\*  
 INTL 4371 International Marketing \*\*  
 INTL 4381 International Finance & Economics \*\*  
 INTL 4393 Topics in International Business \*\* or BUSI 4345 Business Internship \*\*\*  
 MARK 3372 Consumer Behavior \*\*

**TOTAL CREDIT HOURS FOR GRADUATION – 120****TOTAL ADVANCED HOURS (minimum) – 36**

† Grade of "C" or better is required for graduation.

\* Need Departmental Approval.

\*\* Student must obtain approval for admission to Upper Division.

\*\*\* Student must obtain approval for admission to Upper Division and must have a 2.75 cumulative GPA.

Admission to Upper Division: completed, or be within 6 hrs. of completing ALL lower level BBA required courses, and have a 2.5 GPA.  
 For graduation, a student must have a 2.5 cumulative GPA, a 2.5 GPA in the major, and a 2.5 GPA in the upper division core.

**Bachelor of Business Administration**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
SCHOOL OF BUSINESS  
MANAGEMENT AND MARKETING

*The responsibility of management is to be efficient and effective at administering an organization's human, financial, material, and intellectual resources so that they can achieve business goals. Among the career options that are available to individuals with this major are general managers, operations managers, human resource managers, and project managers.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Business Administration in Management must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics (†)**

MATH 1314 College Algebra

**080 – Social and Behavioral Sciences (†)**

ECON 2301 Principles of Macroeconomics

**A – GENERAL EDUCATION CORE – 48 HOURS**

**B – MAJOR REQUIREMENTS**

**1 – Business Administration Lower Division Core – 18 hours**

ACCT 2301 Principles of Accounting I (†)  
ACCT 2302 Principles of Accounting II (†)  
BMIS 1310 Data Management Tools (†)  
BUSI 1301 Business Principles (†)  
BUSI 2341 Statistics (†)  
ECON 2302 Microeconomics (†)

**2 – Business Administration Upper Division Core – 30 hours**

BLAW 3337 Business Law I \*\*  
BUSI 3343 Decision Analysis \*\*  
ENGL 3322 Business Communications  
MANA 3361 Principles of Management  
MARK 3371 Principles of Marketing  
BMIS 3351 Information Systems in Organizations \*\*  
FINA 3380 Managerial Finance \*\*  
MANA 4352 Business and Society \*\*  
MANA 3363 Operations Management \*\*  
\*BUSI 4369 Strategic Management \*\*

**3 – Management Major – 24 hours**

ACCT 3324 Cost Management \*\*  
BMIS 3303 E-Commerce Strategies \*\*  
INTL 3392 Supply Chain Management \*\*  
INTL 4361 International Management \*\*  
MANA 3362 Human Resource Management \*\*  
MANA 4360 Organizational Theory and Behavior \*\*  
MANA 4366 Small Business Management \*\*  
MANA 4367 Topics in Management \*\* or BUSI 4345 Business Internship \*\*\*

**TOTAL CREDIT HOURS FOR GRADUATION - 120**

**TOTAL ADVANCED HOURS (minimum) - 36**

† Grade of "C" or better is required for graduation.

\* Need Departmental Approval.

\*\* Student must obtain approval for admission to Upper Division.

\*\*\* Student must obtain approval for admission to Upper Division and must have a 2.75 cumulative GPA.

Admission to Upper Division: completed, or be within 6 hrs. of completing ALL lower level BBA required courses, and have a 2.5 GPA. For graduation, a student must have a 2.5 cumulative GPA, a 2.5 GPA in the major, and a 2.5 GPA in the upper division core.

## Bachelor of Business Administration

### THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE SCHOOL OF BUSINESS MANAGEMENT AND MARKETING

*Marketers conduct marketing research where they study cultural, social, economic, and environmental factors that can have an effect on product or service development. If you are sociable, creative, and enjoy working with teams you can expect to find job positions such as marketing coordinators, retail store managers, marketing directors, advertising managers, and public relations managers with this career.*

#### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Business Administration in Marketing must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 020 – Mathematics (†)

MATH 1314 College Algebra

#### 080 – Social and Behavioral Sciences (†)

ECON 2301 Principles of Macroeconomics

#### A – GENERAL EDUCATION CORE – 48 HOURS

#### B – MAJOR REQUIREMENTS

##### 1 – Business Administration Lower Division Core – 18 hours

ACCT 2301 Principles of Accounting I (†)  
ACCT 2302 Principles of Accounting II (†)  
BMIS 1310 Data Management Tools (†)  
BUSI 1301 Business Principles (†)  
BUSI 2341 Statistics (†)  
ECON 2302 Microeconomics (†)

##### 2 – Business Administration Upper Division Core – 30 hours

BLAW 3337 Business Law I \*\*  
BUSI 3343 Decision Analysis \*\*  
ENGL 3322 Business Communications  
MANA 3361 Principles of Management  
MARK 3371 Principles of Marketing  
BMIS 3351 Information Systems in Organizations \*\*  
FINA 3380 Managerial Finance \*\*  
MANA 3363 Operations Management \*\*  
MANA 4352 Business and Society \*\*  
\*BUSI 4369 Strategic Management \*\*

##### 3 – Marketing Major – 24 hours

BMIS 3303 E-Commerce Strategies \*\*  
INTL 4371 International Marketing \*\*  
MARK 3372 Consumer Behavior \*\*  
MARK 4371 Sales Management and Personal Selling \*\*  
MARK 4372 Promotion Strategy \*\*  
MARK 4376 Marketing Strategy \*\*  
MARK 4377 Topics in Marketing \*\* or BUSI 4345 Business Internship \*\*\*  
MARK 4378 Marketing Research \*\*

#### TOTAL CREDIT HOURS FOR GRADUATION - 120

#### TOTAL ADVANCED HOURS (minimum) - 36

† Grade of "C" or better is required for graduation.

\* Need Departmental Approval.

\*\* Student must obtain approval for admission to Upper Division.

\*\*\* Student must obtain approval for admission to Upper Division and must have a 2.75 cumulative GPA.

Admission to Upper Division: completed, or be within 6 hrs. of completing ALL lower level BBA required courses, and have a 2.5 GPA. For graduation, a student must have a 2.5 cumulative GPA, a 2.5 GPA in the major, and a 2.5 GPA in the upper division core.



## Bachelor of Business Administration

### THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE SCHOOL OF BUSINESS ACCOUNTING AND MANAGEMENT INFORMATION SYSTEMS

*The MIS program allows students to combine their functional business skills with technology skills and provide a strategic direction to the management of information technology. MIS graduates will be able to plan, coordinate and direct information systems activities of an organization, including database administration, data communications support, information security, electronic records management, project management, and social capital development through the Internet.*

#### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Business Administration in Management Information Systems must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 020 – Mathematics (†)

MATH 1314 College Algebra

#### 080 – Social and Behavioral Sciences (†)

ECON 2301 Principles of Macroeconomics

#### A – GENERAL EDUCATION CORE – 48 HOURS

#### B – MAJOR REQUIREMENTS

##### 1 – Business Administration Lower Division Core – 18 hours

ACCT 2301 Principles of Accounting I (†)  
ACCT 2302 Principles of Accounting II (†)  
COSC 1336 Programming Fundamentals I (†)  
BUSI 1301 Business Principles (†)  
BUSI 2341 Statistics (†)  
ECON 2302 Microeconomics (†)

##### 2 – Business Administration Upper Division Core – 30 hours

BLAW 3337 Business Law I **	BMIS 3351 Information Systems**
BUSI 3343 Decision Analysis **	FINA 3380 Managerial Finance **
ENGL 3322 Business Communications	MANA 4352 Business and Society**
MANA 3361 Principles of Management	MANA 3363 Operations Management
MARK 3371 Principles of Marketing	*BUSI 4369 Strategic Management**

##### 3 – Management Information Systems Major – 24 hours

BMIS 3303 E-Commerce Strategies \*\*  
BMIS 3310 Business Process Logic \*\*  
BMIS 4310 Project Management \*\*  
COSC 1337 Programming Fundamentals II  
COSC 2336 Programming Fundamentals III (†)  
**Select 9 hours from the following list:**  
BMIS 3301 Web Programming\*\*  
BMIS 4367 Topics in Management Information Systems \*\*  
COSC 4313 Computer Networks  
COSC 4319 Computer and Cyber Security  
COSC 4342 Database Management Systems  
COSC 4343 Data Mining

#### TOTAL CREDIT HOURS FOR GRADUATION – 120

#### TOTAL ADVANCED HOURS (minimum) – 36

† Grade of "C" or better is required for graduation.

\* Need Departmental Approval.

\*\* Student must obtain approval for admission to Upper Division.

Admission to Upper Division: completed, or be within 6 hrs. of completing ALL lower level BBA required courses, and have a 2.5 GPA. For graduation, a student must have a 2.5 cumulative GPA, a 2.5 GPA in the major, and a 2.5 GPA in the upper division core.

## Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY  
CHEMISTRY AND ENVIRONMENTAL SCIENCES

*The Bachelor of Science in Chemistry is the basis for a number of avenues of employment and research. Careers in medicine and dentistry utilize a chemistry background. One can be employed in a wide range of laboratory research including forensic studies and pathology. Engineering and manufacturing research employ chemists. The pharmaceutical industry is a major employer of chemists. One may choose a research path in which case enrollment in graduate programs is required.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Science in Chemistry must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics\***

MATH 2413 Calculus I

**030 – Natural Sciences**

CHEM 1311/1111 General Chemistry I /Lab I

CHEM 1312/1112 General Chemistry II/Lab II

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS – 42 HOURS****1 – Core Courses for the Major – 36 hours**

CHEM 2323/2123 Organic Chemistry I /Lab I

CHEM 2325/2125 Organic Chemistry II/Lab II

CHEM 3301/3101 Inorganic Chemistry/Lab I

CHEM 3303/3103 Biochemistry I/Lab I

CHEM 3305/3105 Analytical Chemistry/Lab

CHEM 3310/3110 Physical Chemistry I/Lab I

CHEM 3312/3112 Physical Chemistry II/Lab II

CHEM 4110 Chemistry Seminar

CHEM 4305/4105 Instrumental Methods of Analysis/Lab

CHEM 4320 Chemistry Problems

**2 – Chemistry Electives – 6 hours****(6 hours must be advanced 3000, 4000 level)****C – SUPPORT COURSES – 19 – 20 HOURS**

PHYS 1301/1101 College Physics I/Lab I

PHYS 1302/1102 College Physics II/ Lab II

MATH 2413 Calculus I\*\*

MATH 2414 Calculus II

MATH 3349 Differential Equations *or* MATH 2415 Calculus III

COSC 1301 Introduction to Computing

**D – ELECTIVES – 10 – 11 HOURS****(10 hours if MATH 2415 or 11 hrs if MATH 3349 in Support Courses)****(3 hours must be Advanced if MATH 2415 in Support Courses)****TOTAL CREDIT HOURS FOR GRADUATION – 120****TOTAL ADVANCED HOURS (minimum) – 36**

Admission requirements to this program: MATH-2413 Calculus I with "C" or better grade.

\* Grade of "C" or better is required for a MATH course used to fulfill the General Education Core requirement (MATH-1314 College Algebra or higher).

\*\* MATH 2413-3 sch for general education and 1 sch for support courses.

**Bachelor of Arts**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
 COLLEGE OF LIBERAL ARTS  
 COMMUNICATIONS

*The Bachelor of Arts in Communication Studies prepares a student to work in fields as varied as print journalism, broadcast journalism, public relations, advertising, health sector, and agencies and organizations requiring Press Secretaries and Information Officers in private and public sectors. Employment opportunities also exist in Training and Development, and administrative roles in information and service industries as well as law enforcement and health care organizations. The Bachelor of Arts in Communication also prepares the students to pursue graduate programs in Communication, Media Management, Law, and Public Administration.*

**A – GENERAL EDUCATION CORE – 48 HOURS**

Students seeking the Bachelor of Arts in Communication must fulfill the General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**B – MAJOR REQUIREMENTS – 60 HOURS****1 – Core Courses for the Major – 36 hours**

SPCH 1311 Introduction to Communication  
 COMM 2311 Writing for the Mass Media  
 COMM 3303 Communication Law and Ethics *or* COMM 4303 Special Topics in Communication  
 COMM 3316 Intercultural Communication  
 COMM 3323 Theories of Communication  
 COMM 3326 Integrated Media Communication  
 COMM 3335 Mass Communication and Society  
 COMM 4311 Public Relations  
 COMM 4344 Communication Campaign Development  
 COMM 4345 Communication and Conflict Management  
 COMM 4350 Research in Communication  
 COMM 4360 Senior Capstone Experience in Communication

**2 – Communication Electives – 24 hours**

**(15 hours must be advanced electives 3000, 4000 level)**

Choose 24 hours from the following:

SPCH 2333 Group Communications and Discussion  
 COMM 1300 Social Media Communication  
 COMM 1307 Introduction to Mass Media  
 COMM 2316 Interviewing Principles  
 COMM 2327 Introduction to advertising  
 COMM 2333 Film and T.V. Production  
 COMM 3310 Communication in Context *or* COMM 3311 Gender and Communication  
 COMM 3315 Methods and Strategies of Social Influence  
 COMM 3325 Family Communication  
 COMM 3330 Leadership Communication  
 COMM 3360 Feature Writing  
 COMM 4312 Applied Organizational Communication  
 COMM 4332 Principles of Instruction and Training  
 COMM 4340 Advertising

**C – ELECTIVES – 12 HOURS**

**(3 hours must be advanced 3000, 4000 level)**

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 36**

Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY  
SCHOOL OF ENGINEERING AND COMPUTATIONAL SCIENCE

*\*The Computational Science program offers students the opportunity to acquire a knowledge in computing integrated with knowledge in one of the following areas of study: (a) bioinformatics, (b) computational physics, (c) computational chemistry, (d) computational mathematics, (e) computational environmental science, (f) health information systems, (g) digital forensics and cyber security, (h) management information systems, and (k) ec-12 grade teaching. Graduates of this program major in computational science with a concentration in one of the above areas of study. (Amended for clarification 12/5/2018).*

**Previous Statement**

Computational science graduates are awarded two majors, one in computer science and one in another field, in order to integrate an interdisciplinary computing degree applied to a number of emerging areas of study such as biomedical-informatics, digital forensics, computational chemistry, and computational physics, to mention a few examples. Graduates of this program are prepared to enter the workforce or to continue a graduate studies either in computer science or in the second major.

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Science in Computational Science must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics (†)**

MATH 2413 Calculus I

**030 – Natural Science**

PHYS 2325/2125 University Physics I / Lab I  
PHYS 2326/2126 University Physics II / Lab II

**090 – Institutionally Designated Option**

SPCH 1315 Applied Communication

**A – GENERAL EDUCATION CORE – 48 HOURS**

**B – MAJOR REQUIREMENTS – 39 HOURS**

**1 – Computer Science – 28 hours**

COSC 1336 Programming Fundamentals I  
COSC 1337 Programming Fundamentals II  
COSC 2310 Discrete Structures  
COSC 2312 Digital Logic  
COSC 2325 Machine Language and Computer Organization  
COSC 2336 Programming Fundamentals III  
COSC 3345 Algorithm Analysis  
COSC 4313 Computer Networks  
COSC 4342 Database Management Systems  
COSC 4190 Senior Project

**2 – Computer Science Electives – 11 hours**

(11 hours must be advanced 3000, 4000 level)

**C – ADDITIONAL REQUIREMENTS – 33 HOURS**

**1 – Mathematics – 8 hours**

MATH 2413 Calculus I \*  
MATH 2414 Calculus II  
MATH 3381 Statistics

**3 – Concentration – 25 hours**

Select **one** of the following concentrations (12 hours must be advanced 3000, 4000 level):

Bioinformatics	Computational Mathematics	Digital Forensics and Cyber Security
Computational Physics	Computational Environmental Science	Management Information Systems
Computational Chemistry	Health Information Systems	EC-12 Grade Teaching

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 36**

† Grade of “C” or better is required for graduation.

\* MATH 2413-3 sch for general education and 1 sch for mathematics requirement.

**Bachelor of Applied Technology (B.A.T.)**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY

*Graduates from the Computer Information System Technology degree apply information Technology (IT) to sustain the performance of a broad range of occupations and daily life situations by operating, configuring and maintaining software and hardware in computing systems. Areas of application include data center operation, networking and data communications setup, database management systems maintenance, web support, and digital media assistance. Employment opportunities are extensive in the field of IT and include positions such as analyst, specialist, or operation in data centers, networking, database management systems, and IT support services.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Applied Technology in Computer Information Systems Technology must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics (†)**

MATH 2412 Pre-Calculus *or* any higher level Math course

**A – GENERAL EDUCATION CORE – 48 HOURS****B – AAS DEGREE WITH A MINIMUM GPA OF 2.5 WITH AT LEAST 30 SCH OF COMPUTER RELATED COURSE WORK\***

Degree Major: \_\_\_\_\_

Date: \_\_\_\_\_

Institution: \_\_\_\_\_

**C – COMPUTER INFORMATION SYSTEMS CORE – 12 HOURS**

COSC 1336 Programming Fundamentals I  
COSC 1337 Programming Fundamentals II  
COSC 2336 Programming Fundamentals III  
CIST 3310 Foundations of Information Technology

**D – CIST/COSC ELECTIVES – 18 HOURS**

(18 hours must be advanced 3000, 4000 level)

**E – ELECTIVES – 9 HOURS**

(9 hours must be advanced 3000, 4000 level)

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 30**

**TOTAL TECHNICAL HOURS FROM AAS – 33**

† Grade of "C" or better is required for graduation.

\* 30 semester credit must be documented on an official transcript or through completion of EXPL 2301.

## Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY  
SCHOOL OF ENGINEERING AND COMPUTATIONAL SCIENCE



*Computer Scientists possess strong foundations in computer architecture and algorithms allowing them to apply innovative computing technology to automate processes and to solve problems effectively and efficiently. Areas of application include the design, implementation, research, and study of computing fields such as computer information systems, networking, databases, computer security, web development, software development, and computer graphics. Employment opportunities include positions in software development and research, database systems, networking and data communications. Graduates of this program are prepared for graduate studies in computer science at master and doctorate levels. The Bachelor of Science in Computer Science is accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Science in Computer Science must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics (†)**

MATH 2413 Calculus I

**090 – Institutionally Designated Option**

SPCH 1315 Applied Communication

**030 – Natural Science**

PHYS 2325/2125 University Physics I / Lab I

PHYS 2326/2126 University Physics II / Lab II

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS – 66 HOURS****1 – Computer Science Foundation – 29 hours**

COSC 1336 Programming Fundamentals I (†)

COSC 1337 Programming Fundamentals II (†)

COSC 2312 Digital Logic (†)

COSC 3316 Web Programming and Design

MATH 2318 Linear Algebra

COSC 2325 Machine Language and Computer Organization

COSC 2310 Discrete Structures (†)

MATH 3381 Statistics

MATH 2413 Calculus I\*

MATH 2414 Calculus II

**2 – Computer Science Core – 25 hours**

COSC 2336 Programming Fundamentals III

COSC 3325 Computer Architecture

COSC 4313 Computer Networks

COSC 3345 Algorithm Analysis

COSC 3355 Principles of Programming Languages

COSC 4310 Operating Systems

COSC 4346 Software Engineering

COSC 4190 Senior Project

COSC 4342 Database Management Systems

**3 – Computer Science Electives – 12 hours**

(12 hours must be advanced 3000, 4000 level)

**C – ELECTIVES – 10 – 12 HOURS****1 – Mathematics Electives – 3 – 4 hours**

MATH 2415 Calculus III *or* MATH 3349 Differential Equations

**2 – Electives – 7 – 8 hours**

a) 3-4 hours from MATH 1348, 2318, 2412 or any course listed in “Computer Science” or Mathematics” electives.

b) 4 hours from PHYS 3400, CHEM 1311/1111 or CHEM 1312/1112 or BIOL 1306/1106, or BIOL 1307/1107

**TOTAL CREDIT HOURS FOR GRADUATION – 124 - 126****TOTAL ADVANCED HOURS (minimum) – 36**

† Grade of “C” or better is required for graduation.

\* MATH 2413 – 3 sch for general education and 1sch towards major requirements.

**Bachelor of Science in Criminal Justice**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS  
CRIMINAL JUSTICE

*The BS in Criminal Justice prepares students for practitioner-and research-based careers in the public and private sectors. Graduating students generally seek employment in police, corrections, and court agencies.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Science in Criminal Justice must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics\* (†)**

MATH 1314 College Algebra

**030 – Natural Sciences\***

BIOL 1306/1106 General Biology I/Lab I  
CHEM 1311/1111 General Chemistry I/Lab I

**080 – Social and Behavioral Sciences<sup>2</sup>**

PSYC 2301 General Psychology *or*  
SOCI 1301 Introductory Sociology

**A – GENERAL EDUCATION CORE – 48 HOURS**

**B – MAJOR REQUIREMENTS – 54 HOURS**

**1 – Core Courses for the Major – 30 hours**

CRIJ 1301 Introduction to Criminal Justice	CRIJ 3302 Research Methods in Criminal Justice
CRIJ 1306 Court Systems and Practices	CRIJ 3303 Nature of Crime
CRIJ 1310 Fundamentals of Criminal Law	CRIJ 3362 Statistics in Criminal Justice
CRIJ 2313 Correctional Systems and Practices	CRIJ 4301 Practicum Field Experience
CRIJ 2328 Police Systems and Practices	CRIJ 4370 Senior Seminar – Policy Issues

**2 – Concentration – 15 hours**

**A – Corrections Concentration – 15 hours**

CRIJ 1313 Juvenile Justice System	CRIJ 4343 Seminar of Issues in Corrections
CRIJ 3331 Legal Aspects of Corrections	CRIJ 4320 Criminal Justice Organization and Management
CRIJ 4341 Correctional Casework & Counseling	

**B – Law Enforcement Concentration – 15 hours**

CRIJ 1313 Juvenile Justice System	CRIJ 4313 Seminar of Issues in Law Enforcement
CRIJ 3315 Legal Aspects of Evidence for L.E.	CRIJ 4320 Criminal Justice Organization and Management
CRIJ 4312 Principles of Law Enforcement Supervision	

**C – Forensic Investigation Concentration – 15 hours**

CRIJ 2315 Forensic Investigation I	CRIJ 2325 Medical Legal Forensic Investigation
CRIJ 2416 Forensic Investigation II	CRIJ 2230 Seminar in Forensic Investigation
CRIJ 2320 Evidence for Forensic Investigation	

**3 – Criminal Justice Electives<sup>1</sup> – 9 hours**

(6 hours must be advanced 3000, 4000 level for Corrections and Law Enforcement Concentration)  
(9 hours must be advanced 3000, 4000 level for Forensic Investigation Concentration)

**C – INTERDISCIPLINARY SOCIAL SCIENCE SUPPORT COURSES<sup>2</sup> – 12 HOURS**

- a) 6 hours of advanced GOVT courses at 3000, 4000 level
- b) 6 hours of advanced PSYC or SOCI courses at 3000, 4000 level

**D – ELECTIVES – 6 HOURS**

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 36**

Admissions requirement to this program: CRIJ-1301, CRIJ-1306, CRIJ-1310, CRIJ-1313 with "C" or better grade in all these courses.

† Grade of "C" or better is required for graduation.

<sup>1</sup> CRIJ 4362 Special Topics in Criminal Justice may be taken twice for credit as long as courses have different subject matter.

<sup>2</sup> Majors must complete two advanced Government courses. Majors must complete either two advanced courses in Sociology or two advanced courses in Psychology. If student chooses to take advanced level courses in Psychology, then the student will need to take PSYC 2301 General Psychology for the General Education Social and Behavioral Sciences requirement. Or, if the student chooses to take advanced level courses in Sociology, then the student will need to take SOCI 1301 Introductory Sociology for the General Education Social and Behavioral Sciences requirement.

\*Students seeking the Forensic Investigation concentration must also take the following to satisfy the 020-Mathematics requirement of the General Education Core requirement MATH-1314 College Algebra and 030 Natural Science requirement BIOL-1306/1106 General Biology I/Lab and CHEM-1311/1111 General Chemistry I/Lab.

# CRIMINOLOGY AND CRIMINAL JUSTICE (Online)

BSCJ.OL

2013 - 2014

## Bachelor of Science in Criminal Justice

### THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE COLLEGE OF LIBERAL ARTS CRIMINAL JUSTICE

*The online completion degree in Criminology/Criminal Justice prepares graduates for careers in criminal justice agencies in the areas of law enforcement, corrections and courts.*

#### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Science in Criminal Justice-Online Criminology and Criminal Justice must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

##### 080 – Social and Behavioral Sciences

PSYC 2301 General Psychology

#### A – GENERAL EDUCATION CORE – 48 HOURS

#### B – MAJOR REQUIREMENTS – 72 HOURS

##### 1 – Core Courses for the Major – 60 hours

CRCJ 2334 Introduction to Criminal Justice *or* CRIJ 1301 Introduction to Criminal Justice  
CCJO 3312 Criminal Justice Administration  
CCJO 4316 Theories of Criminal Behavior  
CRCJ 3350 Research Methods  
CRIJ 3315 Legal Aspects of Evidence for Law Enforcement  
CRIJ 3331 Legal Aspects of Corrections  
CRCJ 4301 American Judicial Systems  
CCJO 3332 Juvenile Delinquency and Justice  
CRCJ 4380 Comparative Criminal Justice Systems  
CRIJ 4370 Senior Seminar – Policy Issues  
CRCJ 4333 Institutional Corrections  
CRCJ 4315 Criminal Careers and Behavior Systems  
CCJO 4354 Ethics in Criminal Justice  
CCJO 4356 Probation and Parole  
CRIJ 4312 Principles of Law Enforcement Supervision  
CRIJ 4341 Correctional Casework & Counseling  
CRIJ 4313 Seminar of Issues in Law Enforcement  
CCJO 4364 Police and the Community  
CRCJ 3380 Ethnic and Gender Issues in Criminal Justice  
PSYC 4305 Behavior Management and Modification

##### 2 – Criminal Justice Electives – 6 hours

Student must choose two (2) courses from approved list.

#### C– ELECTIVES<sup>1</sup> – 6 HOURS

#### TOTAL CREDIT HOURS FOR GRADUATION – 120

#### TOTAL ADVANCED HOURS (minimum) – 36

Courses found online from:

CRCJ = UT-Arlington

CCJO = UT Permian Basin

CRIJ = UTB/TSC

« TSI Requirement (Texas Success Initiative - any other State-approved test) - Student must pass all three sections of State-approved test to graduate with this degree and to be admitted to upper level (3000, 4000) classes.

<sup>1</sup> Computer Science courses recommended.



# ENGINEERING PHYSICS

2013 – 2014

## Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY  
SCHOOL OF ENGINEERING AND COMPUTATIONAL SCIENCE



*With this degree you will be an engineer able to work in a variety of positions. You will also be eligible for graduate school in many disciplines including engineering, science, business, and medicine. Graduates of this program are qualified to be high school math or science teachers with a short alternative certification program for which scholarships are available. The Bachelor of Science in Engineering Physics is accredited by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700.*

### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Science in Engineering Physics must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 020 – Mathematics\*

MATH 2413 Calculus I

#### 030 – Natural Sciences

PHYS 2325/2125 University Physics I / Lab I

PHYS 2326/2126 University Physics II / Lab II

### A – GENERAL EDUCATION CORE – 48 HOURS

### B – MAJOR REQUIREMENTS – 86 – 88 hours

#### 1 – Support Courses – 16 hours

MATH 2413 Calculus I \*\*

MATH 2414 Calculus II

MATH 2321 Differential Equations and Linear Algebra

MATH 2415 Calculus III

CHEM 1311/1111 General Chemistry I/Lab I

#### 2 – Physics Core Courses – 11 hours

PHYS 3400 Modern Physics

PHYS 3490 Mathematics for Scientists and Engineers I

Choose one of the following courses:

PHYS 4390 Computational Methods for Engineers and Physicists

COSC 4360 Numerical Methods

MATH 3366 Computer Algebra Systems

#### 3 – Engineering Core Courses – 29 hours

ENGR 1101 Introduction to Engineering

ENGR 2301 Engineering Mechanics I: Statics

ENGR 2302 Engineering Mechanics II: Dynamics

ENGR 3304 Mechanics of Materials

ENGR 3320/3120 Linear Circuits/Lab

ENGR 3321/3121 Electronics I/Lab I

ENGR 3303 Thermodynamics

ENGR 4242 Senior Design Project I

ENGR 4243 Senior Design Project II

ENGR 4441 Control Systems

#### 4 – Computer Science Core Courses – 3 hours

COSC 1336 Programming Fundamentals I

#### 5 – Engineering Physics Track – 27 - 29 hours

Upper Division Engineering Exam \*\*\*

**TOTAL CREDIT HOURS FOR GRADUATION - 134 - 136**

**TOTAL ADVANCED HOURS (minimum) - 36**

Admission requirement: Completion of ENGR-2301 with minimum grade of "C".

\* Grade of "C" or better is required for a MATH course used to fulfill the General Education Core requirement (MATH-1314 College Algebra or higher).

\*\* MATH 2413-3 sch for general education and 1 sch toward major requirement.

\*\*\* Engineering department will submit exam completion information to the Office of the Registrar.

## BIOENGINEERING TRACK – 29 HOURS (BS.ENGR.PHYS.BIOE)

BIOL 1306/1106 Biology for Science Majors I/Lab I  
BIOL 1307/1107 Biology for Science Majors II/Lab II  
CHEM 1312/1112 General Chemistry II/Lab II  
CHEM 2323 Organic Chemistry I  
PHYS 3315 Physics of Biological Systems  
PHYS 4315 Analysis of Biomolecules by Physical Methods  
BENG 4320/4120 Molecular Bioengineering/Lab  
ENGR 4406 Engineering Mechanics III: Fluid Mechanics

## COMPUTER TRACK – 27 HOURS ( BS.ENGR.PHYS.COMPE)

MATH 3381 Statistics  
COSC 1337 Programming Fundamentals II  
COSC 2310 Discrete Structures  
COSC 2312 Digital Logic  
COSC 2336 Programming Fundamentals III  
COSC 2325 Machine Language and Computer Organization  
COSC 3325 Computer Architecture  
COSC 4349 Advanced Computer Architecture  
PHYS 4330 Electromagnetic Theory or PHYS 4320 Quantum Mechanics or PHYS 3310 Classical Mechanics

## ELECTRICAL TRACK – 27 HOURS (BS.ENGR.PHYS.ELET)

ENGR 4322 Electronics II  
ENGR 4423 High Frequency Engineering  
ENGR 4424 Electric Power and Machinery  
ENGR 4425 Analog and Digital Communications  
Engineering Elective I  
Engineering Elective II  
PHYS 4330 Electromagnetic Theory  
ENGR 4326 Power Electronics

## MECHANICAL TRACK – 27 HOURS (BS.ENGR.PHYS.MECH)

ENGR 3405 Engineering Materials  
ENGR 4406 Engineering Mechanics III: Fluid Mechanics  
ENGR 4309 Mechanical Subsystem Design  
ENGR 1304 Engineering Graphics I  
ENGR 4310 Heat and Mass Transfer  
PHYS 3310 Classical Mechanics or PHYS 4330 Electromagnetic Theory  
Engineering Elective I  
ENGR 4407 Manufacturing Process Technologies

## Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY  
SCHOOL OF ENGINEERING AND COMPUTATIONAL SCIENCE

*The Engineering Technology degree will prepare graduates in the applied aspects of science and that portion of the technological spectrum closest to product development, industrial practices, and engineering operation functions. Graduates are referred to as Engineering Technologists and work as members of the engineering team focusing primarily on the implementation of the new technologies. Graduates of this program are employed in the areas of quality assurance, product/software support, applied computer design and development, manufacturing support, plant management, computerized process control, systems planning, process planning, supervision and technical sales.*

### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Science in Engineering Technology must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 020 – Mathematics (†)

MATH 1314 College Algebra

#### 030 – Natural Sciences

PHYS 1301/1101 College Physics I /Lab I

CHEM 1311/1111 General Chemistry I/Lab I

### A – GENERAL EDUCATION CORE – 48 HOURS

### B – MAJOR REQUIREMENTS – 72 HOURS

#### 1 – Core Courses for the Major – 62 hours

ENGT 1101 Introduction to Engineering Technology  
ENGT 1310 Design Graphics I  
COSC 1301 Introduction to Computing  
ENGT 2307 Engineering Materials I for Engineering Technology  
ENGT 1320 Design Graphics II  
ENGT 1321 Basic Architectural C.A.D.  
ENGT 2310 Introduction to Manufacturing Processes  
ENGT 2311 Fundamentals of Product Design  
ENGT 2350 Residential Architectural C.A.D.  
ENGT 3350 Commercial Architectural C.A.D.  
ENGT 2321 Basic Electronics  
ENGT 2322 Computer Integrated Manufacturing  
ENGT 3333 Quality Control  
ENGT 3311 Statics and Strength of Materials  
ENGT 3312 Renewable Energy Technology  
ENGT 3322 Machine Design  
ENGT 3321 Solar Energy Systems  
ENGT 3330 Green Building Design I  
ENGT 4311 Wind Energy Systems  
ENGT 4312 Production Planning and Control  
ENGT 4210 Senior Project I  
ENGT 4220 Senior Project II

#### 2 – Support Courses – 4 hours

MATH 2412 Pre-Calculus Mathematics

#### 3 – Electives – 6 hours

Departmental approval (6 hours must be advanced 3000, 4000 level)

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 36**

Admission requirements to this program: READ-0322, ENGL-0321, MATH-0422.

† Grade of "C" or better is required for graduation.

Source: Academic Affairs/Academic Advising Center  
academicadvising@utb.edu

Program Rev. Date: 5-20-11  
Catalog Date: 4-1-13

**Bachelor of Arts****THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS  
ENGLISH**

*Because the field of English provides students with essential skills necessary to communicate effectively, enrich their lives both materially and intellectually, and function as productive members of society, students who major in English have options for employment in many fields, most notably in education and industry.*

**A – GENERAL EDUCATION CORE – 48 HOURS**

Students seeking the Bachelor of Arts in English must fulfill the General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**B – MAJOR REQUIREMENTS – 39 HOURS****1 – Core Courses for the Major – 21 hours**

ENGL 3302 Literary Analysis  
ENGL 3312 or ENGL 3313 Survey of American Literature  
ENGL 3319 Introduction to Descriptive Linguistics  
ENGL 3330 English Grammar (†)  
ENGL 4301 Shakespeare  
ENGL 4325 Composition Techniques  
ENGL 4350 English Studies

**2 – English Electives – 18 hours**

(18 hrs must be advanced 3000, 4000 level)

**C – SUPPORT AREA AND/OR ELECTIVES – 33 HOURS****TOTAL CREDIT HOURS FOR GRADUATION – 120****TOTAL ADVANCED HOURS (minimum) – 36**

† Grade of "C" or better is required for graduation.

## Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY

## CHEMISTRY AND ENVIRONMENTAL SCIENCES

## CONCENTRATION \_\_\_\_\_

*The Bachelor of Science degree in Environmental Sciences prepares graduates for employment opportunities including government agencies, wildlife refuge management, private environmental mitigation firms, and industry. The employment opportunities are on national, regional and local levels. Additionally, one may wish to continue onto graduate studies in order to pursue research and scholarship opportunities.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Science in Environmental Sciences must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics\***

MATH 1342 Elementary Statistical Methods

**080 – Social and Behavioral Sciences**

GEOG 1303 World Regional Geography

**030 – Natural Sciences**

PHYS 1301/1101 College Physics I /Lab I

CHEM 1311/1111 General Chemistry I/Lab I

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS – 40 HOURS****1 – Core Courses for the Major – 23 hours**

ENVR 1302/1102 Environmental Science II/Lab II

ENVR 3305/3105 Oceanography/Lab

ENVR 3334 Conservation of Natural Resources

ENVR 3351 Environmental Sciences Field Methods and Data Analysis

ENVR 4301 Environmental Regulations

ENVR 4325 Environmental Science Internship

ENVR 4399 Research Problems in Environmental Sciences

**2 – Restricted Environmental Sciences Elective – 17 hours**

Choose from Concentration listed on reverse: BIOLOGY, GEOSCIENCES, CHEMISTRY OR INTERDISCIPLINARY  
(17 hours must be advanced 3000, 4000 level)

**C – SUPPORT COURSES – 28 HOURS**

ENVR 1301/1101 Environmental Science I/Lab I

BIOL 1306/1106 Biology for Science Majors I/ Lab I

BIOL 1307/1107 Biology for Science Majors II/Lab II

GEOG 1303/1103 Physical Geology/Lab

GEOG 1304/1104 Historical Geology/Lab

PHYS 1302/1102 College Physics II/Lab II or CHEM 1312/1112 General Chemistry II/Lab II

MATH 2413 Calculus I

**D – ELECTIVES – 4 HOURS****TOTAL CREDIT HOURS FOR GRADUATION - 120****TOTAL ADVANCED HOURS (minimum) - 36**

Admission requirements to this program: ENVR-1301/1101, ENVR-1302/1102, MATH-1314 (or higher) with "C" or better grade on all these courses.

\* Grade of "C" or better is required for a MATH course used to fulfill the General Education Core requirement (MATH-1314 College Algebra or higher).

**Restricted Environmental Sciences Electives**  
**Choose 17 hours from one of the following concentrations:**

## **BIOLOGY**

Concentration:

BIOL 3303	Genetics
BIOL 3103	Genetics Laboratory
BIOL 3309	Ecology
BIOL 3109	Ecology Lab
BIOL 3314	Invertebrate Zoology
BIOL 3114	Invertebrate Zoology Laboratory
BIOL 4302	Marine Zoology
BIOL 4102	Marine Zoology Lab
BIOL 4304	Ichthyology
BIOL 4104	Ichthyology Lab
BIOL 4314	Plant Taxonomy
BIOL 4114	Plant Taxonomy Lab
BIOL 4309	Herpetology
BIOL 4109	Herpetology Lab
BIOL 4327	Coastal Ecology
BIOL 4127	Coastal Ecology Lab
BIOL 4350	Ornithology
BIOL 4150	Ornithology Lab
BIOL 4370	Topics in Biology
BIOL 4170	Topics in Biology Lab
BIOL 4422	Conservation Biology
BIOL 4415	Mammalogy

## **CHEMISTRY**

Concentration:

\*\* Choosing upper-level Chemistry courses will add additional semester credit hours to the total hours required for this degree because of pre-requisites.

CHEM 3303	Biochemistry I
CHEM 3103	Biochemistry Laboratory I
CHEM 3305	Analytical Chemistry
CHEM 3105	Analytical Chemistry Lab
CHEM 3310	Physical Chemistry I
CHEM 3110	Physical Chemistry Laboratory I
CHEM 3312	Physical Chemistry II
CHEM 3112	Physical Chemistry Laboratory II
CHEM 4305	Instrumental Methods of Analysis
CHEM 4105	Instrumental Methods of Analysis Laboratory
CHEM 4306	Environmental Chemistry

## **GEOSCIENCES**

Concentration:

GEOL 3436	Hydrology and Water Resources
GEOL 4335	Geomorphology
GEOL 4411	Sedimentology and Stratigraphy
GEOL 4431	Coastal Geology
GEOL 4440	Geographic Information Systems
GEOL 4441	Principles of Remote Sensing
GEOL 4350	Geoscience Field Excursion
GEOG 3333	Latin American Geography
ENVR 4370	Topics in Environmental Sciences
ENVR 4170	Topics in Environmental Sciences Laboratory

## **INTERDISCIPLINARY**

Concentration:

Any combination of 17 hours from the 3 concentrations listed above.

## Bachelor of Arts

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS  
GOVERNMENT

*The concepts, skills, and knowledge that are acquired as part of a Bachelor of Arts in government degree can lead to many diverse career fields, including civil service, teaching, law, policy consultant, journalism, non-profit sector management, Foreign Service, politics, and government. Acquired skills include oral, written, and technological communication, critical thinking and problem solving, and quantitative and qualitative analysis. A degree in Government can lead to Master and Ph.D. degrees.*

**A – GENERAL EDUCATION CORE – 48 HOURS**

Students seeking the Bachelor of Arts in Government must fulfill the General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**B – MAJOR REQUIREMENTS – 36 HOURS****1 – Core Courses for the Major – 3 hours**

GOVT 3331 Research Methods

**2 – Advanced American Government – 6 hours**

GOVT 3314 American State and Local Government	GOVT 4360 The Presidency
GOVT 3363 American Hispanic Politics	GOVT 4363 The Congress
GOVT 3373 Contemporary Texas	GOVT 4366 American Political Parties and Politics
GOVT 4320 American Constitutional Law: Powers	GOVT 4367 The Judiciary
GOVT 4321 American Constitutional Law: Civil Liberties	GOVT 4368 Special Topics in American Government

**3 – Comparative Government or International Relations – 3 hours**

GOVT 3322 Introduction to Comparative Politics	GOVT 4370 European Politics
GOVT 3343 Global Politics and International Relations	GOVT 4371 Contemporary International Issues
GOVT 4369 Latin American Politics	GOVT 4378 Middle Eastern Politics

**4 – Political Theory – 3 hours**

GOVT 4372 Classical Political Theory  
GOVT 4373 Modern Political Theory

**5 – Public Administration – 3 hours**

GOVT 3301 Citizenship and Community Development	GOVT 4312 Issues in Public Planning
GOVT 3302 Ethics and Public Service	GOVT 4314 Leadership and Non-Profit Organization
GOVT 3323 Foundations of Public Adm. and Service	GOVT 4365 Public Personnel Administration
GOVT 3333 Government Fiscal Policy	GOVT 4374 American Public Policy
GOVT 3385 Internship	GOVT 4376 Contemporary Issues in Homeland Security

**6 – Government Electives – 12 hours**

(12 hours must be advanced 3000, 4000 level)

**7 – Economic Principles – 6 hours**

ECON 2301 Principles of Macroeconomics  
ECON 2302 Microeconomics

**C – SUPPORT AREA AND/OR ELECTIVES – 36 HOURS**

(6 hours must be advanced 3000, 4000 level)

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 36**

## Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF EDUCATION  
HEALTH AND HUMAN PERFORMANCE

*A baccalaureate degree in kinesiology with non-certification prepares students for non-teaching careers in the areas of fitness, health and recreation in public and corporate settings.*

### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Science in Kinesiology must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 030 – Natural Sciences

- BIOL 2301/2101 Anatomy and Physiology I/Lab I
- BIOL 2302/2102 Anatomy and Physiology II/Lab II

### A – GENERAL EDUCATION CORE – 48 HOURS

### B – MAJOR REQUIREMENTS – 51 hours

#### 1 – Core Courses for the Major – 46 hours

- KINE 1301 Introduction to Sports and Exercise Science
- KINE 1306 First Aid/First Responder
- KINE 2304 Outdoor Education
- KINE 1308 Sports Officiating (Football/Volleyball) *or* KINE 1309 Sports Officiating (Basketball/Softball)
- KINE 3314 Dance for Children and Adolescents
- KINE 3330 Coaching of Sports
- KINE 3340 Principles of Wellness and Fitness
- KINE 3353/3153 Physiology of Exercise and Human Performance/Lab
- KINE 3356 Motor Development
- KINE 3370 Biomechanics
- KINE 4302 Kinesiology Curriculum for Elementary Students
- KINE 4309 Kinesiology Curriculum for Secondary School Students
- KINE 4310 Measurement Techniques in Physical Exercise and Sports
- KINE 4311 Psychology of Sports and Exercise
- KINE 4351 The Adapted Kinesiology Program

#### 2 – Kinesiology Activities – 5 hours

- KINE 11\_\_ Team Sport
- KINE 11\_\_ Individual Sport
- KINE 1111 Folk and Square Dance
- KINE 1124 Swimming
- KINE 1133 Basic Sports Skills

### C – SUPPORT AREA AND/OR ELECTIVES – 21 HOURS

(3 hours must be advanced 3000, 4000 level)

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 36**



## Team and Individual Activity Courses

<b>Course</b>	<b>Title</b>	<b>Activity Type</b>
KINE-1101	Aerobic Dance and Exercise	Individual
KINE-1102	Angling and Baitcasting	Individual
KINE-1103	Archery	Individual
KINE-1104	Badminton	Individual
KINE-1105	Ballet I	Individual
KINE-1106	Ballet II	Individual
KINE-1107	Basketball	Team
KINE-1108	Body Mechanics (Women Only)	Individual
KINE-1109	Bowling	Individual
KINE-1110	Flag Football	Team
KINE-1112	Folklorico	Individual
KINE-1113	Golf	Individual
KINE-1114	Gymnastics	Individual
KINE-1115	Jazz and Modern Dance	Individual
KINE-1116	Jogging	Individual
KINE-1117	Paddle Tennis	Individual
KINE-1118	Pington	Individual
KINE-1119	Racquetball	Individual
KINE-1120	Sailing	Individual
KINE-1121	Self-Defense	Individual
KINE-1122	Soccer	Team
KINE-1123	Softball	Team
KINE-1125	Table Tennis	Individual
KINE-1126	Tap Dance	Individual
KINE-1127	Tennis I	Individual
KINE-1128	Tennis II	Individual
KINE-1129	Volleyball	Team
KINE-1130	Weight Training	Individual
KINE-1131	Wrestling	Individual
KINE-1132	Surfing	Individual
KINE-1134	Physical Conditioning	Individual
KINEU-1135	Activities for Elementary School Students	Individual
KINEU-1136	Activities for Secondary School Students	Individual

## Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF EDUCATION  
HEALTH AND HUMAN PERFORMANCE

*A baccalaureate degree in Exercise Science prepares students for careers in the areas of professional preventive and clinical settings. Career opportunities include: medicine, physical therapy, occupational therapy, cardiac rehabilitation, personal training, strength and conditioning, athletic training, massage therapy, allied health professions, etc.*

### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Science in Health and Human Performance - Exercise Science must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 030 – Natural Sciences

- BIOL 2301/2101 Anatomy and Physiology I/Lab I
- BIOL 2302/2102 Anatomy and Physiology II/Lab II

### A – GENERAL EDUCATION CORE – 48 HOURS

### B – MAJOR REQUIREMENTS – 42 hours

#### 1 – Core Courses for the Major – 38 hours

- KINE 1306 First Aid/First Responder
- HLTH 2325 Nutrition
- KINE 3353/3153 Physiology of Exercise and Human Performance/Lab
- KINE 3360/3160 Exercise Testing and Prescription /Lab
- KINE 3365 Physiology and Techniques of Strength/Power Fitness
- KINE 3370 Biomechanics
- KINE 4310 Measurement Techniques in Physical Exercise and Sports
- KINE 4351 The Adapted Kinesiology Program
- KINE 4355 Pediatric Exercise Physiology
- KINE 4360 Clinical Exercise Physiology
- KINE 4370 Management in Exercise and Health Promotion
- KINE 4380 Exercise Science Internship

#### 2 - KINESIOLOGY ACTIVITIES- 4 hours

- KINE 1101 Aerobic Dance and Exercise
- KINE 1124 Swimming
- KINE 1130 Weight Training
- KINE 1134 Physical Conditioning

### C – SUPPORT AREA AND/OR ELECTIVES – 30 HOURS

(4 hours must be advanced 3000, 4000 level)

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 36**

## Bachelor of Applied Technology (B.A.T.)

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF BIOMEDICAL STUDIES AND HEALTH PROFESSIONS

*The BAT Health Services prepares individuals for leadership positions in health services, education, vocational, corporate training and consulting and other highly marketable fields.*

### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Applied Technology in Health Service Technology must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 030 – Natural Science

BIOL 2301/2101 Anatomy & Physiology I/Lab I  
BIOL 2302/2102 Anatomy & Physiology II/Lab II

#### 080 – Social and Behavioral Sciences

SOCI 1301 Introductory Sociology *or*  
PSYC 2301 General Psychology

### A – GENERAL EDUCATION CORE – 48 HOURS

### B – AAS DEGREE IN A HEALTH RELATED FIELD OR EQUIVALENT\*\*

Degree Major: \_\_\_\_\_

Date: \_\_\_\_\_

Institution: \_\_\_\_\_

### C – HEALTH SERVICES TECHNOLOGY TRACK\* – 36 HOURS

#### 1 – Health Services Professional Core – 21 hours

Choose 21 hours from the following:

HPRS 3301 Introduction to the Evolving Healthcare System  
HPRS 3302 Medical Law/Ethics for the Health Professional  
HPRS 3309 Leading and Managing the Healthcare Team  
HPRS 3313 Physical and Mental Health Throughout The Lifespan  
HPRS 3316 Nutrition Concepts for Allied Health Practitioners  
HPRS 3320 Patient Education in Health Sciences  
HPRS 3324 Teaching in the Health Sciences  
HPRS 4300 Pharmacology for Health Professional  
HPRS 4301 Introduction to Health Data Utilization  
HPRS 4302 Continuous Quality Improvement  
HPRS 4309 Research Methods in Evidenced-Based Healthcare  
HPRS 4312 Applied Pathophysiology  
HPRS 4316 Applied Medical Microbiology  
HPRS 4330 Independent Study  
HPRS 4334 Issues and Trends in Health Care  
HPRS 4360 Practicum in Health Services

#### 2 – Health Services Technology Electives – 15 hours

(15 hours must be advanced 3000, 4000 level)

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 36**

**TOTAL TECHNICAL HOURS FROM AAS – 36**

† Grade of “C” or better is required for graduation.

\* Departmental approval required.

\*\* 36 semester credit hours in a related course work on this particular degree. The hours for the AAS will apply on this bachelor’s degree.

## Bachelor of Arts

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS  
HISTORY

*History majors learn how to think critically and communicate effectively. These skills prepare them for a variety of professions, including education, government, politics, journalism, law, and non-profit organizations.*

### A – GENERAL EDUCATION CORE – 48 HOURS

Students seeking the Bachelor of Arts in History must fulfill the General Education Core requirements. For any additional information, please contact the Academic Advising Center.

### B – MAJOR REQUIREMENTS – 39 HOURS

#### 1 – Core Courses for the Major – 18 hours

- HIST 2300 The Historian's Craft
- HIST 2301 Texas History
- HIST 2321 World History I
- HIST 2322 World History II
- HIST 2380 Mexican-American Studies
- HIST 4399 Senior Seminar

#### 2 – United States History – 3 hours

- HIST 3300 Colonial America to 1763
- HIST 3305 The United States: Revolution and the New Nation, 1763-1840
- HIST 3310 Expansion, War, and Reconstruction, 1840-1877
- HIST 3315 The Gilded Age and Progressive Era, 1877-1919
- HIST 3320 The United States: War, Prosperity, and Depression, 1917-1945
- HIST 3325 The United States Since 1945
- HIST 3330 U.S. Military History
- HIST 4320 Advanced Topics in American History

#### 3 – World History – 3 hours

- HIST 3360 Classical and Post-Classical World, 500 BCE - 1450
- HIST 3365 First Globalization, 1450-1750
- HIST 3370 Modern World, 1750 - Present
- HIST 3375 History of World War I and II
- HIST 4360 Advanced Topics in European/World History

#### 4 – Latin American History – 3 hours

- HIST 3380 Mexico Through Independence
- HIST 3385 Mexico Since Independence
- HIST 3390 History of Modern Latin America
- HIST 4350 Advanced Topics in Latin American History

#### 5 – History Electives – 12 hours

(12 hours must be advanced 3000, 4000 level)

### C – SUPPORT AREA AND/OR ELECTIVES – 33 HOURS

(12 hours must be advanced 3000, 4000 level)

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 36**

## Bachelor of Arts

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS  
CRIMINAL JUSTICE

*The program is designed to prepare students for careers in the legal system and to ready students for law school and/or graduate school. The program provides a strong multi-disciplinary foundation with courses from criminal justice, sociology, psychology, government, and law.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Arts in Law Justice Studies must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**080 – Social and Behavioral Sciences**

SOCI 1301 Introductory Sociology

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS – 72 HOURS****1 – Reasoning/Theory Requirement – 18 hours**

PHIL 2303 Introduction to Logic/Critical Thinking  
CRIJ 3302 Research Methods in Criminal Justice  
CRIJ 3362 Statistics in Criminal Justice  
CRIJ 3380 Jurisprudence and Justice  
ALAW 4301 Legal Research and Writing  
ALAW 4310 Legal Analysis and Writing

**2 – Systems and Practices in Law and Justice – 15 hours**

CRIJ 1306 Court Systems and Practices  
CRIJ 2313 Correctional Systems and Practices  
CRIJ 2328 Police Systems and Practices  
GOVT 3314 American State and Local Government  
GOVT 4367 The Judiciary

**3 – Substantive/Procedural Aspects of Law – 18 hours**

ALAW 3300 Foundations of Law  
CRIJ 1310 Fundamentals of Criminal Law  
CRIJ 3315 Legal Aspects of Evidence for Law Enforcement  
CRIJ 3331 Legal Aspects of Corrections  
GOVT 4320 American Constitutional Law: Powers  
GOVT 4321 American Constitutional Law: Civil Liberties

**4 – Behavioral Science Requirement – 15 hours**

(Choose option I or II)

**I. Psychology Emphasis**

PSYC 2301 General Psychology  
PSYC 3326 Social Psychology  
PSYC 4330 Psychology and the Legal Systems  
PSYC 3313 Abnormal Psychology  
PSYC 3333 Theories of Personality

**II. Government/Political Science Emphasis**

GOVT 3373 Contemporary Texas  
GOVT 4372 Classical Political Theory  
GOVT 4373 Modern Political Theory  
GOVT 4374 American Public Policy  
*One course from:* GOVT 3301 or GOVT 3302 or  
GOVT 3322 or GOVT 3323 or GOVT 3363 or  
GOVT 4312 or GOVT 4314 or GOVT 4360 or  
GOVT 4363 or GOVT 4365 or GOVT 4366 or  
GOVT 4368

**5 – Internship Requirement – 3 hours**

CRIJ 4301 Practicum Field Experience or GOVT 3385 Internship

**6 – Electives – 3 hours**

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 36**

## Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY  
MATHEMATICS

*Mathematics is both an exact science and a highly creative endeavor; a field of study that develops problem-solving skills and a passion for inquiry. Mathematics majors are surprisingly attractive to many professional branches in our society, particularly intelligence, technology, finance, security, engineering and physics. A BS in Mathematics will prepare the graduate for a competitive position in society and provide the necessary preparation for graduate studies.*

### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Science in Mathematics must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 020 – Mathematics \*

MATH 2413 Calculus I

### A – GENERAL EDUCATION CORE – 48 HOURS

### B – MAJOR REQUIREMENTS – 36 HOURS \*\*\*

MATH 2305 Discrete Mathematics  
MATH 2318 Linear Algebra  
MATH 3331 Geometry I  
MATH 2413 Calculus I\*\*  
MATH 2414 Calculus II  
MATH 2415 Calculus III  
MATH 3321 Algebra I  
MATH 3306 Foundations of Analysis  
MATH 3349 Differential Equations  
MATH 4395 Research Experience in Mathematics  
MATH 4395 Research Experience in Mathematics  
MATH 3381 Statistics

### C – RESTRICTED MATH ELECTIVES – 12 HOURS

(12 hours must be advanced 3000, 4000 level)

### D – ELECTIVES – 24 HOURS

(3 hours must be advanced 3000, 4000 level)

### TOTAL CREDIT HOURS FOR GRADUATION – 120

### TOTAL ADVANCED HOURS (minimum) – 36

Admission requirements to this program: MATH-2414 with "C" or better grade.

\* Grade of "C" or better is required for a MATH course used to fulfill the General Education Core requirement (MATH-1314 College Algebra or higher).

\*\* MATH 2413-3 sch for general education and 1 sch toward major requirement. Pre-requisite for Calculus is MATH 2412-Pre-Calculus or Departmental Placement Test.

\*\*\* Prior to graduation, a student must take Major Field Test in Mathematics.

## THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE COLLEGE OF LIBERAL ARTS

*The BMS provides those who want to further their education and career possibilities by broadening their expertise beyond a single area of concentration. Students select the coursework that appeals to them in a variety of disciplines and combine them, creating their own specialized degree. Students completing the BMS program will be able to apply the knowledge and skills to: expand their career and employment opportunities as a result of a multidisciplinary education; and continue their studies in a graduate degree or post-baccalaureate professional program being fully prepared with the analytical skills necessary to success within demanding and highly-competitive fields.*

**IMPORTANT NOTE TO STUDENTS: CHECK WITH AN ACADEMIC ADVISOR FOR SPECIALIZATION SELECTION, COURSE PREREQUISITES OR ADMISSION TO PROGRAMS.**

### **A – GENERAL EDUCATION CORE – 48 HOURS**

Students seeking the Bachelor of Multidisciplinary Studies must fulfill the General Education Core requirements. For any additional information, please contact the Academic Advising Center.

### **B – DEGREE REQUIREMENTS \* – 36 HOURS**

Take two 18-Hour Specializations from Liberal Arts, Sciences, Business, Education, Health Science, or Applied Technologies. Courses in a specialization must be from the same discipline.

#### **1 – Specialization I – 18 hours**

(12 hours must be advanced 3000, 4000 level)

#### **2 – Specialization II – 18 hours**

(12 hours must be advanced 3000, 4000 level)

### **C – ELECTIVES – 36 HOURS**

(12 hours must be advanced 3000, 4000 level)

### **TOTAL CREDIT HOURS FOR GRADUATION – 120**

### **TOTAL ADVANCED HOURS (minimum) – 36**

\* Either Business or APBT courses can make up one specialization.

\* Residency requirements must be met.

## Bachelor of Music in Performance

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS  
MUSIC

*This degree is designed to fully develop the technical skills and musical performance abilities of guitar students at a professional level. As such, the technical and repertoire requirements meet or exceed the current standards of university instruction in the United States in this field. Students will be immersed in the process of preparing music for both solo and ensemble performance so that they understand and utilize the training elements conducive to success in musical performance and instruction. Students will be prepared to perform solo guitar works which demonstrate a high level of technical and stylistic mastery with diverse repertoire representative of the Renaissance, Baroque, Classical, Romantic, and Modern eras.*

### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Music in Performance – Guitar must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 050 – Visual and Performing Arts

MUSI 1308 Music Literature and History I

### A – GENERAL EDUCATION CORE – 48 HOURS

### B – MAJOR REQUIREMENTS – 53 HOURS

#### 1 – Core Courses for the Major – 53 hours

- MUSI 1181 Piano Class \*(Student must continue to register for this class until Music Dept. piano proficiency is passed).
- MUSI 1211/1111 Music Theory I (†)
- MUSI 1212/1112 Music Theory II (†)
- MUSI 2211/2111 Music Theory III (†)
- MUSI 2212/2112 Music Theory IV (†)
- MUSI 3211 Orchestration and Arranging \* (†) (Student must pass an aural skills and piano prof. exam before enrolling in MUSI 3211).
- MUSI 3289 Introduction to Conducting (†)
- MUSI 3308 Music History II
- MUSI 3309 Music History III
- MUSI 3312 Counterpoint and Analysis
- MUSI 4211 Computer Applications in Music
- MUSI 4289 Advanced Conducting
- MUSI 4301 Senior Experience in Music
- MUAP 1287 Applied Music I (†)
- MUAP 1288 Applied Music II (†)
- MUAP 2287 Applied Music III (†)
- MUAP 2288 Applied Music IV (†)
- MUAP 3301 Applied Music V \* (†) (Student must pass a sophomore recital before enrolling in MUAP 3301).
- MUAP 3302 Applied Music VI (†)
- MUAP 4301 Applied Music VII \* (†) (Student must pass a junior recital before enrolling in MUAP 4301).
- MUAP 4302 Applied Music VIII\* (†) (Student must pass a senior recital before graduation).

### C – GUITAR OPTION COURSES – 19 HOURS

- MUSI 3370 Topics in Music Literature
  - MUSI 3380 Music Pedagogy
  - MUEN 1137/3137 Guitar Orchestra (8 core ensemble)
- Choose 5 hours of MUEN Secondary Ensemble (Must be enrolled in core and secondary ensemble every semester).  
*Suggested secondary ensembles: Choir, Chamber, Improvisation, Jazz Guitar, Jazz Band, and Mariachi.*

### TOTAL CREDIT HOURS FOR GRADUATION – 120

### TOTAL ADVANCED HOURS (minimum) – 36

† Grade of “C” or better is required for graduation.

In addition, each semester the student is required to be in a core ensemble and an elective ensemble of choice and be enrolled in the appropriate applied lesson, pass a piano proficiency exam and pass a comprehensive departmental exam before graduation. The student is required to be enrolled in piano class each long semester until the piano exam is passed.



**Bachelor of Music in Performance**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
 COLLEGE OF LIBERAL ARTS  
 MUSIC

*The program is designed to train students for careers in performance. Studies are multifaceted, with numerous opportunities for performance, ensemble training, research, and individual studies in a broad area of specialization. Private lessons, master classes, guest artists and clinicians, solo performance, and instrumental ensemble participation, together, encompass the foundation of the entire instrumental music program. Students in this program develop facility in public speaking, musical performance, and analytical skills. A Bachelor of Music degree in Performance often leads to a Master's degree.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Music in Performance – Instrumental must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**011 – Additional Communication**

FREN 1311 Beginning French I  
 GERM 1311 Beginning German I

**050 – Visual and Performing Arts**

MUSI 1308 Music Literature and History I

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS – 53 HOURS****1 – Core Courses for the Major – 53 hours**

MUSI 1181 Piano Class \*(Student must continue to register for this class until Music Dept. piano proficiency is passed).  
 MUSI 1211/1111 Music Theory I (+)  
 MUSI 1212/1112 Music Theory II (+)  
 MUSI 2211/2111 Music Theory III (+)  
 MUSI 2212/2112 Music Theory IV (+)  
 MUSI 3211 Orchestration and Arranging \* (+) (Student must pass an aural skills and piano prof. exam before enrolling in MUSI 3211).  
 MUSI 3289 Introduction to Conducting (+)  
 MUSI 3308 Music History II  
 MUSI 3309 Music History III  
 MUSI 3312 Counterpoint and Analysis  
 MUSI 4211 Computer Applications in Music  
 MUSI 4289 Advanced Conducting  
 MUSI 4301 Senior Experience in Music  
 MUAP 1287 Applied Music I (+)  
 MUAP 1288 Applied Music II (+)  
 MUAP 2287 Applied Music III (+)  
 MUAP 2288 Applied Music IV (+)  
 MUAP 3301 Applied Music V \* (+) (Student must pass a sophomore recital before enrolling in MUAP 3301).  
 MUAP 3302 Applied Music VI (+)  
 MUAP 4301 Applied Music VII \* (+) (Student must pass a junior recital before enrolling in MUAP 4301).  
 MUAP 4302 Applied Music VIII\* (+) (Student must pass a senior recital before graduation).

**C – INSTRUMENTAL OPTION COURSES – 19 HOURS**

MUSI 3370 Topics in Music Literature  
 MUSI 3380 Music Pedagogy  
 Choose 8 hours of MUEN (core ensemble)  
 Choose 5 hours of MUEN Ensembles (must be advanced level)  
 (Must be enrolled in core ensemble and an elective ensemble each semester).

**TOTAL CREDIT HOURS FOR GRADUATION – 120****TOTAL ADVANCED HOURS (Minimum) – 36**

† Grade of "C" or better is required for graduation.

In addition, each semester the student is required to be in a core ensemble and an elective ensemble of choice and be enrolled in the appropriate applied lesson, pass a piano proficiency exam and pass a comprehensive departmental exam before graduation. The student is required to be enrolled in piano class each long semester until the piano exam is passed.

## Bachelor of Music in Performance

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF LIBERAL ARTS  
MUSIC

*The Bachelor of Music in Piano Performance is a professional music degree that prepares students for future careers as performers, composers and especially as teachers in higher education. The skills developed through the program include: collaborative piano, ensemble playing, conducting, and a comprehensive knowledge of music theory, will prove essential to become not only a well rounded performer but also a successful music teacher, fit for the highly diverse demands of the field. Students in this program develop facility in public speaking, musical performance, and analytical skills. A Bachelor of Music degree in Performance often leads to a Master's degree.*

### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Music in Performance – Keyboard must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 011 – Additional Communication

FREN 1311 Beginning French I  
GERM 1311 Beginning German I

#### 050 – Visual and Performing Arts

MUSI 1308 Music Literature and History I

### A – GENERAL EDUCATION CORE – 48 HOURS

### B – MAJOR REQUIREMENTS – 53 HOURS

#### 1 – Core Courses for the Major – 53 hours

MUSI 1181 Piano Class \*(Student must continue to register for this class until Music Dept. piano proficiency is passed).  
MUSI 1211/1111 Music Theory I (†)  
MUSI 1212/1112 Music Theory II (†)  
MUSI 2211/2111 Music Theory III (†)  
MUSI 2212/2112 Music Theory IV (†)  
MUSI 3211 Orchestration and Arranging \* (†) (Student must pass an aural skills and piano prof. exam before enrolling in MUSI 3211).  
MUSI 3289 Introduction to Conducting (†)  
MUSI 3308 Music History II  
MUSI 3309 Music History III  
MUSI 3312 Counterpoint and Analysis  
MUSI 4211 Computer Applications in Music  
MUSI 4289 Advanced Conducting  
MUSI 4301 Senior Experience in Music  
MUAP 1287 Applied Music I (†)  
MUAP 1288 Applied Music II (†)  
MUAP 2287 Applied Music III (†)  
MUAP 2288 Applied Music IV (†)  
MUAP 3301 Applied Music V \* (†) (Student must pass a sophomore recital before enrolling in MUAP 3301).  
MUAP 3302 Applied Music VI (†)  
MUAP 4301 Applied Music VII \* (†) (Student must pass a junior recital before enrolling in MUAP 4301).  
MUAP 4302 Applied Music VIII\* (†) (Student must pass a senior recital before graduation).

### C – KEYBOARD OPTION COURSES – 19 HOURS

MUSI 1114 Keyboard Skills I  
MUSI 1115 Keyboard Skills II  
MUSI 3370 Topics in Music Literature  
MUSI 3380 Music Pedagogy  
MUEN 1142/3142 Accompanying (8 core ensembles)  
Choose 3 hours of MUEN Secondary Ensembles (*Must be enrolled in core ensemble and an elective ensemble each semester.*)

### TOTAL CREDIT HOURS FOR GRADUATION – 120

### TOTAL ADVANCED HOURS (Minimum) – 36

† Grade of “C” or better is required for graduation.

In addition, each semester the student is required to be in a core ensemble and an elective ensemble of choice and be enrolled in the appropriate applied lesson, pass a piano proficiency exam and pass a comprehensive departmental exam before graduation. The student is required to be enrolled in piano class each long semester until the piano exam is passed.

**Bachelor of Music in Performance**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS  
MUSIC

*The program is designed to train students for future careers as professional musicians, specifically in opera and choral music. Studies in classical vocal technique form the foundation of the degree; musicianship, music theory, aural skills, and conducting are also key areas of focus. Students in this program develop facility in public speaking and musical performance, analytical skills, and competence in several languages. A Bachelor of Music degree in Performance often leads to a Master's degree.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Music in Performance – Vocal must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**011 – Additional Communication**

FREN 1311 Beginning French I  
GERM 1311 Beginning German I

**050 – Visual and Performing Arts**

MUSI 1308 Music Literature and History I

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS – 53 HOURS****1 – Core Courses for the Major – 53 hours**

MUSI 1181 Piano Class \*(Student must continue to register for this class until Music Dept. piano proficiency is passed).  
MUSI 1211/1111 Music Theory I (†)  
MUSI 1212/1112 Music Theory II (†)  
MUSI 2211/2111 Music Theory III (†)  
MUSI 2212/2112 Music Theory IV (†)  
MUSI 3211 Orchestration and Arranging \* (†) (Student must pass an aural skills and piano prof. exam before enrolling in MUSI 3211).  
MUSI 3289 Introduction to Conducting (†)  
MUSI 3308 Music History II  
MUSI 3309 Music History III  
MUSI 3312 Counterpoint and Analysis  
MUSI 4211 Computer Applications in Music  
MUSI 4289 Advanced Conducting  
MUSI 4301 Senior Experience in Music  
MUAP 1287 Applied Music I (†)  
MUAP 1288 Applied Music II (†)  
MUAP 2287 Applied Music III (†)  
MUAP 2288 Applied Music IV (†)  
MUAP 3301 Applied Music V \* (†) (Student must pass a sophomore recital before enrolling in MUAP 3301).  
MUAP 3302 Applied Music VI (†)  
MUAP 4301 Applied Music VII \* (†) (Student must pass a junior recital before enrolling in MUAP 4301).  
MUAP 4302 Applied Music VIII\* (†) (Student must pass a senior recital before graduation).

**C – VOCAL OPTION COURSES – 19 HOURS**

MUSI 1162 Diction I  
MUSI 1165 Diction II  
MUSI 3370 Topics in Music Literature  
MUSI 3380 Music Pedagogy

Choose 11 hours of MUEN Ensembles (*Must be enrolled in core ensemble and an elective ensemble each semester*).

**TOTAL CREDIT HOURS FOR GRADUATION – 120****TOTAL ADVANCED HOURS (minimum) – 36**

† Grade of "C" or better is required for graduation.

In addition, each semester the student is required to be in a core ensemble and an elective ensemble of choice and be enrolled in the appropriate applied lesson, pass a piano proficiency exam before student teaching and pass a comprehensive departmental exam before graduation. The student is required to be enrolled in piano class each long semester until the piano exam is passed.

**Bachelor of Science**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF NURSING  
NURSING

*Graduates of the Bachelor of Science in Nursing Program have the following employment opportunities: faculty clinical teaching assistant, clinician, nursing staff member in Veteran's Administration health system, eligible for multiple certifications including certification as a holistic nurse, case manager, supervision of unlicensed personnel, leadership positions, public health, home healthcare, school nurse.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Science in Nursing must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics (†)**

MATH 1314 College Algebra

**030 – Natural Sciences**

BIOL 2301/2101 Anatomy and Physiology I / Lab I

BIOL 2302/2102 Anatomy and Physiology II / Lab II

**A – GENERAL EDUCATION CORE – 48 HOURS**

**B – MAJOR REQUIREMENTS – 73 HOURS**

**1 – Advanced Placement for the Nursing Major – 38 hours**

NURS 3701 Nursing of the Adult Client with Alterations in Homeostasis

NURS 3702 Nursing of the Childbearing and Childrearing Families

NURS 3303 Nursing of the Family in Psychosocial Crisis

NURS 3604 Clinical Skills in Nursing

NURS 3705 Advanced Concepts of Clinical Decision Making

NURS 3207 Nursing in the Community

NURS 3308 Health Assessment in Nursing Practice

NURS 3309 Pharmacology and Client Care

**2 – Nursing Class Base Core Courses – 32 hours**

NURS 4305 Perspectives in Professional Nursing Practice

NURS 4407 Foundations of Holistic Nursing

NURS 4309 Research and Evidence Based Nursing Practice

NURS 4611 Health Promotion in Professional Nursing

NURS 4313 Transcultural Nursing

NURS 4615 Professional Nursing in the Community

NURS 4217 Contemporary Issues in Professional Nursing

NURS 4519 Leadership in Professional Nursing

**3 – Additional Degree Base Requirements – 3 hours**

x3xx Statistics (MATH 1342 or PSYC 2317 or SOCI 2317)

**TOTAL CREDIT HOURS FOR GRADUATION – 121**

**TOTAL ADVANCED HOURS (minimum) – 36**

† Minimum grade of C is required.

\* Admission Requirements - General Education Core Completed, ADN or Nursing Diploma, minimum grade point average (GPA) 2.5 and current RN license.

## Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF NURSING  
NURSING

*Graduates of the Bachelor of Science in Nursing Program have the following employment opportunities: faculty clinical teaching assistant, clinician, nursing staff member in Veteran's Administration health system, eligible for multiple certifications including certification as a holistic nurse, case manager, supervision of unlicensed personnel, leadership positions, public health, home healthcare, school nurse.*

### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Science in Nursing must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 020 – Mathematics (†)

MATH 1314 College Algebra

#### 030 – Natural Sciences

BIOL 2301/2101 Anatomy and Physiology I / Lab I

BIOL 2302/2102 Anatomy and Physiology II / Lab II

#### 080 – Social and Behavioral Sciences

PSYC 2301 General Psychology

### A – GENERAL EDUCATION CORE – 48 HOURS

### B – MAJOR REQUIREMENTS – 55 HOURS

#### 1 – Core Courses for the Nursing Major - 55 hours

NURS 3503 Health Assessment and Skills

NURS 3612 Medical Surgical Nursing I

NURS 3305 Nursing Research

NURS 3412 Pediatric Nursing

NURS 3414 Maternal Child Health

NURS 3616 Medical Surgical Nursing II

NURS 4306 Leadership in Nursing

NURS 4312 Mental Health Nursing

NURS 4614 Medical Surgical Nursing III

NURS 4613 Community Health Nursing

NURS 4624 Medical Surgical IV: Practicum

NURS 4336 Special Topics

### C – SUPPORT COURSES – 17 HOURS

BIOL 2321/2121 Microbiology/Lab

CHEM 1305/1105 Introductory Chemistry I/Lab I or higher level Chemistry

NURS 2301 Pathophysiology

NURS 2302 Fundamentals of Nursing Practice

NURS 2304 Pharmacotherapeutics

### TOTAL CREDIT HOURS FOR GRADUATION – 120

### TOTAL ADVANCED HOURS (minimum) – 36

\* Admission Requirements - General Education Core and Support Courses Completed, minimum grade point average (GPA) 2.5.

† Minimum grade of C is required.

**Bachelor of Arts**

**THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS  
BEHAVIORAL SCIENCES**

*A college degree in psychology opens the door to one of the most challenging and rewarding professional fields today. Psychology students learn the necessary skills to assist people in improving their mental health; they also gain knowledge and abilities that are valued in many other fields, such as business and politics. At the bachelor's level, psychology graduates are sought in fields like mental health casework statistics, probation and corrections, public relations, health education, social work, human resources, recreational therapy, education, and physician assisting among others.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Arts in Psychology must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**080 – Social and Behavioral Sciences (1 course – 3 hours required)**

ANTH 2351	Cultural Anthropology	GEOG 1303	World Regional Geography
BUSI 1301	Business Principles	SOCI 1301	Introductory Sociology
ECON 2301	Principles of Macroeconomics		

**A – GENERAL EDUCATION CORE – 48 HOURS**

**B – MAJOR REQUIREMENTS – 34 HOURS**

**1 – Core Courses for the Psychology Major - 13 hours**

PSYC 2301	General Psychology	PSYC 3301	Research Methods in Psychology
PSYC 2102	Orientation for Psychology Majors	PSYC 4363	Systems and Theories in Psychology
PSYC 2317	Statistics of Psychology		

**2 – Psychology Areas of Study – 21 hours**

**Psychology as Field of Study**

Choose at least 1 from the following:

PSYC 2308	Child Psychology	PSYC 3363	Human Sexuality
PSYC 2314	Lifespan Growth and Development	PSYC 3312	Psychology of Gender
PSYC 3302	Adolescent Psychology	PSYC 3313	Abnormal Psychology
PSYC 3303	Adulthood and Aging	PSYC 3333	Theories of Personality
PSYC 3326	Social Psychology	PSYC 3374	Topics in Psychology
PSYC 4374	Advanced Topics in Psychology		

**Psychology as a Science**

Choose at least 1 from the following:

PSYC 3318	Theories of Learning	PSYC 4319	Cognitive Processes
PSYC 3322	Biopsychology	PSYC 4322	Sensation and Perception
PSYC 4302	Advanced Statistics for Psychology		

**Psychology as an Application of Knowledge**

Choose at least 2 from the following:

PSYC 3324	Health Psychology	PSYC 4356	Industrial & Organizational Psychology
PSYC 3343	Tests and Measurements in Psychology	PSYC 4360	Clinical and Counseling Psychology
PSYC 4305	Behavior Management and Modification	PSYC 4380	Independent Study
PSYC 4330	Psychology and the Legal Systems		

**C – SUPPORT AREA AND/OR ELECTIVES – 38 HOURS**

(9 – 15 hours must be advanced 3000, 4000 level)

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 36**

**Bachelor of Arts**

**THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS  
GOVERNMENT**

*A Bachelor of Arts in Public Service will provide accessible, affordable, high-quality undergraduate preparation to train students for employment and careers in leadership and management in public service. The program will provide students with skills in the areas of public policy formulation, implementation and evaluation, and public and non-profit management to enhance employment opportunities in national, state, and local governments. A Bachelor of Arts degree in Public Service can lead to Masters and Ph.D. degrees in Public Policy and Management, Public Administration, Public Affairs, and Urban and Regional Planning.*

**A – GENERAL EDUCATION CORE – 48 HOURS**

Students seeking the Bachelor of Arts in Public Service must fulfill the General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**B – MAJOR REQUIREMENTS – 45 HOURS**

**1 – Core Courses for the Major – 15 hours**

- GOVT 3323 Foundations of Public Administration and Service
- GOVT 3331 Research Methods
- GOVT 3332 Applied Statistics Public Service
- GOVT 3301 Citizenship and Community Development
- GOVT 3302 Ethics and Public Service

**2 – Government Electives – 15 hours**

- GOVT 4312 Issues in Public Planning
- GOVT 4365 Public Personnel Administration
- GOVT 4374 American Public Policy
- GOVT 4376 Contemporary Issues in Homeland Security
- GOVT 4314 Leadership and Non-Profit Organization
- GOVT 3343 Global Politics and International Relations
- GOVT 3363 American Hispanic Politics
- GOVT 3314 American State and Local Government
- GOVT 3385 Internship

**3 – Government Electives – 6 hours**

- GOVT 4360 The Presidency
- GOVT 4363 The Congress
- GOVT 4366 American Political Parties and Politics
- GOVT 4367 The Judiciary
- GOVT 4368 Special Topics in American Government

**4 – Leadership and Public Service – 3 hours**

- GOVT 1381 Leadership and Service

**5 – Economic Principles – 6 hours**

- ECON 2301 Principles of Macroeconomics
- ECON 2302 Microeconomics

**C – SUPPORT AREA AND/OR ELECTIVES – 27 HOURS**

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 36**

## Bachelor of Arts

### THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE COLLEGE OF LIBERAL ARTS BEHAVIORAL SCIENCES

*A college degree in sociology presents students with diverse career choices. Sociology graduates often find employment as researchers, consultants or administrators for federal, state, and local governments. A sociologist may also find employment in the private sector with educational institutions and business. The job demand for sociologists should grow by 10% between 2006 and 2016.*

#### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Arts in Sociology must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

##### 080 – Social and Behavioral Sciences (1 course – 3 hours required)

ANTH 2351 Cultural Anthropology	GEOG 1303 World Regional Geography
BUSI 1301 Business Principles	PSYC 2301 General Psychology
ECON 2301 Principles of Macroeconomics	

#### A – GENERAL EDUCATION CORE – 48 HOURS

#### B – MAJOR REQUIREMENTS – 36 HOURS

##### 1 – Core Courses for the Sociology Major - 15 hours

SOCI 1301 Introductory Sociology
SOCI 2305 Introduction to Social Research
SOCI 2317 Statistical Methods in Sociology
SOCI 3335 Social Theory
SOCI 4305 Methods of Social Research

##### 2 – Distribution Courses – 21 hours

*(One course must be at 4000 level and must choose at least one course from each category)*

##### Category I: Community

SOCI 2301 Marriage and Family	SOCI 3323 Hispanics in a Global Society
SOCI 2325 Self and Society	SOCI 4325 Population
SOCI 3333 American Communities	

##### Category II: Stratification

SOCI 3363 Gender	SOCI 4343 Sociology of Globalization
SOCI 3364 Minorities	SOCI 4352 Social Inequality

##### Category III: Authority

SOCI 3324 Sociology of Health	SOCI 3374 Religion in Society
SOCI 3373 Mass Communications and Culture	SOCI 4365 Sexuality and Society

##### Category IV: Alienation

SOCI 1306 Social Problems	SOCI 3393 Sociology of Aging
SOCI 3313 Criminology	SOCI 4314 Sociology of Deviance
SOCI 3325 Migration	

##### Additional Distribution Electives

SOCI 4374 Special Topics in Sociology
SOCI 4383 Independent Studies

#### C – ANTHROPOLOGY SUPPORT COURSES – 6 HOURS

#### D – SUPPORT AREA AND/OR ELECTIVES – 30 HOURS

*(9 – 15 hours must be advanced 3000, 4000 level)*

#### TOTAL CREDIT HOURS FOR GRADUATION – 120

#### TOTAL ADVANCED HOURS (minimum) – 36



**Bachelor of Arts**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS  
MODERN LANGUAGES

A student with a BA degree in Spanish may consider work in the following areas: **Government** (Armed Forces, Department of Justice, Immigration & Naturalization Service), **Non-Profit Organizations** (Civic Organizations, International Exchange Programs, Social Work and Social Services), **Commerce** (Customer Service, Translation and Interpretation, Research, Marketing Firms), **Travel and Tourism** (Airlines and Airports, Travel Agencies, Convention Centers), **Arts Media & Entertainment** (Advertising, Foreign News Agencies, Museums) or **Public Service** (Civil Service, International Service Organizations, Social and Rehab Services).

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Arts in Spanish must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**011 – Additional Communication**

- SPAN 2313 Spanish Native/Heritage Speakers I
- SPAN 2315 Spanish Native/Heritage Speakers II

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS – 33 HOURS****1 – Core Courses for the Major – 27 hours**

- SPAN 3301 Spanish Literature (1100 - 1750)
- SPAN 3302 Spanish Literature (1750 - present) **or** SPAN 3309 Contemporary Spanish Literature
- SPAN 3303 Advanced Spanish Grammar and Composition I
- SPAN 3304 Advanced Spanish Grammar and Composition II
- SPAN 3310 Masterpieces of Spanish American Literature I
- SPAN 3311 Masterpieces of Spanish American Literature II
- SPAN 4310 Spanish Phonology and Phonetics **or** SPAN 4317 Spanish Language in Social Context
- SPAN 4371 Chicano Narrative

Select 3 hours from the following list:

- SPAN 3340 The Hispanic World
- SPAN 4303 Hispanic Civilization
- SPAN 4373 Topic Studies in Hispanic Culture

**2 - Spanish Electives – 6 hours**

(6 hours must be advanced 3000, 4000 level)

**C – SUPPORT AREA AND/OR MINOR AND/OR ELECTIVES – 39 HOURS**

(3 hours must be advanced 3000, 4000 level)

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 36**

**Bachelor of Arts**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS  
MODERN LANGUAGES

*The program is designed to help future practitioners of the art and science of Translation and Interpreting to play a vital role in the global society of the 21st century. The program contributes to the development of analytical skills, cultural literacy, linguistic competence, and the professionalism needed to become superior translators and interpreters, a profession in high demand in the legal, medical and business worlds, in governmental agencies at all levels, as well as in private industry.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Arts in Spanish Translation and Interpreting must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**011 – Additional Communication**

- SPAN 2313 Spanish Native/Heritage Speakers I
- SPAN 2315 Spanish Native/Heritage Speakers II

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS – 39 HOURS****1 – Core Courses for the Major – 33 hours**

- SPAN 2316 Career Spanish I
- SPAN 2317 Career Spanish II
- SPAN 2389 Academic Cooperative English to Spanish
- SPAN 2389 Academic Cooperative Spanish to English
- TRSP/SPAN 3332 Spanish / English Translation
- TRSP/SPAN 3333 English / Spanish Translation
- TRSP/SPAN 3334 Translation Technologies
- TRSP/SPAN 4332 English/Spanish Commercial Translation
- TRSP/SPAN 4334 English/Spanish Legal Translation
- TRSP 4366 Interpreting I
- TRSP 4367 Interpreting II *or* TRSP 3335 Topics in Translation

**2 – Translation Electives – 6 hours**

**(6 hours must be advanced 3000, 4000 level)**

**E – SUPPORT AREA AND/OR MINOR AND/OR ELECTIVES – 33 HOURS**

**(9 hours must be advanced 3000, 4000 level)**

**(Recommended Minor in Spanish or French Language and Translation)**

*Recommended Courses for Spanish Majors/Minors/Support Areas*

- SOCI 2319 Mexican American Experience*
- ECON 2301 Principles of Macroeconomics*
- GEOG 1303 World Regional Geography*
- FREN Any level*

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 36**

**Bachelor of Arts in Interdisciplinary Studies**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF EDUCATION  
TEACHING, LEARNING, AND INNOVATION

**Teacher Certification**

Once a student graduates with a BAIS degree and passes their required TExES (state exams) then they can secure employment in a teaching position.

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Arts in Interdisciplinary Studies in Early Childhood 6<sup>th</sup> Grade ESL Generalist must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**050 - Visual and Performing Arts**

MUSI 1304 Teaching Music in the Elementary School

**090 – Institutionally Designated Option (‡)**

SPCH 1315 Applied Communication is strongly recommended. Minimum grade of B or better is required for admission into the Teacher Education program.

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS****1 – Prerequisites for Admission to Teacher Education – 6 hours**

EDUC 1301 Introduction to the Teaching Profession (†)

EDFR 2301 Intercultural Context of Schooling (†)

**2 - Pedagogy & Professional Responsibility - 18 hours (†, £)**

EDCI 3314 Methods in Teaching Mathematics and Science (†, £) EDCI 3330 Designing Inst. & Assess to Promote Stud. Lear. (†, £)

EDCI 4327 Methods of Teaching Elementary S. S. and E.L.A. (†, £) EDCI 4608 Student Teaching EC-6 ESL Generalist (†, £)

EPSY 4322 Human Development and Student Learning (†, £)

**3 – Reading - 12 hours (£)**

EDLI 3311 Beginning English Literacy for Eng. Lang. Learn. (£)

EDLI 3325 Literacy Across for the Curriculum for English Language Learners (£)

EDLI 3329 Literacy Assessment for E.S.L. Learners (£)

EDLI 3340 E.S.L. Language Arts and Literature (£)

**4 – English - 9 hours**

ENGL 3319 Introduction to Descriptive Linguistics

ENGL 4325 Composition Techniques

ENGL 3330 English Grammar

**5 – Social Studies - 6 hours**

GEOG 3320 Cultural Geography for Educator

INDS 3303 Culture and Humanity: Human Diversity, Cross Cultural Perspective

**6 – Math - 6 hours**

MATH 1350 Fundamental of Mathematics for Teachers I

MATH 1351 Fundamental of Mathematics for Teachers II

**7 – Science - 4 hours**

PSCI 4210 Physical Science for Educators I

PSCI 4220 Physical Science for Educators II

\* Science Lab (from General Education Core)

\* Science Lab (from General Education Core)

**8- Combination of Subjects – 17 hours (£)**

EDSL 4305 Foundations of Bilingual Education and ESL (£)

EDSL 4306 Content Area Methods in the ESL Classroom (£)

ECED 4385 Growth and Development of the Young Child (£)

SPED 4386 Modifications Inclusive Setting (£)

KINE 2255 Health and Motor Development for EC-6 (£)

ECED 4389 The Environment and Early Childhood (£)

**TOTAL CREDIT HOURS FOR GRADUATION - 126****TOTAL ADVANCED HOURS (minimum) - 36**

† Grade of “C” or better is required for graduation.

‡ Grade of “B” or better is required for graduation.

£ Maintain a minimum 2.50 GPA with no grade lower than a C.

Student must meet all Program Admission Requirements/ Student Teaching Rqmts. Contact College of Education for further information.

## Bachelor of Arts in Interdisciplinary Studies

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF EDUCATION  
TEACHING, LEARNING, AND INNOVATION

### Teacher Certification

Once a student graduates with a BAIS degree and passes their required TExES (state exams) then they can secure employment in a teaching position.

### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Arts in Interdisciplinary Studies in Early Childhood 6<sup>th</sup> Grade Generalist/EC-12<sup>th</sup> Grade Special Education must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 050 – Visual and Performing Arts

MUSI 1304 Teaching Music in the Elementary School

#### 090 – Institutionally Designated Option (‡)

SPCH 1315 Applied Communication is strongly recommended.  
Minimum grade of B or better is required for admission into the Teacher Education program.

### A – GENERAL EDUCATION CORE – 48 HOURS

### B – MAJOR REQUIREMENTS

#### 1 – Prerequisites for Admission to Teacher Education – 6 hours

EDUC 1301 Introduction to the Teaching Profession (†)

EDFR 2301 Intercultural Context of Schooling (†)

#### 2 - Pedagogy & Professional Responsibility – 18 hours (†, £)

EDCI 3314 Methods in Teaching Mathematics and Science (†, £)

EPSY 4322 Human Development and Student Learning (†, £)

EDCI 3330 Designing Inst. and Assess to Promote Student Learning (†, £)

EDCI 4327 Methods of Teaching Elementary Social Studies and English Language Arts (†, £)

EDCI 4311 Student Teaching EC-6 (†, £)

SPED 4313 Student Teaching Generic Special Education (†, £)

#### 3 – Reading – 9 hours (£)

EDLI 3311 Beginning English Literacy for English Language Learners (£)

EDLI 3329 E.S.L. Literacy and Assessment (£)

EDLI 3340 E.S.L. Language Arts and Literature (£)

#### 4 – English – 9 hours

ENGL 3319 Introduction to Descriptive Linguistics

ENGL 4325 Composition Techniques

ENGL 3330 English Grammar

#### 5 – Social Studies – 3 hours

GEOG 3320 Cultural Geography for Educators I

#### 6 – Math – 6 hours

MATH 1350 Fundamental of Mathematics for Teachers I

MATH 1351 Fundamental of Mathematics for Teachers II

#### 7 – Science – 4 hours

PSCI 4210 Physical Science for Educators I

PSCI 4220 Physical Science for Educators II

\* Science Lab (from General Education Core)

\* Science Lab (from General Education Core)

#### 8 – Combination of Subjects – 21 hours (£)

SPED 3390 Introduction to Exceptional Children (£)

SPED 4395 Practicum in Generic Special Education (£)

SPED 4320 Legal Roles and Resp. of the Special Educator (£)

ECED 4389 The Environment and Early Childhood (£)

SPED 4330 Problems in Lang. and Lit. for Inds. w/Special Needs (£)

SPED 4350 Assessing Children with Learning Difficulties (£)

SPED 4380 Classroom Inst. for Individuals w/Special Needs (£)

#### 9 – Additional Requirements – 2 hours

KINE 2255 Health and Motor Development for EC-6

### TOTAL CREDIT HOURS FOR GRADUATION – 126

### TOTAL ADVANCED HOURS (minimum) – 36

† Grade of “C” or better is required for graduation.

‡ Grade of “B” or better is required for graduation.

£ Maintain a minimum 2.50 GPA with no grade lower than a C.

Student must meet all Program Admission Requirements/ Student Teaching Rqmts. Contact College of Education for further Information.

**Bachelor of Arts in Interdisciplinary Studies**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF EDUCATION  
TEACHING, LEARNING, AND INNOVATION

**Teacher Certification**

Once a student graduates with a BAIS degree and passes their required TExES (state exams) then they can secure employment in a teaching position.

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Arts in Interdisciplinary Studies in Early Childhood 6<sup>th</sup> Grade Bilingual Generalist must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**011 – Additional Communication**

SPAN 2313 Spanish for Native/Heritage Speakers I  
SPAN 2315 Spanish for Native/Heritage Speakers II

**050 - Visual and Performing Arts**

MUSI 1304 Teaching Music in the Elementary School

**090 – Institutionally Designated Option (‡)**

SPCH 1315 Applied Communication is strongly recommended.

Minimum grade of B or better is required for admission into the Teacher Education program.

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS****1 – Prerequisites for Admission to Teacher Education - 6 hours**

EDUC 1301 Introduction to the Teaching Profession (†)  
EDFR 2301 Intercultural Context of Schooling (†)

**2 - Pedagogy & Professional Responsibility - 18 hours (†, £)**

EDCI 3314 Methods in Teaching Mathematics and Science (†, £)  
EPSY 4322 Human Development and Student Learning (†, £)  
EDCI 3330 Designing Instruction and Assessment to Promote Student Learning (†, £)  
EDCI 4327 Methods of Teaching Elementary Social Studies and English Language Arts (†, £)  
EDBI 4608 Student Teaching EC-6 Bilingual Generalist (†, £)

**3 – Reading - 9 hours (£)**

BILS 3310 Emergent Literacy in the Bilingual Classroom (Spanish) (£)  
BILS 3312 Teaching Reading in the Bilingual Classroom (Spanish) (£)  
EDLI 3329 Literacy Assessment for ESL Learners (£)

**4 – English/Spanish - 12 hours**

ENGL 3319 Introduction to Descriptive Linguistics  
ENGL 3330 English Grammar  
SPAN 4316 Acquisition of the Spanish Language  
SPAN 4368 Children's Literature in Spanish

**5 – Social Studies - 6 hours**

GEOG 3320 Cultural Geography for Educators I  
INDS 3303 Culture and Humanity: Human Diversity, Cross Cultural Perspective

**6 – Math - 6 hours**

MATH 1350 Fundamental of Mathematics for Teachers I  
MATH 1351 Fundamental of Mathematics for Teachers II

**7 – Science - 4 hours**

PSCI 4210 Physical Science for Teachers I  
PSCI 4220 Physical Science for Teachers II

\* Science Lab (from General Education Core)

\* Science Lab (from General Education Core)

**8- Combination of Subjects – 17 hours (£)**

EDSL 4305 Foundations of Bilingual Education and ESL (£) ECED 4389 The Environmental and Early Childhood (£)  
BILS 4306 Content Area Methods in the Bilingual Classroom (£) SPED 4386 Modifications in Inclusive Setting (£)  
ECED 4385 Growth and Development of the Young Child (£) KINE 2255 Health and Motor Development for EC-6 (£)

**TOTAL CREDIT HOURS FOR GRADUATION – 126****TOTAL ADVANCED HOURS (minimum) - 36**

† Grade of "C" or better is required for graduation.

‡ Grade of "B" or better is required for graduation.

£ Maintain a minimum 2.50 GPA with no grade lower than a C.

Student must meet all Program Admission Requirements/ Student Teaching Rqmts. Contact College of Education for further Information.

## Bachelor of Arts

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF LIBERAL ARTS  
ENGLISH

## Teacher Certification

*Because the field of English provides students with essential skills necessary to communicate effectively, enrich their lives both materially and intellectually, and function as productive members of society, students who major in English have options for employment in many fields, most notably in education and industry.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Arts in English / Language Arts/ Reading (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**090 – Institutionally Designated Option (‡)**

*SPCH 1315 Applied Communication is strongly recommended.*

*Minimum grade of B or better is required for admission into the Teacher Education program.*

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS****1 – Prerequisites for Admission to Teacher Education – 6 hours**

EDUC 1301 Introduction to the Teaching Profession (†)

EDFR 2301 Intercultural Context of Schooling (†)

**2 – Pedagogy & Professional Responsibility – 21 hours (†, £)**

EDUC 2303 Technology in Education (†, £)

EPSY 4322 Human Development and Student Learning (†, £)

EDCI 3330 Designing Instruction and Assessment to Promote Student Learning (†, £)

EDSC 4328 Implementing and Assessing Effective Secondary Content Pedagogy (†, £)

SPED 4386 Modifications Inclusive Settings (†, £)

EDMG 4648 Student Teaching in the Middle Grade (†, £)

**3 – Certification Fields – 39 hours (£)**

EDLI 3311 Beginning English Literacy for English Lang. Lear. (£)

EDLI 3329 ESL Literacy and Assessment (£)

EDLI 4350 Adolescent Literature (£)

EDLI 4351 Content Area Literacy (£)

EDLI 4367 Teaching Read to the English Language Learner (£)

ENGL 3302 Literary Analysis (£)

ENGL 3312 *or* ENGL 3313 Survey of American Literature (£)

ENGL 3319 Introduction to Descriptive Linguistics (£)

ENGL 3330 English Grammar (†, £)

ENGL 4301 Shakespeare (£)

ENGL 4325 Composition Techniques (£)

ENGL 4328 Intro. to English as a Second Language (£)

ENGL 4350 English Studies (£)

**4 – Math – 6 hours**

MATH 1350 Fundamental of Mathematics for Teachers I

MATH 1351 Fundamental of Mathematics for Teachers II

**5 – Science – 4 hours**

PSCI 4210 Physical Science for Educators I

PSCI 4220 Physical Science for Educators II

\* Science Lab from General Education Core

\* Science Lab from General Education Core

**TOTAL CREDIT HOURS FOR GRADUATION – 124****TOTAL ADVANCED HOURS (minimum) – 36**

† Grade of "C" or better is required for graduation.

‡ Grade of "B" or better is required for graduation.

£ Maintain a minimum 2.50 GPA with no grade lower than a C.

Student must meet all Program Admission Requirements/Student Teaching Requirements. Contact College of Education for further information.

Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY  
MATHEMATICS



Teacher Certification

Mathematics Majors with Teacher Certification are attractive to the growing demand for teachers in high schools, middle schools and elementary schools. A BS in Mathematics will prepare the graduate for an exciting and rewarding teaching position and provide the necessary preparation for graduate studies.

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Science in Mathematics (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics\***

MATH 2413 Calculus I

**090 – Institutionally Designated Option (‡)**

SPCH 1315 Applied Communication is strongly recommended. Minimum grade of B or better is required for admission into the Teacher Education program.

**A – GENERAL EDUCATION CORE – 48 HOURS**

**B – MAJOR REQUIREMENTS**

**1 – Pedagogy & Professional Responsibility – 18 hours (†, £)**

- EDCI 1101 Step 1: Inquiry Approaches to Teaching (†, £)
- EDCI 1102 Step 2: Inquiry Based Lesson Design (†, £)
- EDCI 3350 Knowing and Learning in Mathematics and Science (†, £)
- EDCI 3355 Classroom Interactions (†, £)
- EDCI 3360 Project-Based Instruction (†, £)
- EDCI 4650 Apprentice Teaching 6-12 (†, £)
- EDCI 4170 Apprentice Teaching Seminar (†, £)

**2 – Core Courses for the Major – 30 hours**

- |                                |                                   |
|--------------------------------|-----------------------------------|
| MATH 2305 Discrete Mathematics | MATH 2415 Calculus III            |
| MATH 2318 Linear Algebra       | MATH 3306 Foundations of Analysis |
| MATH 3331 Geometry I           | MATH 3321 Algebra I               |
| MATH 2413 Calculus I**         | MATH 3349 Differential Equations  |
| MATH 2414 Calculus II          | MATH 3381 Statistics              |

**3 – Teaching Concentration – 9 hours (£)**

- MATH 2303 Functions and Modeling
- MATH 3307 Perspectives on Mathematics and Science - UTeach
- BIOL 3304 Research Methods - UTeach

**4 – Literacy – 3 hours (£)**

- EDLI 4351 Content Area Literacy

**5 – Science – 4 hours**

- PSCI 4210 Physical Sciences for Educators I <sup>1</sup> Science Lab
- PSCI 4220 Physical Sciences for Educators II <sup>1</sup> Science Lab

**6 – Math/Science Electives – 8 hours**

**TOTAL CREDIT HOURS FOR GRADUATION – 120**

**TOTAL ADVANCED HOURS (minimum) – 36**

Admission requirements to this program: MATH-2414 with a “C” or better grade and EDCI 1101 with a “C” or better and a minimum cumulative GPA of 2.5

† Grade of “C” or better is required for graduation.

‡ Grade of “B” or better is required for graduation.

<sup>1</sup> See Major = Science Lab requirement

\* Grade of “C” or better is required for a MATH course used to fulfill the General Education Core requirement (MATH-1314 College Algebra or higher).

\*\* MATH 2413 – 3 sch for general education and 1 sch toward Major requirements. Pre-requisite for Calculus I is MATH 2412-Pre-Calculus Mathematics or Departmental Placement Test.

£ Maintain a minimum 2.50 GPA with no grade lower than a C.

Student must meet all Program Admission Requirements/ Student Teaching Requirements. Contact UTeach program for further information.

\*\*\* Prior to graduation, a student must take Major Field Test in Mathematics.

## Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
 COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY  
 BIOLOGICAL SCIENCES



*Stepping stone towards a Master degree in discipline and an Ed.D. teaching science at the elementary school levels.  
 Many enter administrative positions such as deans, assistant principals and principals, etc.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Science (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics\***

MATH 1342 Elementary Statistical Methods

**090 – Institutionally Designated Option (‡)**

*SPCH 1315 Applied Communication is strongly recommended.  
 Minimum grade of B or better is required for admission into the  
 Teacher Education program.*

**030 – Natural Science**

CHEM 1311/1111 General Chemistry I/Lab I

CHEM 1312/1112 General Chemistry II/Lab II

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS****1 – Pedagogy & Professional Responsibility – 18 hours (†, £)**

EDCI 1101 Step 1: Inquiring Approaches to Teaching (†, £)

EDCI 1102 Step 2: Inquiring Based Lesson Design (†, £)

EDCI 3350 Knowing and Learning in Mathematics and Science (†, £)

EDCI 3355 Classroom Interactions (†, £)

EDCI 3360 Project-Based Instruction (†, £)

EDCI 4650 Apprentice Teaching 6-12 (†, £)

EDCI 4170 Apprentice Teaching Seminar (†, £)

**2 – Core Courses for the Major – 23 hours (†)**

BIOL 1306/1106 Biology for Science Majors I/Lab I

BIOL 1307/1107 Biology for Science Majors II/Lab II

BIOL 2343/2143 General Biology III/Lab III

BIOL 3309/3109 Ecology/Lab

BIOL 3303/3103 Genetics/Lab

BIOL 4301 Evolution

**3 – Biology Electives – 4 hours**

**(4 hours must be advanced 3000, 4000 level)**

**4 – Support Courses – 30 hours**

MATH 2413 Calculus I

PHYS 1301/1101 College Physics I/Lab II

PHYS 1302/1102 College Physics II/Lab II

GEOL 1303/1103 Physical Geology I/Lab I

ENVR 1301/1101 Environmental Sciences I/Lab I

MATH 3307 Perspectives on Mathematics and Science - UTeach

BIOL 3304 Research Methods – UTeach

ASTR 1303/1103 Stars and Galaxies/Lab

**5 – Support – 3 hours (†, £)**

EDLI 4351 Content Area Literacy (†, £)

**TOTAL CREDIT HOURS FOR GRADUATION – 126****TOTAL ADVANCED HOURS (minimum) – 36**

Admission requirements to this program: BIOL-1306/1106, BIOL-1307/1107, CHEM-1311/1111, CHEM-1312/1112, MATH-2412 (or higher) with “C” or better grade in all these courses and Departmental approval.

\* Grade of “C” or better is required for a MATH course used to fulfill the General Education Core requirement (MATH-1314 College Algebra or higher).

† Grade of “C” or better is required for graduation.

‡ Grade of “B” or better is required for graduation.

£ Maintain a minimum 2.50 GPA with no grade lower than a C.

Student must meet all Program Admission Requirements/Student Teaching Rqmts. Contact College of Education for further information.



**Bachelor of Arts**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
 COLLEGE OF LIBERAL ARTS  
 ENGLISH

**Teacher Certification**

*Because the field of English provides students with essential skills necessary to communicate effectively, enrich their lives both materially and intellectually, and function as productive members of society, students who major in English have options for employment in many fields, most notably in education and industry.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Arts in English / Language Arts/ Reading (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**090 – Institutionally Designated Option (‡)**

*SPCH 1315 Applied Communication is strongly recommended.*

*Minimum grade of B or better is required for admission into the Teacher Education program.*

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS****1 – Prerequisites for Admission to Teacher Education – 6 hours**

EDUC 1301 Introduction to the Teaching Profession (†)

EDFR 2301 Intercultural Context of Schooling (†)

**2 - Pedagogy & Professional Responsibility – 18 hours (†, £)**

EDUC 2303 Technology in Education (†, £)

EPSY 4322 Human Development and Student Learning (†, £)

EDCI 3330 Designing Instruction and Assessment to Promote Student Learning (†, £)

EDSC 4328 Implementing and Assessing Effective Secondary Content Pedagogy (†, £)

EDSC 4641 Student Teaching, Secondary (†, £)

**3 – Reading / English – 24 hours**

ENGL 3302 Literary Analysis

ENGL 4325 Composition Techniques

ENGL 3319 Introduction to Descriptive Linguistics

EDLI 3329 ESL Literacy and Assessment (†, £)

ENGL 3330 English Grammar (†)

ENGL 4350 English Studies

ENGL 3331 History of the English Language

EDLI 4367 Teaching Read to the English Lang. Learner (†, £)

**4 – Literature – 9 hours**

ENGL 3309 Major British Authors

ENGL 3312 or ENGL 3313 Survey of American Literature

ENGL 4301 Shakespeare

**5 – Literature Electives – 9 hours**

**(9 hrs must be advanced 3000, 4000 level)**

Recommended: courses divided among British & American Literature

**6 – Support Courses – 12 hours**

EDLI 4350 Adolescent Literature (†, £)

EDLI 4351 Content Area Literacy (†, £)

ENGL 4328 Introduction to English as a Second Language

SPED 4386 Modifications Inclusive Settings (†, £)

**TOTAL CREDIT HOURS FOR GRADUATION – 126****TOTAL ADVANCED HOURS (minimum) – 36**

† Grade of "C" or better is required for graduation.

‡ Grade of "B" or better is required for graduation.

£ Maintain a minimum 2.50 GPA with no grade lower than a C.

Student must meet all Program Admission Requirements/Student Teaching Rqmts. Contact College of Education for further information.

## Bachelor of Arts

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF LIBERAL ARTS  
HISTORY

**Teacher Certification**

*History majors learn how to think critically and communicate effectively. These skills prepare them for a variety of professions, including government, politics, journalism, law, non-profit organizations, and education. This degree plan is designed for students who want to become teachers in the state of Texas.*

### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Arts in History (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 080 – Social and Behavioral Sciences

PSYC 2301 General Psychology

#### 090 – Institutionally Designated Option (‡)

SPCH 1315 *Applied Communication is strongly recommended. Minimum grade of B or better is required for admission into the Teacher Education program.*

### A – GENERAL EDUCATION CORE – 48 HOURS

### B – MAJOR REQUIREMENTS

#### 1 – Prerequisites for Admission to Teacher Education – 6 hours

EDUC 1301 Introduction to the Teaching Profession (†)      EDFR 2301 Intercultural Context of Schooling (†)

#### 2 - Pedagogy & Professional Responsibility – 18 hours (†, £)

EDUC 2303 Technology in Education (†, £)      EDSC 4328 Implementing and Assessing Eff. Sec. Content Ped. (†, £)  
EPSY 4322 Human Development and Student Learning (†, £)      EDSC 4641 Student Teaching Secondary (†, £)  
EDCI 3330 Designing Instruction and Assessment to Promote Student Learning (†, £)

#### 3 – Core Courses for the Major – 18 hours

HIST 2300 The Historian's Craft      HIST 2322 World History II  
HIST 2301 Texas History      HIST 2380 Mexican-American Studies  
HIST 2321 World History I      HIST 4399 Senior Seminar

#### 4 – United States History – 6 hours

HIST 3300 Colonial America to 1763      HIST 3320 The U.S.: War, Prosperity, and Depression, 1917-1945  
HIST 3305 The United States: Revolution and the New Nation, 1763-1840      HIST 3325 The United States Since 1945  
HIST 3310 Expansion, War, and Reconstruction, 1840-1877      HIST 3330 U.S. Military History  
HIST 3315 The Gilded Age and Progressive Era, 1877-1919      HIST 4320 Advanced Topics in American History

#### 5 – World History – 6 hours

HIST 3360 Classical and Post-Classical World, 500 BCE - 1450      HIST 3375 History of World War I and II  
HIST 3365 First Globalization, 1450-1750      HIST 4360 Advanced Topics in European/World History  
HIST 3370 Modern World 1750-Present

#### 6 – Latin American History – 6 hours

HIST 3380 Mexico Through Independence      HIST 3390 History of Modern Latin America  
HIST 3385 Mexico Since Independence      HIST 4350 Advanced Topics in Latin American History

#### 7 – Government Electives – 6 hours

(6 hours must be advanced 3000, 4000 level)

#### 8 – Electives – 6 hours

Student must select hours from: ECON 2301, ECON 2302, Upper Level GEOG, and Upper Level INDS.

#### 9 – Combination of Subjects – 6 hours (†, £)

EDLI 4351 Content Area Literacy (†, £)      SPED 4386 Modifications Inclusive Setting (†, £)

### TOTAL CREDIT HOURS FOR GRADUATION – 126

### TOTAL ADVANCED HOURS (minimum) – 36

† Grade of "C" or better is required for graduation.

‡ Grade of "B" or better is required for graduation.

£ Maintain a minimum of 2.50 GPA with no grade lower than a C. Student must meet all Program Admission Requirements/Student Teaching Rqmts. Contact College of Education for further information.

## Bachelor of Arts

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE

COLLEGE OF LIBERAL ARTS

HISTORY

Teacher Certification

*History majors learn how to think critically and communicate effectively. These skills prepare them for a variety of professions, including government, politics, journalism, law, non-profit organizations, and education. This degree plan is specifically designed for students who want to become Social Studies teachers in Brownsville and the Lower Rio Grande Valley.*

### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Arts in History/Social Studies (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 030 – Natural Science

GEOL 1301/1101 Earth Sciences I/Lab

GEOL 1303/1103 Physical Geology/Lab

#### 090 – Institutionally Designated Option (‡)

SPCH 1315 Applied Communication is strongly recommended.

Minimum grade of B or better is required for admission into the Teacher Education program.

#### 080 – Social and Behavioral Sciences

GEOG 1303 World Regional Geography

### A – GENERAL EDUCATION CORE – 48 HOURS

### B – MAJOR REQUIREMENTS

#### 1 – Prerequisites for Admission to Teacher Education – 6 hours

EDUC 1301 Introduction to the Teaching Profession (†)

EDFR 2301 Intercultural Context of Schooling (†)

#### 2 – Pedagogy & Professional Responsibility – 18 hours (†, £)

EDUC 2303 Technology in Education (†, £)

EDSC 4328 Implementing and Assessing Eff. Sec. Content Ped. (†, £)

EPSY 4322 Human Development and Student Learning (†, £)

EDSC 4641 Student Teaching Secondary (†, £)

EDCI 3330 Designing Instruction and Assessment to Promote Student Learning (†, £)

#### 3 – Core Courses for the Major – 18 hours

HIST 2300 The Historian's Craft

HIST 2322 World History II

HIST 2301 Texas History

HIST 2380 Mexican-American Studies

HIST 2321 World History I

HIST 4399 Senior Seminar

#### 4 – United States History – 3 - 6 hours

HIST 3300 Colonial America to 1763

HIST 3305 The United States: Revolution and the New Nation, 1763-1840

HIST 3325 The United States Since 1945

HIST 3310 Expansion, War, and Reconstruction, 1840-1877

HIST 3330 U.S. Military History

HIST 3315 The Gilded Age and Progressive Era, 1877-1919

HIST 4320 Advanced Topics in American History

HIST 3320 The United States: War, Prosperity, and Depression, 1917-1945

#### 5 – World History – 3 - 6 hours

HIST 3360 Classical and Post-Classical World, 500BCE - 1450

HIST 3375 History of World War I and II

HIST 3365 First Globalization, 1450-1750

HIST 4360 Advanced Topics in World History

HIST 3370 Modern World 1750-Present

#### 6 – Latin American History – 3 - 6 hours

HIST 3380 Mexico Through Independence

HIST 3390 History of Modern Latin America

HIST 3385 Mexico Since Independence

HIST 4350 Advanced Topics in Latin American History

#### 7 – Government Electives – 12 hours

GOVT 3373 Contemporary Texas

(9 hours must be advanced 3000, 4000 level)

\*Choose at least one Upper Level course from each group:

Group 1: GOVT 3322, 3343, 4369, 4370, 4371

Group 2: GOVT 4320, 4321, 4360, 4363, 4366, 4367, 4368, 4374

#### 8 – Economics Requirements – 6 hours

ECON 2301 Principles of Macroeconomics

ECON 2302 Microeconomics

#### 9 – Geography Electives – 3 hours

GEOG 3320 Cultural Geography for Educators I or GEOG 3333 Latin American Geography

#### 10 – Combination of Subjects – 3 hours (†, £)

EDLI 4351 Content Area Literacy (†, £)

### TOTAL CREDIT HOURS FOR GRADUATION – 126

### TOTAL ADVANCED HOURS (minimum) – 36

† Grade of "C" or better is required for graduation.

‡ Grade of "B" or better is required for graduation.

£ Maintain a minimum of 2.50 GPA with a grade no lower than a C. Student must meet all Program Admission Requirements/Student Teaching Rqmts. Contact College of Education for further information.

## Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
 COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY  
 MATHEMATICS



## Teacher Certification

*Mathematics Majors with Teacher Certification are attractive to the growing demand for teachers in high schools, middle schools and elementary schools. A BS in Mathematics will prepare the graduate for an exciting and rewarding teaching position and provide the necessary preparation for graduate studies.*

### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Science in Mathematics (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 020 – Mathematics\*

MATH 2413 Calculus I

#### 090 – Institutionally Designated Option (‡)

*SPCH 1315 Applied Communication is strongly recommended. Minimum grade of B or better is required for admission into the Teacher Education program.*

### A – GENERAL EDUCATION CORE – 48 HOURS

### B – MAJOR REQUIREMENTS\*\*\*

#### 1 – Pedagogy and Professional Responsibility – 18 hours (†, £)

EDCI 1101 Step 1: Inquiring Approaches to Teaching (†, £)  
 EDCI 1102 Step 2: Inquiring Based Lesson Design (†, £)  
 EDCI 3350 Knowing and Learning in Mathematics and Science (†, £)  
 EDCI 3355 Classroom Interactions (†, £)  
 EDCI 3360 Project-Based Instruction (†, £)  
 EDCI 4650 Apprentice Teaching 6-12 (†, £)  
 EDCI 4170 Apprentice Teaching Seminar (†, £)

#### 2 – Core Courses for the Major – 30 hours

MATH 2305 Discrete Mathematics	MATH 2415 Calculus III
MATH 2318 Linear Algebra	MATH 3306 Foundation of Analysis
MATH 3331 Geometry I	MATH 3321 Algebra I
MATH 2413 Calculus I**	MATH 3349 Differential Equations
MATH 2414 Calculus II	MATH 3381 Statistics

#### 3 – Teaching Concentration – 9 hours

MATH 2303 Functions and Modeling  
 MATH 3307 Perspectives on Mathematics and Science - UTeach  
 BIOL 3304 Research Methods - UTeach

#### 4 – Math Electives – 12 hours

#### 5 – Literacy – 3 hours (£)

EDLI 4351 Content Area Literacy

### TOTAL CREDIT HOURS FOR GRADUATION – 120

### TOTAL ADVANCED HOURS (minimum) – 36

Admission requirements to this program: MATH-2414 with “C” or better grade and EDCI 1101 with a “C” or better and a minimum cumulative GPA of 2.5

† Grade of “C” or better is required for graduation.

‡ Grade of “B” or better is required for graduation.

\* Grade of “C” or better is required for a MATH course used to fulfill the General Education Core requirement (MATH-1314 College Algebra or higher).

\*\* MATH 2413 – 3 sch for general education and 1 sch toward Major requirements. Pre-requisite for Calculus I is MATH 2412-Pre-Calculus Mathematics or Departmental Placement Test.

£ Maintain a minimum of 2.50 GPA with a grade no lower than a C.

Student must meet all Program Admission Requirements/Student Teaching Requirements. Contact UTeach program for further information.

\*\* \*Prior to graduation a student must take Major Field Test in Mathematics.

## Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE

COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY

BIOLOGICAL SCIENCES



Science 8-12 Certification

*Stepping stone towards a Master degree in discipline and an Ed.D. Teaching science at the middle and senior school levels. Many enter administrative positions such as deans, asst. principals and principals etc. Can become adjunct instructors at the college level.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Science in Biology (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics\***

MATH 2413 Calculus I

**030 – Natural Sciences**

CHEM 1311/1111 General Chemistry I /Lab I

CHEM 1312/1112 General Chemistry II/Lab II

**090 – Institutionally Designated Option (‡)**

SPCH 1315 Applied Communication is strongly recommended.

Minimum grade of B or better is required for admission into the Teacher Education program.

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS****1 - Pedagogy & Professional Responsibility – 18 hours (†, £)**

EDCI 1101 Step 1: Inquiring Approaches to Teaching (†, £)

EDCI 1102 Step 2: Inquiring Based Lesson Design (†, £)

EDCI 3350 Knowing and Learning in Mathematics and Science (†, £)

EDCI 3355 Classroom Interactions (†, £)

EDCI 3360 Project-Based Instruction (†, £)

EDCI 4650 Apprentice Teaching 6-12(†, £)

EDCI 4170 Apprentice Teaching Seminar (†, £)

**2 – Core Courses for the Major – 28 hours (†)**

BIOL 1306/1106 Biology for Science Majors I/Lab I

BIOL 1307/1107 Biology for Science Majors II/Lab II

BIOL 2343/2143 General Biology III/Lab III

BIOL 3303/3103 Genetics/Lab

BIOL 3309/3109 Ecology/Lab

BIOL 3312/3112 Cell and Molecular Biology/Lab

BIOL 4100 Biology Seminar

BIOL 4301 Evolution

**3 – Biology Electives – 8 hours****(4 hours must be advanced 3000, 4000 level)****4 – Support Courses – 19 hours**

CHEM 2323/2123 Organic Chemistry I/Lab I

MATH 3307 Perspectives on Mathematics and Sciences - UTeach

BIOL 3304 Research Methods – UTeach

MATH 2413 Calculus I (†)\*\*

PHYS 1301/1101 College Physics I/Lab I

Choose 4 credits from the following courses:

PHYS 1302/1102 College Physics II/Lab II

GEOL 1303/1103 Physical Geology/Lab

GEOL 1304/1104 Historical Geology/Lab

ENVR 1301/1101 Environmental Science I/Lab I

CHEM 2325/2125 Organic Chemistry II/Lab II

**5 – Literacy – 3 hours (†, £)**

EDLI 4351 Content Area Literacy

**TOTAL CREDIT HOURS FOR GRADUATION – 124****TOTAL ADVANCED HOURS (minimum) – 36**

Admission requirements to this program: BIOL-1306/1106, BIOL-1307/1107, CHEM-1311/1111, CHEM-1312/1112, MATH-2412 (or higher) with “C” or better grade in all these courses and Departmental approval.

† Grade of “C” or better is required for graduation.

‡ Grade of “B” or better is required for graduation.

\* Grade of “C” or better is required for a MATH course used to fulfill the General Education Core requirement (MATH-1314 College Algebra or higher).

\*\* MATH 2413 – 3 sch for general education and 1 sch for support courses.

£ Maintain a minimum of 2.50 GPA with a grade no lower than a C.

## Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY  
CHEMISTRY AND ENVIRONMENTAL SCIENCES



## Science 8-12 Certification

*The Bachelor of Science in Chemistry is the basis for a number of avenues of employment and research. Careers in medicine and dentistry utilize a chemistry background. One can be employed in a wide range of laboratory research including forensic studies and pathology. Engineering and manufacturing research employ chemists. The pharmaceutical industry is a major employer of chemists. One may choose a research path in which case enrollment in graduate programs is required.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Science in Chemistry (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics\***

MATH 2413 Calculus I

**030 – Natural Sciences**

CHEM 1311/1111 General Chemistry I /Lab I

CHEM 1312/1112 General Chemistry II/Lab II

**090 – Institutionally Designated Option (‡)**

SPCH 1315 Applied Communication is strongly recommended.

Minimum grade of B or better is required for admission into the Teacher Education program.

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS****1 - Pedagogy & Professional Responsibility – 18 hours (†, £)**

EDCI 1101 Step 1: Inquiring Approaches to Teaching (†, £)

EDCI 1102 Step 2: Inquiring Based Lesson Design (†, £)

EDCI 3350 Knowing and Learning in Mathematics and Science (†, £)

EDCI 3355 Classroom Interactions (†, £)

EDCI 3360 Project Based Instruction (†, £)

EDCI 4650 Apprentice Teaching 6-12 (†, £)

EDCI 4170 Apprentice Teaching Seminar(†, £)

**2 – Core Courses for the Major – 38 hours**

CHEM 2323/2123 Organic Chemistry I /Lab I

CHEM 3310/3110 Physical Chemistry I/Lab I

CHEM 2325/2125 Organic Chemistry II/Lab II

CHEM 3312/3112 Physical Chemistry II/Lab II

CHEM 3301 Inorganic Chemistry

CHEM 4110 Chemistry Seminar

CHEM 3303/3103 Biochemistry I/Lab I

CHEM 4305/4105 Instrumental Methods of Analysis/Lab

CHEM 3305/3105 Analytical Chemistry/Lab

BIOL 3304 Research Methods - UTeach

MATH 3307 Perspectives on Mathematics and Science - UTeach

**3 – Support Courses – 19-20 hours**

PHYS 1301/1101 College Physics I/Lab I

PHYS 1302/1102 College Physics II/ Lab II

MATH 2413 Calculus I \*\*

MATH 2414 Calculus II

MATH 3349 Differential Equations *or* MATH 2415 Calculus III

COSC 1301 Introduction to Computing

**4 – Literacy – 3 hours (†, £)**

EDLI 4351 Content Area Literacy

**TOTAL CREDIT HOURS FOR GRADUATION – 126****TOTAL ADVANCED HOURS (minimum) – 36**

Admission requirements to this program: MATH-2413 Calculus I with “C” or better grade.

† Grade of “C” or better is required for graduation.

‡ Grade of “B” or better is required for graduation.

\* Grade of “C” or better is required for a MATH course used to fulfill the General Education Core requirement (MATH-1314 College Algebra or higher).

\*\* MATH 2413 – 3 sch for general education and 1 sch for support courses.

£ Maintain a minimum of 2.50 GPA with a grade no lower than a C.

## Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
 COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY  
 CHEMISTRY AND ENVIRONMENTAL SCIENCES



Science 8-12 Certification

*The Department of Chemistry and Environmental Sciences offers a Bachelor of Science degree in Environmental Sciences. Employment opportunities include government agencies, wild life refuge management, private environmental mitigation firms, legal firms, and industry. Government agencies at all levels, from local to national, employ environmental planners and managers. The environmental science degree is utilized for park and wildlife managers, from national to local levels. One may wish to become continue in research and scholarship in which case graduate studies become a necessary option. With a concentration in Geographic Information Systems one can be employed by any number of agencies which utilize mapping including law enforcement, transportation, public utilities, and commercial entities.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Science in Environmental Sciences (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**020 – Mathematics\***

MATH 1342 Elementary Statistical Methods

**080 – Social and Behavioral Sciences**

GEOG 1303 World Regional Geography

**030 – Natural Sciences**

PHYS 1301/1101 College Physics I /Lab I

CHEM 1311/1111 General Chemistry I /Lab I

**090 – Institutionally Designated Option (‡)**

*SPCH 1315 Applied Communication is strongly recommended. Minimum grade of B or better is required for admission into the Teacher Education program.*

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS – 78 HOURS****1 – Pedagogy & Professional Responsibility – 18 hours (†, £)**

EDCI 1101 Step 1: Inquiring Approaches to Teaching (†, £)

EDCI 1102 Step 2: Inquiring Based Lesson Design (†, £)

EDCI 3350 Knowing and Learning in Mathematics and Science (†, £)

EDCI 3355 Classroom Interactions (†, £)

EDCI 3360 Project Based Instruction (†, £)

EDCI 4650 Apprentice Teaching 6-12 (†, £)

EDCI 4170 Apprentice Teaching Seminar (†, £)

**2 – Core Courses for the Major – 23 hours**

ENVR 1302/1102 Environmental Science II/Lab II

ENVR 3305/3105 Oceanography/Lab

ENVR 3334 Conservation of Natural Resources

ENVR 3351 Environmental Sciences Field Methods and Data Analysis

ENVR 4301 Environmental Regulations

ENVR 4325 Environmental Science Internship

ENVR 4399 Research Problems in Environmental Sciences

**3 – Support Courses – 34 hours**

ENVR 1301/1101 Environmental Sciences I/Lab I

BIOL 1306/1106 Biology for Science Majors I/ Lab I

BIOL 1307/1107 Biology for Science Majors II/Lab II

BIOL 3304 Research Methods - UTeach

GEOL 1303/1103 Physical Geology/Lab

GEOL 1304/1104 Historical Geology/Lab

PHYS 1302/1102 College Physics II/Lab II or CHEM 1312/1112 General Chemistry II/Lab II

MATH 2413 Calculus I

MATH 3307 Perspectives on Mathematics and Science - UTeach

**4 – Literacy – 3 hours (†, £)**

EDLI 4351 Content Area Literacy

**TOTAL CREDIT HOURS FOR GRADUATION - 126****TOTAL ADVANCED HOURS (minimum) – 36**

Admission requirements to this program: ENVR-1301/1101, ENVR-1302/1102, MATH-1314 (or higher) with "C" or better grade on all these courses.

\* Grade of "C" or better is required for a MATH course used to fulfill the General Education Core requirement (MATH-1314 College Algebra or higher).

£ Maintain a minimum of 2.50 GPA with a grade no lower than a C.

† Grade of "C" or better is required for graduation.

‡ Grade of "B" or better is required for graduation.

## Bachelor of Arts

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS  
VISUAL ARTS

## Teacher Certification

A Bachelor of Arts in Arts EC-12 allows students the opportunity to become a certified art teacher and provides the necessary training in studio technique, curriculum and classroom strategies to go on to a career in arts education. Upon the completion of the degree students will be able to teach Art in any public school setting EC-12.

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Arts in Art (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education core requirements. For any additional information, please contact the Academic Advising Center.

**050 – Visual and Performing Arts**

ARTS 1303 Art History Survey I

**090 – Institutionally Designated Option (‡)**

SPCH 1315 Applied Communication is strongly recommended.  
Minimum grade of B or better is required for admission into the Teacher Education program.

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS****1 – Prerequisites for Admission to Teacher Education – 6 hours**

EDUC 1301 Introduction to the Teaching Profession (†)

EDFR 2301 Intercultural Context of Schooling (†)

**2 - Pedagogy & Professional Responsibility – 18 hours (†, £)**

EDUC 2303 Technology in Education (†, £)

EDSC 4328 Impl. & Assess. Eff. Sec. Content Ped. (†, £)\*

EPSY 4322 Human Development and Student Learning (†, £)\*

EDCI 4311 Student Teaching EC-6<sup>th</sup> (†, £)

EDCI 3330 Designing Inst. & Assess. to Promote Std. Lrng. (†, £)\*

EDSC 4398 Student Teaching All Level (†, £)

**3 – Core Courses for the Major – 21 hours**

ARTS 1304 Art History Survey II

ARTS 3381 Art Ed. Theory and Background\*

ARTS 1311 Two Dimensional Design

ARTS 3384 Art Ed. Classroom Strategies\*

ARTS 1312 Three Dimensional Design

ARTS 4301 Senior Experience

ARTS 1316 Drawing I

**4 - Choose 9 hours from the following:**

ARTS 2313 Computer Imaging I

ARTS 2346 Ceramics I

ARTS 2316 Painting I

ARTS 2356 Photography I

ARTS 2333 Printmaking I

ARTS 2326 Sculpture I

**5 - Choose 9 hours from the following:**

ARTS 1317 Drawing II

ARTS 2357 Photography II

ARTS 2314 Computer Imaging II

ARTS 2327 Sculpture II

ARTS 2317 Painting II

ARTS 2347 Ceramics II

ARTS 2334 Printmaking II

**6 - Choose 3 hours from the following:**

ARTS 3303 Italian Renaissance 1400-1650

ARTS 3338 Fundamentals of Creative and Critical Thinking in Art

ARTS 3340 History of Women in Art

ARTS 3352 Contemporary Art

ARTS 3382 19<sup>th</sup> Century European Art History

ARTS 4353 American Art History

ARTS 4354 Latin American Art and Architecture

ARTS 4355 Span Medieval, Renaissance & Baroque

ARTS 4387 Far East Art History

ARTS 4390 Topics in Art History

**7 - Choose 9 hours from the following:**

ARTS 3314 Individual Problems<sup>^</sup>

ARTS 4331 Advanced Computer Imaging<sup>^</sup>

ARTS 3321 Advanced Painting <sup>^</sup>

ARTS 4334 Advanced Printmaking<sup>^</sup>

ARTS 3323 Advanced Drawing<sup>^</sup>

ARTS 4359 Advanced Photography<sup>^</sup>

ARTS 3326 Advanced Sculpture<sup>^</sup>

ARTS 4391 Studio Art General <sup>^</sup>

ARTS 3371 Advanced Ceramics<sup>^</sup>

ARTS 4337 Internship in Art Studio<sup>^</sup>

**8 – Additional Requirements – 3 hours (†, £)**

EDLI 4351 Content Area Literacy (†, £)

**TOTAL CREDIT HOURS FOR GRADUATION - 126**

**TOTAL ADVANCED HOURS (minimum) - 36**

<sup>^</sup> May be repeated four times for credit.

£ Maintain a minimum of 2.50 GPA with a grade no lower than a C.

\* Before registration see Art Ed. Advisor.

† Grade of "C" or better is required for graduation.

‡ Grade of "B" or better is required for graduation.



# HEALTH and HUMAN PERFORMANCE – EC-12<sup>TH</sup> GRADE TEACHING (KINESIOLOGY)

BS.KINE.EC-12

2013 – 2014

## Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF EDUCATION  
HEALTH AND HUMAN PERFORMANCE

### Teacher Certification

*A baccalaureate degree in Health and Human Performance with certification prepares students for a variety of career options including but not limited to teaching physical education in the public schools; coaching sports; recreation careers; and entry level careers in fitness and health in public and corporate settings.*

### GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Science in Health and Human Performance (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

#### 030 – Natural Sciences

BIOL 2301/2101 Anatomy and Physiology I /Lab I  
BIOL 2302/2102 Anatomy and Physiology II /Lab II

#### 090 – Institutionally Designated Option

SPCH 1315 Applied Communication is strongly recommended.  
Minimum grade of B or better is required for admission into the Teacher Education program.

### A – GENERAL EDUCATION CORE – 48 HOURS

### B – MAJOR REQUIREMENTS

#### 1 – Prerequisites for Admission to Teacher Education – 6 hours

EDUC 1301 Introduction to the Teaching Profession (†)  
EDFR 2301 Intercultural Context of Schooling (†)

#### 2 - Pedagogy & Professional Responsibility – 18 hours (†, £)

EDUC 2303 Technology in Education (†, £)  
EPSY 4322 Human Development and Student Learning (†, £)  
EDCI 3330 Designing Instruction and Assessment to Promote Student Learning (†, £)  
EDSC 4328 Implementing and Assessing Effective Secondary Content Pedagogy (†, £)  
EDCI 4311 Student Teaching EC-6<sup>th</sup> (†, £)  
EDSC 4398 Student Teaching All Level (†, £)

#### 3 – Certification Fields – 39 hours

KINE 11__ Team Sport	KINE 3340 Principles of Wellness and Fitness
KINE 11__ Individual Sport	KINE 3353/3153 Physiology of Exercise and Human Performance/Lab
KINE 1111 Folk and Square Dance	KINE 3356 Motor Development
KINE 1124 Swimming	KINE 3370 Biomechanics
KINE 1133 Basic Sports Skills	KINE 4302 Kinesiology Curriculum for Elementary Students
KINE 1306 First Aid/First Responder	KINE 4309 Kinesiology Curriculum for Secondary School Students
KINE 3314 Dance for Children and Adolescents	KINE 4310 Measurement Tech. in Physical Ex. & Sports
KINE 3330 Coaching of Sports	KINE 4351 The Adapted Kinesiology Program

#### 4 – Electives – 12 hours

(6 hours must be advanced 3000, 4000 level)

#### 5 – Additional Requirements – 3 hours (†, £)

EDLI 4351 Content Area Literacy

### TOTAL CREDIT HOURS FOR GRADUATION – 126

### TOTAL ADVANCED HOURS (minimum) – 36

† Grade of “C” or better is required for graduation.

£ Maintain a minimum 2.50 GPA with no grade lower than a C.

Student must meet all Program Admission Requirements/ Student Teaching Rqmts. Contact College of Education for further Information.

**Team and Individual Activity Courses**

<b>Course</b>	<b>Title</b>	<b>Activity Type</b>
KINE-1101	Aerobic Dance and Exercise	Individual
KINE-1102	Angling and Baitcasting	Individual
KINE-1103	Archery	Individual
KINE-1104	Badminton	Individual
KINE-1105	Ballet I	Individual
KINE-1106	Ballet II	Individual
KINE-1107	Basketball	Team
KINE-1108	Body Mechanics (Women Only)	Individual
KINE-1109	Bowling	Individual
KINE-1110	Flag Football	Team
KINE-1112	Folklorico	Individual
KINE-1113	Golf	Individual
KINE-1114	Gymnastics	Individual
KINE-1115	Jazz and Modern Dance	Individual
KINE-1116	Jogging	Individual
KINE-1117	Paddle Tennis	Individual
KINE-1118	Pington	Individual
KINE-1119	Racquetball	Individual
KINE-1120	Sailing	Individual
KINE-1121	Self-Defense	Individual
KINE-1122	Soccer	Team
KINE-1123	Softball	Team
KINE-1125	Table Tennis	Individual
KINE-1126	Tap Dance	Individual
KINE-1127	Tennis I	Individual
KINE-1128	Tennis II	Individual
KINE-1129	Volleyball	Team
KINE-1130	Weight Training	Individual
KINE-1131	Wrestling	Individual
KINE-1132	Surfing	Individual
KINE-1134	Physical Conditioning	Individual
KINE-1135	Activities for Elementary School Students	Individual
KINE-1136	Activities for Secondary School Students	Individual

## Bachelor of Music

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF LIBERAL ARTS  
MUSIC

## Teacher Certification

*This degree is designed to fully develop the musical performance and teaching abilities of guitar students. Students will develop a firm understanding of solo and ensemble pedagogy in terms of processes, mechanics, and sequence while becoming familiar with pedagogic repertoire, teaching methods, and resource materials.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Music – Guitar (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**011 – Additional Communication**

FREN 1311 Beginning French I  
GERM 1311 Beginning German I

**50 – Visual and Performing Arts**

MUSI 1308 Music Literature and History I

**090 – Institutionally Designated Option (‡)**

SPCH 1315 *Applied Communication is strongly recommended.*  
*Minimum grade of B or better is required for admission into the Teacher Education program.*

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS****1 – Prerequisites for Admission to Teacher Education– 6 hours (†)**

EDUC 1301 Introduction to the Teaching Profession (†)  
EDFR 2301 Intercultural Context of Schooling (†)

**2 – Pedagogy & Professional Responsibility – 18 hours (†, £)**

EDUC 2303 Technology in Education (†, £) (Music Education Majors should contact advisor)  
EPSY 4322 Human Development and Student Learning (†, £)  
EDCI 3330 Designing Inst. & Assess. to Promote Stud. Lear. (†, £) (Music Education Majors should contact advisor)  
EDSC 4328 Implementing and Assessing Effective Secondary Content Pedagogy (†, £) (Music Education Majors should contact advisor)  
EDCI 4311 Student Teaching EC-6<sup>th</sup> (†, £)  
EDSC 4398 Student Teaching All Level (†, £)

**3 – Core Courses for the Major – 41 hours**

MUSI 1181 Piano Class \*(Student must continue to register for this class until Music Dept. piano proficiency is passed).  
MUSI 1211/1111 Music Theory I (†)  
MUSI 1212/1112 Music Theory II (†)  
MUSI 2211/2111 Music Theory III (†)  
MUSI 2212/2112 Music Theory IV (†)  
MUSI 3211 Orchestration and Arranging \* (†) (Student must pass an aural skills and piano prof. exam before enrolling in MUSI 3211).  
MUSI 3289 Introduction to Conducting (†)  
MUSI 3307 Secondary Instrumental Techniques  
MUSI 3312 Counterpoint and Analysis  
MUSI 3308 Music History II  
MUSI 3309 Music History III  
MUSI 4289 Advanced Conducting  
MUSI 4301 Senior Experience in Music  
MUAP 1187 (†), 1188 (†), 2187 (†), 2188 (†), 3101 (†), 3102 (†), 4101 (†) (Student must pass a sophomore recital before enrolling in MUAP 3301).  
Student must pass a junior/senior recital before enrolling EDCI 4311 and EDSC 4398.  
*MUSI 3304 Elem. Music Tech., MUSI 3306 Sec. Chor. Tech., and MUSI 4211 Computer App. \* Recommended for teacher certification. See Advisor.*

**4 – Guitar Option Courses – 10 hours**

MUSI 1183 Voice Class I (Applied Voice may be substituted)  
MUSI 1188 Percussion Class  
MUSI 1189 Strings Class I (Applied Violin may be substituted)

MUSI 2189 Strings Class II (Applied Cello may be substituted)  
MUSI 3380 Music Pedagogy  
MUEN 1137/3137 Guitar Ensemble (3 core ensemble)  
Must be enrolled in Guitar Ensemble (core ensemble) and an elective ensemble each semester.

**5 – Additional Requirements – 3 hours (†)**

EDLI 4351 Content Area Literacy (†)

**TOTAL CREDIT HOURS FOR GRADUATION – 126****TOTAL ADVANCED HOURS (minimum) – 36**

£ Maintain a minimum of 2.50 GPA with no grade lower than a C.

† Grade of “C” or better is required for graduation.

‡ Grade of “B” or better is required for graduation.

## Bachelor of Music

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF LIBERAL ARTS  
MUSIC

## Teacher Certification

*The program is designed to train students for future careers teaching music at the elementary, middle school, and high school levels, specifically in instrumental music. Studies in instrumental techniques form the foundation of the degree; musicianship, music theory, aural skills, and conducting are also key areas of focus. Students in this program develop facility in public speaking, musical performance, and analytical skills*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Music – Instrumental (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**011 – Additional Communication**

FREN 1311 Beginning French I

GERM 1311 Beginning German I

**090 – Institutionally Designated Option (‡)**SPCH 1315 *Applied Communication is strongly recommended.**Minimum grade of B or better is required for admission into the Teacher Education program.***50 – Visual and Performing Arts**

MUSI 1308 Music Literature and History I

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS****1 – Prerequisites for Admission to Teacher Education– 6 hours (†)**

EDUC 1301 Introduction to the Teaching Profession (†)

EDFR 2301 Intercultural Context of Schooling (†)

**2 – Pedagogy & Professional Responsibility – 18 hours (†, £)**

EDUC 2303 Technology in Education (†, £) (Music Education Majors should contact advisor)

EPSY 4322 Human Development and Student Learning (†, £)

EDCI 3330 Designing Inst. &amp; Assess. to Promote Stud. Lear. (†, £)(Music Education Majors should contact advisor)

EDSC 4328 Implementing and Assessing Effective Secondary Content Pedagogy (†, £) (Music Education Majors should contact advisor)

EDCI 4311 Student Teaching EC-6<sup>th</sup> (†, £)

EDSC 4398 Student Teaching All Level (†, £)

**3 – Core Courses for the Major – 41 hours**

MUSI 1181 Piano Class \*(Student must continue to register for this class until Music Dept. piano proficiency is passed).

MUSI 1211/1111 Music Theory I (†)

MUSI 1212/1112 Music Theory II (†)

MUSI 2211/2111 Music Theory III (†)

MUSI 2212/2112 Music Theory IV (†)

MUSI 3211 Orchestration and Arranging \* (†) (Student must pass an aural skills and piano prof. exam before enrolling in MUSI 3211).

MUSI 3289 Introduction to Conducting (†)

MUSI 3307 Secondary Instrumental Techniques

MUSI 3308 Music History II

MUSI 3309 Music History III

MUSI 3312 Counterpoint and Analysis

MUSI 4289 Advanced Conducting

MUSI 4301 Senior Experience in Music

MUAP 1187 (†), 1188 (†), 2187 (†), 2188 (†), 3101 (†), 3102 (†), 4101 (†) (Student must pass a sophomore recital before enrolling in MUAP 3301).

Student must pass a junior/senior recital before enrolling EDCI 4311 and EDSC 4398.

*MUSI 3304 Elem. Music Tech., MUSI 3306 Sec. Chor. Tech., and MUSI 4211 Computer App. \* Recommended for teacher certification. See Advisor.***4 – Instrumental Option Courses – 10 hours**

MUSI 1188 Percussion Class

MUSI 1189 Strings Class I (Applied Violin may be substituted)

MUSI 1168 High Brass Class

MUSI 2168 Low Brass Class

MUSI 1166 Woodwind Class I

MUSI 2166 Woodwind Class II

Choose 4 hours of MUEN Ensembles \*Must be enrolled in core ensemble and an elective ensemble each semester.

**5 – Additional Requirements – 3 hours (†)**

EDLI 4351 Content Area Literacy (†)

**TOTAL CREDIT HOURS FOR GRADUATION – 126****TOTAL ADVANCED HOURS (minimum) - 36**

£ Maintain a minimum of 2.50 GPA with no grade lower than a C.

† Grade of "C" or better is required for graduation.

‡ Grade of "B" or better is required for graduation.

## Bachelor of Music

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE

COLLEGE OF LIBERAL ARTS

MUSIC

Teacher Certification

The program is designed to train students for future careers teaching music at the elementary, middle, school, and high school levels, specifically in choral music and class piano. Studies in piano technique form the foundation of the degree; musicianship, music theory, aural skills, and conducting are also key areas of focus. Students in this program develop facility in public speaking and musical performance, analytical skills, and competence in several languages.

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Music – Keyboard (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**011 – Additional Communication**

FREN 1311 Beginning French I

GERM 1311 Beginning German I

**090 – Institutionally Designated Option (‡)**

SPCH 1315 Applied Communication is strongly recommended.

Minimum grade of B or better is required for admission into the Teacher Education program.

**050 – Visual and Performing Arts**

MUSI 1308 Music Literature and History I

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS****1 – Prerequisites for Admission to Teacher Education – 6 hours (†)**

EDUC 1301 Introduction to the Teaching Profession (†)

EDFR 2301 Intercultural Context of Schooling (†)

**2 – Pedagogy & Professional Responsibility – 18 hours (†, £)**

EDUC 2303 Technology in Education (†, £) (Music Education Majors should contact advisor)

EPSY 4322 Human Development and Student Learning (†, £)

EDCI 3330 Designing Inst. &amp; Assess. to Promote Stud. Lear. (†, £) (Music Education Majors should contact advisor)

EDSC 4328 Implementing and Assessing Effective Secondary Content Pedagogy (†, £) (Music Education Majors should contact advisor)

EDCI 4311 Student Teaching EC-6<sup>th</sup> (†, £)

EDSC 4398 Student Teaching All Level (†, £)

**3 – Core Courses for the Major – 41 hours**

MUSI 1181 Piano Class \*(Student must continue to register for this class until Music Dept. piano proficiency is passed).

MUSI 1211/1111 Music Theory I (†)

MUSI 1212/1112 Music Theory II (†)

MUSI 2211/2111 Music Theory III (†)

MUSI 2212/2112 Music Theory IV (†)

MUSI 3211 Orchestration and Arranging \* (†) (Student must pass an aural skills and piano prof. exam before enrolling in MUSI 3211).

MUSI 3289 Introduction to Conducting (†)

MUSI 3307 Secondary Instrumental Techniques

MUSI 3308 Music History II

MUSI 3309 Music History III

MUSI 3312 Counterpoint and Analysis

MUSI 4289 Advanced Conducting

MUSI 4301 Senior Experience in Music

MUAP 1187 (†), 1188 (†), 2187 (†), 2188 (†), 3101 (†), 3102 (†), 4101 (†) (Student must pass a sophomore recital before enrolling in MUAP 3301).

Student must pass a junior/senior recital before enrolling EDCI 4311 and EDSC 4398.

MUSI 3304 Elem. Music Tech., MUSI 3306 Sec. Chor. Tech., and MUSI 4211 Computer App. \* Recommended for teacher certification. See Advisor.

**4 – Keyboard Option Courses – 10 hours**

MUSI 3370 Topics in Music Literature

MUSI 3380 Music Pedagogy

MUEN 1142/3142 Accompanying (4 core ensembles)

Choose MUEN Secondary Ensembles \*Must be enrolled in core ensemble and an elective ensemble each semester.

**5 – Additional Requirements – 3 hours (†)**

EDLI 4351 Content Area Literacy (†)

**TOTAL CREDIT HOURS FOR GRADUATION – 126****TOTAL ADVANCED HOURS (minimum) – 36**

£ Maintain a minimum of 2.50 GPA with no grade lower than a C.

† Grade of "C" or better is required for graduation.

‡ Grade of "B" or better is required for graduation.

## Bachelor of Music

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE

COLLEGE OF LIBERAL ARTS

MUSIC

Teacher Certification

*The program is designed to train students for future careers teaching music at the elementary, middle school, and high school level, specifically in choral music. Studies in classical vocal technique form the foundation of the degree; musicianship, music theory, aural skills, and conducting are also key areas of focus. Students in this program develop facility in public speaking and musical performance, analytical skills and competence in several languages.*

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Music – Vocal (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**011 – Additional Communication**

FREN 1311 Beginning French I  
GERM 1311 Beginning German I

**050 – Visual and Performing Arts**

MUSI 1308 Music Literature and History I

**090 – Institutionally Designated Option (‡)**

SPCH 1315 *Applied Communication is strongly recommended.*  
*Minimum grade of B or better is required for admission into the Teacher Education program.*

**A – GENERAL EDUCATION CORE – 48 HOURS****B – MAJOR REQUIREMENTS****1 – Prerequisites for Admission to Teacher Education – 6 hours (†)**

EDUC 1301 Introduction to the Teaching Profession (†)  
EDFR 2301 Intercultural Context of Schooling (†)

**2 – Pedagogy & Professional Responsibility – 18 hours (†, £)**

EDUC 2303 Technology in Education (†, £) (Music Education Majors should contact advisor)  
EPSY 4322 Human Development and Student Learning (†, £)  
EDCI 3330 Designing Inst. & Assess. to Promote Stud. Lear. (†, £) (Music Education Majors should contact advisor)  
EDSC 4328 Implementing and Assessing Effective Secondary Content Pedagogy (†, £) (Music Education Majors should contact advisor)  
EDCI 4311 Student Teaching EC-6<sup>th</sup> (†, £)  
EDSC 4398 Student Teaching All Level (†, £)

**3 – Core Courses for the Major – 41 hours**

MUSI 1181 Piano Class \*(Student must continue to register for this class until Music Dept. piano proficiency is passed).  
MUSI 1211/1111 Music Theory I (†)  
MUSI 1212/1112 Music Theory II (†)  
MUSI 2211/2111 Music Theory III (†)  
MUSI 2212/2112 Music Theory IV (†)  
MUSI 3211 Orchestration and Arranging \* (†) (Student must pass an aural skills and piano prof. exam before enrolling in MUSI 3211).  
MUSI 3289 Introduction to Conducting (†)  
MUSI 3307 Secondary Instrumental Techniques  
MUSI 3308 Music History II  
MUSI 3309 Music History III  
MUSI 3312 Counterpoint and Analysis  
MUSI 4289 Advanced Conducting  
MUSI 4301 Senior Experience in Music  
MUAP 1187 (†), 1188 (†), 2187 (†), 2188 (†), 3101 (†), 3102 (†), 4101 (†) (Student must pass a sophomore recital before enrolling in MUAP 3301).  
Student must pass a junior/senior recital before enrolling EDCI 4311 and EDSC 4398.  
*MUSI 3304 Elem. Music Tech., MUSI 3306 Sec. Chor. Tech., and MUSI 4211 Computer App. \* Recommended for teacher certification. See Advisor.*

**4 – Vocal Option Courses – 10 hours**

MUSI 1162 Diction I  
MUSI 1165 Diction II  
MUSI 3380 Music Pedagogy  
Choose 5 hours of MUEN Ensembles \*Must be enrolled in core ensemble and an elective ensemble each semester.

**5 – Additional Requirements – 3 hours (†)**

EDLI 4351 Content Area Literacy (†)

**TOTAL CREDIT HOURS FOR GRADUATION – 126****TOTAL ADVANCED HOURS (minimum) – 36**

£ Maintain a minimum of 2.50 GPA with no grade lower than a C.

† Grade of “C” or better is required for graduation.

‡ Grade of “B” or better is required for graduation.

## Bachelor of Arts

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS  
MODERN LANGUAGES

## Teacher Certification

In addition to **Education** (Public and Private K-12 Schools, Student Exchange Programs, Corporate Programs for Foreign Transfers), a student with a BA degree in Spanish EC-12 may consider work in the following areas: **Government** (Armed Forces, Department of Justice, Immigration & Naturalization Service), **Non-Profit Organizations** (Civic Organizations, International Exchange Programs, Social Work and Social Services), **Commerce** (Customer Service, Translation and Interpretation, Research, Marketing Firms), **Travel and Tourism** (Airlines and Airports, Travel Agencies, Convention Centers), **Arts Media & Entertainment** (Advertising, Foreign News Agencies, Museums) or **Public Service** (Civil Service, International Service Organizations, Social and Rehab Services).

**GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR**

Students seeking the Bachelor of Arts in Spanish (Teacher Certification) must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

**011 – Additional Communication**

SPAN 2313 Spanish for Native/Heritage Speakers I  
SPAN 2315 Spanish for Native/Heritage Speakers II

**090 – Institutionally Designated Option (‡)**

SPCH 1315 Applied Communication is strongly recommended.  
Minimum grade of B or better is required for admission into the Teacher Education program.

**A – GENERAL EDUCATION CORE – 48 HOURS****B – REQUIREMENTS – 57 HOURS****1 – Prerequisites for Admission to Teacher Education – 6 hours**

EDUC 1301 Introduction to the Teaching Profession (†)      EDFR 2301 Intercultural Context of Schooling (†)

**2 – Pedagogy & Professional Responsibility – 18 hours (£)**

EDUC 2303 Technology in Education (†, £)      EDSC 4328 Implementing & Assess. Eff. Sec. Cont. Ped. (†, £)  
EPSY 4322 Human Development and Student Learning (†, £)      EDCI 4311 Student Teaching – EC – 6<sup>th</sup> (†, £)  
EDCI 3330 Designing Inst. & Assess to Promote Stud. Learn. (†, £)      EDSC 4398 Student Teaching - All Level (†, £)

**3 – Core Courses for the Major – 33 hours**

SPAN 3301 Spanish Literature (1100 - 1750)  
SPAN 3302 Spanish Literature (1750 - present) **or** SPAN 3309 Contemporary Spanish Literature  
SPAN 3303 Advanced Spanish Grammar and Composition I  
SPAN 3304 Advanced Spanish Grammar and Composition II  
SPAN 3310 Masterpieces of Spanish American Literature I  
SPAN 3311 Masterpieces of Spanish American Literature II  
SPAN 4310 Spanish Phonology and Phonetics **or** SPAN 4317 Spanish Language in Social Context  
SPAN 4368 Children's Literature in Spanish  
SPAN 4371 Chicano Narrative

Select 6 hours from the following list:

SPAN 3340 The Hispanic World  
SPAN 4303 Hispanic Civilization  
SPAN 4373 Topic Studies in Hispanic Culture  
SPAN 4312 Structure of the Spanish Language

**C – SUPPORT AREA AND/OR MINOR AND/OR ELECTIVES - 18 HOURS****D – ADDITIONAL REQUIREMENTS – 3 HOURS (£)**

EDLI 4351 Content Area Literacy

**TOTAL CREDIT HOURS FOR GRADUATION – 126****TOTAL ADVANCED HOURS (minimum) – 36**

† Grade of "C" or better is required for graduation.

‡ Grade of "B" or better is required for graduation.

£ Maintain a minimum of 2.50 GPA with no grade lower than a C.

Student must meet all Program Admission Requirements/Student Teaching Rqmts. Contact College of Education for further information.

**2013 - 2014 MINORS**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE

<u><b>ART</b></u>	<b>30 Hrs.</b>	<u><b>ART HISTORY</b></u>	<b>18 Hrs.</b>	<u><b>BUSINESS ADMINISTRATION</b></u>	<b>18 Hrs.</b>
ARTS 1303 Art History Survey I	3	ARTS 1303 Art History Survey I	3	BUSI 1301 Intro. to Business	3
ARTS 1304 Art History Survey II	3	ARTS 1304 Art History Survey II	3	ACCT 2301 Prin. of Accounting I	3
ARTS 1311 Two-dimensional Design	3	12 hours of Upper Division Art History		ECON 2301 Prin. of Macroeconomics <u>or</u>	
ARTS 1312 Three-dimensional Design	3	ARTS 4390 Topics in Art History	3	ECON 2302 Microeconomics	3
ARTS 1316 Drawing I	3	ARTS (Adv. Elective 3000/4000)	3	MANA 3361 Principles of Management	3
ARTS 1317 Drawing II	3	ARTS (Adv. Elective 3000/4000)	3	MARK 3371 Principles of Marketing	3
3 hours: Choose from ARTS 2313, 2316, 2326, 2333, <u>or</u> 2346	3	ARTS (Adv. Elective 3000/4000)	3	Any Adv. Business Elective 3000/4000	3
9 hrs of Upper Div. Art History/Studio					
ARTS (Adv. Elective 3000/4000)	3				
ARTS (Adv. Elective 3000/4000)	3				
ARTS (Adv. Elective 3000/4000)	3				
<u><b>FRENCH</b></u>	<b>21 Hrs</b>	<u><b>MILITARY SCIENCE</b></u>	<b>18 Hrs</b>	<u><b>SPANISH *</b></u>	<b>18 Hrs.</b>
FREN 1311 Elementary French I	3	ROTC 3202 Advanced Army Physical Training	2	SPAN (Adv. Elective 3000/4000)	3
FREN 1312 Elementary French II	3	ROTC 3401 Adaptive Tactical Leadership	4	SPAN (Adv. Elective 3000/4000)	3
[FREN 2311 Intermediate French I <u>and</u>	} 6	ROTC 3402 Leadership in Changing Environments	4	SPAN (Adv. Elective 3000/4000)	3
FREN 2312 Intermediate French II] <u>or</u>		ROTC 4401 Developing Adaptive Leaders	4	SPAN (Adv. Elective 3000/4000)	3
FREN 2612 Intensive. Interm. French II		ROTC 4403 Leadership in a Complex World	4	SPAN (Adv. Elective 3000/4000)	3
FREN 3330 Direct Fr. Translation <u>or</u>	} 3			SPAN (Adv. Elective 3000/4000)	3
FREN 4330 Inverse Fr. Translation					
FREN 3337 French Grammar & Comp.	3				
FREN 4335 Topics in Fr. Lang. <u>or</u>	} 3				
FREN 4338 French Culture					



**Institutional Award****THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF LIBERAL ARTS  
HISTORY****FIRST SEMESTER**

HIST 2380 Mexican American History **or** SOCI 2319 Mexican American Experience  
INDS 3304 Frontier Studies: The U.S. - Mexico Border

**SECOND SEMESTER**

Choose 6 hours of the following Upper Level electives:

ANTH 3375 Mexican American Folklore  
ANTH 3301 Cultures & Communities of Latin America  
ANTH 4353 Ritual, Belief, and Healing  
ARTS 4354 Latin American Art and Architecture  
COMM 3316 Intercultural Communication  
COMM 4303 Special Topics in Communication  
ENGL 4316 Mexican American Literature  
GEOG 3333 Latin American Geography  
GEOL 4350 Geoscience Field Excursion  
GOVT 3363 American Hispanic Politics  
GOVT 4376 Contemporary Issues in Homeland Security  
GOVT 4369 Latin American Politics  
HIST 3340 Texas History  
HIST 3334 Mexico and the Borderlands Through Independence  
HIST 3335 Mexico Since Independence  
INDS 3303 Culture and Humanity: Human Diversity Cross Cultural Perspective  
MUSI 3305 History and Style of Mariachi  
SOCI 3323 Hispanics in a Global Society  
SOCI 4325 Population and Migration  
SPAN 3340 The Hispanic World  
SPAN 4371 Chicano Narrative

**THIRD SEMESTER**

Choose a capstone topics course with an experiential learning component:

CRJ 4362 Topics in Criminal Justice  
GOVT 4368 Topics in American Government  
HIST 4350 Topics in Latin American History  
SOCI 4374 Topics in Sociology  
SPAN 4373 Topics in Hispanic Culture  
ARTS 4390 Topics in Arts History

**TOTAL CREDIT HOURS REQUIRED TO COMPLETE PROGRAM – 15**

- Topics courses may be used as electives (Courses 3-4) and repeated for credit so long as the topic is appropriate and has the director's approval.
- The "Capstone" Topics Course may be taken only once and must be taken last.
- Students wishing to culminate their studies for the Border Studies Certificate would enroll in the Topics Course designated that semester as the "Capstone Experience" course for Border Studies. The Schedule of Classes published each semester will identify the specific Topics Course designated to satisfy the requisites for the Border Studies Capstone Course. Students in the Border Studies Certificate Program should also maintain frequent contact with the Border Studies Program Director for program information and advance notice of course offerings.
- Candidates for the Border Studies Certificate must possess a 3.0 cumulative GPA in their five border studies courses to receive certification.
- Border Studies Certificates will be awarded to students who have completed all certificate program requirements AND all requirements for a Bachelors degree.

## Institutional Award

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS  
MUSIC

### FIRST SEMESTER

MUSI 2310 Special Topics in Music - Jazz History

MUSI 1114 Keyboard Skills I

MUSI 1263 Improvisation

Choose one course from:

MUEN 1122 Jazz Band

MUEN 3122 Jazz Band

MUEN 1135 Jazz Combo

MUEN 3135 Jazz Combo

MUEN 1141 Chamber Ensemble – Latin Jazz Combo

MUEN 1137 Jazz Guitar Ensemble

MUEN 3137 Jazz Guitar Ensemble

### SECOND SEMESTER

MUSI 1115 Keyboard Skills II

MUSI 3313 Advanced Jazz Harmony

MUSI 3363 Intermediate Jazz Improvisation

Choose one course from:

MUEN 1122 Jazz Band

MUEN 3122 Jazz Band

MUEN 1135 Jazz Combo

MUEN 3135 Jazz Combo

MUEN 1141 Chamber Ensemble – Latin Jazz Combo

MUEN 1137 Jazz Guitar Ensemble

MUEN 3137 Jazz Guitar Ensemble

The program would consist of 14 semester hours and approximately 352 contact hours.

**TOTAL CREDIT HOURS REQUIRED TO COMPLETE PROGRAM - 14**

**Institutional Award**

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHWEST COLLEGE  
COLLEGE OF LIBERAL ARTS  
MUSIC

**FIRST SEMESTER**

**Mariachi ensemble:**

MUEN 1139 Instrumental Chamber Ensemble **or** MUEN 1140 Instrumental Chamber Ensemble

**Mariachi Methods courses:**

MUSI 1105.03 Special Topics in Armonia/Guitarron

MUSI 1105.02 Basics in Mariachi Strings

**Choose one from the following methods course:**

MUSI 1105.01 Basics in Mariachi Trumpet

MUSI 1105.04 Basics in Mariachi Vocal Techniques

**Additional Courses:** (These can be taken in any semester)

MUAP x2xx Applied Music in primary Instrument

MUSI 4211 Computer Application in Music

**8 Semester credits**

**SECOND SEMESTER**

**Mariachi ensemble-choose one from:**

MUEN 1139 Instrumental Chamber Ensemble **or** MUEN 1140 Instrumental Chamber Ensemble

**Mariachi methods courses:**

MUSI 1105.03 Basic in Armonia /Guitarron II

MUSI 1105.02 Basics in Strings II

**Choose one from the following methods course:**

MUSI 1105.01 Basic in Mariachi Trumpet

MUSI 1105.04 Basic in Mariachi Vocal Techniques

**Additional Courses**

MUSI 2310 Transcription and Transposition Techniques (There are some courses that can serve as substitutes for this course such as Orchestration or a Music theory course.)

MUAP x2xx Applied Music in Primary Instrument

**9 Semester Credit Hours**

**TOTAL CREDIT HOURS REQUIRED TO COMPLETE PROGRAM - 17**

## Institutional Award

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS  
CRIMINAL JUSTICE

### Natural Science Requirement – 8 Hours

BIOL 1306/1106 Biology for Science Majors I/Lab I  
CHEM 1311/1111 General Chemistry I/Lab I

### Law Requirement – 6 Hours

CRIJ 1310 Fundamentals of Criminal Law  
CRIJ 2320 Evidence for Forensic Investigation

### Forensic Investigation Requirements – 9 Hours

CRIJ 2315 Forensic Investigation I  
CRIJ 2416 Forensic Investigation II  
CRIJ 2230 Seminar in Forensics Investigation

### Elective Requirements – 3 Hours

CRIJ 2325 Medical-Legal Forensics Investigation *or* ARTS 2356 Photography I

**TOTAL CREDIT HOURS REQUIRED TO COMPLETE PROGRAM - 26**

## Institutional Award

THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
COLLEGE OF LIBERAL ARTS  
MODERN LANGUAGE

This certification will provide students with an added value to their programs of studies, opening additional opportunities in today's job market. Globalization and the growth of the Hispanic population in the United States have spurred demand for this type of certification, and the job market embraces graduates who have specialized skills in the medical field.

### REQUIRED COURSES

- SPAN 2316 Career Spanish I (Traditionally taught in UTB/TSC as an Introduction to Medical Interpreting and Terminology)
- SPAN 2389.01 Academic Cooperative (Basic Translation into English)
- SPAN 2389.02 Academic Cooperative (Basic Translation into Spanish)
- SPAN/TRSP The student will choose **one** of the following upper division courses:
  - SPAN/TRSP 3332 Spanish/English Translation
  - or
  - SPAN/TRSP 3333 English/Spanish Translation
  
- INTG/TRSP 4366 Interpreting I

**TOTAL CREDIT HOURS FOR CERTIFICATION – 15**

Course	Course Title	Course Description
ACCT-2301	Principles of Accounting I	Financial accounting applies to sole proprietorships, partnerships, and corporations. Financial accounting systems and accounting for equity rights are also covered. BBA degrees require that this course be passed with a C or better. Lec 3, Cr 3
ACCT-2302	Principles of Accounting II	Managerial accounting includes systems, budgeting, and financial analysis quantitative techniques. Accounting for departments and branches and price level change as they affect decision-making are also covered. BBA degrees require that this course be passed with C or better. Lec 3, Cr 3
ACCT-3321	Intermediate Accounting I	The accounting process and financial statements, present value concepts, a detailed study of current assets and current liabilities, property, plant and equipment, intangible assets. Lec 3, Cr 3
ACCT-3322	Intermediate Accounting II	The continuing study of Intermediate Accounting I, long term liabilities, long term investments, capital structure and earnings per share, pension costs, leases, statement of charges in financial position. Lec 3, Cr 3
ACCT-3323	Federal Income Tax	Analysis of federal tax laws is the focus of this course. Determining net taxable income and preparing income tax returns for individuals are emphasized. BBA degrees require that this course be passed with a "C" or better. Lec 3, Cr 3
ACCT-3324	Cost Management	Basic cost accounting concepts and techniques, with an emphasis on providing information for management decision-making. Topics include job and process costing, cost-volume-profit analysis, budgeting, standard costs and variance analysis, direct costing, cost behavior and relevant costs. Lec 3, Cr 3
ACCT-3325	Governmental and Not-For-Profit Accounting	The special features of fund accounting as applied to not-for-profit entities, municipalities, school districts and other governmental units. Lec 3, Cr 3
ACCT-3351	Accounting Information Systems	This course addresses issues associated with the expanding role of information systems and accounting information systems in organizations, including their development and use, strategic impact, and international implications. Lec 3, Cr 3
ACCT-4321	Advanced Accounting	The theory and techniques of consolidated financial statements are the focus of this course. Accounting for partnerships is also covered. Lec 3, Cr 3
ACCT-4323	Contemporary Accounting Theory	Contemporary advanced accounting and auditing theory, including controversial issues, with emphasis on income determination and asset valuation particular attention is given to current publications of professional and governmental agencies. Lec 3, Cr 3
ACCT-4324	Auditing	Auditing standards and procedures applied by public accountants and internal auditors in examining financial statements are the focus of this course including the verification of underlying data. Elements of operational and compliance auditing may be also covered. BBA degrees require that this course be passed with a "C" or better. Lec 3, Cr 3
ACCT-4328	Seminar in Auditing	The auditing philosophy and contemporary auditing issues are examined, including research of public company (PCAOB) auditing standards and nonpublic company (AICPA) auditing standards and applicable GAAP. Governmental, not-for-profit auditing issues, and internal auditing concepts may also be covered. Lec 3, Cr 3
ACCT-4329	Corporation and Partnership Tax	Analysis of tax laws applicable to partnerships and corporations. Federal gift, estate and inheritance taxes may also be covered. Lec 3, Cr 3
ACCT-4331	Accounting Research	This course covers research and analysis of accounting problems and cases. Authoritative literature such as the Internal Revenue Code & Treasury Regulations, FASB Codification, and AICPA Professional Standards in used. Lec 3, Cr 3
ACCT-4345	Accounting Internship	Supervised full-time or part-time, off campus training in public accounting, industry, or government. Oral and written required. Students must apply to program and be accepted prior to registration. May not be repeated for credit. Intern 20, Cr 3
ACCT-4350	Ethics for Accountants	The principles of integrity, objectivity, independence and professionalism are examined in this introduction to ethical reasoning. This course also teaches compliance with the Rules of Professional Conduct. It is designed to satisfy the requirements of the Texas State Board of Public Accountancy for CPA exam candidates. Lec 3, Cr 3
ACCT-4351	Fraud Examination	This course will examine various aspects of fraud prevention and detection including the following: elements of fraud, types of fraud involving accounting information, costs of fraud, use of controls to prevent fraud, and fraud examination and detection methods. Case analysis and expert witness presentations may be emphasized. Lec 3, Cr 3.

ACCT-4377	Topics in Accounting	The course will cover significant topics related to Accounting. It may be repeated for credit when topic varies. Lec 3, Cr 3.
ALAW-3300	Foundations of Law	This course surveys the origins and development of the American legal system. Topics include legal principles and procedures, federal and state courts, legal terminology, research, and resources, professional organizations, and ethical responsibilities. Lec 3, Cr 3
ALAW-3307	Civil Litigation Advanced	This course covers concepts and procedures, research, and analysis of major concepts of civil litigation. Practical experiences include research and drafting of pre-trial, trial, post-trial documents. Lec 3, Cr 3
ALAW-3312	Evidence	This course covers the rules, techniques and methods applied to the acquisitions, admissibility and use of evidence in trial and administrative proceedings. Practical experiences include research and drafting legal documents in the context of evidentiary situations. Lec 3, Cr 3
ALAW-3315	Criminal Law and Procedure - Advanced	This course will focus on the research and writing of constitutional and legal criminal law issues. The class will cover the critical analysis of legal issues as they relate to the criminal prosecution and defense and will include issues spotting, legal research, and synthesizing of the issue and research. Lec 3, Cr 3
ALAW-4301	Legal Research and Writing	This course focuses on the goals and processes of legal research and the development of legal research, analysis and writing skills. Topics include traditional and electronic legal resources, correct citation of legal authority, and drafting of effective communication of legal analysis. Lec 3, Cr 3
ALAW-4310	Legal Analysis and Writing	This course focuses on the identification, research and analysis of legal issues. Topics include the appellate process and standards of review, application of key facts and relevant law, and effective use of mandatory and persuasive authority. Practical experience is gained by drafting legal forms. Lec 3, Cr 3
ALAW-4368	Pre-Law Academy	This course is a preparatory course for students interested in becoming an attorney. Topics include an overview of the law and legal profession, preparation for law school application and Law School Admission Test, and introduction to the law school experience. Lec 3, Cr 3
ANTH-2301	Physical Anthropology	Human evolution, race, heredity, the organic basis of culture history through Paleolithic period. Lec 3, Cr 3
ANTH-2351	Cultural Anthropology	Key concepts, methods and theory in the study of cultural diversity, social institutions, linguistics of culture change among world peoples. Lec 3, Cr 3
ANTH-3301	Cultures and Communities of Latin America	This class examines contemporary communities in Latin American with special emphasis on Mexico and Guatemala. The class is designed to integrate theory and case studies to provide the student an overview of regional socio-cultural processes. Lec 3, Cr 3
ANTH-3335	Anthropological Theory	This course examines anthropological theory. The course provides critical analysis of the epistemological foundations of anthropological thinking and surveys major theoretical orientations. Lec 3, Cr 3
ANTH-3374	Religion in Society	This course surveys both classical and newer approaches to the social scientific study of religion. The course is designed to give students in the social sciences a thorough understanding of the leading approaches to religion. Lec 3, Cr 3
ANTH-3375	Mexican American Folklore	A survey of general introductory topics in folklore as applied to the Hispanic American population of the American Southwest and Northern Mexico. Topics include myth, tale, folk medicine, song, dance, as well as discussion of the Material culture. Lec 3, Cr 3
ANTH-4353	Ritual, Belief, and Healing	An examination of how ritual and belief systems create alternative healing systems with a focus on the U.S. Mexico border and curanderismo. Lec 3, Cr 3
ANTH-4369	Archeology of Mexico and Central America	A survey of the major archeological sites and the theories concerning the pre-Colombian societies of Meso-America. Lec 3, Cr 3
ANTH-4383	Independent Study	This course provides students with an opportunity to engage in study of anthropological subjects that may not otherwise be available in regular course offerings. Lec 3, Cr 3
APBT-3309	Workforce Ethics	This course provides students with theoretical definitions, ethical concepts, and situations related not only to business organizations but also to their personal lives. Ethical dilemmas provide opportunities for students to recognize a professional code of ethics. Lec 3, Cr 3
APBT-3312	Administrative Office Management	This course relates to the study of administrative office management, the management of human resources and administrative services, the implementation of electronic office systems, and the controlling of administrative service. Case studies and projects are used to develop decision-making and supervisory skills. Lec 3, Cr 3

APBT-3314	Employment Services	This course relates to the study of employment services as a foundation in human resources and customer relations. This course teaches an overview of the human resource function and customer service principles. Emphasis will be two fold: on developing techniques to gain customer commitment and exploration of various training and development techniques. Lec 3, Cr 3
APBT-3322	Information and Technology in Organizations	This course discusses the fundamental and use of computer networks, terminology, principles, and procedures related to the computer and information technology as it applies to the business office. Topics of e-commerce, online business, principles, and procedures related to confidentiality, security, and data integrity associated with the use of the computer in a business. Lec 3, Cr 3
APBT-3335	Applied Organizational Communication	This course a systems approach to information processing, and the practical and psychological aspects of formal and informal communication in organizations, inter- and intra-personal communication related to various corporate cultures. Intercultural difference in various communication scenarios. Lec 3, Cr 3
APBT-4380	Leadership Foundations	This course relates to the basic knowledge managers need to effectively lead employees. Includes primary measures of performance success, leadership strategies, core leadership actions, and comprehensive theory that explains how the strategies and actions cause positive attitudes and increased performance. Lec 3, Cr 3
APBT-4391	Current Issues in Applied Technology	This course discusses and examines current issues facing businesses in the applied technology area. Unique characteristics of managing and exploiting information technology, communication and administration of an organization operating in a global, networked environment. Lec 3, Cr 3
ARAB-1311	Beginning Arabic I	This course is a study of fundamental skills in listening comprehension, speaking, reading, and writing. It includes basic vocabulary, grammatical structures, and culture. Lec 3, Cr 3
ARAB-1312	Beginning Arabic II	A continuation of ARAB-1311. Lec 3, Cr 3
ARCH-1301	Architecture History I	This course is a survey of architecture, and arts from prehistoric times to the 14th Century with an emphasis on the relationship of culture, geography, environment, and materials to the methods of construction. Lec 3, Cr 3
ARCH-1302	Architecture History II	This course is a survey of painting, sculpture, architecture, and minor arts from 14th century to the present with an emphasis on the development of World Architecture from European Enlightenment to the present. Lec 3, Cr 3
ARCH-1311	Introduction to Architecture	This course is an introduction to architecture. It provides general exploration of architectural canons and traditions. Emphasis is placed on the relationships between architecture and societal and environmental contexts. Lec 3, Cr 3
ARCH-1315	Architectural Computer Graphic	This course introduces basic computer-aided drafting. Emphasis is placed on drawing setup! creating and modifying geometry! storing and retrieving predefined shapes! placing, rotating, and scaling objects, adding text and dimensions! using layers and coordinate systems! and input and output devices. Lec 2, Lab 3, Cr 3
ARCH-1403	Architectural Design Studio I	This course introduces the principles and methods used at various stages of design analysis and synthesis processes. Emphasis is placed on the visual characteristics of two-and three-dimensional forms and spaces. Lec 3, Lab 6, Cr 4
ARCH-1404	Architectural Design Studio II	This course introduces the design skills that are core and internal to architecture. Emphasis is placed on a systematic approach to architectural design. Lec 3, Lab 6, Cr 4
ARCH-2301	Architect Freehand Drawing I	This course investigates various media and drawing techniques, including descriptive and expressive possibilities. This course also introduces the principles of axonometric and perspective drawings. Lec 2, Lab 4, Cr 3
ARCH-2302	Architectural Freehand Drawing II	This course instructs students in architectural drafting techniques and applications with emphasis on shades, shadows and perspective drawing. Lec 2, Lab 4, Cr 3
ARCH-2312	Architectural Technology I	This course introduces students to construction materials, methods, and their applications with an emphasis common building material: woods, masonry, concrete and metals. The course also introduces building envelope performance and issues of sustainability. Lec 3, Cr 3
ARCH-2313	Architectural Technology II	This course introduces students to the mechanical and electrical systems and their relationship to the structural system of a building. Lec 3, Cr 3
ARTS-1301	Art Appreciation	An introduction to creative art, relationship of line, mass, color, texture. A survey of the history and philosophy of art and architecture in the Western World. Lec 3, Cr 3



ARTS-1303	Art History I	Art History Survey I is a survey of painting, sculpture, architecture, and the minor arts from prehistoric times to the 14th century. Lec 3, Cr 3
ARTS-1304	Art History II	Art History Survey II is a survey of painting, sculpture, architecture, and minor arts from the 14th century to the present. Lec 3, Cr 3
ARTS-1311	Two Dimensional Design	Principles of design and development of design structure on two dimensional surfaces. Lec 2, Lab 4, Cr 3, Ind 3
ARTS-1312	Three Dimensional Design	This course investigates the art elements and principles of design applied to three dimensional surfaces. Lec 2, Lab 4, Cr 3, Ind 3
ARTS-1316	Drawing I	The investigation of drawing media and techniques, including descriptive and expressive possibilities. Lec 2, Lab 4, Ind 3, Cr 3.
ARTS-1317	Drawing II	Drawing II is a continuation of Drawing I with an emphasis on forms of expression that represent the human figure. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-2313	Computer Imaging I	Computer Imaging I is an introductory studio art course that explores the potential of computer hardware and software as a medium for visual, conceptual and practical uses in the visual arts. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-2314	Computer Imaging II	This course is a continuation of Computer Imaging I, but with a greater emphasis on the creation of fine art digital manipulation and computer graphics. Lec 3, Cr 3, Ind 3
ARTS-2316	Painting I	Painting I is a studio course that explores ideas using painting media and techniques. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-2317	Painting II	Painting II is a continuation of Painting I with an emphasis on special problems determined by the student in cooperation with the instructor. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-2326	Sculpture I	This course investigates the use of materials such as clay, stone, wood and plaster to create three dimensional sculptures. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-2327	Sculpture II	Sculpture II is a continuation of Sculpture I, but with a greater emphasis on aiding the student in solving individual problems using sculpture media and techniques. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-2333	Printmaking	Printmaking I is a studio art class which explores visual expression and ideas using printmaking processes. Lec 2, Lab 4, Cr 3
ARTS-2334	Printmaking II	Printmaking II is a continuation of Printmaking I. Students will explore a variety of printmaking processes. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-2346	Ceramics I	This course investigates the basic ceramic processes of hand building, throwing, glazing, and the firing of clay. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-2347	Ceramics II	Ceramics II is a continuation of Ceramics I with an emphasis on glaze formulation. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-2356	Photography I	Study of fundamental lighting, posing, camera techniques, composition, processing and printing relating to all shooting with special emphasis on portraits and still life. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-2357	Photography II	Photography II is a continuation of Photography I with an emphasis on extending the student's knowledge of techniques and guides them in developing personal outlooks toward specific applications of the photographic process. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-3303	Italian Renaissance 1400-1650	This course will study the major artists of the Italian Renaissance and will focus on the development of NeoClassicism and NeoPlatonicism. Lec 3, Cr 3
ARTS-3314	Individual Problems	Individual problems is a studio art class which allows the student to work on advanced individual projects to be completed under faculty supervision on a one-to-one basis. This course may be taken for a total of 12 hours of credit. Std 6, Cr 3
ARTS-3321	Advanced Painting	Advanced Painting is a studio art class where students undertake advanced problems in painting. This course may be taken four times for a total of 12 hours of credit. Lec 2, Lab 4, Ind 3, Cr 3.
ARTS-3323	Advanced Drawing	Advanced Drawing is an upper division studio art class in which students will investigate advanced studio problems in drawing. This course may be taken four times for a total of 12 hours of credit. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-3326	Advanced Sculpture	Advanced Sculpture is a continuation of Sculpture II but with an even greater emphasis on aiding the student in solving individual problems. This course may be taken 4 times for a total of 12 hours of credit. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-3338	Fundamentals of Creative and Critical Thinking in Art	The course offers discussion in synectics, philosophy, and analytical thinking. A topology of creative behavior development is presented along with spatial exercises. Lec 3, Cr 3
ARTS-3340	History of Women in Art	The course "History of Women in Art" is a thematic and chronological survey of women artists, using gender theories to analyze issues concerning visual representation. Lec 3, Cr 3

ARTS-3352	Contemporary Art History	Art history from 19th century in Europe and America to the present. Development and growth of today's arts and aesthetics. Lec 3, Cr 3
ARTS-3371	Advanced Ceramics	Advanced Ceramics investigates the advanced studio problems in the ceramics process. This course may be taken four times for a total of 12 hours credit. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-3381	Art Education: Theory and Background	Students will be introduced to key figures and theories within the field and their relationship to significant developments within the art world. This course will provide students with a theoretical base for art at all levels. Lec 3, Cr 3
ARTS-3382	19th Century European Art	European painting, sculpture and architecture as social and political events ranging from the French Revolution to 1900. This art history course covers the development of the neoclassicism, romanticism, social realism, impressionism and post impressionism and their international impact. Lec 3, Cr 3
ARTS-3383	Art Education: Issues and Practice	This class is designed to show the students, on a practical level, how to teach in the public school setting. The student will be responsible for developing and implementing their own curriculum, designing their own syllabi and writing their own lesson plans by using a wide array of resources. Lec 3, Cr 3
ARTS-3384	Art Education: Classroom Strategies	Students will learn various approaches for the art classroom with an overview of the various art concepts currently in practice, their ideologies, and important strengths and weaknesses. Lec 3, Cr 3
ARTS-4301	Senior Experience in Art	Senior Experience is a capstone course for art majors. It is designed to make connections of the various elements of the arts degree program. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-4331	Advanced Computer Imaging	Advanced Computer Imaging is a studio arts course that explores advanced techniques in the uses of the computer as an artistic and graphic medium. This course may be taken four times for a total of 12 hours of credit. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-4334	Advanced Printmaking	This course consists of advanced studio problems in printmaking. This course may be taken four times for a total of 12 credit hours. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-4337	Internship in Art Studio	Internship in Art Studio provides opportunities for students in applied learning related to visual art through local business, government, industry, or institutional organizations. Students will work under faculty direction with periodic and final written reports and a supporting portfolio. May be taken four times for a total of 12 hours of credit. Intern 6, Cr 3
ARTS-4353	American Art History	History of visual arts in the United States from the 17th century to the present, including the art of the Native Americans. Lec 3, Cr 3
ARTS-4354	Latin American Art and Architecture	Major monuments of Latin-American art and architecture in the New World, 16th century to the present. Emphasizes post-Conquest mixtures of European and Indigenous styles during the colonial period and major developments in modern Latin American art since independence. Lec 3, Cr 3
ARTS-4359	Advanced Photography	This course consists of advanced studio problems in photography. This course may be taken four times for a total of 12 credits. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-4387	Far East Art History	This course explores the art and architecture of India, Japan, and China from ancient times to the early 19th century. It explores the different cultures by analyzing the impact of Brahmanism, Confucianism and Taoism in buildings, paintings, sculptures and tapestries of the Far East. Lec 3, Cr 3
ARTS-4390	Topics in Arts History	This course is an in-depth study of specific arts historical topics that go beyond the current course offerings. The topics may vary. The course may be repeated when topic vary for the total of 6 credit hours. Lec 3, Cr 3
ARTS-4391	Studio Art General	Advanced problems in art of the students' choice and/or internship with an art professional in the field of interest. This course may be taken four times for a total of 12 hours credit. Lec 2, Lab 4, Ind 3, Cr 3
ARTS-4393	Senior Exhibit	This course requires an art exhibition and a written thesis from all last semester seniors. Students must complete before student teaching. Lec 2, Lab 4, Cr 3
ASTR-1103	Stars and Galaxies Laboratory	Laboratory experiments in introductory astronomy based on observations of stars and galaxies. Lab 3, Cr 1
ASTR-1104	Solar System Laboratory	Laboratory experiments based on observations of the sun and planets. Lab 3, Cr 1
ASTR-1303	Stars and Galaxies	Study of stars, galaxies, and the universe outside our solar system. Lec 3, Cr 3
ASTR-1304	Solar System	This course in an introduction to the study of astronomy of the solar system. Topics include the origin and evolution of the sun and planets. Lec 3, Cr 3

BCIS-1305	Business Computer Applications	The main focus of this course is on business applications of software, including Word Processing, Spreadsheet, Database, Presentations, and business-oriented utilization of Personal Information Management Software. Introduction of computer terminology, hardware, operating systems and information systems relating to the business environment will also be covered. Lec 3, Cr 3
BENG-4120	Molecular Bioengineering Lab	Laboratory experiments in macromolecular design. Lab 3, Cr 1
BENG-4320	Molecular Bioengineering	The course is designed for students in Bachelors of Science in Engineering Physics/Bioengineering Program. The topics include biomaterials, designing biomolecules for therapeutics and diagnostics, and advanced biomolecular assemblies. Lec 3, Cr 3
BILS-3310	Emergent Literacy in the Bilingual Classroom (Spanish)	This course focuses on how children learn to read in the native language. This emphasis is on research-based approaches for teaching reading in bilingual classrooms. Course is taught in Spanish. Field observations are required. Lec 3, Cr 3.
BILS-3312	Teaching Reading in the Bilingual Classroom (Spanish)	Students will be given the opportunity to learn the developmental process involved in biliteracy. This course focuses on methods and techniques for integrating teaching and assessing reading skills in the Spanish/English bilingual classroom. This course is taught in Spanish. Field observations are required. Lec 3, Cr 3
BILS-4306	Content Area Methods in the Bilingual Classroom	This course focuses on the current methods and theories of planning and teaching math, science and social studies in the bilingual classroom, with emphasis on an interdisciplinary approach to instruction and on the development of academic Spanish. Course is taught in Spanish. Field experience is required. Concurrent enrollment in BILS-3312 is allowed with departmental approval. Lec 3, Cr 3.
BIOL-1106	Biology for Science Majors Laboratory I	Investigations related to BIOL 1306. First Semester of a laboratory required for science majors and minor,also available to the general student. Lab 3, Cr 1
BIOL-1107	Biology for Science Majors II Lab	Investigation related to BIOL 1307. Second semester of a laboratory required for science majors and minors! also available to the general student. Lab 3, Cr 1.
BIOL-1108	Biology Non-Science Majors Lab I	This course covers laboratory investigations related to BIOL 1308. Lab 3, Cr 1
BIOL-1109	Biology Non-Science Majors Lab II	This course covers laboratory investigations related to BIOL 1309. Lab 3, Cr 1
BIOL-1306	Biology for Science Majors I	This course will emphasize fundamental of molecular and cellular biology including the chemical basis of life, metabolism, cell structure and function, and genetics. This course is intended for science majors. Lec 3, Cr 3
BIOL-1307	Biology for Science Majors II	This course is a comparative study of form and function in animals including a survey of animal diversity and general principles of physiological mechanisms. Other topics to be discussed include general ecology and conservation biology. Lec 3, Cr 3
BIOL-1308	Biology for Non-Science Majors I	This introductory course is designed to provide non-science majors a conceptual approach to topics ranging from molecular and cellular biology, to genetics, and biotechnology as they relate to current events, cultural and societal issues. Lec 3, Cr 3
BIOL-1309	Biology for Non-Science Majors II	This introductory course is designed to provide non-science majors a conceptual approach to topics ranging from evolution biodiversity, ecology, to conservation biology as they relate to current events, cultural and societal issues. Lec 3, Cr 3
BIOL-1322	Human Nutrition	A study of the basic principles of nutrition in health and disease. Stresses the modern concept of an adequate diet based on the nutritional needs of the individual. Lec 3, Cr 3
BIOL-2101	Anatomy & Physiology Lab I	Cells, tissues, skeletal ,muscle, nervous systems. Includes dissections and instrumentation related to basic hands-on understanding of human anatomy and physiology. Lab 3, Cr 1
BIOL-2102	Anatomy & Physiology Lab II	Emphasis on endocrine cardiovascular, respiratory, digestive, urinary, and reproductive systems. Includes related dissections and instrumentation design to facilitate basic hands-on understanding of human anatomy and physiology. Lab 3, Cr 1
BIOL-2121	Microbiology for Science Majors Lab	Laboratory application microbial techniques including staining, microscopy, cultivation of microbes, and handling of aseptic cultures and materials in the laboratory, biochemical aspects of microbes, chemical, physical and chemotherapeutic control of microbial growth, sanitary analysis of municipal water systems, determination of a bacterial unknown. Lab 4, Cr 1
BIOL-2143	General Biology Laboratory III	This course covers laboratory investigations related to BIOL 2343. Lab 3, Cr 3

BIOL-2301	Human Anatomy & Physiology I	General biological principles, cellular biology, emphasis on human integumentary, skeletal, muscular, and nervous systems and related topics. Lec 3, Cr 3
BIOL-2302	Anatomy & Physiology II	Continuation of BIOL 2301, Includes human urogenital circulatory, respiratory, digestive and endocrine systems, human development! emphasis on nutrition, metabolism, electrolytic and fluid balance. Lec 3, Cr 3
BIOL-2317	Evolutionary Biology	This course reviews the history of evolutionary thought and examines modern evolutionary theory. Topics include Darwinian and evolution mechanisms of evolutionary change, speciation and the history of life and macroevolutionary trends. The course concludes with a survey of current research, including applications to human evolution. Prerequisite: BIOL 1306, 1106, 1307, 1107. Lec. 3, Cr. 3.
BIOL-2321	Microbiology for Science Majors	An introduction to the field of microbiology, microbial morphology, cell fine structure, factors controlling growth and reproduction, microbial survey plus viruses,metabolism, microbial genetics, biotechnology,genetic control of microbes, resistance and infection, immunology! transmission of diseases,environmental and applied microbiology. Lec 3, Cr 3
BIOL-2343	General Biology III	This course is a comparative study of form and function in protists, fungi, and plants including a survey of diversity, physiology, reproduction and development. Other topics to be discussed include the origin and diversification of life, population genetics, taxonomy, and systematics. Lec 3, Cr 3
BIOL-3101	Advanced Physiology Laboratory	Laboratory practice in mammalian physiology, primarily man, which include nervous, muscular, cardiovascular, endocrine, immunity, respiratory, digestive, metabolic, urinary, acid-base balance, and reproductive systems. Lab 3, Cr 1
BIOL-3103	Genetics Laboratory	This is the genetics laboratory that emphasizes the concepts of modern molecular genetics. Lec 3, Cr 1
BIOL-3109	Ecology Laboratory	This is a laboratory for ecology which covers the study of the basic environmental factors affecting plants and animals, and their relation to economic and conservation problems. Lab 3, Cr 1
BIOL-3112	Cell and Molecular Biology Laboratory	This is a laboratory study of cell and molecular structure and function with emphasis on bioenergetics, membranes, genes, and genetic control, cell division and its regulation, cellular differentiation. Biochemistry I is highly recommended before taking this course. Lab 3, Cr 1
BIOL-3114	Invertebrate Zoology Laboratory	This is a laboratory study of the comparative morphology, evolution, systematic, and natural history of the invertebrates. Lab 3, Cr 1
BIOL-3301	Advanced Physiology	Selective topics of mammalian physiology, primarily man, which include nervous, muscular, cardiovascular, endocrine, immunity, respiratory, digestive, metabolic, urinary, acid-base balance, and reproductive. Lec 3, Cr 3
BIOL-3303	Genetics	This course is an introduction to genetics with consideration of its application in plant and animal biology and human welfare. Lec 3, Cr 3
BIOL-3304	Research Methods-U.Teach	Students perform four independent inquiries and learn to combine skills from mathematics and science in order to solve research problems. This course is part of the UTeach program. Lec 3, Cr 3
BIOL-3309	Ecology	This course is a study of the basic environmental factors affecting plants and animals, and their relation to economic and conservation problems. Lec 3, Cr 3
BIOL-3312	Cell and Molecular Biology	This course is a study of cell and molecular structure and functions with emphasis on bioenergetics, membranes, genes, and genetic control, cell division and its regulation, cellular differentiation. Biochemistry I is highly recommended for this course. Lec 3, Cr 3
BIOL-3314	Invertebrate Zoology	This is a course that covers the comparative morphology, evolution, systematic, and natural history of the invertebrates. Lec 3, Cr 3
BIOL-3428	Comparative Vertebrate Anatomy	This course provides a brief survey of chordates and a summary of vertebrate natural history. Dissections of representative vertebrates will be used to explore the development and morphology of vertebrates and their organ systems.
BIOL-4100	Biology Seminar	The student completes independent scholarly review of a research topic, makes an oral report on the topic, and discusses current research with faculty and students. Lec 1, Cr 1
BIOL-4102	Marine Zoology Laboratory	This is a laboratory study of the common marine animals, especially invertebrates in local coastal waters, particular attention given to structural and physiological relationships. Lab 3, Cr 1
BIOL-4104	Ichthyology Laboratory	This lab emphasizes field surveys, taxonomy, and the identification of local marines and freshwater fishes. Lab 3, Cr 1

BIOL-4109	Herpetology Laboratory	The lab and field work familiarize students with herpetofauna of the lower Rio Grande Valley and with plant and animal associations in a variety of habitats. Students will be required to keep a journal of field observations and a catalog of specimens observed. The instructor will provide keys and relevant scientific journal articles. Lab 3, Cr 1
BIOL-4127	Coastal Ecology Laboratory	This course is a series of laboratory and field investigations emphasizing identification, biology and ecology of local marine organisms. Lab 3, Cr 1
BIOL-4132	Animal Behavior Laboratory	Projects introduce students to laboratory and field methods for observing, quantifying, analyzing, and reporting animal behavior. Typical research projects address: sensory mechanisms, chemical and vocal communication signals, and dynamic behavioral interactions. Lab 3, Cr 1
BIOL-4150	Ornithology Laboratory	This course is a laboratory practice concerning the field identification, classification, morphology, ecology, distribution, migration patterns, and behavior of local birds. Field trips are required. Lab 3, Cr 1
BIOL-4170	Laboratory Topics in Biology	This course is a series of lab/field investigations in areas not available in other courses. May be repeated for credit when content changes. Lab 3, Cr 1
BIOL-4199	Research Problems in Biology	Research under the supervision of a Biology faculty member. May be repeated for credit but no more than three semester credit hours(*) may apply toward the Biology major. (*combinations of 4199, 4299)Lec 2, Cr 1
BIOL-4301	Evolution	This course involves the study of organic evolution with an emphasis on mechanics, especially genetics and modern theories. This course will provide a common foundation of understanding of the fundamental principles that underpin biology. Lec 3, Cr 3
BIOL-4302	Marine Zoology	This course is a study of the common marine animals, especially invertebrates in coastal waters, particular attention is given to structural and physiological relationships. Lec 3, Cr 3
BIOL-4304	Ichthyology	This course covers the classification, evolution, ecology, and biology of the fishes. Lec 3, Cr 3
BIOL-4309	Herpetology	An in-depth study of amphibians and reptiles. Classification according to their types and characteristics as well as collection and field trip techniques for acquiring and preparing museum specimens and their preparation for proper storage and cataloging. A good knowledge of South Texas herpetofauna will be emphasized. Special in-depth study of venomous snakes and current snakebite treatment measures will be surveyed. Lec 3, Cr 3
BIOL-4327	Coastal Ecology	This course examines the major near shore habitats and communities of the western Gulf of Mexico including: beaches, sand dunes, estuaries, salt marshes, mud flats, sea grass meadows, and rocky shores. Emphasis is placed on directed, field-oriented, group and/or individual research projects. Lec 3, Cr 3
BIOL-4331	Biological Laboratory Instruction	This course provides an introduction to laboratory techniques used in the education of biology students. Students learn principles of organization and presentation of biological principles necessary to effectively set-up and run undergraduate teaching labs in middle, high and post-secondary school. Lec 3, Cr 3
BIOL-4332	Animal Behavior	Lectures introduce students to the biological basis of animal behavior. Emphasis is placed on evolutionary explanations of: behavioral genetics and development, neural and hormonal mechanisms, instincts and learning, reproductive, and social behavior. Lec 3, Cr 3
BIOL-4340	Immunology	This course covers the immune system, cells and organs of the immune system, antigens and antibodies, immunoglobulin genes, Major Histocompatibility Complex proteins, cytokines, vaccines, and infectious diseases. Biochemistry I is highly recommended for this course. Lec 3, Cr 3
BIOL-4350	Ornithology	This course is a study of the classification, morphology, ecology, distribution, migration patterns, and behavior of birds. Emphasis will be mainly on local species. Field trips are required. Lec 3, Cr 3
BIOL-4361	Neuroscience I (Cellular and Molecular)	This is a comprehensive first course in the cell and molecular neuroscience for students with biology and/or health science majors. The course offers general principles with a useful blend of data from vertebrate and invertebrate, and provides clear focus and well rounded modern knowledge. Lec 3, Cr 3
BIOL-4362	Neuroscience II ( System, Developmental, and Disorders)	This is a comprehensive course in systems, developmental, and disorders of the nervous system. Neuronal mechanisms underlying intercellular communication, learning and memory, and diseases will be taught based on the knowledge in cellular and molecular neuroscience. Lec 3, Cr 3

BIOL-4370	Topics in Biology	This course presents specialized lecture content not available in other courses. May be repeated for credit as topics change. Lec 3, Cr 3
BIOL-4390	Biology Internship	This course is an applied experience in an industrial, educational, private agency, or government facility supported by an acceptable scholarly written report and a seminar. Lab 6-8, Cr 3
BIOL-4391	Biomedical Research I- Research Principles and Ethics	This course will provide students with a general understanding of issues surrounding ethical conduct in scientific research. Topics include scientific authorship, protocol for research on human subjects, mechanisms of peer review, grant application review. Students will gain ability to think about scientific conduct issues in an ethical decision-making way. Lec 3, Cr 3
BIOL-4392	Biomedical Research II - Research Methodology	Methodologies employed in biomedical research will be discussed and explored. Topics will include formulation and testing of scientific hypotheses, experimental design, laboratory notebook maintenance, and data interpretation. Biochemical, genetic, immunohistochemical, and molecular techniques will be review. At the completion of the course students are anticipated to understand the basic methods employed in scientific research. Lec 3, Cr 3
BIOL-4393	Biomedical Research III - Research Project	Students will be expected to design, develop, and conduct an independent research subproject in the laboratory with the guidance of a research faculty. Acquisition of experimental techniques, note keeping, safety, and appropriate laboratory conduct will be emphasized. Lec 3, Cr 3
BIOL-4394	Biomedical Research IV - Research Presentation	The course will promote the development of presentation skills and the ability to discuss research data in scientific or public forum. Literature search, reading of research articles, and interpretation of experimental results will be emphasized. Verbal and written presentations will be expected from students for successful completion of the course. Formats utilized will be those employed at scientific meetings and required by peer-reviewed scientific journal. Literature research and presentation topics will be assigned by the instructor. Lec 3, Cr 3
BIOL-4399	Research Problems in Biology	Research under the supervision of a Biology faculty member. May be repeated for credit but no more than three semester credit hours may apply toward the Biology major. Students enrolling for BIOL 4399 will present research results in a Department seminar. Rsch 3, Cr 3
BIOL-4415	Mammalogy	This course will examine the nomenclature and classification of major taxonomic groups of mammals. Special emphasis will be placed on evolutionary relationship and adaptations of mammals. The lab will demonstrate useful field techniques and the identification and classification of mammals from live and prepared specimens. Field trips are required. Lec 3, Lab 3, Cr 4
BIOL-4422	Conservation Biology	This course focuses on the biological concepts important for the conservation of natural populations, communities, and ecosystems including the social, political, and economic aspects of conservation biology. Lec 3, Lab 3, Cr 4
BLAW-3337	Business Law I	Important aspects of our legal environment include legal reasoning and the U.S. Constitution, the development of case law and precedents and the application of procedural substantive law pertaining to civil and penal matters. Specific topics covered include ethics, torts, contracts, intellectual property, agency, employment, and law for small businesses. Lec 3, Cr 3
BLAW-3338	Business Law II	The study of business law continues with specific topics including sales and lease contracts, warranties and product liability, negotiable instruments, the banking system, creditors' right and bankruptcy, business organizations, government regulation pertaining to administrative procedures and consumer, environmental and antitrust laws, property, insurance, estate planning, professional liability, and international law. Lec 3, Cr 3
BMED-1101	Introductory Medical Biochemistry	This course introduces the fundamentals of modern molecular biology and biochemistry as applied to medicine. Topics discussed include the scientific method, introductory chemistry, molecular biology, nutrition and medical advances as they relate to body functions.
BMED-1102	Introduction to Biomedical Laboratory I	This course is an introduction to the techniques and procedures used in the biomedical laboratory. Students will perform independent experiments to address a specific question.
BMED-1103	Introductory Cell Biology	This introductory level course introduces freshmen to the concept of cell structures, processes and functions of microbes and multicellular organisms as relevant to the understanding human cellular biology and human disease.

BMED-1104	Introductory Molecular Biology	This introductory level course introduces the concept of the structure and function of macromolecules (DNA, RNA, Proteins). Biomedical research techniques utilizing these macromolecules and the relevance of such research in understanding human disease will be discussed.
BMED-1105	Introductory Medical Genetics	This introductory level course introduces freshmen to the concept of genetic basis of heredity, simple and complex traits, sexual reproduction and recombination and variations that underlie diseases in human populations.
BMED-1106	Introductory Medical Microbiology	This course is an introduction to the field of medical microbiology and will examine microbial morphology, factors controlling growth and reproduction, metabolism, genetics of human pathogens including bacteria, protozoa, fungi, and viruses. The molecular basis of host defense and pathogenesis will be emphasized.
BMED-1107	Introductory Immunology	This course is an introduction to the field of immunology and will illustrate the importance of an understanding of immunology in clinical problems. The molecular mechanism of innate and adaptive immunity will be emphasized.
BMED-1108	Introductory Medical Neuroscience	The course introduces core concepts in neuroanatomy, neurochemistry, neuropharmacology, and neurophysiology in a hierarchical order from molecules to networks of neurons. The course also serves as a foundation to develop knowledge and critical thinking in neuroscience that will be emphasized in upper division neuroscience courses.
BMED-1109	Evolutionary Medicine	This course introduces evolutionary concepts and discusses the application of evolutionary thinking to the study of human health and disease.
BMED-1110	Introductory Medical Physiology	This biomedicine course provides an introduction to the major concepts of physiology as applied to the human organism and diseases. The content will be integrated within the concept of homeostasis of body systems that is essential for clinical medicine.
BMED-1111	Introduction to Biomedical Laboratory II	This course continues the laboratory investigation of Biomedical Laboratory I. Students will be exposed to experimental design in medical microbiology, medical neurobiology, medical immunology, and bioinformatics.
BMED-2101	Gross Anatomy	The students in this course will have the opportunity to study the detailed structure of the human body. Relationships of surface and internal structures from body systems are emphasized.
BMED-2102	Molecules, Cells and Tissues	This course emphasizes the macromolecules and cells and their influence on biological functions in the human body. The course also, provides students with a current and comprehensive review of the molecular structure and function at the cellular and tissue levels and discusses medical application of such knowledge.
BMED-2103	Legal Medicine and Ethics	This course is intended to give the student an overview of the multidisciplinary topics in legal medicine and ethics. The students acquired an understanding of the similarities and differences in which medicine and law frame questions, address problems, and approach moral issues affecting the practice of medicine today.
BMED-3101	Pathobiology and Host Defense	This course is an introduction to the disease process in all organ systems and presents the basic clinical aspects of diseases and its correlation with the morphologic features of the diseases.
BMED-3102	Neurochemistry	The course examines fundamental neuroscientific principles in neurotransmitters and receptors with a useful blend of data from vertebrate and humans, and provides integrated modern knowledge in a hierarchical manner from molecules to networks of higher nervous system functions.
BMED-3103	Human Behavior	The course examines the neuronal basis of human behavior with a useful combination of data from vertebrate animals and humans. Biological foundations of human behavior, evolution and development of human behavior, as well as genetic and environmental regulation of human behavior will be discussed in health and disease.
BMED-3104	Integrated Body Systems I: Cardiovascular and Pulmonary	This course is an in depth examination of the cardiovascular and respiratory systems. The embryology, anatomy, histology, physiology, clinical aspects, pathophysiology and pharmacology of cardiovascular and respiratory systems will be presented.
BMED-3105	Integrated Body Systems II: Gastrointestinal System	This course is an in depth examination of the digestive system and nutrition. Topics include embryology, anatomy, histology, physiology, clinical aspects, pathophysiology, and pharmacology of digestive system, and the importance of nutrition in the life cycle.

BMED-3106	Integrated Body Systems Iii: Fluid and Electrolytes	This course is an examination of the embryology, anatomy, histology, physiology, clinical aspects, pathophysiology and pharmacology of the urinary system. The course also includes the study of fluids and electrolyte balance.
BMED-3107	Integrated Body Systems IV: Endocrine and Reproductive System	This course is an in depth examination of the embryology, anatomy, histology, physiology and pathology of the endocrine and reproductive systems. A special emphasis will be given to the process of gestation.
BMED-3108	Integrated Body Systems V: Dermatology Hematology & Musculoskeletal	This course is an in depth examination of the integumentary system, musculoskeletal system, and the blood. Topics include anatomy, histology, physiology, clinical aspects, as well as an introduction to the pathophysiology of the integumentary system, blood, and the musculoskeletal system.
BMED-3109	Medical Syndromes	The students in this course will learn the importance of clinical judgment, interactions and involvement of the different organ systems in the development of diseases by integration and application of information acquired in previous courses. Topics will include ethics, death and dying, pain management, treatment principles and situational awareness.
BMED-3121	Independent Research I	This course is an introduction to the process of science and its literature. The hands on laboratory portion focuses on critical thought for designing and conducting effective research using student designed projects. The student will present a project design to the program faculty.
BMED-3122	Independent Research II	This course is an introduction to advanced research techniques in an area of study chosen by the student. Methods will be taught through experimental approaches, culminating in the reporting of the findings in a scientific format and defended before program faculty.
BMED-3223	Independent Research III	This course provides an opportunity to pursue a research topic under the direction of a biology faculty member, resulting in a final presentation to the program faculty.
BMED-3224	Independent Research IV	This course is a study program of research arranged between an advanced student and an instructor. This course provides an opportunity to perform advanced research under the direction of a biology faculty member, resulting in a final presentation to the program faculty.
BMED-4220	Medical Bioinformatics, Genomics and Systems Biology	This course is an introduction to genomics and systems biology using bioinformatics methods. Medical case studies are used to illustrate data collection and analysis techniques.
BMED-4230	Human Genetics and Medical Genomics	This course will examine human genetics and medical genomics, covering the human genomics, heritability, variations and associations with diseases, gene-environment interactions, population genetics, cancer genetics, epigenetics, and the ethical, legal and social implications of studying human genetics.
BMED-4240	Medical Microbiology	This advanced course that examines the biological properties of pathogens that contribute to human disease and examines the etiology, epidemiology, host defenses, identification, diagnosis, prevention, and control for selected major human pathogens.
BMED-4250	Advanced Cell Biology	This advanced level course introduces students to the concept of protein targeting and its implication in human diseases.
BMED-4260	Advanced Molecular Biology	This biomedical course focuses on the molecular processes involved in synthesis, maintenance and functions of macromolecules in health and disease.
BMED-4270	Introduction to Complimentary and Alternative Medicine	This course examines the principles, practices, use and outcomes of complementary therapies and alternative healing.
BMED-4280	Advanced Medical Neuroscience	This course examines real clinical problems and utilizes one of the most contemporary teaching approaches in introductory medical neuroscience education through problem solving approaches. Students will be exposed to the most important elements of medical neuroscience in the field of disorders of the nervous system in humans.
BMED-4290	Medical Immunology	This advanced course in the medical immunology will relate scientific findings in immunology with clinical problems. It will illustrate essential points about mechanisms of immunity in a clinical context. The course will also cover the design of proper diagnostic approaches and their interpretation based on modern knowledge of immunology.
BMED-4295	Pathophysiology	This course provides an introduction to the basic concepts of pathophysiology. Students will study human diseases, the mechanisms that govern them and the resulting human response. The major emphasis of this course will be on the physiological factors that underlie disease states.



BMED-4310	Medical Biochemistry	This course addresses the basic biochemical principles and terminology; metabolism and function of biomolecules of importance in medical biology and human pathophysiology.
BMIS-1310	Data Management Tools	Students will develop core competency skills to prepare themselves for the rest of their curriculum and for their careers. Preparation in spreadsheets, relational database management systems, and elementary statistics will serve as a primer for helping students to stay up to date and to prepare for more specialized courses. Lec 3, Cr 3
BMIS-3301	Web Programming	This course is an overview of computer programming concepts and application of programming languages used on the web. Students will be able to write stand-alone programs and applets. Lec 3, Cr 3.
BMIS-3303	E-Commerce Strategies	The most important elements for effective commerce through the Internet include strategies and tools within E-Commerce categories, which include Business-to-Consumer, Business-to-Business, Consumer-to-Consumer, technological infrastructure, electronic security, electronic payment mechanisms and virtual communities. Lec 3, Cr 3
BMIS-3310	Business Process Logic	This course examines the changing role of business processes as they are adapted to exploit new technologies and business models through the use of computer-based tools. Lec. 3, Cr 3.
BMIS-3351	Information Systems in Organizations	The information era of today requires students be equipped with an understanding of how to effectively utilize information technologies. This course provides an overview and hands-on practice of information technology at all levels of an organization including transactional processing systems, database management, decision support systems, enterprise information systems, and e-commerce applications. Lec 3, Cr 3
BMIS-4310	Project Management	Theoretical concepts of project management and their practical applications, mathematical concepts necessary for planning and tracking projects and use of software tools will be covered in this course. Lec. 3, Cr 3.
BMIS-4367	Topics in Management Information Systems	The course will provide a study of significant topics related to Management Information Systems. This course may be repeated for credit when topic varies. Lec 3, Cr 3.
BUSI-1301	Business Principles	A survey of the various fields of business and their interrelationships, production and distribution systems, finance, accounting, statistics, capital, labor, marketing, taxes, governmental regulations, and other aspects of business necessary for understanding modern business enterprises and organization. BBA degrees require that this course be passed with a "C" or better. Lec 3, Cr 3
BUSI-1307	Personal Finance	This course provides instruction in personal and family accounts, budgets and budgetary control, bank accounts, charge accounts, borrowing, investing, insurance, standards of living, renting vs. home ownership, wills and trusts. Lec 3, Cr 3
BUSI-2301	Business Law	Principles of law which form the legal framework for business activity. Lec 3, Cr 3
BUSI-2304	Business Report Writing and Correspondence	This course provides instruction in the development of writing and presentation skills to produce effective business communications. The students will learn to compose, produce, and present effective business documents appropriate to meet industry standards, applied critical evaluation techniques to business documents to demonstrate the importance of coherent, ethical communication principles in business and industry. Lec 3, Cr 3
BUSI-2341	Statistics	Topics covered in introductory statistics include tabular and graphical presentation of data, measures of location, measures of variability, correlation, discrete and continuous probability distributions, sampling distributions, point estimation, interval estimation, hypothesis testing, and linear regression, with emphasis on business applications. BBA degrees require that this course be passed with a "C" or better. Lec 3, Cr 3
BUSI-3343	Decision Analysis	A study of regression, forecasting, and other analytical methods. The format of the course will be lectures and case studies. Students will address problems in context, determine the proper techniques, collect the information, and then solve the problem. Lec 3, Cr 3
BUSI-4345	Business Internship	This course is a supervised full-time or part-time, off-campus training with an industry, or government organizations. Oral and written reports are required. Students must apply to the program and be accepted prior to registration. May not be repeated for credit. Lec 1, Intern 20, Cr 3

BUSI-4369	Strategic Management	The formal strategic planning process provides a framework for this course. Students are expected to apply this process in a case analysis, with emphasis on integrating earlier studies in business. This course should be taken in the last semester prior to graduation. Lec 3, Cr 3
CHEM-1105	Introductory Chemistry Lab I	Laboratory practice that illustrates elementary, general, organic, and biochemical experimental techniques. Lab 3, Cr 1
CHEM-1111	General Chemistry Laboratory I	Introduction to laboratory techniques of chemical experimentation. Lab 3, Cr 1
CHEM-1112	General Chemistry Laboratory II	Introduction to some basic laboratory techniques used in studying chemical kinetics, chemical equilibrium, electrochemistry, and qualitative inorganic analysis, introduction to instruments used in pH measurement. Lab 3, Cr 1
CHEM-1305	Introductory Chemistry I	A terminal course in chemistry for non-science majors and technology students. Major topics covered are: atomic and molecular structure, chemical bonding, the state of matter, solution calculations, and acid-base concepts! includes a brief introduction to organic chemistry and biochemistry. Lec 3, Cr 3
CHEM-1311	General Chemistry I	A study of atomic and molecular structure, chemical stoichiometry, chemical bonding, states of matter, solutions and colloids, and acid-base concepts. Lec 3, Cr 3
CHEM-1312	General Chemistry II	Continuation of CHEM 1311. Study of chemical kinetics, equilibrium, electron transfer reactions, electrochemistry, nuclear chemistry, chemical thermodynamics, and some descriptive inorganic chemistry. Lec 3, Cr 3
CHEM-2123	Organic Chemistry Laboratory I	Laboratory application of techniques used in experimental organic chemistry. Lab 3, Cr 1
CHEM-2125	Organic Chemistry Laboratory II	Additional laboratory application of techniques used in experimental organic chemistry. Lab 3, Cr 1
CHEM-2323	Organic Chemistry I	Study of the structure, properties, preparations and reactions of aliphatic and aromatic compounds! stereo chemistry, reaction mechanisms, and the use of spectroscopic techniques are included. Lec 3, Cr 3
CHEM-2325	Organic Chemistry II	Continuation of CHEM 2323. Includes a brief introduction to the chemistry of polymers, fats, carbohydrates, amino acids and proteins. Lec 3, Cr 3
CHEM-3101	Inorganic Chemistry Laboratory	This course introduces new chemistry laboratory techniques such as high temperature processes, vacuum line operations, solid state reactions, controlled atmosphere reactions, reactions with gases, and inorganic characterization. It will also focus on the conceptual understanding of the structure, bonding, and chemistry of inorganic molecules. Lab 3, Cr 1
CHEM-3103	Biochemistry Laboratory I	Laboratory work consists of selected experiments in biochemistry with special emphasis on the chemical interpretation of the structure and function of biological macromolecules. Lab 3, Cr 1
CHEM-3105	Analytical Laboratory	Laboratory methods in analytical chemistry, including a quantitative separation techniques, electrochemistry, and absorption spectroscopy. Lab 4, Cr 1
CHEM-3110	Physical Chemistry Laboratory I	The use of modern instrumentation to illustrate physical chemical techniques used to study electrochemistry, molecular structure, calorimetry, and thermodynamics. Lab 3, Cr 1
CHEM-3112	Physical Chemistry Laboratory II	The use of modern instrumentation to illustrate physical chemical techniques used to study macromolecules, chemical kinetics, properties of gases. Lab 3, Cr 1
CHEM-3301	Inorganic Chemistry	An introductory study of the elements other than carbon and their compounds based on the periodic classification and certain related theoretical concepts explaining structure and reactivity. Lec 3, Cr 3
CHEM-3303	Biochemistry I	Study of the chemical properties of the biomolecules, amino acids, proteins, enzymes, carbohydrates, lipids, nucleic acids, and coenzymes! metabolic energy! the biosynthesis of informational molecules, such as DNA and RNA, will also be discussed. Lec 3, Cr 3
CHEM-3304	Biochemistry II	A detailed study of the design, integration and control of metabolism. Hormone action and the regulation of gene expression. Lec 3, Cr 3
CHEM-3305	Analytical Chemistry	Modern analytical chemistry, including separation methods and quantitative chemistry, introduction to methods of analysis in electrochemistry, absorption and emission spectroscopy. Lec 3, Cr 3
CHEM-3306	Chemical Literature	A course designed to provide students with a working knowledge of the chemical literature. Students will learn how to obtain information using the libraries in the university system under the supervision of a faculty member in the Chemistry and Environmental Sciences Department. Lec 3, Cr 3
CHEM-3310	Physical Chemistry I	Study of the classical thermodynamics including applications to gases, liquids, solutions and phase equilibrium, ionic equilibrium, and electrochemist. Lec 3, Cr 3

CHEM-3312	Physical Chemistry II	Fundamentals of quantum mechanics, chemical bonding spectroscopy, photochemistry, chemical kinetics, kinetic theory of gases and the transport of both gas and liquid phases. Lec 3, Cr 3
CHEM-4105	Instrumental Methods of Analysis Laboratory	Introduction to use of electrical and optical measurements in chemical analysis. Interpretation of infrared, ultraviolet, nuclear magnetic resonance, and mass spectra. Lab 4, Cr 1
CHEM-4110	Chemistry Seminar	Students are expected to research a current chemical topic, previously approved by a faculty member in the Chemistry and Environmental Sciences Department, and to present it in a formal seminar to fellow students and faculty members. Lec 1, Cr 1
CHEM-4302	Advanced Inorganic Chemistry	This course is an introduction to the coordination chemistry of transition metals. Theoretical understanding of the synthesis, characterization, and applications of selected transition metal complexes, bioinorganic complexes, and organometallic compounds will be introduced. The course also introduces group theory and its application to molecules in the description of bonding. Lec 3, Cr 3
CHEM-4304	Selected Topics in Biochemistry	An advanced course in Biochemistry with emphasis on current developments. Lec 3, Cr 3
CHEM-4305	Instrumental Methods of Analysis	Introduction to the theory and practice of optical and electro-analytical methods of analysis. Interpretation of infrared, ultraviolet, nuclear magnetic resonance, and mass spectra. Lec 3, Cr 3
CHEM-4306	Environmental Chemistry	This course covers environmental issues and the chemistry associated with these issues. Key areas include energy used and production, the atmosphere, the hydrosphere. Specific topics to be discussed include fossil fuels, nuclear and solar energy, the Greenhouse effect, ozone chemistry, air and water pollution, water resources, nitrogen and food production, and agrochemicals. Lec 3, Cr 3
CHEM-4320	Chemistry Problems	An individual introduction to research which involves both laboratory and library work. Students will work under the direct supervision of a Chemistry faculty member on a chemistry topic of mutual interest. Lec 1, Lab 6, Cr 3
CHEM-4325	Chemistry Internship	This course is designed to give the Chemistry student the opportunity to gain insight and experience in applying chemistry principles and concepts in an actual work-related environment. The student will perform the internship under the supervision of both a chemistry faculty member and a collaborating member of the participating internship site. This course will provide opportunity for the student to apply prior learning to practical laboratory situations. Lec 1, Lab 6, Cr 3
CHIN-1311	Beginning Chinese I	Fundamental skills in listening comprehension, speaking, reading and writing, including basic vocabulary, grammatical structures and culture. Lec 3, Cr 3
CHIN-1312	Beginning Chinese II	A continuation of CHIN-1311. Lec 3, Cr 3.
CIST-3310	Foundations of Information Technology	This course is designed to familiarize students with skills needed in information technology. Discrete concepts are discussed and become practical when applied to the understanding of various concepts in Computer Information Technology. Lec 3, Lab 1, Cr 3
CIST-3313	Computer Networks	Computer Networks are introduced. Topics include ISO/OSI layer models, study of LANs and standards, inter/intra-nets and networking security. Students will not receive credit for both CIST 3330 and CIST 3313 or CIST 3342. Lec 3, Cr 3
CIST-3316	Web Programming and Design	This course focuses on web programming and the underlying Internet client server paradigm. Techniques to be studied include dynamic content with client-side and server-side scripting languages. Issues of security, session management and integration with databases are discussed in detail along with an overview of the fundamentals of e-Commerce. Lec 3, Cr 3
CIST-3340	Concepts and Methods of Education Technology	This course will provide an understanding of learning models and the impact of technology in enhancing in the learning process. This includes the application of teaching and learning strategies that integrate technology in the classroom environment. Lec 3, Cr 3
CIST-3342	Database Management Systems	This course introduces database administration systems. Topics include database access methods, data models, query languages and optimization, concurrency control, recovery, security, integrity, client server architecture, and distributed database systems. Lec 3, Cr 3
CIST-4310	Operating Systems Management	This course introduces applied operating system concepts. Operating System theory and application are explored using various environments. Topics include: operating system installations, configuration and troubleshooting, process management, communication and synchronization, memory and device management, directory and file management, system administration and security including user account management. Lec 3, Cr 3

CIST-4313	Advanced Computer Networking	This course provides computer networking topics based on the OSI seven layers. Networking topics include advanced administration techniques, advanced security, adding components, trouble-shooting techniques and network management. Students will install and administrate current networking operating systems in servers and clients in a lab environment. Lec 3, Cr 3
CIST-4330	Computer Graphics and Digital Imaging Processing	This course covers fundamental principles of graphics and digital imaging. Topics of this course include graphics acquisition, graphics optimization, image manipulations, masking, layering, compositing, image correction techniques, and video manipulating and filtering techniques. Lec 3, Cr 3
CIST-4342	Advanced Database Management Systems	This course provides database management topics which include relational database design, formal and commercial query models, network and hierarchical data models, and concurrency control. Lec 3, Cr 3
CIST-4346	Systems Analysis and Design	This course provides an understanding of the system development cycle. It enables students to evaluate and choose a system development methodology. Topics include systems survey, functional specifications, interface specification, data design, program design, system testing and implementation. Lec 3, Cr 3
CIST-4360	Advanced Computer Graphics and Digital Image Processing	This course introduces basic concepts of designing, creating, editing and manipulating the layout of photographic-quality animation sequences, professional images, and multi-media slide presentations and how to integrate them within the web environment. Image and audio formats, compression techniques and transmission techniques are also discussed. Lec 3, Cr 3
COMM-1300	Social Media Communication	This course introduces students to the nuances and dynamics of Web 2.0 technologies with an emphasis on social media platforms and how these apply to the field of communication. The course fosters the development of practical and theory-driven skills to develop and execute effective and dynamic social media strategies. Lec 3, Cr 3
COMM-1307	Introduction to Mass Media	This course is designed to provide students with an overview of broadcasting and cable casting! history, programming, regulations, and financial structures. Commercial, educational and public radio and television, both in the United States and around the world, will be covered with an emphasis on helping the student be a better-informed, and more critical consumer. Lec 3, Cr 3
COMM-2311	Writing for the Mass Media	Theory and practice of news gathering and writing with emphasis on effective writing. Assignments cover general news, interviews, speeches, meetings, and other fields of activity. Lec 3, Cr 3
COMM-2316	Interviewing Principles	This course is designed to improve students' verbal and nonverbal skills in participating in and conducting several types of interviews. Students have the opportunity to develop basic skills in data analysis and techniques such as structuring interviews, techniques, methods of evaluation, and personal presentation. Lec 3, Cr 3
COMM-2327	Introduction of Advertising	This introductory course examines traditional and emerging fundamentals of advertising as an interdisciplinary marketing-based practice, career option, and cultural force. This course is designed to accommodate Communication majors and students from other disciplines throughout the University. Lec 3, Cr 3
COMM-2331	Radio/Television Announcing	Study of voice, diction, pronunciation, phonetics, and delivery in various types of announcing. Lec 3, Cr 3
COMM-2333	Film and T.V. Production	Students will learn the practical application of film and television production principles through hands on training in the operation of cameras, lighting equipment, sound recording equipment, and digital editing systems. Lec 3, Cr 3
COMM-2353	Argumentation and Debate	This course will teach theory and practice of formal debate. Course covers the basis for establishing a point of view, logical proof (evidence and reasoning) and also requires development of written briefs, critical thinking exercises, and public debate. Lec 3, Cr 3
COMM-2366	Film Appreciation	This course traces the history of film from its conception. Within the course, the student will examine all aspects of cinematic systems of style and narrative. Both the communication major and non-major will be provided with critical skills to analyze and discuss film. Lec 3, Cr 3
COMM-3303	Communication Law and Ethics	The general objective of this course is to provide students with an in-depth understanding of communication law as it applies to journalism and other areas of the media. Lec 3, Cr 3
COMM-3310	Communication in Context	This course is designed to expose students to significant issues and topics are related to contexts of communication: media issues, political communication, health communication, gender communication, and family communication. This course may be repeated three times for a total of nine hours for credit. Lec 3, Cr 3

COMM-3311	Gender and Communication	This course is an examination of issues related to gender differences in communication, including discussion of biological, social and cultural sources of gender roles in communication. This course also examines religion, economic change, women's and men's movements and their impact on current gender role expectations. Lec 3, Cr 3
COMM-3312	Difficult Dialogues for Valuing Diversity	This course focuses on helping students develop sensitivity to and acceptance of racial/ gender/ individual differences in a variety of communication contexts. Lec 3, Cr 3
COMM-3315	Methods and Strategies of Social Influence	Designed to examine persuasive and rhetorical techniques as they apply to effective social influence in interpersonal, small group, and mass communication settings. Emphasis on motivational factors, psychological and rhetorical principles, credibility, image, and theories of attitude change. Lec 3, Cr 3
COMM-3316	Intercultural Communication	This course is a study of the symbolic and relativistic nature of culture and the resultant problems in attempting to communicate meaning across cultural lines. Lec 3, Cr 3
COMM-3321	Technical and Professional Communication	Designed to serve students in scientific and technical areas, including business administration, computer science, engineering, biochemistry, and other fields. Provides students with the specific speech communication concepts, principles, and competencies needed to create in listeners an understanding of both the principles and applications of scientifically studied fields of knowledge. Lec 3, Cr 3
COMM-3323	Theories of Communication	This course designed to provide the student with a comprehensive overview and analysis of the nature, history and goals of communication theories. Lec 3, Cr 3
COMM-3325	Family Communication	This course introduces study of family communication, and survey topics, such as research, contexts and family relationships. The goal is to foster students' insights into their own experience of family communication. Lec 3, Cr 3
COMM-3326	Integrated Media Communication	This course implies a wide range of experimental networked media environments to explore networked and collaborative media production environments. This course examines the use and role of media in the context of contemporary information networks. Lec 3, Cr 3
COMM-3330	Leadership Communication	Designed to examine the role appropriate communication skills play in improving student's ability to address management and leadership duties. Emphasis is placed on organizational processes, leadership styles, and interpersonal, presentational, and group communication skills that are useful in business, governmental, and professional settings. Relationships between cultural diversity and leadership and communication are explored. Lec 3, Cr 3
COMM-3335	Mass Communication and Society	Examines theories and effects of the mass communication process. Emphasis on media as they relate to political systems, radio talk shows, and new communication technologies. Lec 3, Cr 3
COMM-3345	Great American Oratory	This course covers the most significant speeches in American history. The course examines three genres: Political oratory. legal oratory, and religious oratory. The course identifies rhetorical commonalities in great speeches. Lec 3, Cr 3
COMM-3353	Advanced Public Speaking	Provides students with intensive application of public speaking principles to various situations. Critical thinking, analysis, reasoning, organization skills, and methods for intensifying presentation impact are stressed. An audience-centered approach to public presentations is the central issue for this course. Lec 3, Cr 3
COMM-3360	Feature Writing	Interpreting trends in reader appeal, analyzing feature story structure! finding ideas for gathering materials, writing and selling feature articles. Lec 3, Cr 3
COMM-4300	Communication Internship	Course applies communication knowledge to a specific career or job opportunity. Student works 10-15 hours per week in a applied communication field with supervisory feedback to instructor. Students will assemble portfolio of work to demonstrate what has been learned/accomplished in the internship. Internship 3, Cr 3
COMM-4303	Special Topics in Communication	Select topic in an identified area of communication. May be repeated for credit when the topics vary. Lec 3, Cr 3
COMM-4311	Public Relations	This course explores the principles of public relations as practiced in public affairs and private business. Lec 3, Cr 3
COMM-4312	Applied Organizational Communication	Analysis of organizational communication processes and development of interpersonal, presentational, and group communication skills that are useful in business, governmental, and professional organizations. Lec 3, Cr 3

COMM-4332	Principles of Instruction and Training	Designed to provide students with exposure to classroom communication patterns, climate, and ecology as they relate to instruction. Student- teacher, teacher-teacher, teacher-administrator, and school-public interaction and examined. Lec 3, Cr 3
COMM-4340	Advertising	Designed to expose the student to principles of advertising as they are applied and used in differing media. Emphasis is place on writing advertising copy, layout, and design. Lec 3, Cr 3
COMM-4344	Communication Campaign Development	Designed to provide students with an in-depth study of persuasive and campaign development. Students will prepare an integrated campaign. Lec 3, Cr 3
COMM-4345	Communication and Conflict Management	Theory and research pertaining to management to resolution of conflict across diverse contexts. Lec 3, Cr 3
COMM-4350	Research in Communication	This course is designed to develop students' ability to understand, evaluate, and produce social/ scientific research in the area of communication. Students will be exposed to the major methods of research used in speech, communication, journalism, and mass media. Lec 3, Cr 3
COMM-4360	Senior Capstone Experience in Communication	This course brings together senior communication majors to focus on a synthesis of the communication field of study. Preparation for future professional work and development will be explored. For Communication majors only. Lec 3, Cr 3
COSC-1301	Introduction to Computing	This course provides an overview of computer information systems and introduces computer hardware, software, the Internet, and Office applications. Current issues such as the effect of computers on society, business, education, etc., are also studied. This course does not count toward major in business or computer science. Lec 3, Cr 3
COSC-1336	Programming Fundamentals I	This course is an introduction to programming logic and programming. Topics include propositional calculus and Boolean algebra, numeric systems and their arithmetic, software development ethics and methodologies, data types, control structures, functions, arrays, testing and debugging. This course satisfies computer literacy requirements. Lec 3, Lab 1, Cr 3
COSC-1337	Programming Fundamentals II	The course will use a high level programming language to review structured and abstract data types, object oriented paradigm, software engineering techniques, searching and sorting techniques, and analysis of algorithm. Lec 3, Lab 1, Cr 3
COSC-2310	Discrete Structures	This course is a study of proof techniques, asymptotic notations for growth function analysis, common functions found in algorithm analysis, manipulating and bounding summations, different methods to solve recurrences including alteration and generating functions, combinatory analysis, number theory, binomial coefficients, sets, graphs, and trees. Lec 3, Lab 1, Cr 3
COSC-2312	Digital Logic	This course covers Boolean algebra applied to digital logic including normal form representation, resolution, simplification of digital systems. Sequential circuits and combinational circuits are studied and reinforced with projects leading to the design of a microprocessor. Lec 3, Lab 1, Cr 3
COSC-2325	Machine Language and Computer Organization	This assembly language intensive course covers machine cycle, digital representation of data and instructions, assemblers, loaders, macros, subroutines, and program linkages. Concepts of computer organization, operating systems, concurrent processes, synchronization and communication are introduced. Lec 3, Lab 1, Cr 3
COSC-2336	Programming Fundamentals III	This course is designed for computer science and engineering students. The course will include topics including concepts of file input/ output, recursion backtracking, data structures including queues, stacks, linked lists, trees, hash tables, and graphs. Software engineering techniques for modularity, reusability, documentation, testing, error detection and recovery are also covered. Lec 3, Lab 1, Cr 3
COSC-3316	Web Programming and Design	This course focuses on the design of multimedia programs and Web applications using languages such as JAVA and HTML. The course will develop the student's skills in developing multimedia applications integrated with Web designs through the use of programming languages. Lec 3, Lab 1, Cr 3
COSC-3325	Computer Architecture	Combinational and sequential logic (reinforced by several lab projects) are studied leading to the design of a processor. Hardware description languages in conjunction with hardwired/microprogramming controllers are studied. Lec 3, Lab 1, Cr 3

COSC-3345	Algorithm Analysis	Concepts of creating, storing, retrieving, ordering, and manipulation of data structures are introduced via programming intensive projects. Formal specification of data structures in programming languages is studied in depth. Algorithms used are analyzed for their space and time complexity. Lec 3, Lab 1, Cr 3
COSC-3355	Principles of Programming Languages	This course is a theory of programming languages, including Syntax and semantics of a language, scoping, binding, storage allocation, procedures and data objects,data-directed programming, object-oriented programming, and other modern programming concepts. Lec 3, Lab 1, Cr 3.
COSC-4190	Senior Project	Students will develop a project and give a presentation to a faculty committee under the guidance of a faculty project advisor. Lab 3, Cr 1
COSC-4300	Compiler Construction	Different phases of compiler construction are studied, including lexical, syntax, semantics, and code generation. Projects leading to the complete construction of a computer for a mini set of a language are carried out. Lec 3, Lab 1, Cr 3
COSC-4310	Operating Systems	The student is familiarized with the services common to most operating systems. Issues in CPU scheduling, concurrent processes, deadlocks, memory management, file management, and distributed systems are dealt with. Students are given relevant projects to support the theoretical aspects learned in class. Lec 3, Lab 1, Cr 3
COSC-4313	Computer Networks	Computer networks are presented via seven distinct layers: physical, data link, network, transport, session, presentation, and application layer. hardware and protocols used at different layers and in different networks are studied in detail. Different existing networks are studied as examples in every layer. Lec 3, Lab 1, Cr 3
COSC-4315	Advanced Computer Networks	This course covers the design of networks and their performance. Topics that will be studied are cryptology, network programming, and secure channels, data preprocessing, pattern recognition, attribute relevance analysis, class discrimination, rule associate, correlation analysis,classification, prediction, cluster analysis and query languages. Lec 3, Lab 1, Cr 3
COSC-4317	Signals and Systems	An in depth study to signals and systems including discrete and multi-dimensional signals. Random variables and representation of signals in the time and frequency domains will be covered, including filter design and analysis. Topics will be reinforced with junior/senior level capstone projects. Lec 3, Lab 1, Cr 3
COSC-4318	Digital Forensics	This course explores the science, technology, procedures, and laws of acquiring and analyzing evidence from digital media and computing devices. Current Forensics tools will be surveyed, and case studies will be assigned and presented in class. Lec 3, Lab 1, Cr 3
COSC-4319	Computer and Cyber Security	This course is an in-depth of computer systems and network security principles. Key areas include network attacks and defenses, operating system flaws, malware, social engineering attacks digital rights management. Lec 3, Lab 1, Cr 3
COSC-4321	E-Commerce	This course covers e-commerce implementation including e-commerce security and prevention, e-commerce scalable architecture design, Internet infrastructure, web server administration, e-payment, mobile commerce (mCommerce) systems and business-to-business (B2B)systems. Lec 3, Lab 1, Cr 3
COSC-4330	Computer Graphics	The student is familiarized with structured graphical objects. The algorithms for transforming, clipping, and projecting objects are put into practice several projects. Hidden line/surface removal, shading/lighting models, and the problem of aliasing are studied. Lec 3, Lab 1, Cr 3
COSC-4332	Human Computer Interaction	Simple and compound classes, page and page selector classes, animation and pop up classes, configuration and deriving of new objects, application interface, overall design, and machine dependencies are studied. Application-oriented graphic user interfaces are built. Lec 3, Lab 1, Cr 3
COSC-4333	Digital Image Processing	This course covers the basic techniques used in acquiring, processing, and displaying of digital images and video. Topics include image acquisition, spatial and frequency domain representation, image filtering, image compression, image analysis, morphological image processing and image understanding. Efficient implementation of image processing algorithms in a structured computer language is emphasized. Lec 3,Lab 1, Cr 3

COSC-4335	Computer Vision	The course covers the fundamental and advanced ideas of developing computerized procedures to extract numeric and symbolic information from images. Key ideas includes image formation, acquisition, calibration, object recognition, video understanding, stereo imaging, optical flow and classification methods. System implementation and applications in communication, medicine, robotics and manufacturing are introduced. Lec 3, Lab 1, Cr 3
COSC-4342	Database Management Systems	Data abstraction and models, entity-relationship model, relational model, formal and commercial query languages, network and hierarchical data models, relational database design, file and system structure, indexing and hashing, query processing, and concurrency control are studied. Lec 3, Lab 1, Cr 3
COSC-4343	Data Mining	This course gives the fundamentals of applying artificial intelligence techniques for analysis, learning and prediction of information using data extracted from databases. Topics include data mining system architecture, data preprocessing, pattern recognition, attribute relevance analysis, class discrimination, rule association, correlation analysis, classification, prediction, cluster analysis and query languages. Lec 3, Lab 1, Cr 3
COSC-4345	Advanced Algorithm Analysis	Both basic and advanced techniques of algorithm design and analysis are introduced. Algorithms with real applications are thoroughly studied. The notion of NP-complete problems and design and analysis techniques for approximation and randomized algorithms are also introduced. Lec 3, Lab 1, Cr 3
COSC-4346	Software Engineering	The scope of systems analysis, systems investigation and analysis, input and output design, storage devices, file organization, sorting and merging, factors affecting file design, system design, the program specifications, design strategy, and financial applications are studied. Lec 3, Lab 1, Cr 3
COSC-4347	Advanced Software Engineering	This course is an in-depth study of advanced software engineering principles including project management, team building, team organization, cost estimation, scheduling, description and evaluation of software architecture design, object-oriented design methodologies, and refactoring. Practical aspects of software are discussed including testing, maintenance, safety, security, quality assurance, and reliability. Lec 3, Cr 3 Lab 1
COSC-4349	Advanced Computer Architecture	This course covers classical and modern computer architectures. Techniques such as microprogramming and counter-decoder methods will be included. Other topics that will be studied include parallel computing architectures, their performance and programming. Lec 3, Lab 1, Cr 3
COSC-4350	Artificial Intelligence	This course discusses the theoretical and practical foundations of Artificial Intelligence. Principles of reasoning, perception, deduction, planning, learning, knowledge representation and problem resolution are some of the areas covered. Lec 3, Lab 1, Cr 3
COSC-4355	Expert Systems	This course covers the theoretical and practical principles of modern Expert Systems construction. Lec 3, Lab 1, Cr 3
COSC-4360	Numerical Methods	The topics include root finding, interpolation and numerical differentiation, polynomial interpolation, estimating derivatives, numerical integration, systems of linear equations, approximation by spline functions, and smoothing of data. This course satisfies the computer science course requirements toward a major in mathematics. Lec 3, Lab 1, Cr 3
COSC-4361	Computability Theory	This course introduces elements in formal language theory and computability theory. Theoretical foundations of computer science will be covered. Lec 3, Lab 1, Cr 3
COSC-4362	Complexity Theory	This course introduces basic concepts, results and techniques in computational complexity theory, and provides a deeper insight of the power of computing using the Turing-machine model. Lec 3, Lab 1, Cr 3
COSC-4380	Special Topics	A special topic will be covered in this course at the senior level. Different sections may cover different topics in a semester. Under special topics, courses related to new developments in the area of computer science will be offered. Lec 3, Cr 3 Lab 1
COSC-4381	Bioinformatics	This course will provide an introduction to the rapidly evolving field of Bioinformatics with the overarching goal of understanding how Computer Science plays an integral part both in application and algorithmic aspects. Lec 3, Lab 1, Cr 3
COSC-4382	Bioinformatics Imaging	An introduction to the physical and computational principles of medical imaging systems. Topics covered include fundamentals of x-ray radiography, x-ray computed tomography, ultrasound imaging and magnetic resonance imaging. Current techniques for visualization, segmentation, and analysis of medical image data will also be discussed. Lec 3, Lab 1, Cr 3



COSC-4386	Internship	A practical general workplace training related to the student's general and technical course of study is supported by an individualized learning plan developed by the employer, college, and student. These guided experiences may be paid or unpaid and the course may be repeated if topics and learning outcomes vary. Internship 10, Cr 3
CRIJ-1301	Introduction to Criminal Justice	Provides an overview of the history and philosophy of criminal justice and ethical considerations, defines crime and its nature and impact, provides an overview of the criminal justice system, law enforcement, the court system, prosecution and defense, the trial process, and corrections. Lec 3, Cr 3
CRIJ-1306	Court Systems and Practices	Students will study the judiciary in the American criminal justice system and the adjudication processes and procedures. Lec 3, Cr 3
CRIJ-1307	Crime in America	This course introduces American crime problems in historical perspective, social and public policy factors affecting crime! the impact of crime! crime trends, social characteristics of specific crimes, and prevention of crime. Lec 3, Cr 3
CRIJ-1310	Fundamentals of Criminal Law	This course presents the nature of criminal law and its philosophical and historical development! major definitions, concepts and classifications of crime, elements of crime and penalties using Texas statutes as illustrations, criminal responsibility. Lec 3, Cr 3
CRIJ-1313	Juvenile Justice System	This course is a study of the juvenile justice process to include specialized juvenile law, role of the juvenile courts, role of police agencies, role of correctional agencies, and theories concerning delinquency. Lec 3, Cr 3
CRIJ-2230	Seminar in Forensics Investigation	This course is a general survey of forensic science careers, specializations, qualifications, professional literature, ethics, certifications, with a special emphasis on legal and procedural aspects of preparation for and actual testimony in court. Lec 2, Cr 2
CRIJ-2301	Community Resources in Corrections	Introduces the role of community corrections, including community programs for adults and juveniles, administration of community programs, legal issues, and future trends in community treatment. Lec 3, Cr 3
CRIJ-2313	Correctional Systems & Practices	This course introduces corrections in the criminal justice system, organization of correctional systems correctional role, institutional operations, alternatives to institutionalization, treatment and rehabilitation, and current and future issues. Lec 3, Cr 3
CRIJ-2315	Forensic Investigation I	A course in criminal investigation processes, methods, tools, and techniques, forensic applications, investigative case management, role of the crime lab, and case documentation. Students engage in semester-long simulation in preparation of comprehensive, legally sufficient investigative felony case folders from crime scene response to the eventual prosecutor's presentation to a grand jury. Lec 3, Cr 3.
CRIJ-2320	Evidence for Forensic Investigation	This is a course in gathering evidence, fashioning evidentiary arguments and preparing evidence for trial, with emphasis on the practical applications of the rules of evidence with specific forensic science cases and situations presented. Lec 3, Cr 3
CRIJ-2325	Medical- Legal Forensics Investigation	An interdisciplinary course in concepts in forensic investigation/ evidentiary aspects of traumatic wounds and injuries, death, sexual assault, intimate partner violence, child abuse, and elder abuse, this course is of utility to law enforcement, protective services, and health care professionals. Lec 3, Cr 3
CRIJ-2328	Police Systems and Practices	This course presents the police profession, the organization of law enforcement systems, the police role, police discretion and ethics, police community interaction, and current and future issues. Lec 3, Cr 3
CRIJ-2416	Forensic Investigation II	A course involving the field collection of evidence and the preservation of crime scene evidence, with emphasis on fingerprints, photography, and other skills and competencies expected on an apprentice identification officer and crime scene investigator. Course competencies and tasks correspond to the IAI body of knowledge for the certified crime scene investigator. Lec 3, Lab 1, Cr 4
CRIJ-3302	Research Methods in Criminal Justice	This course provides an overview of quantitative and qualitative research methods commonly used in criminal justice studies. Measurement issues related to validity, reliability, objectivity, and methods of data collection are discussed in detail. Lec 3, Cr 3
CRIJ-3303	Nature of Crime	This course provides an overall perspective of the crime problem with special emphasis given to philosophical and theoretical ideas pertaining to crime and its control, including examining of the victim and criminal topologies. Lec 3, Cr 3

CRIJ-3315	Legal Aspects of Evidence for Law Enforcement	This course critically examines the legal controls on police officers, with special attention to current court decisions related to such issues as arrest, search and seizure, confessions, wiretapping and eavesdropping, right to counsel, and self-incrimination. Lec 3, Cr 3
CRIJ-3325	Violent Crime and Offenders	This course examines genesis of violence and its expression in criminal and noncriminal forms! theories of violence! victim-offender interactions! types of violent crimes, such as homicide, assault, robbery, and rape! domestic abuse and violence! distribution of violent crimes! gender, class, race and crime! proactive and reactive measures to control violent crimes. Lec 3, Cr 3
CRIJ-3331	Legal Aspects of Corrections	This course examines legal problems and principles from conviction to release, including consideration of convictions, imprisonment, sentencing, conditional release, post conviction procedures, prisoners' rights, probationers' right, and validity of conviction. Lec 3, Cr 3
CRIJ-3341	Probation and Parole	This course examines the philosophy, history and principles of probation, parole and other community-based treatment programs, the philosophy of punishment and rehabilitation! trends, practices and current research in probation and parole, including methods of analysis, selection and prediction. Lec 3, Cr 3
CRIJ-3362	Statistics in Criminal Justice	This course covers the basics of descriptive and inferential statistics. It emphasizes the use of data analysis employing SPSS and the understanding of the proper application of statistics in criminal justice research. Lec 3, Cr 3
CRIJ-3380	Jurisprudence and Justice	The course provides abroad overview of theory and philosophy pertaining to law and justice. The focus of the course is on theory and philosophy underlying the development and maintenance of law, the various types/categories of law, and important concepts in understanding the nature of law. The course also explores the relationship of law to various conceptualizations of justice. Lec 3, Cr 3
CRIJ-4301	Practicum Field Experience	This capstone course focuses on academic and professional development. It requires placement in a criminal justice (or related) agency for a minimum of 120 hours. Students will be evaluated by agency critiques, daily logs, and meeting with the intern coordinator and a cumulative program exam. Lec 1, Internship 7.5, Cr 3
CRIJ-4312	Principles of Law Enforcement Supervision	This course examines the principles involved in law enforcement supervision, principles of leadership, psychology involved in handling grievances and in building morale, duties and responsibilities of command level personnel, law enforcement budgeting procedures, supervisory problems and responsibilities relating to discipline, and internal affairs investigations. Lec 3, Cr 3
CRIJ-4313	Seminar of Issues in Law Enforcement	This course analyses and discusses contemporary issues in policing with particular attention to current developments, service delivery, and the changing police role! integration of established scientific knowledge with practical police experiences in various areas of policing. Seminar 3, Cr 3
CRIJ-4320	Criminal Justice Organization and Management	This course focuses on fundamental concepts of management, organization, and administration as specifically applicable to corrections and law enforcement. The course also focuses attention on societal trends that impact criminal justice administration. Lec 3, Cr 3
CRIJ-4321	White-Collar and Organized Crime	This course surveys, criminological and criminal justice theories and approaches to classifying white-collar, and organized crime and deviance. Beginning with classic articles and continuing with case studies of corporate and organized criminality and irresponsibility, this course examines social, legal and ethical issues surrounding racketeering, and crime in the suites. Lec 3, Cr 3
CRIJ-4341	Correctional Casework and Counseling	This course examines the role and techniques of casework in corrections with emphasis on integrating casework and counseling responsibilities and procedures. The course includes examining of therapy techniques and processes in various correctional settings and studying of service delivery programs tailored to the specific needs of correctional clients. Lec 3, Cr 3
CRIJ-4343	Seminar of Issues in Corrections	This course analyses and discusses contemporary correctional systems, including discussion of recent research concerning correctional institutions and various corrections field services. Emphasis is given to administrative and treatment concerns in corrections. Lec 3, Cr 3
CRIJ-4361	International Study of Crime and Justice	This course is a study of criminal justice programs and institutions outside of the United States through in-country visitations supplemented by assigned readings, papers, discussion, and dialogue with leading in-country criminal justice personnel. The course permits students to engage in a realistic comparative study of criminal justice in countries other than the United States through first hand experiences. Lec 3, Cr 3

CRIJ-4362	Special Topics in Criminal Justice	This course gives advanced undergraduate students the academic flexibility and opportunity to study contemporary issues in crime and criminal justice. May be retaken once for credit upon approval of the department chair. Lec 3, Cr 3
CRIJ-4363	Gangs and Gang Behavior	This course introduces the student to street and prison gangs! it explores gang structure, organization, and characteristics. Official response to gang problems is also analyzed. Lec 3, Cr 3
CRIJ-4370	Senior Seminar - Policy Issues	This course is designed for students nearing completion of their BS degree. This seminar will explore: 1) current criminal justice policy issues, 2) topical CJ policy issues as they affect each agency, and 3) assess the intended and unintended consequences of CJ policies throughout the system and society. Seminar 3, Cr 3
CTMT-3332	Principles of Computed Tomography	In depth coverage of computed tomography imaging techniques. Image quality assurance and radiation protection are emphasized. Lec 3, Cr 3.
CTMT-3636	Computed Tomography Equipment and Methodology	Skills development in the operation of computed topographic equipment, focusing on routine protocols, image quality, quality assurance and radiation protection. Lec 3, Lab 6, Cr 6.
CTMT-4636	Practicum in Computed Tomography	Practice in the clinical setting performing CT Imaging. Close supervision by preceptor in the clinical setting. This experience can be paid or non paid. Lec 1,Lab 6, Cr 6.
DRAM-1310	Introduction to Theater	Fundamentals of dramatic art, structural techniques, character analysis and interpretation, makeup! costuming, set design, construction, and lighting! and participation in plays. Lec 3, Lab 3, Cr 3
DRAM-1351	Introduction to Acting	Introductory study and analysis of acting, with emphasis on stage movement, spatial awareness, behavioral techniques, and character development. Lec 3, Lab 3, Cr 3
DRAM-2361	History of Theater	A study of the history of the theatre including critical review and analysis of selected plays from Greek antiquity to the present. Lec 3, Cr 3
DSEC-3140	Practicum I Echocardiography	A basic type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional, generally in a clinical setting. Practicum 1, Cr 1.
DSEC-3200	Introduction to Echocardiography Techniques	An introduction to scanning techniques and procedures with hands-on experience in a lab setting. Emphasis is placed on the sonographic explanation of the normal adult heart. Lec 1, Lab 1, Cr 2.
DSEC-3300	Principles of Adult Echocardiography	An introduction to cardiovascular anatomy and physiology, including hemodynamics and spatial relationships of the normal adult heart. Topics include anatomical correlation of 2D, M-mode and Doppler sonographic imaging. Scanning techniques are correlated and taught in the laboratory sessions. Lec 2, Lab 1,Cr 3.
DSEC-3340	Adult Echocardiography	Fundamental theories of echocardiography including cardiac anatomy and physiology, physics, M-mode 2-D correlation and scanning protocol, mitral valve normal and abnormal echo patterns, hemodynamic and conduction changes, and basic Doppler and color flow. Designed for sonographers and individuals practicing echo who need more of an academic echo background. Lec 2, Lab 1, Cr 3.
DSEC-4140	Practicum II Echocardiography	An advanced type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional, generally in a clinical setting. Practicum 12, Cr 1.
DSEC-4200	Echocardiography Evaluation of Pathology I	An emphasis on adult acquired cardiac pathologies. Topics include cardiovascular pathophysiology, quantitative measurements and the application of 2D, M-mode, and Doppler. Recognition of the sonographic appearances of cardiovascular disease is stressed. Lec 1, Lab 1, Cr 2.
DSEC-4300	Echocardiography Evaluation of Pathology II	A continuation of Echocardiography Evaluation of Pathology I with emphasis on cardiac disease. Topics include adult and pediatric congenital heart disease. A discussion of quantitative measurements and application of 2D, M-mode, and Doppler. Recognition of the sonographic appearances of cardiac disease is stressed. Lec 2, Lab 1, Cr 3.

DSVT-3140	Practicum I Vascular Technology	A BASIC type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional, generally in a clinical setting. Practicum 12, Cr 1.
DSVT-3210	Vascular Technology Applications	Study of noninvasive vascular exams with emphasis on anatomy and physiology, and pathophysiology. Lec 2, Cr 2.
DSVT-3300	Introduction to Vascular Technology	An introduction to basic noninvasive vascular theories, with emphasis on basic skills and knowledge, such as image orientation, transducer handling and identification of anatomic structures. Lec 2, Lab1, Cr 3.
DSVT-3330	Principles of Vascular Technology	An introduction to noninvasive vascular technology modalities, including 2D imaging, Doppler, plethysmography and segmental pressures. Emphasis on performing basic venous and arterial imaging and non-imaging exams. Lec 2, Lab 1, Cr 3.
DSVT-3340	Cerebral Vascular Evaluation	Integration of basic concepts and the application of non-invasive technology for the evaluation of carotid disease. Lec 3, Cr 3.
DSVT-3350	Peripheral Vascular Evaluation	Integration of basic concept and the application of noninvasive technology for the evaluation of Peripheral vascular disease. Lec 3, Cr 3.
DSVT-4140	Practicum II Vascular Technology	An ADVANCED type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional, generally in a clinical setting. Practicum 12, Cr 1.
EABL-3312	Teaching Reading in the Bilingual Classroom	Students will be given the opportunity to learn the developmental process involved in biliteracy. This course focuses on methods and techniques for integrating teaching and assessing reading skills in Spanish-English bilingual classrooms. Taught in Spanish. Lec 3, Cr 3
EACI-4324	Designing Instruction and Assessment to Promote Student Learning - A.C.P	Knowledge of student diversity and learning goals and objectives will be emphasized. This knowledge will be applied to effective instructional planning and assessment for all students. Field-based course. Lec 3, Cr 3
EAEC-4385	Growth and Development of Young Children -A.C.P	Emphasis on developmental and growth characteristics for birth through the eighth year. Affective development, psychomotor development, social and emotional development. Cultural dynamics of family relationships and the family and school are emphasized. Observations, reading, lectures! class activities include day care as well as TEA accredited schools for pre-kindergarten and kindergarten children. Field experience required. Lec 3, Cr 3
EAIN-4320	Elementary/ Secondary Internship I-A.C.P	This course involves supervised classroom teaching and seminars designed to relate classroom teaching/ learning experience to corresponding educational theory applicable to all educational levels. Intern 3, Cr 3
EAIN-4321	Elementary/ Secondary Internship II - A.C.P	This course involves supervised classroom teaching and seminars designed to relate classroom teaching/learning experience to corresponding educational theory applicable to all educational levels. Intern 3, Cr 3
EALI-3311	Beginning Literacy for English Language Learners	Students focus on the early foundations of oral language, reading, and writing development. This course will include the teaching of phonological awareness, phonics, vocabulary, and comprehension. Instructional strategies for English language learners are incorporated. Lec 3, Cr 3
EALI-3323	Beginning Literacy for E.S.L Learner: 2nd-4th Grade- A.C.P	Students focus on word analysis and decoding, reading fluency, reading comprehension and writing conventions. Students plan and present literacy lessons using techniques appropriate for English language learners. Field experience required. Lec 3, Cr 3
EALI-4329	Literacy and Assessment- A.C.P	Participants understand the basic principles of formative and summative assessment and use a variety of literacy assessment practices to plan and implement instruction for students. Evaluation of strengths, needs and interests using standardized and alternative assessments will be included. Lec 3, Cr 3
EALI-4351	Content Area Literacy- A.C.P	This course focuses on explicit strategies to teach and monitor content area reading comprehension, vocabulary development, and study skills for all learners. Factors influencing reading comprehension, as well as a variety of reading materials and formats, will be highlighted. Field-based experience is required. Lec 3, Cr 3

EALI-4367	Teaching Reading to the English Language Learner-A.C.P	This course offers the student the opportunity to develop knowledge and instructional strategies for teaching reading to students of diverse cultural-linguistics backgrounds. Special emphasis will be placed on developing oral language proficiency as a prerequisite skill to reading and on instructional strategies designed specifically to meet the needs of such learners. Lec 3, Cr 3
EAMG-4324	Designing Instruction and Assessment to Promote Student Learning: 4th-8th Grades -A.C.P	Knowledge of students, learning goals and objectives will be emphasized. This knowledge will be applied to effective instructional planning and assessment for all students. Field-based course. Lec 3, Cr 3
EAMG-4325	Implementing Responsive Instruction and Assessment: 4th-8th Grade- A.C.P	This class emphasizes communication, instruction and assessment and technology. This knowledge will be implemented to create responsive instruction and assessment that actively engages all students in the learning process. Field-based course. Lec 3, Cr 3
EASC-4324	Designing Instruction and Assessment to Promote Student Learning: 8th-12th Grade -A.C.P	Knowledge of students, learning goals and objectives will be emphasized. This knowledge will be applied to effective instructional planning and assessment for all students. Field-based course. Lec 3, Cr 3
EASC-4325	Implementing Responsive Instruction and Assessment: 8th-12th Grade-A.C.P	This class emphasizes communication, instruction and assessment strategies and technology. This knowledge will be implemented to create responsive instruction and assessment that actively engages all students in the learning process. Field-based course. Lec 3, Cr 3
EASL-4307	Foundations of Bilingual/E.S.L-A.C.P	Students will learn the foundations of bilingual and English as a Second Language programs. Current research on first and second language acquisition, bilingual and ESL programs, theories and models is emphasized. Field experience is required. Lec 3, Lab 3, Cr 3
ECCS-3310	Introduction to Emergency and Critical Care	The purpose of this course is to provide the learner with advanced knowledge in critical care medicine. Topics will include monitoring technology, advanced procedures, diagnostic testing, and treatment of acutely critical patients. Lec 3, Cr 3.
ECCS-3325	Advanced Airway Management	Prepares the student to perform endotracheal intubations, emergency tracheotomy, and other advanced airway techniques as well as insertion of chest tubes, emergency thoracentesis and other life saving maneuvers. Practice on manikins and possibly live animal labs are planned. Lec 2, Lab 2, Cr 3.
ECCS-3340	Critical Care Pharmacology	This course is designed to provide the learner with a fundamental knowledge of the actions and therapeutic uses of drugs. The topics covered will include basic principles of drug action, pharmacokinetics, autonomic and cardiovascular pharmacology, neuropharmacology, toxicology, endocrine pharmacology, and respiratory tract pharmacology. Lec 3, Cr 3.
ECCS-3355	Electrocardiography	A study of the fundamentals of electrocardiology with emphasis on the role of the 12-lead ECG in and out of hospital medical care. The purpose of this course is to teach in systematic-analytical approach to rapid 12-lead interpretation. Topics begin with cardiac anatomy and physiology and progress to the level of recognizing the classic 12-lead and multi-lead ECG patterns. Lec 3, Cr 3.
ECCS-4310	Invasive Hemodynamic Procedures	The learner will be prepared to monitor hemodynamic data in the intensive care unit. Topics will cover arterial line insertion, aortic counter pulsation, insertion of balloon tip pulmonary artery catheter. The physiology and interpretation of pathology will also be reviewed. Lec 2, Lab 2, Cr 3.
ECED-2383	Introduction to Early Childhood Education	This course is a orientation to the study of early childhood education from its early beginnings to the present. Emphasis is on the teacher's role, the preferred learning environment, and appropriate learning content for meeting individual differences and cultural diversities for young children. Lec 3, Cr 3
ECED-3384	Nutrition, Health and Safety	This course deals with factors impacting the health and safety of young children. It emphasizes healthy living, food choices, nutrition, fitness, recognizing illness and abuse, and safety practices. It focuses on local and national standards and legal implications of policies as related to children's health and safety. Lec 3, Cr 3
ECED-3385	Math and Science in Early Childhood Education	The course will include the standards, principles, and practices in teaching mathematics and sciences concepts to young children ages birth to eight, and will focus on an integrated curriculum that includes appropriate content, processes, environment and materials, and child-centered choices. Lec 3, Cr 3
ECED-3386	Theories in Early Childhood Education	This course will include the review of various theories relevant to early childhood education. Various theories and research will be discussed with respect to trends, quality, and standards. Lec 3, Cr 3

ECED-3387	Diversity in Families	This course will help students understand and identify differences in approaches to learning, including different learning styles and ways in which students demonstrate learning. This course will emphasize understanding how children's learning is influenced by individual experiences, talents, disabilities, gender, language, culture, family, and community. Lec 3, Cr 3
ECED-3388	Curriculum in Early Childhood Education	This course will focus on planning developmentally appropriate curriculum designed to enhance children's cognitive, social, emotional, physical, and creative development. It includes developing an awareness of various forms of discrimination and identifying bias in materials. Lec 3, Cr 3
ECED-3389	Creativity and the Visual Arts in Early Childhood Education	This course will introduce students to the importance of creativity in early childhood programs. Students will learn the benefits of creative arts for young children as well as ways to implement creative arts in the classroom. Students will also learn how adults can support the creative arts in the classroom. Lec 3, Cr 3
ECED-3390	Program Administration and Management	This course provides an overview of programs management in early childhood education. This includes planning, implementing, and evaluating programs, financial, legal and ethical issues, personnel management, building parent partnerships, advocacy, fiscal analysis, best practices and program administration. Lec 3, Cr 3
ECED-3391	Practicum I: Infants and Toddlers	This course provides opportunities for students to work with children aged birth to 36 months, in child development centers with infant and toddler programs. It helps integrate child development theories with developmentally appropriate practice. Students will work under supervision and assume responsibility for classroom management, organization and design of curriculum. Lec 3, Cr 3
ECED-4385	Growth and Development of Young Children	Emphasis on developmental and growth characteristics from birth through the eighth year. Cultural dynamics of family relationships and the family and school are emphasized. Observations, reading, lectures, class activities include daycare as well as TEA accredited schools. Environments will be developmentally appropriate inclusion models. Lec 3, Cr 3
ECED-4387	Practicum II: Preschool (ages 3 to 5)	This course is designed to provide an understanding in the instruction of preschool children by participating in hands-on learning experiences in selected child care settings. Students will develop an awareness of appropriate adult/ child interaction, basic skills in planning and implementing a daily routine and curriculum activities. Lec 3, Cr 3
ECED-4388	Play Theory and Practice	This course will cover the theory and practice of play in the early childhood classroom. Students will review major play theorists and the domains of play. Practical implementation to play in the EC-3rd grade classroom will also be discussed. Lec 3, Cr 3
ECED-4389	The Environment and Early Childhood	The course focuses on an examination of appropriate learning environments for young children. It includes the relationship between curriculum and the design by addressing issues of development, assessment, classroom guidance, interdisciplinary lesson planning, culture, language and special needs. Lec 3, Cr 3
ECED-4391	Early Childhood Assessment	This course will examine the goals, benefits and uses of assessment in early childhood education. Students will gain experience with a variety of developmentally appropriate assessment tools. The use of assessment in curriculum planning and in the development of appropriate teaching strategies for young children will also be reviewed. Lec 3, Cr 3
ECED-4392	Emergent Literacy in Early Childhood Education	This course explores early literacy learning from birth through grade three. Students will analyze stages in literacy learning and plan developmentally appropriate literacy environments, materials, activities and assessments to apply content knowledge. This course will incorporate a framework of bilingual and multilingual learners. Lec 3, Cr 3
ECED-4393	First and Second Language Development	Students will explore theories and models of second language acquisition (SLA). They will learn about the emotional, social, and intellectual implications of learning a second language while maintaining the first. This course will incorporate a framework of multilingual learners. Lec 3, Cr 3
ECED-4394	Children's Literature	The course will cover various literary genres and how to apply them to the early childhood classroom. Students will evaluate children's literature through a variety of individual and group projects and design developmentally appropriate activities that promote literacy learning. Lec 3, Cr 3

ECED-4397	Practicum III : School Age (ages 5 to 8)	This course is the third practicum course for the degree in early childhood education. This course will involve observations and involvement in a school age classroom. Students will acquire practical knowledge and experience in school age setting. Lec 3, Cr 3
ECON-2301	Principles of Macroeconomics	Introduction to national income analysis. Topics include an introduction to supply and demand analysis, the economic functions of government, the determinants of output, employment, and the general price level, national income accounting, classical, Keynesian and neoclassical models of the economy, the Federal Reserve! fiscal and monetary policy, the balance of payments. BBA degrees require that this course be passed with a minimum grade of "C" Lec 3, Cr 3
ECON-2302	Microeconomics	Introduction to price theory. Topics include elasticity, consumer behavior, the behavior of the firm under perfect and imperfect competition, government regulation, natural resources, labor, international trade, and the distribution of income and wealth. Open only to students who have completed all required development courses in reading and/or writing as assessed by the University. BBA degrees require that this course be passed with a minimum grade of "C" Lec 3, Cr 3
EDBI-4608	Student Teaching E.C-6th Bilingual Generalist	Student teaching occurs in a bilingual classroom under the guidance of EC-6th grade classroom teachers and a university supervisor. Enhancing professional development and preparation for state required certification examinations will be emphasized in a seminar format. Internship 6, Cr 6
EDCI-1101	Step 1: Inquiry Approaches to Teaching	This course provides math and science students with the opportunity to experience teaching in classroom setting. Master teachers introduce students high- quality inquiry-based lessons and model the pedagogical concepts. Students observe a classroom twice and then prepare and teach 3 lessons in elementary classroom. Lec 1.5, Cr 1
EDCI-1102	Step 2: Inquiry Based Lesson Design	This course provides math and science students with opportunity to experience teaching classroom setting. Master teachers introduce students to high-quality inquiry-based lessons and model pedagogical concepts. Students conduct more observations than in the previous Step 1 course and prepare/teach 3 lessons in middle school classrooms. Lec 1.5, Cr 1
EDCI-3314	Methods in Teaching Science and Mathematics	The course provides knowledge and application of science and mathematics teaching methods for diverse student populations. Instructional methods of teaching mathematics and science will integrate content from physical, life, earth, and space sciences and mathematics content from algebra, geometry, and numeracy. A laboratory and field component is included. Lec 3, Cr 3
EDCI-3330	Designing Instr and Assessment to Promote Student Learning	Knowledge of student diversity and learning goals and objectives will be emphasized. This knowledge will be applied to effective instructional planning and assessment for all students. To be taken concurrently with EDCI-4325. Field-based course. Lec 3 Fld 1, Cr 3.
EDCI-3350	Knowing and Learning in Mathematics and Science	This course expands the prospective teacher's understanding of current theories of learning and conceptual development. Students examines their assumptions about learning. They examine the needs of a diverse student population in the classroom. Faculty will also discuss how material from this course can be used to continue building the portfolio. Lec 3, Cr 3
EDCI-3355	Classroom Interactions	This course focuses on teaching and learning. Prospective teachers introduce methods where curriculum and technology are used to build interrelationships among teachers and students. This course has observation and teaching. Students should also expect to dedicate out-of-class time to videotransfer, lesson planning, and their portfolio project. Lec 3, Cr 3
EDCI-3360	Project-Based Instruction	In this course, students aim to master new technologies for problem-based investigations in math and science classrooms, teaching project-based lessons to middle school students. Students discuss the use of assessment to improve student learning. Students should also expect to dedicate some out-of-class time as in other courses. Lec 3, Cr 3
EDCI-4170	Apprentice Teaching-Seminar	Students reflect on their student teaching experiences and examine contemporary critical issues in education. Lec 1, Cr 1
EDCI-4311	Student Teaching E.C- 6th	Student teacher will have the opportunity to design and implement instruction, and practice classroom management techniques. Weekly seminars and individual conferences are required. Students will be assigned a half-semester, all day, Monday through Friday placement. This course is required for all level certifications. Lec 1, Cr 3

EDCI-4315	Principles of Teaching Workshop for Elementary/ Secondary Teachers	This workshop course is designed to give people entering teaching a theoretical and practical base for their introduction to teaching and for planning learning activities. Special permission must be given before enrollment in the course. Lec 3, Cr 3
EDCI-4325	Implementing Responsive Instruction and Assessment	This class emphasizes communication, instruction and assessment strategies, and technology. This knowledge will be implemented to create responsive instruction and assessment which actively engages all students in the learning process. Lec 3, Cr 3
EDCI-4327	Methods of Teaching Social Studies and English Language Arts	This course focuses on developing content specific strategies for elementary teaching. Candidates plan and implement effective instruction and develop a preliminary Teacher Work to demonstrate mastery of the knowledge and skills associated with effective, elementary content pedagogy that promotes student learning. Field experience is 15 hours. Lec 3 Fld 1, Cr 3.
EDCI-4336	Topics in Education	This course covers current issues and topics related to the field of education. Field or lab work may be required. The course may be repeated twice for credit for a total of 9 semester credit hours when the topic is different. Lec 3, Cr 3
EDCI-4608	Student Teaching E.C- 6th E.S.L Generalist	Student teaching occurs in an ESL classroom under the guidance of EC-6th grade classroom teachers and a university supervisor. Enhancing professional development and preparation for state required certification examinations will be emphasized in a seminar format. Lec 3, Cr 6
EDCI-4620	Internship Elementary / Secondary Schools	Full-time supervised classroom teaching with seminars designed to relate the classroom teaching/ learning experience to corresponding educational theory. Applicable to both elementary and secondary majors. May not substitute for student teaching. Lec 1, Cr 6
EDCI-4650	Apprentice Teaching 6-12	Students are immersed in the schools to prepare them to confidently assume a teaching position in the public schools. Lec 6, Cr 6
EDCI-4680	Clinical Teaching Post-Baccalaureate	Clinical teaching is required in partial fulfillment of the requirements for a provisional teaching certificate in Texas. This one-semester course provides post-baccalaureate candidates with hands-on teaching experience in an assigned classroom setting. No candidate may enroll in more than six hours concurrently with clinical teaching. Lec 6, Cr 6
EDEC-4389	The Environment and Early Childhood	This focuses on an examination of appropriate learning environments for young children. It includes the relationship between curriculum and the design by addressing issues of development, assessment, classroom guidance, interdisciplinary lesson planning, culture, language and special needs. Lec 3, Cr 3
EDFR-2301	Intercultural Foundations of Schooling	This education course introduces students to issues related to characteristics of special needs populations as well as classroom strategies for instruction of diverse populations. Lec 3 Fld 1, Cr 3.
EDLI-3310	Emergent Literacy for E.S.L Learners: Early Childhood - 1st Grade	Early development of oral language, phonological and phonemic awareness, the alphabetic principle, and writing will be explored in this course. Students will tutor young children in these areas based multi-sensory, developmentally appropriate, and English as a second language principles. Field experience required. Lec 3, Cr 3
EDLI-3311	Beginning English Literacy for English Language Learners	Students focus on the early foundations of oral language, reading and writing development. The course will include the teaching of phonological awareness, phonics, vocabulary, and comprehension. Instructional strategies for English language learners are incorporated. Lec 3, Cr 3
EDLI-3323	Beginning Literacy for E.S.L Learners: 2nd-4th Grades	Students focus on word analysis and decoding, reading fluency, reading comprehension, and writing conventions. Students plan and present literacy lessons using techniques appropriate for English language learners. Field experience required. Lec 3, Cr 3
EDLI-3325	Literacy Across the Curriculum for English Language Learners	Students focus on the early foundations of oral language, reading and writing development. The course will include the teaching of phonological awareness, phonics, vocabulary, and comprehension. Instructional strategies for English language learners are incorporated. Lec 3, Cr 3.
EDLI-3329	E.S.L Literacy and Assessment	Participants will learn the basic principles of assessment and use a variety of literacy assessment practices to plan and implement literacy instruction for young ESL learners. Evaluation of strengths, needs, and interests using standardized and alternative assessments will be included. Field experience is required. Lec 3, Cr 3



EDLI-3340	E.S.L Language Arts and Literature	This class focuses on developing the language arts skills of English language learners through reading, writing, listening, viewing and representing. The reading/writing workshop model includes the writing process, reading quality children's literature in various genres, and responding to the literature. Field experience is required. Lec 3, Cr 3.
EDLI-4350	Adolescent Literature	This course focuses on different genres of literature in multicultural society. It highlights purposes for reading, including reading for pleasure and lifelong learning. Additionally, it emphasizes modeling reading and adapting materials for all learners. Ways to enhance comprehension before, during and after reading are emphasized. Field-based experience is required. Lec 3, Cr 3
EDLI-4351	Content Area Literacy	This course focuses on explicit strategies to teach and monitor content area reading comprehension, vocabulary development, and study skills for all learners. Factors influencing reading comprehension, as well as a variety of reading materials and formats, will be highlighted. Field-based experience is required. Lec 3, Cr 3
EDLI-4367	Teaching Read to the English Language Learner	This course offers the student the opportunity to develop knowledge and instructional strategies for teaching reading to students of diverse cultural/linguistic backgrounds. Special emphasis will be placed on developing oral language proficiency as a prerequisite skill to reading and on instructional strategies designed specifically to meet the needs of such learners. Lec 3, Cr 3
EDMG-3330	Designing Inst. and Assess to Promote Student Learning	Knowledge of students, learning goals and objectives will be emphasized. This knowledge will be applied to effective instructional planning and assessment for all students. Field-based course. Lec 3 Fld 1, Cr 3.
EDMG-4325	Implementing Responsive Instruction and Assessment	This class emphasizes communication, instruction and assessment strategies, and technology. This knowledge will be implemented to create responsive instruction and assessment which actively engages all students in the learning process. Field-based course. Lec 3, Cr 3
EDMG-4377	Teaching Science in 4-8 Classrooms	An intensive examination of various strategies and techniques, specifically related to teaching 4-8 school science. The course will provide a foundation in learning theories, assessment techniques, teaching with various tools, and designing and implementing mathematics lessons for a diverse student population. Lec 3, Cr 3
EDMG-4378	Teaching Mathematics in 4-8 Classrooms	An intensive examination of various strategies and techniques, specifically related to teaching 4-8 school mathematics. This course will provide a foundation in learning theories, assessment techniques, teaching with various tools, and designing and implementing mathematics lessons for a diverse student population. Lec 3, Cr 3
EDMG-4648	Student Teaching in the Middle Grade	This course places students in the middle grades classroom settings as a practicing teacher to demonstrate competencies. The student teacher will have the opportunity to design and implement instruction, and practice classroom management techniques. Weekly seminars and individual conferences are required. Students will be assigned a full-semester, all day, Monday thru Friday placement. Lec 1, Cr 6
EDSC-3330	Designing Instr and Assess to Promote Student Learning	Knowledge of students, leaning goals and objectives will be emphasized. This knowledge will be applied to effective instructional planning and assessment for all students. Field-based course. Lec 3 Fld 1, Cr 3.
EDSC-4325	Implementing Responsive Instruction and Assessment	This class emphasizes communication, instruction and assessment strategies, and technology. This knowledge will be implemented to create responsive instruction and assessment which actively engages all students in the learning process. Filed-based course. Lec 3, Cr 3
EDSC-4328	Implementing and Assessing Effective Sec Content Pedagogy	This course focuses on developing content specific strategies for secondary teaching. Candidates plan and implement effective instruction and develop a preliminary Teacher Work to demonstrate mastery of the knowledge and skills associated with effective, secondary content pedagogy that promotes student learning. Field experience is 15 hours. Lec 3 Fld 1, Cr 3.
EDSC-4378	Teaching Math in 8-12 Classrooms	This course exams issues, strategies and techniques, specifically related to teaching 8-12 school mathematics. The course also provides a foundation in learning theories, assessment techniques, teaching with various tools, and designing and implementing mathematics lessons for a diverse students population. Lec 3, Cr 3

EDSC-4379	Teaching Science in 8-12 Classroom	This course allows students to synthesize learning, the code of ethics, history and philosophy of education and legal issues in education. Emphasis is also given to classroom management and motivation. This course will also focus on characteristics and assessment requirements of students with special needs in an inclusive setting. Current issues dealing with the assessment of diverse learners will be addressed. A minimum of six hours of field experience per week is required. Lec 3, Cr 3
EDSC-4398	Student Teaching All Level	This course places students in the 8-12 classroom settings as a practicing teacher to demonstrate teacher competencies. The student teacher will have the opportunity to design and implement instruction, and practice classroom management techniques. Weekly seminars and individual conferences are required. Students will be assigned a full-semester, all-day, Monday thru Friday placement and must be enrolled in EDCI 4311. Lec 1, Cr 3
EDSC-4641	Student Teaching, Secondary	Student teaching for one teaching field of 36 hours requires a complete semester of full-day student teaching in an approved, accredited school, and weekly seminars. Lec 3, Cr 6
EDSL-4305	Foundations of Bilingual Education and ESL	Students will learn the foundations of bilingual and English as a second Language programs. Current research on first and second language acquisition, bilingual and ESL programs, theories and models are emphasized. Field observations are required. Lec 3, Cr 3.
EDSL-4306	Content Area Methods in the ESL Classroom	This course focuses on the current methods and theories of planning and teaching elementary math, science, and social studies for English language learners with a strong emphasis on an interdisciplinary approach to instruction. Linguistic and cognitive issues for language minority students are addressed. Field experience is required. Lec 3, Cr 3.
EDTC-3310	Introduction to Educational Technology	This course provides an introduction to the field of educational technology and its impact on teaching and learning. Historical and current perspectives are examined, as well as emerging trends and issues. The application of innovative instructional technologies is introduced in this project-based course. Lec 3, Cr 3
EDTC-3320	Instructional Design for the Corporate Trainer	This train-the-trainer course introduces the learner to the principles of instructional design. Students will explore the complexities of designing instruction in the context of corporate training environments. Students will learn classic ID theory and models and apply these theories in a real context through a major design project. Lec 3, Cr 3
EDTC-3321	Computer/Web-Based Training	This course provides with the skills necessary to create effective computer/web-based training programs based on proven instructional design concepts. Lec 3, Cr 3
EDTC-3323	Designing Instructional Multimedia	This course focuses on the development of skills using the latest multimedia tools for instructional technology training. Significant attention is made to interface design, message design, and the appropriate matching of media tools with specific goals and contexts. Lec 3, Cr 3
EDTC-3325	Computer Mediated Communication and Collaboration	The course focuses on the use of computer-mediated communication (CMC) and computer-supported collaboration learning (CSCL) in online learning environment. Students will explore, assess, and utilize a variety of current and emerging Web 2.0 technologies to collaborate, share and deliver effective instructional resources and instruction to virtual learners. Lec 3, Cr 3
EDTC-3332	Application of Instructional Technology	Students will combine skills and concepts to generate a web/computer-based training solution. Guided observation and practice in the applications of instructional technology to a specified training/ educational setting are emphasized. Lec 3, Cr 3
EDUC-1301	Introduction to Teaching Profession	This course introduces students to education in society by analyzing historical, social, political, economic, cultural, global and legal issues in education. Lec 3, Cr 3
EDUC-2301	Introduction of Special Populations	This education course introduces students to issues related to characteristics of special needs populations as well as classroom strategies for instruction of diverse populations. Students will also be introduced to the legal issues related to students with special needs. Field experience required. Lec 3, Cr 3
EDUC-2303	Technology in Education	Students will understand the use of technology applications in classrooms instruction and evaluation. They will use technology as media to enhance instruction in all content areas. Using technology as a learning tool is emphasized. Lec 3, Cr 3

ELET-2201	Fabrication and Instrumentation Lab	Fabrication and Instrumentation Lab will introduce students to electrical fabrication and instrumentation subjects. Topics include fabrication, test, and trouble shooting of an electronic circuit! component identification and electronic assembly on PCB, which includes lead cutting, bending and soldering! use of a voltmeter, ohmmeter, oscilloscope, and signal generator. Lab 6, Cr 2
ELET-2402	Linear Circuits I	Signal and device models and laws used in the analysis of linear circuits are introduced. Topics include Ohm's Law, Kirchoff's Laws, the power law, node and mesh analysis, superposition. Thevenin and Norton equivalents, phasor representation, Laplace transform analysis, and frequency-and-s-domain analysis, including pole/zero plots and transfer functions. Lec 3, Lab 3, Cr 4
ELET-2410	Electronic I: Semiconductor Devices	Operational amplifiers (Op-amp), the electrical characteristics of silicon, and operation of bipolar junction diodes. Metal-Oxide Field Effect Transistor are the main topics of this course. Op-amp amplifier, diode, and transistor circuits and applications are described, built, and investigated both in the classroom and in the laboratory. Lec 3, Lab 3, Cr 3
ELET-3314	Instrumentation and Control	Computer-based instrumentation and control systems including transducers, sensors, signal conversion and conditioning, amplification, filtering and offsetting. Lec 2, Lab 3, Cr 3
ELET-3410	Electronics II	This course is the second course of a two-semester electronics sequence. The course begins with a study of bipolar junction transistor (BJT) amplifier circuit configurations. Other transistor types, including FET and MOS, are then studied with circuit applications. Differential amplifiers are built and studied, leading to a study of integrated operational amplifiers (OPAMPS) and applications. Active filters are studied and built. Lec 3, Lab 3, Cr 4
ELET-3411	Electromagnetics and High Frequency Systems	Electromagnetics and High Frequency Systems deals with high frequency concepts including topics in basic electromagnetics, transmission lines, matrix characterization, antennas, and RF circuit design! applications including wireless communication systems, satellite communication systems, passive and active microwave circuit design, and high frequency PCB (Printed Circuit Board) layout. Lec 3, Lab 3, Cr 4
ELET-3424	Power Electronics	Power Electronics deals with power diodes and transistors! static converters! DC power supplies! power transistor circuits! silicon-controlled rectifiers! Classical and modern forced-commutation inverters! choppers cycloconverters, and applications in power. Lec 3, Lab 3, Cr 4
ELET-3431	Introduction to Telecommunications	Introduction to telecommunications principles including analysis of modulation and multiplexing, transmission media, switching techniques and modern communications models and standards. Lec 3, Lab 3, Cr 4
ELET-3440	Electric Power and Machinery	This course introduces basic concepts of electric power generation, utilization, and power networks. Modeling of power system components are presented. Power systems functions and issues are presented and discussed. The associated laboratory will introduce power instrumentation and explore power factor correction, transformers, synchronous machines and induction machines. Lec 3, Lab 3, Cr 4
ELET-3441	Digital Systems	The main goal of this course is the design and analysis of digital circuits using Hardware Definition Language and CAD programs. Students will develop detailed understanding of advanced logic and system synthesis and optimization algorithms as they create operational systems in the laboratory and interface them with analog external circuits. Lec 3, Lab 3, Cr 4
ENGL-1301	Composition I	Expository writing with emphasis on thinking and composing skills required to write full length essays on topics of personal experience, current issues, and material in published essays. Students will practice some research skills and produce a documented paper employing in-text citations. Lec 3, Cr 3
ENGL-1302	Composition II	This course is a continuation of ENGL 1301 and emphasizes analytical writing in response to literature. A research essay is required. Lec 3, Cr 3
ENGL-2341	Forms of Literature	This course encourages in students a deeper appreciation for literature by providing vocabulary and tools for analysis of literature ranging from the Greek classes through contemporary literature- poetry, drama, fiction, essay- with a global perspective. Lec 3, Cr 3
ENGL-3301	Medieval Literature	A study of various types of medieval literature, including epic, romance, and allegory, with special emphasis on Middle English writers. Lec 3, Cr 3
ENGL-3302	Literary Analysis	A course introducing students to the methodologies and techniques of reading and writing about literature and literary criticism through the study of works representative of various genres from different literary periods. Lec 3, Cr 3

ENGL-3304	Eighteenth Century British Literature	A study of the major works of English writers of the Long Eighteenth Century, including Dryden, Congreve, Pope, Swift, Sterne, and Johnson. Lec 3, Cr 3
ENGL-3306	British Novel to 1900	Chronological study of the development of the English novel from Defoe and Fielding to Hardy with special emphasis on significant 19th century novelists such as Thackeray, Eliot, Dickens, and Austen. Lec 3, Cr 3
ENGL-3309	Major British Authors	A course that introduces students to the characteristics of major historical periods through the study of representative British literary works. Lec 3, Cr 3
ENGL-3311	Technical Communication	This course focuses on technical writing adapted to help students develop professional communication skills in the workplace environment. Topics for reports, statistical tables and graphs, business letters, memoranda and primary and secondary research are normally related to student's field of study. Lec 3, Cr 3
ENGL-3312	Survey of American Literature	A chronological study of the principal authors, their works and the trends in American literature, from the Colonial period to the Civil War. Lec 3, Cr 3
ENGL-3313	Survey of American Literature	A chronological study of the principal authors, their works and trends in American literature from the Civil War to the present. Lec 3, Cr 3
ENGL-3319	Introduction to Descriptive Linguistics	This course is an introduction to linguistic science, primarily phonetics, phonology, syntax, morphology, and the history of English. Lec 3, Cr 3
ENGL-3322	Business Communications	This course provides an introduction to the fundamentals of business writing, including memos, reports, and proposals. Lec 3, Cr 3
ENGL-3324	Victorian and Modern Poetry	A study of British poetry from 1832 to the present. Lec 3, Cr 3
ENGL-3330	English Grammar	Theories of grammar with practical applications. Lec 3, Cr 3
ENGL-3331	History of the English Language	A study of the history and development of the English language from the Anglo-Saxon period into the 20th century. Lec 3, Cr 3
ENGL-3343	American Realism and Naturalism	A study of American writing from 1865 to 1925 with an emphasis on fictions, Dreiser, and Anderson. Lec 3, Cr 3
ENGL-3344	American Poetry to 1900	A study of American poetry from Anne Bradstreet to Emily Dickinson. Lec 3, Cr 3
ENGL-3346	American Novel	A study of major American novelists and the genre since 1900. Lec 3, Cr 3
ENGL-4300	Special Topics in English	This course will cover a variety of topics related to English studies and may be repeated once for credit as topics may vary. Lec 3, Cr 3
ENGL-4301	Shakespeare	A study in representative plays in comedy, history, and tragedy. Lec 3, Cr 3
ENGL-4316	Mexican American Literature	A study of the literature by and about Mexican Americans, with emphasis on the literary techniques and the culture reflected in this literature. Lec 3, Cr 3
ENGL-4317	Literature by Women	A critical study of literature written by women, focusing on works from 1901 to the present. The course will introduce women's literature and the female literary tradition that has coexisted with, revised, and influenced male models. Lec 3, Cr 3
ENGL-4318	Science Fiction	A chronological survey of science fiction through a critical study of selected short stories and novels in their literary, social, and philosophical contexts. This course will examine definitions and prototypes of the genre. Lec 3, Cr 3
ENGL-4322	Creative Writing I	A course in writing poetry. Students will explore the elements of poetry by writing original poems and examining published poems. At the professor's discretion, students may have the opportunities to practice writing in other genres, such as short fiction and short drama. Lec 3, Cr 3
ENGL-4323	Creative Writing II	A course in writing short fiction. Students will explore the elements of short fiction by writing original stories and examining published stories. At the professor's discretion, students may have the opportunity to practice writing in other genres, such as poetry and short drama. Lec 3, Cr 3
ENGL-4324	Argument and Persuasion	A course that emphasizes the use of logical conventions and analysis of other rhetorical elements to produce persuasive essays on the current cultural and ethical concerns. Lec 3, Cr 3
ENGL-4325	Composition Techniques	An advanced course in formal English compositions stressing effective communication with special emphasis on the exposition of abstract ideas and internal logic. Lec 3, Cr 3
ENGL-4328	Introduction to English As a Second Language	A study of the process of learning English as a second language. Special attention is given to problems encountered in reading, writing, and comprehending English. Lec 3, Cr 3
ENGL-4350	English Studies	A capstone course for senior English majors aimed at integrating students' knowledge of language, literature, and composition. The course also provides guidance in assembling a portfolio and in preparing for the state teacher certification exam in English. Lec 3, Cr 3

ENGR-1101	Introduction to Engineering	This course is an introduction to engineering as a discipline and a profession. The course includes instruction in the application of mathematical and scientific principles to the solution of practical problems for the benefits of society. Lab 2, Cr 1
ENGR-1201	Introduction to Engineering	Engineering as a career, considering the various fields of engineering, history, and professionalism . Basic engineering analysis and problem solving, introducing calculators and computers. Lec 2, Cr 2
ENGR-1205	Engineering Graphics II	
ENGR-1304	Engineering Graphics I	This course is an introduction to spatial relationships, multiview projection and sectioning, geometric dimensioning and tolerancing, graphical presentation of data, and fundamentals of computer graphics and solid modeling. Lec 2, Lab 3, Cr 3
ENGR-2301	Engineering Mechanics I- Statics	This course is a calculus-based study of composition and resolution of focuses, equilibrium of forces system, friction, centroids, and moments of inertia. Lec 3, Lab 1, Cr 3
ENGR-2302	Engineering Mechanics II - Dynamics	This course is a calculus-based study of dynamics of rigid bodies, force-mass-acceleration, work-energy, and impulse-momentum computation. Lec 3, Lab 1, Cr 3
ENGR-2310	Measurements and Instrumentation	This course deals with the theoretical basis for and practical implementation of the current state of the art in engineering measurement and instrumentation useful in mechanical and electrical engineering. Lec 2, Lab 3, Cr 3
ENGR-2332	Mechanics of Materials	Stresses, deformations, stress-strain relationships, torsions, beams, shafts, columns, elastic deflections in beams, combined loading, and combined stresses are the main topics of this course. Lec 3, Cr 3
ENGR-2340	Renewable Energy Fundamentals	The course introduces the basic concepts, working principles, and selected state-of-the-art developments of various renewable energy technologies. The energy sources covered are solar, wind, ocean, and geothermal. Solar includes thermal and photovoltaic technologies, and flat plate and concentrating geometries. Ocean includes wave and tidal sources. Lec 3, Cr 3.
ENGR-3103	Thermodynamics Laboratory	This course includes experiments in laws of thermodynamics, heat transfer, and problem solving. Lab 3, Cr 1
ENGR-3120	Linear Circuits Lab	This course provides laboratory experiences associated with ENGR 3320, Linear. Topics include multimeter, oscilloscopes, circuit laws, parallel and serial circuits, passive components, first and second order ac circuits, ac filters and design of circuits. Lab 3, Cr 1
ENGR-3121	Electronics I Lab	This course provides laboratory support for Electronics I. Topics include operational amplifier circuits, diode circuits, voltage regulators, MOSFET and BJT transistors, and amplifier circuits. Student designed circuits will be built, tested and analyzed.
ENGR-3303	Thermodynamics	The course introduces basic principles and applications of classical thermodynamics. The topics covered include basic concepts, zeroth, first and second laws of thermodynamic, thermodynamic properties of substance, and cycle analysis of some power and refrigeration systems. Lec 3, Cr 3
ENGR-3304	Mechanics of Materials	This course is on stresses, deformations, stress-stain relationships, torsions, beams, shafts, columns, elastic deflections in beams, combined loading, and combined stresses. Lec 3, Cr 3
ENGR-3310	Mechatronics I	This course exposes students for the first time in the program to the combination of mechanical engineering, electronic control and systems thinking in the design of products and manufacturing processes. Lec 2, Lab 3, Cr 3
ENGR-3312	Engineering of Nanomaterials	The main objective of this course is to introduce various types of nanomaterials, nanostructures, and characterization techniques used in nanotechnology engineering. Emphasis will be placed on hands-on training with modern instrumentation techniques as used in design and production of nanoscale components.
ENGR-3320	Linear Circuits	Signal and device models and laws used in the analysis of linear circuits are introduced. Topics include Ohm's Law, Kirchoff's Laws, the power law, node and mesh analysis, superposition, Thevinin and Norton equivalent, phasor representation, Laplace transform analysis, and frequency- and s-domain analysis, including pole/zero plots and transfer functions. Lec 3, Cr 3
ENGR-3321	Electronics I	Operational amplifiers (op-amps), electrical characteristics of silicon, operation of bipolar junction diodes, and metal-oxide field effect transistors are the main topics of this course. Analysis and design of circuits and applications containing op-amps, diodes, and transistors are performed. Lec 3, Cr 3.

ENGR-3330	Linear Signals and Systems	This course discusses the concepts of linear systems and mathematical models for signal processing. The content of this course has practical application in communications, signal processing, control systems, circuit design, and biomedical engineering. Lec 3, Cr 3
ENGR-3331	Digital V.L.S.I. Circuits	The course starts with fundamentals of digital circuits. It continues with computer simulation and layout of digital circuits. A small 1-bit adder circuit will be simulated, fabricated and tested in the laboratory. Lec 2, Lab 3, Cr 3
ENGR-3405	Engineering Materials	This course is an introduction to the structure, properties, processing, destructive and non-destructive testing, and engineering applications of ferrous and non-ferrous metals, plastics, polymers, composites and ceramics. The laboratory includes mechanical and physical testing, metallographic procedures, heat treatment, surface treatment and failure analysis. An emphasis is placed on material selection, testing, and validation. Lec 3, Lab 3, Cr 4
ENGR-3421	Electronics I	This course covers operational amplifiers (Op-amp), electrical characteristics of silicon, operation of bipolar junction diodes, and metal-oxide field effect transistor are the main topics of this course. Analysis and design of circuits and applications containing op-amp, diode, and transistors are carried out both in the classroom and in the laboratory. Lec 3, Lab 3, Cr 4
ENGR-4122	Electronics II Laboratory	This is a laboratory course to accompany Electronics II with in-depth experimental studies of operational and discrete amplifiers. Lab 3, Cr 1
ENGR-4242	Senior Design Project I	This course begins with project definition, task analysis and planning, and project control, for an industry-based major design project. It concludes with the beginning of work on the project. Lab 6, Cr 2
ENGR-4243	Senior Design Project II	This course is the continuation of ENGR 4242. Completion of industry-based design project. Lab 6, Cr 2
ENGR-4308	Design Graphics With Solid Modeling	This course is an introduction to special relationships, multiview projection and sectioning, geometric dimensioning and tolerancing, graphical presentation of data, and fundamentals of computer graphics, and solid modeling. Lec 3, Cr 3
ENGR-4309	Mechanical Subsystem Design	This course deals with the selection and computer-aided graphical representation of mechanical subsystems for the transmission of mechanical power and/or generation of mechanical motion. Component selection of gears, cams, belt and chain drives, clutches and transmissions will use data sources of contemporary manufacturers ranging from vendor catalogs to computerized databases. Lec 2, Lab 3, Cr 3
ENGR-4310	Heat and Mass Transfer	This course provides an introduction to the fundamentals of heat and mass transfer processes. Topics include conduction, convection, and radiation heat transfer processes with various applications and diffusion mass transfer. Lec 3, Cr 3
ENGR-4311	Nanofabrication and Nanoelectronics Nanoelectronics	This course presents techniques of basic fabrication and characterization of silicon based nanostructures used in nanoelectronics. The course will focus on nanotechnology material processing techniques and design, including photolithography, electron beam lithography, scanning electron microscopy, chemical vapor deposition, etc. with hands-on demonstrations and exercises.
ENGR-4322	Electronics II	Electronics II deals with the analysis and design of complex analog integrated circuits(ICs). The course covers single stage IC amplifiers, differential and multistage amplifiers, feedback, frequency response, signal generators and an overview of output stages and power amplifiers. Lec 3, Cr 3
ENGR-4326	Power Electronics	Power Electronics deals with power diodes and transistors, basic switching circuits, silicon-controlled rectifiers, modern switch mode power converters, and analysis and design of basic AC/DC, DC/DC, DC/AC power converters. Lec 3, Cr 3
ENGR-4343	Control Systems II	This course is the second part of a two-term sequence on modeling, analysis and control of dynamic systems. This second term emphasizes practical applications of control theory industry. Lec 3, Cr 3
ENGR-4406	Engineering Mechanics III: Fluid Mechanics	This course introduces principles of continuity, momentum, and energy applied to fluid motion. The topic include hydrostatics, integral relations for control-volume analysis, laminar and turbulent flows in ducts, boundary layer flows, and dimensional analysis. The course includes hands-on experiments and design problems. Lec 3, Lab 3, Cr 4
ENGR-4407	Manufacturing Process Technologies	This course is an introduction to manufacturing process including metal cutting, measurements and metrology, deformation processes, casting, welding, joining, and composites. Lec 3, Lab 3, Cr 4

ENGR-4423	High Frequency Engineering	High Frequency Engineering deals thoroughly with the particular problems faced when working with microwave frequencies, from microwave devices to satellite communications. Lec 3, Lab 3, Cr 3
ENGR-4424	Electric Power and Machinery	Topics of this course will include: an overview of electric power systems from energy sources to end user motors! principles of electromagnetism, analysis of three phase systems! a selection of in-depth studies of transformers, induction and synchronous motors and generators, distribution fault analysis, and alternative energy! and design problems. Lec 3, Lab 3, Cr 4
ENGR-4425	Analog and Digital Communications	This course is an introduction to telecommunications principles including analysis of modulation and multiplexing, transmission media, switching techniques and modern communications models and standards. Lec 3, Lab 3, Cr 3
ENGR-4441	Control Systems	This course exposes students to the solution of feedback control problems involving mechanical, thermal and electrical systems and their couplings via computational methods (math CAD and MATLAB)laboratory experimentation. Lec 3, Lab 3, Cr 4
ENGR-4450	Computational Mechanics	This course is an introduction to numerical methods in engineering. It covers solutions of classical heat transfer and solid mechanics problems using the finite element method. Lec 3, Lab 2, Cr 4
ENGT-1100	Introduction to Engineering Technology	This course is an introduction to a broad range of engineering technology topics and fields. Lec 1, Cr 1
ENGT-1310	Design Graphics I	This course is an introduction to solid modeling, includes sketching, CAD modeling, geometric construction, shape description, orthographic projection, sectional views, auxiliary views, threads, fasteners, and an introduction to working drawings. Lec 2, Lab 3, Cr 3
ENGT-1320	Design Graphics II	This is an advanced CAD course that emphasizes surface and solid modeling catering to industry standards, which includes ANSI/ASME CAD standards, fits and tolerances, GD&T, product assembly and simulation. Lec 2, Lab 3, Cr 3
ENGT-1321	Basic Architectural C.A.D.	This course introduces basic 2D computer-aided drafting. Emphasis is placed on: drawing setup! creating/ modifying geometry! storing/ retrieving predefined shapes! placing, rotating, scaling objects! adding text/ dimensions! using layers. Lec 2, Lab 3, Cr 3
ENGT-1407	Digital Fundamentals	Analysis, design, and simulation of combinational and sequential systems using: classical Boolean algebra techniques, laboratory hardware experiments and computer simulation. Introduction to programmable logic devices (PLD's) and application-specific integrated circuits using software tool to the design and analysis of facilitate learning digital concepts and hardware. Lec 3, Lab 3, Cr 4
ENGT-1409	Introduction to Electrical Technology	Fundamentals of DC circuits and AC circuits operation including Ohm's law, Kirchoff's law, networks, transformers, resonance, phasors, capacitive and inductive and circuit analysis techniques. Lec 3, Lab 3, Cr 4
ENGT-2130	Engineering Communications	Application of modern computer tools to analysis and presentation of engineering and technical information. Emphasis on critical thinking techniques in group and communication settings. Lab 3, Cr 1
ENGT-2307	Engineering Materials I for Engineering Technology	This course covers forming and classification of steel, cast iron, and aluminum. Topics include mechanical and physical properties, testing, alloying, selection, iron carbon diagrams, heat treatment, polymers, composites and ceramics. Lec 2, Lab 3, Cr 3
ENGT-2310	Introduction to Manufacturing Processes	This course is an exploration of a variety of manufacturing methods. Also processes covered include but not limited to metal forming, joining, machining, heat treating, and casting. Lec 2, Lab 3, Cr 3.
ENGT-2311	Fundamentals of Product Design	This course emphasizes the profitable conversion of product manufacture. Advanced CAD is extensively used. Lec 2, Lab 3, Cr 3
ENGT-2321	Basic Electronics	This course is an introduction to the fundamentals of electronic devices, circuits and systems. Topics include AC/DC, transistors and integrated circuits, amplifiers and oscillators, transmitters and receivers, digital logic circuits, electronic memory, and computers. Lec 2, Lab 3, Cr 3
ENGT-2322	Computer Integrated Manufacturing	This course will introduce concepts in Computer- Integrated-Manufacturing (CIM). Students will learn CNC part programming, CAD-CAM Interface, CNC Machining, FMS and Rapid Prototyping. Lec 2, Lab 3, Cr 3
ENGT-2350	Residential Architectural C.A.D.	This course covers residential architectural drafting/ design standards, procedures, and practices, emphasizing slab-on-grade, wood framed construction. Students will use 2D CAD & 3D BIM software to develop construction documents. Lec 2, Lab 3, Cr 3

ENGT-2407	Engineering Materials I	Instruction in the making and forming of steel and the classification of steel, cast iron, and aluminum. Topics include mechanical and physical properties, non-destructive testing principles of alloying, selection of metals, iron carbon diagrams, principles of hardening and tempering steel, and the metallurgical aspects of machining. Topics will also include an overview of properties and uses of polymers and ceramics. Lec 3, Lab 3, Cr 4
ENGT-2410	Introduction to Manufacturing Processes	Exploration of variety of methods used in manufacturing. Theory and application of processes including but not limited to metal forming, welding, machining, heat treating, plating, assembly procedures, process controls considerations, casting and injection molding. Lec 3, Lab 3, Cr 4
ENGT-3311	Statics and Strength of Materials	This course studies the principles of forces, moments, resultants & static equilibrium of force systems, center of gravity, friction, free body diagrams, stress, strain, shear, bending moments torsion, bending stresses. Lec 2, Lab 3, Cr 3
ENGT-3312	Renewable Energy Technology	This course is an introduction to renewable energy. Topics include photovoltaics, solar thermal, green building, fuel-cells, biofuels, wind, wave, tidal and hydroelectric power. Economic, environment, and social policy are discussed. Lec 2, Lab 3, Cr 3
ENGT-3320	Engineering Economics	Analysis of the economic performance of Manufacturing systems, analysis of projects and selections from among alternatives. Covers cost classifications, profit and productivity, internal rate of return time value concepts. Lec 3, Cr 3
ENGT-3321	Solar Energy Systems	This course is an introduction to solar energy systems for residential, commercial and industrial applications. Topics included are solar resource and site assessments, PV system components, concentrating collectors, heating and cooling, solar thermal and economic considerations. Lec 2, Lab 3, Cr 3
ENGT-3322	Machine Design	This course deals with the application of engineering technology fundamentals to machine design. Techniques involved in designing and selecting individual machine parts such as gears, cams, and transmissions are included. Lec 2, Lab 3, Cr 3
ENGT-3330	Green Building Design I	This architectural engineering course studies the design of Residential Structures, covering residential green building construction methods/ materials, high wind design of hurricane-resistant structures, and basic surveying concepts. Lec 2, Lab 3, Cr 3
ENGT-3333	Quality Control	This course familiarizes students with Total Quality Management principles, methods and practices. Statistical Quality Control, including probability and statistics, control charts for variables and attributes, and acceptance sampling are covered. Lec 2, Lab 3, Cr 3
ENGT-3350	Commercial Architectural C.A.D	This course covers commercial architectural drafting/ design standards, procedures, and practices, emphasizing steel and concrete construction. Students use 2D CAD and 3D BIM software to develop construction documents. Lec 2, Lab 3, Cr 3
ENGT-3424	Power Electronics	
ENGT-4210	Senior Project I	This is a capstone course spanning two consecutive semesters. This course includes application of skills, knowledge, techniques and concepts to design and manufacturing. Emphasis is placed on project management, documentation and presentation. Lec 2, Lab 3, Cr 3
ENGT-4220	Senior Project II	This course is the continuation and completion of project on design and manufacturing initiated in ENGT 4210. Lab 6, Cr 2
ENGT-4241	Senior Design Project I	Project definition, task analysis and planning, project control. Begins work on industry-based major design project. Lab 6, Cr 2
ENGT-4242	Senior Design Project II	Continuation of ENGT 4241. Completion of industry-based design project. Cr 2
ENGT-4311	Wind Energy System	This course is an introduction to power production from wind resources. Physics of wind power also included are vertical and horizontal axis turbines and its aerodynamics, large-scale turbine farms and siting, commercial development, economics and environmental impacts. Lec 2, Lab 3, Cr 3
ENGT-4312	Production Planning and Control	This course introduces design, analysis and management of production systems. Topics include productivity measurement, forecasting, project planning, line balancing, inventory systems, aggregate, master scheduling, operations scheduling, and Just-In-Time production. Lec 2, Lab 3, Cr 3
ENGT-4330	Green Building Design II	This architectural engineering course studies the design of Commercial Structures, covering commercial green building construction methods/ materials, design/ detailing of steel and reinforced concrete structures, and foundation systems. Lec 2, Lab 3, Cr 3



ENGT-4340	Robotics and Automation	This course deals with the technology and application of robots in a Computer Integrated Manufacturing (CIM) environment by studying of robotic hardware, software, automation and cell design. Lec 2, Lab 3, Cr 3
ENGT-4350	Topics in Engineering Technology	Topics vary to meet student and employer needs. May be taken twice for credit provided topics are different. Lec 3, Cr 3
ENTR-3340	New Venture Creation and Innovation	The skills needed for evaluating and ensuring the success of a business opportunity include team building, organizing, planning, integrating, and persuading. The course will develop creativity and innovation skills through hands on learning to help students better identify, create and implement entrepreneurial solutions. Students will create a new product concept. Lec 3, Cr 3
ENTR-4360	Entrepreneurial Finance	Topics covered include the development, implementation and control of financial plans, strategies and policies by owner-managers of small and medium sized firms, as well as the analysis of alternatives and decision making. Lec 3, Cr 3
ENVR-1101	Environmental Science Lab I	This course provides students an opportunity to learn practical applications for the basic principles learned in the Introduction to Environmental Science course ENVR 1301. Lab 3, Cr 1
ENVR-1102	Environmental Science Lab II	This course provides students an opportunity to learn practical applications for basic principles learned in the introduction to environmental science course ENVR 1302. Lec 3, Cr 1
ENVR-1301	Environmental Science I	This course provides students with an introduction to environmental science from various perspectives (regional to global, including principles for understanding the environment, managing living system, and human impacts on the environment, such as population issues, environmental health, biodiversity, and food. Lec 3, Cr 3
ENVR-1302	Environmental Science II	This course is a continuation of introduction to environmental science. It provides students with various perspectives (regional to global) on focusing on natural and physical resources, environmental systems, issues and policies. Such as air pollution, water pollution, energy waste management and sustainability. Lec 3, Cr 3
ENVR-3105	Oceanography Laboratory	This course includes the practical application of oceanographic principles, marines water property distribution, rock identification and depositional environment interpretation, geologic and bathometric map interpretation, and geological data analysis. Lab 3, Cr 1
ENVR-3305	Oceanography	An introduction to the nature and origin of the world's oceans. Topics will cover geological, chemical, physical and biological processes throughout the oceans. Lec 3, Cr 3
ENVR-3334	Conservation of Natural Resources	A survey of the distribution of natural resources, with special emphasis on new solutions to problem of resource scarcity. Topics include: energy, water, air and food resources, and other selected components of the lithosphere, hydrosphere, atmosphere and biosphere. Economic, demographic, and political issues are considered as they affect natural resources. Lec 3, Cr 3
ENVR-3351	Environmental Science Field Methods and Data Analysis	This course will introduce many field and data analysis methods. During the field excursions, students will practice the field methods and collect data for later analysis. Lec 3, Cr 3
ENVR-4170	Topics in Environmental Science Laboratory	Specialized laboratory content not available in other courses. May be repeated for credit as topics changes but no more than three credit hours may apply toward the Environmental Science major. Lec 3, Cr 3
ENVR-4301	Environmental Regulations	An overview of pertinent state, national and international environmental regulations, policies and treaties, Topics include: common law liability, the Clean Air and Water Acts, sustainable development, stratospheric ozone, global warming, endangered species, environmental justice hazardous waste and much more. An emphasis will be placed on U.S./ Mexico specific issues. Lec 3, Cr 3
ENVR-4303	Environmental Nanotechnology	Environmental Nanotechnology is a study of the chemical-physical properties of nanomaterials and their impact on the environment. This course explores green nanotechnologies for environmental quality, nanotechnologies in the energy industry, transport and fate of nanostructures in the environment. Topics of interest include fabrication technologies, characterization, and measurement of nanomaterials.
ENVR-4325	Environmental Science Internship	This course will give environmental sciences students the opportunity to gain experience by applying by principles and concepts in an actual work-related environment. The student will perform the internship under the supervision of both an environmental sciences faculty member and a collaborating member of the participating internship site. Internship 3, Cr 3

ENVR-4370	Topics in Environmental Sciences	Specialized lecture content not available in other courses. May be retaken for credit as topics changes but no more than nine credit hours may apply toward the Environmental Science major. Lec 3, Cr 3
ENVR-4399	Research Problems in Environmental Sciences	This course includes research under the supervision of an Environmental Sciences faculty member. May be repeated for credit but no more than three semester credit hours may apply toward the Environmental Science major. Students enrolling for ENVR 4399 will present research results in a Department seminar. Lec 3, Cr 3
EPSY-4322	Human Development and Instruction	Major theories of the teaching-learning process and human growth and development as they relate to the learners will be addressed. Areas emphasized are cultural differences, needs of special learners, developmental appropriateness, and linguistically diverse populations. Lec 3, Cr 3
FINA-3380	Managerial Finance	Managerial finance provides a framework for understanding how corporate managers' investment and financing decisions affect their firm's value. Specific topics include the goals of financial management, financial planning, time value of money, valuation of financial assets, capital budgeting, risk and return, and the cost of capital. Lec 3, Cr 3
FINA-3382	Investment Principles	This course covers the basics of investigating in stocks, bonds, and derivatives as well as portfolio creation, management and performance measurement. The main focus of the course is the trade-off between risk and return. Lec 3, Cr 3
FINA-3383	Advanced Investment Analysis	This is a course in advanced investment concepts, techniques, and strategies, such as the construction and evaluation of securities portfolios. It will familiarize students with the institutional aspects and trading mechanisms of stock markets, options markets, future markets, and close-end funds. Lec 3, Cr 3.
FINA-4380	Corporate Finance	Intermediate and advanced issues in corporate finance are covered in this course. Specific topics include issues in capital budgeting, cost of capital, dividend policy, capital structure long term financing, mergers and acquisitions and international financial management. Lec 3, Cr 3
FINA-4385	Financial Institutions and Markets	The dynamics of financial markets and their interaction with suppliers of funds, particularly financial intermediaries. Lec 3, Cr 3
FINA-4387	Topics in Finance	The study of significant topics related to Finance Course may be repeated for credit when topic varies. Lec 3, Cr 3
FINA-4388	Financial Statement Analysis	The course focuses on the analysis and use of financial statements. Areas of concentration include financial responsibility and ethics, comparative analysis between firms, risk and profitability analysis, use of ratios, cash flow analysis, quality of earnings, asset valuation, corporate valuation, forecasting of cash flows, and strategic financial analysis. Lec 3, Cr 3
FINA-4389	Commercial Banking	Commercial banking is a comprehensive study of commercial banks and their role in the economy. Topics include credit analysis, asset and liability management, and risk management. Lec 3, Cr 3.
FREN-1311	Beginning French I	A course designed to develop the ability to understand, speak, read, and write the French language. Lec 3, Cr 3
FREN-1312	Beginning French II	A continuation of FREN 1311. Lec 3, Cr 3.
FREN-2311	Intermediate French I	A review of the grammar. Emphasis on reading and writing. Lec 3, Cr 3
FREN-2312	Intermediate French II	A continuation of FREN 2311. Lec 3, Cr 3.
FREN-2612	Intensive Intermediate French	This is an intensive course covering all contents of FREN 2311 and FREN 2312 in one semester. Lec 6, Cr 6
FREN-3330	Direct French Translation (French to English)	This course is a basic orientation in the theory and practice of translating a text from French into English (direct translation), including consideration of both cultural and morpho-syntactical problems. Software programs used by professional translators and interpreters will be introduced. Lec 3, Cr 3
FREN-3337	French Grammar and Composition	This course is a review of advanced grammar issues with emphasis on composition. Lec 3, Cr 3
FREN-4330	Inverse French Translation (English to French)	This course is a basic orientation in the theory and practice of translating a text from English into French (inverse translation), with consideration given to both cultural and morpho-syntactical problems as well as to a review of advanced grammar and composition. Lec 3, Cr 3
FREN-4335	Topics in French Language, Culture, and Translation	This course consists of topics including but not limited to French language, literature, and culture. It may be taken 3 times for a total of 9 hours when topic varies. Lec 3, Cr 3
FREN-4338	French Culture	This survey course will explore French Culture, that is French Art, Architecture and History from the Romans to the present. Lec 3, Cr 3

GEOG-1301	Physical Geography	The earth's external features! landscape development under the influence of volcanism and mountain- building forces, rivers and their work, underground waters, waves and currents, and the wind! the principle soil groups as related to landscape and climate. Lec 3, Cr 3
GEOG-1303	World Regional Geography	This course includes the study of the major world regions with emphasis on prevailing conditions and developments, including emerging conditions and trends, and the awareness of diversity of ideas and practices to be found in those regions. Lec 3, Cr 3
GEOG-3320	Cultural Geography for Educators I	The Cultural geography is the study of the interaction between humans and the natural environment. The course will examine the relationship from the historical past to the present time with major emphasis human cultural diversity. Lec 3, Cr 3
GEOG-3333	Latin American Geography	A regional study of geography of Mexico, the Caribbean, Central and South America. Includes an investigation of the physical, cultural and economic factors of various regions and how these affect present day conditions. Lec 3, Cr 3
GEOG-3334	Conservation of Natural Resources	A survey of the distribution of natural resources, with special emphasis on new and novel solutions to problems of resource scarcity. Topics include food, scenic and recreational resources, and other selected components of the lithosphere, hydrosphere, atmosphere and biosphere. Economic, demographic, and political issues are considered as they affect the natural resources. Lec 3, Cr 3
GEOG-4440	Geographic Information Systems	This course covers the basics of Geographic Information Systems (GIS) concepts and software such as ArcView and ArcGIS. Special attention will be given to digital data acquisition, processing, data management and generation of base maps for various applications in the field-based sciences. Lec 3, Lab 3, Cr 3
GEOG-4441	Principles of Remote Sensing	This course will emphasis the application of remote sensing and image analysis in the earth sciences, qualitative and quantitative satellite image and air photo interpretation. Additional emphasis will be placed on the use of computer processing packages. Lec 3, Lab 3, Cr 4
GEOL-1101	Earth Sciences Laboratory	Laboratory practice that illustrates the formation of earth materials, processes of plate tectonics and of atmosphere. Lab 3, Cr 1
GEOL-1103	Physical Geology Laboratory	Laboratory practice which illustrates the types of Earth materials, basic principles of structural geology, processes of hydrosphere and of plate tectonics. Lab 3, Cr 1
GEOL-1104	Historical Geology Laboratory	Laboratory practice that illustrates the basic principles of stratigraphy, paleontology, origin and evolution of Earth through time. Lab 3, Cr 1
GEOL-1147	Meteorology Laboratory	This course is a laboratory study of the weather variables, atmospheric motion, precipitation, and topics in modern weather science. Exercises are based on lab component to the meteorology course. Lab 3, Cr 1
GEOL-1301	Earth Science I	Topics are selected from geology, geophysics, meteorology, and oceanography in order to illustrate the philosophy and methods of science. Other topics include earth materials, processes of plate tectonics and atmosphere. Lec 3, Cr 3
GEOL-1303	Physical Geology	The classification and analysis of geologic agents responsible for the origin, structure, and sculpturing of the earth's crust, including a comprehensive description of materials comprising the Earth. Lec 3, Cr 3
GEOL-1304	Historical Geology	The geologic history of the earth and its inhabitants as revealed by fossil record with emphasis on North America. Lec 3, Cr 3
GEOL-1347	Meteorology	This course will introduce the student of the study of the observation and distribution of weather variables, atmospheric motion, precipitation, and topics in modern weather science. Lec 3, Cr 3
GEOL-3436	Hydrology and Water Resources	This course will explore the circulation of water in earth systems. Surface water processes studied will include runoff, routing, evapotranspiration, infiltration, and flooding. Groundwater process will include the basics of ground water flow, aquifer characteristics, and others. Global national, and regional aspects of water resources management will also be introduced. Lec 3, Lab 3, Cr. 4
GEOL-4335	Geomorphology	Geomorphology is the study of landforms. This class will emphasize the physical, chemical, and biological processes that create and modify landforms. This course covers the history of landform evolution and the climatic and tectonic conditions that influence landform development. Lec 3, Cr 3
GEOL-4350	Geoscience Field Excursion	A study of the geology of a selected region Texas or Mexico with several 1-2 day field trips in order to map and study the field trips in order to map and study the field relationship of the geologic features. Special emphasis is given to stratigraphic, geomorphologic, structural and/or tectonic relationships of the designated study area. Lec 3, Cr 3

GEOL-4411	Sedimentology and Stratigraphy	This course will explore the formation of sediments and sedimentary rocks. Students will learn to interpret depositional environments and sequences of stratigraphic beds using multiple tools. Lec 3, Lab 3, Cr 3
GEOL-4431	Coastal Geology	This course explores the sedimentary features and stratigraphy of the Gulf of Mexico coastline. The exploration of the impact of geology on humans and the impact of humans on the geologic features will be emphasized. Lec 3, Lab 3, Cr 4
GERM-1311	Beginning German I	A study of the essentials of German grammar, pronunciation, elementary conversation and prose reading. Lec 3, Cr 3
GERM-1312	Beginning German II	A continuation of GERM 1311. Lec 3, Cr 3
GERM-2311	Intermediate German I	A review of the German language structure with emphasis on the development of aural comprehension and speaking ability. Selected readings based on everyday subjects and cultural material. Also includes dictation and simple composition exercises. Lec 3, Cr 3
GERM-2312	Intermediate German II	A continuation of GERM 2311. Lec 3, Cr 3
GOVT-1381	Leadership and Service	This course is an interdisciplinary course that integrates hands-on opportunities to learn leadership through service. It focuses on issues of social justice in our community, especially in areas of non-profit management, healthcare, education, advocacy, and local government. Lec 3, Cr 3.
GOVT-2301	American and Texas Government	A survey of the fundamental principles of political science of the American system of government, and of the origins, development and structure of the constitutions and government of the United States and Texas. Lec 3, Cr 3
GOVT-2302	American Government and Policy	A survey of the inputs and outputs of the American government including political participation, civil rights and liberties, public economics and foreign policy. Lec 3, Cr 3
GOVT-3301	Citizenship and Community Development	This course develops an understanding of community development as an expression of citizenship. It explores two citizenship traditions: citizenship as a status and citizenship as a practice. It also focuses on the role of democratic deliberation in support of community development. Lec 3, Cr 3
GOVT-3302	Ethics and Public Service	This course is a philosophical inquiry into ethical issues. It focuses on the ethical examination of political behavior and decision-making that impact public service. Lec 3, Cr 3
GOVT-3314	American State and Local Government	This course analyzes the developments, problems and issues facing state and local community governments. Emphasis will be on state and local community development through comparative regional governmental analysis within the United States. Lec 3, Cr 3
ITAL-1312	Beginning Italian II	A continuation of Italian 1311. Lec 3, Cr 3
JAPN-1311	Beginning Japanese I	This course covers the fundamental skills in listening comprehension, speaking, reading, and writing of the Japanese language, including basic vocabulary, grammatical structures and culture. Lec 3, Cr 3
JAPN-1312	Beginning Japanese II	This course covers the fundamental skills in listening comprehension, speaking, reading, and writing of the Japanese language, including basic vocabulary, grammatical structures and culture, as a continuation of JAPN 1311. Lec 3, Cr 3
KINE-1100	Advanced Life Saving	
KINE-1101	Aerobic Dance and Exercise	
KINE-1103	Archery	
KINE-1104	Badminton	
KINE-1105	Ballet I	
KINE-1107	Basketball	
KINE-1109	Bowling	
KINE-1110	Flag Football	
KINE-1111	Folk & Square Dancing	
KINE-1112	Folklorico	
KINE-1113	Golf	
KINE-1115	Jazz & Modern Dance	
KINE-1116	Jogging	
KINE-1118	Pington	
GOVT-3322	Introduction to Comparative Politics	This course is a study of similarities and differences between various political systems in the world. It aims to generate a better understanding of international relations and politics. Lec 3, Cr 3
GOVT-3323	Foundations of Public Administration and Service	This course is a survey of public administration in the United States. It highlights a wide variety of topics in public administration, with emphasis on public service. Lec 3, Cr 3

GOVT-3331	Research Methods	This is an introductory research methods survey course in political science and government that comes a variety of research methods, and analytical techniques from both qualitative and quantitative perspectives. Lec 3, Cr 3
GOVT-3332	Applied Statistics Public Service	This course illustrates the statistical applications to public service programs. It extends the basic research methods explored in GOVT 3331. Lec 3, Cr 3
GOVT-3333	Government Fiscal Policy	This course examines the financial dimension of public policy and administration. The topics covered will include tax policy, revenue sources, expenditures, types of budgets, and debt administration. Examination of the budgetary process will include policies and procedures at the federal, state, and local levels of government. Lec 3, Cr 3
GOVT-3343	Global Politics and International Relations	This course is an introduction to the history and contemporary theory of global politics from the perspective of international relations. Lec 3, Cr 3
GOVT-3351	Survey of Political Theory	This course is a survey of political thought from Ancient Greece to the modern era. It involves works by major figures such as Plato, Aristotle, Locke and Mill. It considers basic principles, such as justice, equality, and liberty, and questions such as who rules, how and why. Lec 3, Cr 3.
GOVT-3363	American Hispanic Politics	A study of the American Hispanic experience. Analyzes political socialization and culture, political participation and behavior, leadership, organizations, and power in the American political system. Lec 3, Cr 3
GOVT-3373	Contemporary Texas	This course is a survey of contemporary political, and administrative issues confronting Texas. Lec 3, Cr 3
GOVT-3385	Internship	This course is designed for the students seeking credit through an internship placement. The internship must be directly related to government! the student must be under direct academic supervision and the student must complete written assignments to be evaluated by the supervising teacher. Internship 3, Cr 3
GOVT-4312	Issues in Public Planning	This course is a survey of planning in the public sector. It focuses on program evaluation and accountability, project selection, and performance-based budgeting. Lec 3, Cr 3
GOVT-4314	Leadership and Non-Profit Organization	This course focuses on the skills, knowledge, and attitudes in building the leadership of nonprofit organizations. It also addresses topics such as power, leadership styles, supervision, ethics, women and minorities in management, and conflict resolution. Lec 3, Cr 3
GOVT-4320	American Constitutional Law: Powers	A study of the allocation of government powers by use of court cases, with special emphasis on the national government and an introduction to the judicial functions of the American legal system. Lec 3, Cr 3
GOVT-4321	American Constitutional Law: Civil Liberties	A study of the limitations of governmental powers in the United States by use of the courts cases, with primary emphasis on civil and political rights. Lec 3, Cr 3
GOVT-4360	The Presidency	This course is a study of the development, structure, powers, and functions of the presidency. Lec 3, Cr 3
GOVT-4363	The Congress	This course is a study of the development and the structure, powers, functions, processes, and influence of Congress. Lec 3, Cr 3
GOVT-4365	Public Personnel Administration	This course emphasizes the importance of human resources management in public and nonprofit organizations. It also focuses, on the development and maintenance of public bureaucracy and the proper response to the needs of a democratic society. Lec 3, Cr 3
GOVT-4366	American Political Parties and Politics	This course examines the history, function and leadership of political parties and the role they play in the operation of national, state, and local governments in the United States and a study of the role of group politics and voting behavior in the American political process. Lec 3, Cr 3
GOVT-4367	The Judiciary	This course is a study of the judicial system at the local, state, and national levels. It focuses on the relationship between the judiciary and political system, as well as the impact of the judicial decision-making on public policy. Lec 3, Cr 3
GOVT-4368	Special Topics in American Government	This course covers significant issues and problems in politics and the political system are covered in this course. This course may be repeated for credit provided different topics are the focus of each class. Lec 3, Cr 3
GOVT-4369	Latin American Politics	This is a survey course on the governmental processes in Mexico, the Caribbean, Central, and South America. It examines competing ideologies, group dynamics, relationships between political, economic and social structures and Latin America's role in the international political system. Lec 3, Cr 3
GOVT-4370	European Politics	This course examines the major democracies of Europe. It is comparative study of peoples and their political, social and economic institutions. It Generally includes, but is not limited to, Great Britain, France, and Germany. Lec 3, Cr 3

GOVT-4371	Contemporary International Issues	This course is a study of important issues in international politics. It focuses on themes, issues, and players in world politics, regional and international conflicts, and the solutions to these conflicts. Lec 3, Cr 3
GOVT-4374	American Public Policy	An analysis of the formation, implementation, and assessment of selected public policies in America. Lec 3, Cr 3
GOVT-4376	Contemporary Issues in Homeland Security	This course examines contemporary issues concerning Homeland Security. It focuses on counter-terrorism, borders and international jurisdiction, immigration, transportation, and public health emergencies. Lec 3, Cr 3
GOVT-4378	Middle Eastern Politics	This course is a survey of governmental processes in the Middle East. It focuses on the role of the Middle East in global politics. It also examines the relationships between the political, economic, and social structures and the competing ideologies and group dynamics in this region. Lec 3, Cr 3
HIST-1301	United States to 1877	Discovery, the colonial period, the American Revolution, establishing the nation, political, territorial and socioeconomic growth! the sectional controversy, civil war! reconstruction in the South to 1877. Lec 3, Cr 3
HIST-1302	United States Since 1877	The growth of transportation and industry, the agrarian protest and the movement toward economic and political reform. The creation of an overseas empire, the United States in two world wars! the Cold War, and the role of the United States as a dominant world power. Lec 3, Cr 3
HIST-2300	The Historian's Craft	This course introduces history majors to the ideas and methods that historians use in their research, writing and teaching. Lec 3, Cr 3.
HIST-2301	Texas History	This course is a survey of Texas history from the pre-Columbian era to the present. Themes include: Spanish Texas, Mexican Texas, the Republic, statehood, civil war, reconstruction, oil, urbanization, civil rights, and modern Texas. Lec 3, Cr 3.
HIST-2321	World History I	A study of world history to 1650 tracing the rise, decline and renewal of major civilizations, emphasizing those societies which have been in forefront of human change at any one time. Lec 3, Cr 3
HIST-2322	World History II	A study of world history since 1650 tracing the rise, decline and renewal of major civilizations, emphasizing those societies which have been in forefront of human change at one time. Lec 3, Cr 3
HIST-2380	Mexican-American Studies	This survey course presents the chronological, social-cultural and political-historical foundations that forged the Mexican/American/Hispanic/Chicano heritage. Included in this course are the following: a) elements of pre-Columbian roots, b) Spanish /Caribbean cultural, social and political systems, c) Mexican history and heritage and d) their collective impact on the contemporary Hispanic population in United States. Lec 3, Cr 3
HIST-3300	Colonial America to 1763	This course is a study of American colonial history from the founding of the first colony through the French and Indian War. Lec 3, Cr 3.
HIST-3305	The United States: Revolution and the New Nation, 1763-1840	A study of the American Revolution and American nation from the adoption of the constitution and launching of the new government through the transformation of American Society by the Jacksonian Era of the Common Man. Lec 3, Cr 3.
HIST-3310	Expansion, War, and Reconstruction, 1840 -1877	This course covers United States history from 1840 to 1877 with emphasis on westward expansionism, sectionalism, the breakdown of American political parties, Civil War, and Reconstruction. Lec 3, Cr 3.
HIST-3315	The Glided Age and Progressive Era, 1877 -1919	This course is a study of the growth of U.S. business and industry, the emergence of the United States as a world power, the populist protest and progressive reform movements, including the relationship of reform to World War I. Lec 3, Cr 3.
HIST-3320	The United States: War, Prosperity, and Depression, 1917-1945	This course is a study of the United States with emphasis on World War I, the 1920s, 1930s, and World War II, with emphasis on domestic and foreign affairs in their relationship to and effect on each other. Lec 3, Cr 3.
HIST-3325	History of the United States Since 1945	This course surveys domestic, global, social, and racial issues in United States history from World War II through present day. Lec 3, Cr 3.
HIST-3330	U.S Military History	A study and analysis of the American military experience from the Revolutionary War through the Persian Gulf War to the present day. Lec 3, Cr 3.
HIST-3360	Classical and Post-Classical World 500 BCE - 1450	This course examines the political, economic, social, and cultural developments that define the classical and post-classical era. Lec 3, Cr 3.
HIST-3365	First Globalization 1450-1750	The course examines the significant impact of territorial expansions by European and Asian powers through the exchanges and interconnection of people, ideas, diseases and cultures. Lec 3, Cr 3.

HIST-3370	Modern World 1750-Present	This course examines the technological political and social advances that accelerated and increased the exchange and interconnection of people, ideas, goods, diseases and cultures. Lec 3, Cr 3.
HIST-3375	History of World War I and II	A history of the causes, course, and outcomes of the two World Wars. Lec 3, Cr3.
HIST-3380	Mexico Through Independence	This course surveys Mexican history with emphasis on pre-Colombian cultures, the Conquest, Spanish colonial institutions, and independence. Lec 3, Cr 3.
HIST-3385	Mexico Since Independence	This course surveys the major developments in nineteenth and twentieth century Mexico with emphasis on the early national period, the Reform, the Porfiriato, and the Revolution. Lec 3, Cr3.
HIST-3390	History of Modern Latin America	This course is a study of the political and cultural trends of the Latin American nations since independence. Lec 3, Cr 3.
HIST-4320	Advanced Topics in American History	This course offers an in depth examination of selected topics in American History. Course can be repeated for credit as topic changes for a total of up to 6 credit hours. Lec 3, Cr 3
HIST-4338	American Intellectual Social History	The intellectual perspective includes major historical and cultural ideas which were conceived and used by elites to promote given political and social agendas. The Social History component includes group behavior and participation in such basic areas as: Religion, Political Democracy, Labor Organizations and Reform movements. Lec 3, Cr 3
HIST-4344	United States Diplomatic History	A survey of American foreign policy, its implementations and ratifications, and the interaction between the United States and other nations from 1776 to the present, with special emphasis on the relations with Mexico. Lec 3, Cr 3
HIST-4345	North American Economic History	A survey of North American Economic growth and development from the pre-colonial era to the present. May be counted as ECON 4345 or HIST 4345. Lec 3, Cr 3
HIST-4350	Advanced Topics in Latin American History	This course offers an in depth examination of selected topics in Latin American History. Course can be repeated for credit as topic changes for a total of up to 6 credit hours. Lec 3, Cr 3
HIST-4360	Advanced Topics in European/ World History	This course offers in depth examination of selected topics in European/World History. Course can be repeated for credit as topic changes for a total of up to 6 credit hours. Lec 3, Cr 3
HIST-4365	History of the Middle Ages	A study of European Medieval roots to 1500. Lec 3, Cr 3
HIST-4367	History of Early Modern Europe	A study of the transition of European society into modernity in the 16th, 17th, and 18th centuries. Lec 3, Cr 3
HIST-4369	Nineteenth Century Europe:1789-1914	A study of the political, social and cultural developments in Europe from the French Revolution to the outbreak of World War I. Lec 3, Cr 3
HIST-4371	History of the Islamic World	A survey of the vast crescent of the Islamic World from North Africa through the Middle East to Indonesia. The study will commence with Mohammed in 622 but concentrate on the challenges posed by the Islamic World in modern times. Lec 3, Cr 3
HIST-4372	History of Russia	A study of Russian history from the founding of the Kievan state through to today. Special emphasis will be given to the Soviet Era and the current state of the former Soviet republics. Lec 3, Cr 3
HIST-4374	History of Asia	A survey of Asian history from earliest times through to today. Special emphasis will be given to the Asian "core civilizations" of China and India. Lec 3, Cr 3
HIST-4379	Modern Europe: 1914- Present	A study of Europe from the commencement of the First World War through to the progressive, increasingly-unified Europe of today. Lec 3, Cr 3
HIST-4385	Ancient History	A study of the historical foundations of the Middle East, Greece, and Rome. Lec 3, Cr 3
HIST-4390	American History Senior Seminar	This course will help senior students to consolidate their knowledge of American History. The student is challenged to appreciate the flow of American history as major historical themes evolve from Pre-Columbian peoples and civilizations through to the present in the United States. Sem 3, Cr 3
HIST-4392	World History Senior Seminar	This course will help students to consolidate their knowledge of World History. The student is challenged to appreciate the flow of world history as major historical themes evolve from earliest civilization through to the modern day. Sem 3, Cr 3
HIST-4399	Senior Seminar	This capstone reinforces all previously acquired historical skills and culminates in a research project in the area of expertise of the instructor. Lec 3, Cr 3.
HITT-3107	C.I.M Practicum	The course provides 160 of clinical experience under supervision of a Certified Tumor Registrar and experiences in the following: Data collection! Registry files! Follow-up! Quality control! Reporting! Quality management! and Case finding. Clinical 10, Cr 1.

HITT-3206	Cancer Disease Coding	This course provides an overview of oncology coding systems, with a focus on coding and abstracting clinical information from medical records. Instruction focuses on International Classification of Disease for Oncology (ICD-O) and Facility Oncology Registry Data Standards (FORDS) to classify tumors. Students will participate in hands-on abstracting and coding exercises. Lec 2, Cr 2.
HITT-3301	Cancer Program Standards and Registry Operations	This course will provide an in-depth introduction to hospital-based and central cancer registry standards and operations. The structure, management and daily operations of cancer registries will be explored in detail. Instruction will primarily focus on topics such as confidentiality, data utilizations, data quality, and the role of standard setting organizations. Lec 3, Cr 3.
HITT-3302	Cancer Disease Management	This course is a comprehensive review of the clinical management of cancer. Diagnostic and staging procedures will be explored. Treatment modalities will also be covered. Upon completing the course, students will know how to determine the types of treatment expected based in site, extent of disease and histology. Lec 3, Cr 3.
HITT-3304	Cancer Statistics and Epidemiology	The purpose of this course is to provide students with an introduction to cancer statistics, descriptive and analytic epidemiology, cancer surveillance, annual report preparation and presentation of cancer data. Furthermore, the use of cancer statistical data for research, marketing and strategic planning will be discussed. Lec 3, Cr 3.
HITT-3305	Cancer Disease Staging	This course introduces the principles of cancer staging. The American Joint Committee on Cancer (AJCC) TNM, Surveillance, Epidemiology and End Results (SEER) Summary Staging and Collaborative Stage are explored. Instruction includes extent of disease concepts used to determine treatment and survival and the procedures to conduct patient follow-up. Lec 3, Cr 3.
HITT-3308	Cancer Case Abstracting Principles and Practice	Instruction covers all coded data elements and supporting documentation required by the American College of Surgeons Commission on cancer. Students receive hand-on experience in abstracting cancer data from hospital and clinic medical records. Lec 3, Cr 3
HLTH-2320	Personal Health	The course will cover factors and the health issues that influence lifestyle and wellness throughout the lifespan. Emphasis will be placed on the application of knowledge and skills for personal and skills for personal and professional practice. Lec 3, Cr 3
HLTH-2325	Nutrition	The course covers the science of nutrition and food dietary choice, weight management, disease prevention and food safety. Identification of nutritional problems and the resources in the community will be examined. Lec 3, Cr 3
HLTH-3300	Elementary and Secondary School Health	This course focuses in the etiology of the physical, mental, social, and emotional health of young people. Emphasis will be placed on the theory and practice in health education and an overview of the coordinated school health program. Lec 3, Cr 3
HLTH-3305	Selected Topics in Health Education	Selected topics in the field are examined with the intent of promoting the study and research of are as not offered in the curriculum. May be repeated one time as long as the topic is different. Lec 3, Cr 3
HLTH-3325	Latino Health Issues	This course covers topics related to the health issues of the Latino population. Emphasis will be placed on application of knowledge and skills to personal and professional practice related to the demographic, socioeconomic and behavioral-risk profiles of Latino populations. Lec 3, Cr 3.
HLTH-4300	Human Disease	This course covers the relationship between the human body and communicable and non-communicable diseases. The historical aspects of diseases, etiology, prevention and control, prevalence and symptoms are examined. Lec 3, Cr 3
HLTH-4305	Community Health Methods	This course will examine multiple aspects of community health such as political, social, economic, and cultural values in the community health education settings. Emphasis will be placed on the tenets of program planning, implementation, and evaluation. Lec 3, Cr 3
HLTH-4315	Health Program Planning and Evaluation	This course covers the essentials of health education/promotion program design, planning and evaluation. Students will learn the process of health education programming including assessment, design, planning, implementation, and evaluation. This course will also include an introduction to health behavior theory. Lec 3, Cr 3.



HPRS-3301	Introduction to the Evolving Healthcare System	Introduces the student to the organizational structure of the U.S. Health Care system. Provides historical perspective to the system evolution from institutional-based to population based care to cost-aware values. Describes the financing mechanisms, primary providers and secondary providers, and consumers of health care. Discusses how technology affects the politics of the system. Discusses the health care system along the Texas-Mexico borders and how cultural influences impacts health care delivery. Lec 3, Cr 3.
HPRS-3302	Medical Law/ Ethics for the Health Professional	Describes the laws and ethical standards that apply to allied health practitioners. Uses case presentations and develops methods for solving legal and or ethical and cultural dilemmas. Discuss pertinent legal cases involving allied health practitioners. Lec 3, Cr 3.
HPRS-3309	Leading and Managing the Healthcare Team	Discusses the concepts of leadership within the context of allied health. Prepares the learner to use problem solving methods to effectively supervise and lead subordinates in a health care setting. Focuses on the economics of managed care, how continuous quality improvement relates to cost-effective care. Develops skills and values necessary for effective teamwork. Lec 3, Cr 3.
HPRS-3313	Physical and Mental Health Throughout The Lifespan	This course provides concepts of growth, development, and mental health through human stages of life, focusing on biological/genetic and environmental influences on the cognitive, physical, and socio-emotional/psychological developmental areas. Course concepts are demonstrated by applying principles and theories to an interaction/ observation project and discussion of current lifespan issues. Lec 3, Cr 3.
HPRS-3316	Nutrition Concepts for Allied Health Practitioners	This course is designed to emphasize the importance of nutrition in maintaining health and wellness. The effectiveness of the therapeutic diet as related to specific diseases will be explored. In addition to school-based training, this course provides clinical-based learning experiences. Lec 3, Cr 3.
HPRS-3320	Patient Education in Health Sciences	This course will cover adult learning theories and concepts to develop appropriate teaching materials and materials and grams for patients and their families that enhance client knowledge and skills for health promotion and recovery. Lec 3, Cr 3.
HPRS-3324	Teaching in the Health Sciences	This course will provide an introduction to the principles of teaching to include planning, implementation, assessment and evaluation in health career education. The student will develop an appreciation of the value of vocational/technical education. Lec 3, Cr 3.
HPRS-4300	Pharmacology for Health Professional	This course will provide an overview of the pharmacokinetics and pharmacodynamics of prescription and nonprescription medications. Course content will emphasize drug classifications, drug action, drug administration, ethical and legal issues, and safety. Students will develop an understanding of pharmaceuticals and its impact on the health care industry. Lec 3, Cr 3.
HPRS-4301	Introduction to Health Data Utilization	Surveys the use of computers in the health care industry. The learner will understand the principles of data base management with examples from medical records. Use of computer spreadsheets, graphics programs in managing and presenting data will be taught. Lec 3, Cr 3.
HPRS-4302	Continuous Quality Improvement	Provides basic principles of CQI and its application in health care environments. Provides knowledge, skills, and tools necessary to implement, facilitate, and coordinate CQI activities. This requires experience in a health care setting and moderate computer skills including creating spreadsheets, charts and graphs. Lec 3, Cr 3.
HPRS-4309	Research Methods in Evidenced-Based Healthcare	In this course, students conduct laboratory investigations and fieldwork, use scientific methods during investigations, and make informed decisions using critical thinking and problem solving. The student actively formulates a problem related to health science, designs the research and procedures to be used, and plans a final product that will involve a formal presentation to representatives of the scientific community. The course may be conducted in the classroom settings or as independent seminar. Lec 3, Cr 3.
HPRS-4312	Applied Pathophysiology	This course allows students to conduct laboratory investigations and fieldwork, use scientific methods during investigations, and make informed decisions using critical thinking and problem solving. Students in Pathophysiology study disease processes, and how human systems are affected. Emphasis is placed on prevention and treatment of diseases. Students will differentiate between normal and abnormal physiology. Lec 3, Cr 3.

HPRS-4316	Applied Medical Microbiology	Students in Medical Microbiology study the morphology and physiology of microbes and the relationship between microbes and health maintenance. Emphasis is placed on the role of microbes in infectious diseases. Lec 3, Cr 3.
HPRS-4330	Independent Study	This course will offer the student the opportunity for an in-depth exploration of a topic or a clinical skill in the health sciences. This course may be repeated twice for credit. Lec 3, Cr 3.
HPRS-4334	Issues and Trends in Health Care	This course will address current events, issues and attitudes pertinent to health care. This course maybe repeated twice for credit with permission of instructor. Lec 3, Cr 3.
HPRS-4360	Practicum in Health Services	Students are provided the opportunity to develop a self-directed learning plan. Students should be working in an area where meaningful experiential learning can occur. Students will develop goals and objectives, a learning plan, and evaluate the outcomes of their activities. A summary report of the process is required. Practicum 9, Cr 3.
INDS-3301	Theories of Knowledge	Analysis of humankind's "ways of knowing, including empirical and non-empirical methods. Perspectives and issues are drawn from the various sciences and humanities as well as nonacademic sources of knowledge. Lec 3, Cr 3
INDS-3303	Culture and Humanity: Human Diversity Cross Cultural Perspective	Analysis of the diversity of the human experience from a cross-cultural perspective. Particular attention is paid to differing world-views and institutional patterns (e.g., the economy, religion, politics, family, medicine) as well as the role of technology and science within different cultural contexts. Lec 3, Cr 3
INTG-4366	Interpreting I	A basic orientation in the theory and practice of interpreting English to Spanish and Spanish to English. Emphasis on sight translation and short consecutive interpreting, and also preparation for simultaneous interpreting. Cross-listed with TRSP 4366. Lec 3, Cr 3
INTG-4367	Interpreting II	Advanced practice in English to Spanish and Spanish to English consecutive and simultaneous interpreting with close attention to terminology and documentation. Lec 3, Cr 3
INTL-3331	International Law	This course covers a wide range of topics including differences in national legal systems, the formation of international law through treaties and practice, and the relationship between international law and domestic law. It may include such topics as immigration law, human rights, intellectual property protection, the settlement of international disputes, and customs law. Lec 3, Cr 3
INTL-3392	Supply Chain Management	The study of the systematic approach to managing the flows of materials and information links between the organization itself and its suppliers, transporters, warehouses, retailers, and customers in a way to maximize the overall value generated. Appropriate concepts and quantitative skills required for effective and efficient management of a supply chain will be studied. Themes encompassed include globalization and the role of e-commerce. Lec 3, Cr 3
INTL-4361	International Management	The study of current recommended global management practices including managing across cultures and intercultural communication, organizing international operations and decision making, controlling across political and social environments, motivation and leadership across cultures and human resource/labor issues. Lec 3, Cr 3
INTL-4371	International Marketing	This course will provide students with an understanding of how to evaluate marketing opportunities in foreign markets. Emphasis is placed on adapting marketing concepts and strategies to accommodate individual environmental differences in the development of an international marketing plan. Topics may include cross-cultural issues, market-entry strategies, currency markets, international brand development, and consumer motivations. Lec 3, Cr 3
INTL-4381	International Finance and Economics	An analysis of international trade, foreign investment, financing, and the factors affecting them in the process of allocating scarce resources to better meet human needs. Lec 3, Cr 3
INTL-4393	Topics in International Business	The study of significant topics related to International Business. Course may be repeated for credit when topic varies. Lec 3, Cr 3
ITAL-1311	Beginning Italian I	A course designed to develop fundamental skills in listening comprehension, speaking, reading, and writing, emphasizing conversation, vocabulary acquisition, reading, composition and culture. Lec 3, Cr 3
KINE-1119	Racquetball	
KINE-1120	Sailing	
KINE-1121	Self-Defense	
KINE-1122	Soccer	
KINE-1123	Softball	

KINE-1124	Swimming	
KINE-1125	Table Tennis	
KINE-1126	Tap Dance	
KINE-1127	Tennis I	
KINE-1128	Tennis II	
KINE-1129	Volleyball	
KINE-1130	Weight Training	
KINE-1133	Basic Sports Skills	
KINE-1134	Physical Conditioning	
KINE-1135	Activities for Elementary School Students	This course provides pre-service physical educators with information and skill development essential for the practical application of activities supportive of the Texas Essential Knowledge Skills (TEKS) for elementary school physical education. Lab 2, Cr 1
KINE-1136	Activities for Secondary School Students	This course provides pre-service physical educators with information and skill development essential for the practical application of activities supportive of the Texas Essential Knowledge Skills (TEKS) for elementary school physical education. Lab 2, Cr 1
KINE-1164	Introduction to Physical Fitness and Sport	
KINE-1301	Intro to Sports and Exercise Science	A survey course designed to introduce the prospective kinesiology education major to the history, philosophy, scientific foundations, objectives and current status of sports and exercise in educational and recreational settings. Required for Kinesiology Majors and Minors. Lec 3, Cr 3
KINE-1306	First Aid/First Responder	Topics of study include cardiopulmonary resuscitation, bleeding and shock, fractures, dislocations and medical emergencies. Upon successful completion of skills and knowledge tests, the student may be certified through the American Red Cross. Lec 3, Cr 3
KINE-1308	Sports Officiating - Football, Volleyball	Instruction in the rules and techniques of officiating football and volleyball will be given. Opportunities for practice in both the classroom and college intramural setting will be provided. Lec 3, Cr 3
KINE-1309	Sports Officiating - Basketball/Softball	Instruction in the rules and techniques of officiating basketball and softball will be given. Opportunities for practice in both the classroom and intramural setting will be provided. Lec 3, Cr 3
KINE-2255	Health and Motor Development for E.C-6	This course focuses on motor activities and health skills for young children. It includes the study of physiological, intellectual, social and emotional factors that influence gross and fine motor skills. The course is also designed to acquaint students with health issues for young children. Lec 2, Cr 2
KINE-2304	Outdoor Education	This course involves an introduction to outdoor adventure activities (such as rock climbing, orienteering, canoeing, backpacking, and camping) as well as an introduction to experiential activity as teaching methodology. Topics covered require academic preparation and active student participation. Lec 3, Cr 3
KINE-3153	Physiology of Exercise and Human Performance Lab	Emphasis on demonstration of lecture concepts through hands on experiences in the lab. Maximal oxygen consumption and aerobic fitness assessment, human thermoregulation, body composition analysis, pulmonary function testing are among the topics explored. Lab 2, Cr 1
KINE-3160	Exercise Testing and Prescription Lab	Practical application of concepts discussed in lecture. ACSM client screening, fitness assessment, metabolic equations required for prescription and development of exercise prescriptions using volunteer subjects and cases studies. All methodologies required ACSM certification explored. Lab 2, Cr 1
KINE-3301	Psychology of Sport and Exercise	A study of the effects of psychological factors on performance in sport, as well as the effects of sport-exercise participation on psychological development and wellness. Lec 3, Cr 3
KINE-3314	Dance for Children and Adolescents	A study of historical foundations and philosophical roots relating to the development of dance in the United States. Includes the forces, controversies, and leaders affecting dance as an integral part of current society. Lec 3, Cr 3
KINE-3320	History and Principles of Sport and Movement Sciences	Study of the sporting events of early civilizations and their evolution into modern society. Includes the Olympic Games, the European influence on sports in the U.S. and the modern sports movement in the U.S. including intercollegiate and interscholastic sports. Lec 3, Cr 3
KINE-3330	Coaching of Sports	Study of the coaching profession as a multi-dimensional role in education. Course includes study of the psychological and sociological aspects of coaching! use of coaching strategies! organizing practices and games! communication with school, parents and the media! and the ethics of coaching. The use of technology in coaching will also be examined. Lec 3, Cr 3

KINE-3340	Principles of Wellness and Fitness	Study of the scientific principles of total well- being with emphasis upon physical fitness, proper nutrition, weight control, and stress management. Students will learn to design comprehensive wellness programs for the K-12 public school sector. Lec 3, Cr 3
KINE-3353	Physiology of Exercise and Human Performance	Basic systematic adaptations to exercise with specific emphasis on the interrelationship of physiological functions of the human body, and the changes resulting from physical activity. Lec 3, Cr 3
KINE-3356	Motor Development	A study of motor skills and physical development from birth to adulthood with emphasis on childhood. Course includes study of neurological, physiological, intellectual, social and emotional factors that influence gross and fine movement activities. Formerly KINE 3356. Lec 3, Cr 3
KINE-3360	Exercise Testing and Prescription	Development and implementation of exercise prescription for health-related fitness with specific respect to the following! cardiorespiratory endurance, muscular strength and endurance, flexibility and optimal body composition. Client screening, fitness assessment for prescription and metabolic equations following ACSM guidelines included. Lec 3, Cr 3
KINE-3365	Physiology and Techniques of Strength/ Power Fitness	Advanced concepts in the conditioning of muscular strength, endurance and power are taught. Exercise prescription for health-related fitness for the general public is detailed as well as prescription for athletic performance. In addition, the theory and use of periodization, plyometrics, and interval training for sports are covered. Lec 3, Cr 3
KINE-3370	Biomechanics	The study of the advanced principles of human movement! scientific principles learned in the course will allow the student to understand how and why the human body moves in the manner that it does. The student will also learn to analyze biomechanical technique in numerous motor skills, as required in teaching and coaching complex movement. Lec 3, Cr 3
KINE-4302	Kinesiology Curriculum for Elementary Students	This course focuses on knowledge and theory related to designing appropriate and optimal physical curriculum for young children. Emphasis will be given to curriculum development and implementation supportive of the Texas Essential Knowledge and Skills (TEKS) for elementary school students. Lec 3, Cr 3
KINE-4309	Kinesiology Curriculum for Secondary School Students	This course focuses on knowledge and theory related to designing an appropriate and optimal physical education curriculum for adolescents. Emphasis will be given to curriculum development and implementation supportive of the Texas Essential Knowledge and Skills (TEKS) for middle and high school students. Lec 3, Cr 3
KINE-4310	Measurement Techniques in Physical Exercise and Sports	Course includes knowledge and theory fundamentals of statistical measurement basics. It includes construction, selection, administration and interpretation of performance and knowledge tests for physical activities. Lec 3, Cr 3
KINE-4311	Psychology of Sport and Exercise	A study of the affects of psychological factors on performance in sport as well as the affects of sport/exercise participation on psychological development and wellness. Formerly KINE 3311. Lec 3, Cr 3
KINE-4313	Seminar in Sports, Dance and Exercise Science	Selected topics on sports, dance or exercise science. Current trends and theories are included. Course covers skills, legal implications and specific topics in the areas of perceptual motor skills, sports, dance and exercise science that are not available as part of the regular course offerings. Courses may be repeated for credit when topics vary, but not more than nine hours will apply to a bachelor's degree. Lec 3, Cr 3
KINE-4322	Adapted Aquatics and Rehabilitation	This course is designed to provide students with current therapeutic, recreational, and educational, and adapted aquatic intervention techniques for individuals with mental, physical, sensory, and/or health-related impairments. Students will learn practical hands-on applications of adapted aquatics using theoretical models and best practices in the field. Lec 3, Cr 3
KINE-4351	The Adapted Kinesiology Program	Study of adaptations for the exceptional child. Theory and implications of specific disabilities with application to exercise and sports. Characteristics of special population children as related to the physiological basis of movement. Lec 3, Cr 3
KINE-4355	Pediatric Exercise Physiology	The purpose of this course is to provide knowledge and experience for future professionals in the field of exercise physiology that pertains primarily to children and adolescents. Training protocols and health-related fitness programs tailored to meet the developmental needs of children are covered. Lec 3, Cr 3
KINE-4358	Motor Control and Learning	This course provides an introduction to the major concepts, theories and applications of the study of human motor control and learning. The course is relevant to those who will work in educational and therapeutic careers. Lec 3, Cr 3.

KINE-4360	Clinical Exercise Physiology	Exercise prescription for special populations is covered. Clinical description of specific medical problems is presented as well as their potential impact on the exercise prescription. Groups considered include those afflicted with diabetes, cardiovascular disease, metabolic syndrome, respiratory disorders, arthritis, cancer, HIV, and neuromuscular disorders. Lec 3, Cr 3
KINE-4370	Management in Exercise and Health Promotion	Applied knowledge for the operation of fitness centers emphasizing the development of practical skills for management, equipment acquisition and staffing of commercial, corporate and clinical centers. Lec 3, Cr 3
KINE-4380	Exercise Science Internship	The course consists of practical general training and experiences in health-related fitness environments. The structure if the field experience is developed in consultation with the internship site. Lec 3, Cr 3
MAMT-3337	Anatomy, Positioning, and Patient Assessment	This course presents the risk factor of breast disease. Content also includes the discussion of the various pathologies identified through mammography and the anatomy and physiology of the breast. Also includes the routine and special projections of the breast. Lec 3, Cr 3.
MAMT-3338	Special Topics in Mammography	This course will include topics, which will address recently identified current events, skills, knowledge, and/or attitudes and behavior pertinent to the technology or occupation, which are relevant to the professional development of the mammography student. Lec 3, Cr 3.
MAMT-4331	Mammography Instrumentation and Modalities	This course discusses the dedicated radiography equipment necessary for breast imaging. Also includes proper technical factors, radiation protection techniques, and proper accessory equipment. Lec 3, Cr 3.
MAMT-4632	Mammographic Practicum	This course provides clinical experience in a mammography facility performing all functions including routine and special mammographic procedures, quality assurance testing and image analysis. Lec 6, Cr 6.
MANA-3361	Principles of Management	This course is a study of the management functions of planning, organizing, leading and controlling. Emphasis is placed on organizational theory and behavior. Lec 3, Cr 3
MANA-3362	Human Resource Management	Current developments within the field of human resource management are reviewed. Covered areas are employment law, recruitment, selection, compensation, training and development, career management, motivation and performance, and collective bargaining. Lec 3, Cr 3
MANA-3363	Operations Management	The operations function and its applicability to all kinds of organizations is the backdrop for this course. Emphasis is on fundamental managerial concepts, the integration of operations with the quality, marketing and finance functions, analytical skills, and computer based tools. Lec 3, Cr 3
MANA-4352	Business and Society	The ethical and social responsibilities of business are analyzed using basic ethical principles. This course also examines the relationship between business and stakeholders such as employees, customers, investors and the community, and considers the impact of external factors such as cultural trends, governmental regulations, and legal rulings. Lec 3, Cr 3
MANA-4360	Organizational Theory and Behavior	Organizational structures and individual and group behavior within organizations are the focus of this course. Covered areas are individual differences, group dynamics, leadership, motivation, goal setting, communication and decision-making. Lec 3, Cr 3
MANA-4366	Small Business Management	A study of the special characteristics of small business. Emphasis will be placed on the selecting and starting of a small business and the essential function of management in the first years of operation. Lec 3, Cr 3
MANA-4367	Topics in Management	The study of significant topics related to Management. Course may be repeated for credit when topic varies. Lec 3, Cr 3
MARK-3371	Principles of Marketing	The marketing structure as it operates in our economic system. With emphasis on improving the flow of goods and services from producer to consumer. Practical application of principles and techniques designed as a beginning course in marketing. Lec 3, Cr 3
MARK-3372	Consumer Behavior	An overall view of the basic perspectives of consumer behavior. An interdisciplinary approach is utilized by studying the fields of economics, psychology, sociology and anthropology as they relate to marketing. Emphasis is placed on the fundamental process of motivation, perception and learning, as well as analysis of individual predispositions and group influences in marketing. Lec 3, Cr 3

MARK-4371	Sales Management and Personal Selling	The selection, training, compensation, organization, and control of a field sales organization is studied. Primary emphasis is devoted to the selection and training of the sales force for the selling process and making a sales presentation. Lec 3, Cr 3
MARK-4372	Promotion Strategy	The development and management of an organization's promotional effort is the focus of this survey course. It includes a review of advertising, sales promotions, public relations, personal selling and direct marketing. Emphasis is placed on this coordination and integration of promotional strategy with sales force activities. Lec 3, Cr 3
MARK-4376	Marketing Strategy	Marketing principles are applied to strategy formulation. Topics include: target market selection, market mix development and new product planning . Both consumer and industrial marketing is stressed through the use of cases, readings, and special projects. This course is recommended as the capstone course in the Marketing major. Lec 3, Cr 3
MARK-4377	Topics in Marketing	The study of significant topics related to marketing. Course may be repeated for credit when topic varies. Lec 3, Cr 3
MARK-4378	Marketing Research	Quantitative research procedures and techniques utilized in business today. Problem definition, sources of research data, survey methods, questionnaire design and sampling techniques. Practical application of procedures and techniques is emphasized through class research projects. Lec 3, Cr 3
MATH-1314	College Algebra	Topics in this course include the study of quadratics! polynomial, rational, and exponential functions! systems of equations! progressions! sequences and series! matrices and determinants. Lec 3, Cr 3
MATH-1324	Mathematics for Business and Social Sciences I	This course is designed to meet the needs of students in business and social sciences. The topics covered include linear equations, quadratic equations, functions and graphs, inequalities, mathematics of finance (simple and compound interest, annuities), linear programming, matrices, systems of linear equations applications to management, economics, and business. Lec 3, Cr 3
MATH-1325	Mathematics for Business and Social Sciences II	This course is designed to meet the needs of students in business and social sciences. The topics covered include limits and continuity, derivatives, graphing and optimization, exponential and logarithmic functions, antiderivatives, integral applications to management, economics, and business. Lec 3, Cr 3
MATH-1332	Contemporary Mathematics I	This course is designed to meet the needs of non-science and non-business majors. The topics covered in this course include sets, logic, elementary number theory, functions, geometric concepts, mathematics of finance, and the introduction to probability and statistics. Lec 3, Cr 3
MATH-1342	Elementary Statistical Methods	This course provides the student with an elementary overview of the nature and uses of descriptive and inferential statistics. Topics include descriptive statistics, measures of central tendency and dispersion, probability, distributions, tests of hypothesis and estimation for large and small samples, linear regression and correlation, comparisons, and analysis of variance. Lec 3, Cr 3
MATH-1350	Fundamentals of Mathematics for Teachers I	This course is designed for students seeking teacher certification Early Childhood through eighth grade. Topics includes sets, functions, numerations systems, integers, rational, and real numbers with an emphasis on problem solving and the use of math manipulatives. Lec 3, Cr 3
MATH-1351	Fundamentals of Mathematics for Teachers II	This course is designed for students seeking teacher certification for levels Early Childhood through eighth grade. Topics include geometry, probability, statistics, algebraic applications, and measurement with an emphasis on problem solving and the use of manipulatives. Lec 3, Cr 3
MATH-2303	Functions and Modeling	Students will engage in lab-based activities designed to expand knowledge to topics in secondary mathematics, focusing on topics from precalculus and calculus. Students will explore contexts that can be modeled using families of functions, including linear, exponential, polynomial and trigonometric functions. This course is part of the UTeach program. Lec 3, Cr 3
MATH-2305	Discrete Mathematics	This course is a study of proof techniques, asymptotic notations for growth function analysis, common functions found in algorithm analysis, manipulating and bounding summations, different methods to solve recurrences including alteration and generating functions, combinatorial analysis, number theory, binomial coefficients, sets, graphs, and trees. Lec 3, Cr 3
MATH-2318	Linear Algebra	This is an introductory course in linear algebra. Topics include in this course are finite dimensional vector spaces, linear transformations and matrices, quadratic forms, and eigenvalues and eigenvectors. Lec 3, Cr 3

MATH-2321	Differential Equations and Linear Algebra	This course emphasizes solution techniques. Topics include differential equations, vector spaces, linear transformation, matrix/vector algebra, eigenvectors, Laplace Transform and systems of equation. Lec 3, Cr 3
MATH-2412	Pre-Calculus Mathematics	The course includes applications of algebra and trigonometry to the study of elementary functions and their graphs including polynomial, rational, exponential, logarithmic, and trigonometric functions. Topics from analytical geometry may also be included. Lec 4 , Cr 4
MATH-2413	Calculus I	This course covers functions, limits, and continuity! the derivative! differentiation of algebraic functions, the derivative as a rate of change, maximum and minimum problems with applications, Rolle's Theorem, the Mean-Value Theorem, higher derivatives, concavity, techniques of graphing, antiderivative, the definite integral and integration with applications. Lec 3, Lab 2, Cr 4
MATH-2414	Calculus II	This course is a continuation of MATH 2413. This course covers the following topics: applications of the definite integral, differentiation, integration, and applications of logarithmic, exponential, trigonometric, hyperbolic functions and their inverses, solving differential equations, various techniques of integration with applications, improper integrals, approximation methods for definite integrals, limits of sequence infinite series, various tests for convergence of a series, power series, Taylor and Maclaurin Series, and application of power series. Lec 3, Lab 2, Cr 4
MATH-2415	Calculus III	Topics include Vectors in space, limits of the functions of several variables, directional derivatives of functions of several variables, and multiple integration. Lec 3, Lab 2, Cr 4
MATH-3306	Foundations of Analysis	This course introduces proof techniques, functions, relations, cardinality, and axiomatic approach to the real number system. Lec 3, Cr 3.
MATH-3307	Perspectives on Mathematics and Science- U.Teach	Students will explore a selection of topics and episodes in the history of mathematics and science. This course is part of the UTeach program. Lec 3, Cr 3
MATH-3310	Survey of Mathematical Concepts and Principles I	This course, designed for students seeking teacher certification, is a study of Domains 1, 2, and 5 of the TExES Examination for grades 4-8 and 8-12. Topics include number concepts, algebra, mathematical processes and perspectives. The goal is to enhance prospective teachers' essential knowledge and skills necessary to teach mathematics. Lec 3, Cr 3
MATH-3317	Survey of Mathematical Concepts and Principles II	This course, designed for students seeking teacher certification, is a study of Domain 3, 4, and 6 of the TExES Examination for grade 4-8 and 8-12. Topics include geometry, measurement, probability, statistics, instruction, and assessment. The goal is to enhance prospective teacher's essential knowledge and skills necessary to teach mathematics. Lec 3, Cr 3
MATH-3321	Algebra I	This course provides an introduction to algebraic structures. Topics to be taken from groups, rings and fields. Lec 3, Cr 3
MATH-3328	Advanced Linear Algebra	This course covers linear transformations, matrix representations of linear transformations, similarity of matrices, orthogonality, least squares problems, the Gram-Schmidt orthogonalization, eigenvalues and eigenvectors, systems of linear differential equations, diagonalization, Hermitian matrices quadratic forms, positive definite matrices. Lec 3, Cr 3
MATH-3331	Geometry I	Euclidean geometry (congruence axioms and theorems with proofs; polygons), analytic geometry (coordination over real numbers), transformational geometry (basic results in $GL(2, \mathbb{R})$ and $GL(3, \mathbb{R})$ ) axiomatic introduction into Projective Geometry. Lec 3, Cr 3.
MATH-3332	Geometry II	Complete overview of Hilbert's axioms (connection, order, parallels, congruence, continuity)! convex geometry (convex hull, extreme points, linear programming)! projective geometry (collineation, coordination, the Main Theorem, affine spaces). Lec 3, Cr 3
MATH-3339	Topology	This is an introductory course in topology, one of the major branches of modern mathematics. Topics will include! sets, mappings, metric spaces, sequences in metric spaces, connectedness, and compactness. Lec 3, Cr 3
MATH-3341	Real Analysis	This course presents a rigorous introduction to the elements of real analysis. Topics include sequences, series, functions, limits, continuity, and derivatives. Lec 3, Cr 3
MATH-3349	Differential Equations	This course concentrates on solving ordinary differential equations by a variety of methods and techniques including Laplace Transforms. Also included in this course are elementary applications problems and solving systems of linear differential equations. Lec 3, Cr 3

MATH-3362	Discrete Structures	This course is an introduction to discrete mathematics with minimal mathematics requirements. This course extends the students' mathematical maturity and ability to deal with abstraction: topics include logic and proofs, set theory, relations, functions, algorithms, combinatorial, graph theory, directed graphs and binary trees, ordered sets and lattices. Lec 3, Cr 3
MATH-3366	Computer Algebra Systems	This is a course in high level programming language. Different programming styles are covered such as functional, rule-based, procedural and object oriented programming. A computer algebra system such as Mathematical, Maple or MatLab is used. Lec 3, Cr 3
MATH-3381	Statistics	This is an introductory course to statistics for students whose background includes differential and integral calculus. Topics include the fundamentals of probability theory. In descriptive statistics it covers discrete and continuous distributions, multivariate distributions, sampling distributions and the central limit theorem. In inferential statistics topics include estimation and hypothesis testing. Lec 3, Cr 3
MATH-3382	Models for Actuarial Applications Probability	Probability tools used in quantitative risk management are introduced. The course covers material included in the Society of Actuaries' Exam P. The course also prepares students for MATH-3383m Actuarial Statistical Estimates. Lec 3, Cr 3.
MATH-3383	Actuarial Statistical Estimates	Statistical tools used for the construction and evaluation of actuarial models are covered in this course. The syllabus is chosen to cover material included in the Society's of Actuaries' Exam C. Lec 3, Cr 3.
MATH-3386	Theory of Interest	The theory of interest will be developed. Emphasis on topics included in the financial mathematics portion of the Society of Actuaries' Financial Mathematics exam. Lec 3, Cr 3.
MATH-3387	Financial Mathematics for Actuarial Applications	Financial mathematics is applied to areas of financial economics important in actuarial applications. Emphasis is placed on topics included in the financial economics portion of the Society of Actuaries' Financial Mathematics exam. Lec 3, Cr 3.
MATH-4321	Advanced Topics in Algebra	Topics are selected from the area of Algebra and not available in other Mathematics courses. Course may be taken multiple times as content changes. Lec 3, Cr 3
MATH-4329	Number Theory	This course includes a study of divisibility of integers, prime factorizations, congruence, and Diophantine equations. Lec 3, Cr 3
MATH-4342	Complex Analysis	This course gives rigorous introduction to the theory of functions of a single complex variable. Topics include complex number system, analytic functions, Cauchy-Riemann equation, complex integration, Cauchy's theorem, infinite series, and the residue theorem. Lec 3, Cr 3
MATH-4343	Advanced Topic in Analysis	Topics are selected from the area of Analysis and not available in other Mathematics courses. Course may be taken multiple time as content changes. Lec 3, Cr 3
MATH-4361	Selected Topics in Mathematics for Teachers	The topics of this course may come from different areas of Mathematics especially suited for teachers and not available in other courses. Course may be taken multiple times as content changes. Lec 3, Cr 3
MATH-4367	Numerical Analysis	The topics in include numerical solutions of linear and nonlinear equations and system of equations, polynomial and spline interpolation, approximation with Fourier series, numerical differentiation and integration, orthogonal polynomial and smoothing of data. Lec 3, Cr 3
MATH-4374	Probability and Statistics	This course introduces the student to the mathematical theory of probability and statistics. Topics include probability, random variables, discrete and continuous probability distributions, expectation and variance. Moments and moment generating functions and the central limit theorem. Lec 3, Cr 3
MATH-4391	Special Topic in Mathematics	This course covers special undergraduate topics in the mathematics not offered elsewhere in the department. May be repeated for credit. Lec 3, Cr 3
MATH-4395	Research Experience in Mathematics	This course introduces methods and tools of mathematical research. Students will be required to present verbally and in written form findings of their research project. This can course can be taken no more than twice. Lec 3, Cr 3.
MEET-3333	Mechanical Subsystem Design	Selection and computer-aided graphical representation of mechanical subsystems for the transmission of mechanical power and/or generation of mechanical motion. Component selection of gears, cams, belt and chain drives, clutches and transmissions will use data sources of contemporary manufacturers ranging from vendor catalogs to computerized databases. Lec 2, Lab 3, Cr 3
MEET-3430	Transport Technologies I	This course covers the zeroth, first, and second laws of thermodynamics, fluid properties, conduction, convection and radiant heat transfer. Lec 3, Lab 3, Cr 3



MEET-3431	Transport Technologies II	This course deals with the analysis and applications of fluid mechanics and fluid power to mechanical systems, fluid components and control of hydraulic and pneumatic systems. Lec 3, Lab 3, Cr 4
MFET-3311	International Quality Assurance Systems	Study of the statistical methods used in international markets for the assurance of product quality. International standards and practices including ISO 9000 will be examined, along with practical fundamentals of control charts, correlation, regression and design of experiments. Lec 3, Cr 3
MFET-3320	Product and Process Design	Application of the engineering design and problem solving process for products and Manufacturing processes. Concepts of product life cycle, reliability, reparability, engineering specifications, productivity and product cost will be introduced. Lec 2, Lab 3, Cr 3
MFET-3325	Manufacturing Process Planning	Introduction to basic Industrial Engineering functions including process engineering, work analysis, workplace design, and motion studies, line balancing, inventory control and material handling systems. Lec 3, Cr 3
MFET-3331	Computer Aided Manufacturing	Introduction to the integration of design and manufacturing in computer-based systems. Applications of engineering design theory and methodology, 2D and 3D graphics, dimensions, tolerances and fits. Extensive use of commercial Computer Aided Design/CAM systems. Lec 2, Lab 3, Cr 3
MFET-3332	Robots in Manufacturing	This course deals with the technology and application of robots in a Computer Integrated Manufacturing (CIM) environment by providing understanding of robotics hardware and software. Digital interfacing of robots with other CIM components will be introduced. Robotics cell design and the socio-economic impact of robotics will also be discussed. Lec 2, Lab 3, Cr 3
MFET-4321	Designed Experimentation	Application of computer systems to the design and execution of engineering experimentation for product and process design, analysis and problem solving. Covers classical and modern factorial experimentation techniques, response surface analysis, experimental design, execution and data analysis. Lec 3, Cr 3
MLAB-4112	Advanced Hematology	Specialized procedures in hematology with an emphasis on body fluid analysis. Lec 1, Cr 1.
MLAB-4115	Advanced Immunology	Advanced concepts in clinical immunology with an emphasis on specialized tests including HLA system. Abnormalities of the immune system will be emphasized. Lec 1, Cr 1.
MLAB-4303	Medical Laboratory Leadership	An introduction to the leadership roles and responsibilities of the clinical laboratorian in management, supervision and education as well as regulatory and legal aspects of laboratory science. Lec 3, Cr 3.
MLAB-4314	Advanced Immunohematology	Lecture and laboratory stress the detection, identification and characterization of rarer and a typical antigens, antibodies, compatibility testing, blood component therapy and problem solving techniques. Lec 2, Lab 5, Cr 3.
MLAB-4322	Advanced Clinical Chemistry	Discussion of special procedures and instrumentation in the clinical chemistry laboratory including toxicology therapeutic drug monitoring and clinical correction of biochemical results as well as problem solving strategies. Lec 3, Cr 3.
MLAB-4631	Advanced Clinical Microbiology	Lecture and laboratory emphasize fastidious bacteria, fungi, viruses and rickettsia. Disease processes, therapy and prevention as they relate to microbiology will also be emphasized. Lec 5, Lab 5, Cr 6.
MRIT-3330	Special Topics in Magnetic Resonance Imaging Technology	Topics address recently identified current events, skills, knowledge, or occupation and relevant to the professional development of the student. Lec 3, Cr 3.
MRIT-3334	Magnetic Resonance Equipment and Methodology	A study of the actual operational control of magnetic resonance imaging. Theory and application of magnetic resonance imaging equipment and the principles of the patient. Lec 3, Cr 3.
MRIT-3664	Clinical Practicum	Practical workplace clinical experience in MR scanning, patient screening and related activities. This course is competency based rather than time based. If the student needs more time to complete the required competences. Lab 18, Cr 6.
MRIT-4331	Cross-Sectional Anatomy	This course provides the student with a basic knowledge of cross-sectional anatomy. This course provides the foundation needed to recognize anatomic structures in MR images. Lec 3, Cr 3.
MTML-3310	Import/Export Theory	This course is designed to expose the student to the fundamental of import and export operations in a global environment. Topics include history of import and export, the global legal environment and practical considerations of importing and exporting. Lec 3, Cr 3.

MTML-4310	Forecasting	This course is concerning the various business forecasting techniques. This is a quantitative course designed to provide instruction in common techniques used in forecasting as well as the ability to understand the limitations and short comings of various models as well as the ability to interrupt the data. Lec 3, Cr 3.
MTML-4320	Materials Management and ERP	This course focuses on management of the supply chain and is developed around the use of an ERP program. The course provides the student with a fundamental understanding of the tools, processes and objectives associated with the analysis and decision-making for successful management of a supply chain. Lec 3, Cr 3.
MTML-4330	Import/Export Operations	This course is designed to expose the student to the fundamentals of import and export operations in a global environment. Topics include document preparation, valuation, security considerations and shipping via various modes of transportation. Lec 3, Cr 3.
MUAP-1187	Applied Music I	This applied music course is individualized instruction in the student's instrument or voice, intended for music majors seeking teacher certification. Students must perform on a student recital, appear before a faculty jury, be concurrently enrolled in two ensembles and attend a number of live performances approved by the music faculty. PRIVL 1, Cr 1
MUAP-1188	Applied Music II	This applied music course is individualized instruction in the student's instrument or voice, intended for music majors seeking teacher certification. Students must perform on a student recital, appear before a faculty jury, be concurrently enrolled in two ensembles and attend a number of live performances approved by the music faculty. PRIVL 1, Cr 1
MUAP-2187	Applied Music III	This applied music course is individualized instruction in the student's instrument or voice, intended for music majors seeking teacher certification. Students must perform on a student recital, appear before a faculty jury, be concurrently enrolled in two ensembles and attend a number of live performances approved by the music faculty. PRIVL 1, Cr 1
MUAP-2188	Applied Music IV	This applied music course is individualized instruction in the student's instrument or voice, intended for music majors seeking teacher certification. Students must perform on a student recital, appear before a faculty jury, be concurrently enrolled in two ensembles and attend a number of live performances approved by the music faculty. PRIVL 1, Cr 1
MUAP-3101	Applied Music V	This applied music course is individualized instruction in the student's instrument or voice, intended for music majors seeking teacher certification. Students must perform on a student recital, present a sophomore recital appear before a faculty jury, be concurrently enrolled in two ensembles and attend a number of live performances approved by the music faculty. Cr 1
MUAP-3102	Applied Music VI	This applied music course is individualized instruction in the student's instrument or voice, intended for music majors seeking teacher certification. Students must perform on a student recital, appear before a faculty jury, be concurrently enrolled in two ensembles and attend a number of live performances approved by the music faculty. Cr 1
MUAP-3301	Applied Music V	This applied music course is individualized instruction in the student's instrument or voice, intended for music majors seeking teacher certification. Students must perform on a student recital, appear before a faculty jury, be concurrently enrolled in two ensembles and attend a number of live performances approved by the music faculty. Cr 3
MUAP-3302	Applied Music V I	This applied music course is individualized instruction in the student's instrument or voice, intended for music majors seeking teacher certification. Students must perform on a student recital, appear before a faculty jury, be concurrently enrolled in two ensembles and attend a number of live performances approved by the music faculty. Cr 3
MUAP-4101	Applied Music VII	This applied music course is individualized instruction in the student's instrument or voice, intended for music majors seeking teacher certification. Students must perform on a student recital, appear before a faculty jury, be concurrently enrolled in two ensembles and attend a number of live performances approved by the music faculty. Cr 1
MUAP-4102	Applied Music VIII	This applied music course is individualized instruction in the student's instrument or voice, intended for music majors seeking teacher certification. Students must perform on a student recital, appear before a faculty jury, be concurrently enrolled in two ensembles and attend a number of live performances approved by the music faculty. Cr 1

MUAP-4301	Applied Music VIII	This applied music course is individualized instruction in the student's instrument of voice, intended for music majors seeking teacher certification. Students must perform on a student recital, appear before a faculty jury, be concurrently enrolled in two ensembles and attend a number of live performances approved by the music faculty. Cr 3
MUAP-4302	Applied Music VIII	This applied music course is individualized instruction in the student's instrument or voice, intended for music majors seeking teacher certification. Students must perform on a student recital, appear before a faculty jury, be concurrently enrolled in two ensembles and attend a number of live performances approved by the music faculty. Cr 3
MUEN-1121	Wind Ensemble	The Wind Ensemble studies and performs a wide variety of music representing the literature and genres of wind music throughout history. Membership is open to the entire University student population. May be repeated for additional credit. Lab 4, Cr 1
MUEN-1122	Jazz Band	Jazz Band is dedicated to the study and performance of music in the big band tradition. Membership is open to the entire University student population and is determined by permission of the director (s) through audition. Course may be repeated for additional credit. Lab 4, Cr 1
MUEN-1123	Symphony Orchestra	The symphony Orchestra rehearses and performs symphonic literature composed and arranged for the symphonic or chamber orchestra. Membership is open to the entire University student population. Course may be repeated for additional credit. Lab 4, Cr 1
MUEN-1131	Brass Ensemble	The Brass Ensemble studies and performs a wide variety of music representing the literature and genres of brass music throughout history. Membership is open to the entire University student population. May be repeated for additional credit. Lab 4, Cr 1
MUEN-1132	Percussion Ensemble	The Rio Bravo Percussion Ensemble is a chamber ensemble dedicated to the performance of traditional to contemporary music written expressly for percussion. Membership is determined by permission of the director through audition. May be repeated for additional credit. Lab 4, Cr 1
MUEN-1133	Trumpet Ensemble	The Trumpet Ensemble studies and performs a wide variety of music representing the literature and genres of trumpet music throughout history. Membership is open to the entire University population and is determined by the permission of the director through audition. May be repeated for additional credit. Lab 4, Cr 1
MUEN-1134	Flute Ensemble	The Flute Ensemble studies and performs a wide variety of music representing the literature and genres of flute music throughout history. Membership is open to the entire University student population. May be repeated for additional credit. Lab 4, Cr 1
MUEN-1135	Jazz Combo	Jazz Combo is dedicated to the study and performance of jazz literature in the small ensemble tradition. Membership is open to the entire University student population and is determined by the permission of the director(s) through audition. May be repeated for additional credit. Lab 4, Cr 1
MUEN-1136	String Ensemble	The String Ensemble is a chamber ensemble that rehearses and performs music from different eras composed and arranged for the string quartet and/or string orchestra. Membership is open to the entire University student population. May be repeated for additional credit. Lab 4, Cr 1
MUEN-1137	Guitar Orchestra	The Guitar Orchestra emphasizes basic ensemble performance skills, reading ability, improvisation and repertoire. Membership is determined by permission of the director through audition. Advanced guitar skills required. Course may be repeated for additional credit. Lab 4, Cr 1
MUEN-1138	Early Music Consort	The Early Music Consort is a small ensemble focusing on the music of the Renaissance and early Baroque eras. Members of the group sing and perform on various sizes of the recorder in Renaissance attire. Membership is open to the entire University student population. This course may be repeated for additional credit. Lab 4, Cr 1.
MUEN-1139	Mariachi	Mariachi is dedicated to the study and performance of mariachi music. It is a performance course with emphasis on the different stylistic trends of the mariachi repertoire. Membership is determined by permission of the director through audition. May be repeated for additional credit. Lab 4, Cr 1
MUEN-1140	Clarinet Ensemble	The clarinet Ensemble studies and performs a wide variety of music representing the literature and genres of clarinet throughout history. Lab 4, Cr 1.

MUEN-1141	Chamber Ensembles	Chamber Ensembles offer the student the opportunity to perform without a conductor in small ensemble- such as woodwind or brass quintets, or specialized vocal ensembles- that are coached by a faculty member. Membership is open to the entire University student population. May be repeated for additional credit. Lab 4, Cr 1
MUEN-1142	Accompanying	Accompanying introduces students to the skills necessary to be effective collaborative pianists, including sight reading, ensemble playing, score reading and communication skills. Course may be repeated for additional credit. Lab 4, Cr 1
MUEN-1151	University Choir	The University Choir studies and performs a wide variety of choral music, from madrigals and folk songs to modern arrangements and masterworks. Membership is open to the entire University students population. May be repeated for additional credit. Lab 4, Cr 1
MUEN-1152	Bravo Opera Workshop	The Bravo Opera Company studies and performs a wide variety of music and works of the music theater. Membership is determined by permission of director through audition. Course may be repeated for additional credit. Lab 4, Cr 1
MUEN-1161	Master Chorale	Master Chorale is an elite choral ensemble open to music and non-music majors through audition and director approval. The Master Chorale studies and performs outstanding choral literature of all eras and styles. May be repeated for additional credit. Lab 4, Cr 1
MUEN-3121	Wind Ensemble	The Wind Ensemble studies and performs a wide variety of music representing the literature and sonority of sounds of the great eras of music history up to the contemporary sounds of today's composers. Membership is determined by permission of director through audition. Course may be repeated for credit. Lab 4, Cr 1
MUEN-3122	Jazz Band	Jazz Band is dedicated to the study and performance of music in the big band tradition. Membership is open to the entire University student population and is determined by the permission of the director(s) through audition. May be repeated for additional credit. Lab 4, Cr 1
MUEN-3123	Symphony Orchestra	The symphony Orchestra rehearses and performs symphonic literature composed and arranged for the symphonic or chamber orchestra. Membership is open to the entire University student population. Course may be repeated for additional credit. Lab 4, Cr 1
MUEN-3131	Brass Ensemble	The Brass Ensemble studies and performs a wide variety of music representing the literature and genres of brass music throughout history. Membership is open to the entire University student population. May be repeated for additional credit. Lab 4, Cr 1
MUEN-3132	Percussion Ensemble	The Rio Bravo Percussion Ensemble is a chamber ensemble dedicated to the performance of traditional to contemporary music written expressly for percussion. Membership is determines by permission of the director through audition. May be repeated for additional credit. Lab 4, Cr 1
MUEN-3133	Trumpet Ensemble	The Trumpet Ensembles studies and performs a wide variety of music representing the literature and genres of trumpet music throughout history. Membership is open to the entire University population and is determined by the permission of the director through audition. May be repeated for additional credit. Lab 4, Cr 1
MUEN-3134	Flute Ensemble	The Flute Ensemble studies and performs a wide variety of music representing the literature and genres of flute music throughout history. Membership is open to the entire University student population. May be repeated for additional credit. Lab 4, Cr 1
MUEN-3135	Jazz Combo	Jazz Combo is dedicated to the study and performance of jazz literature in the small ensemble tradition. Membership is open to the entire University student population and is determined by the permission of the director(s) through audition. May be repeated for additional credit. Lab 4, Cr 1
MUEN-3136	String Ensemble	The String Ensemble is a chamber ensemble that rehearses and performs music from different eras composed and arranged for the string quartet and/or string orchestra. Membership is open to the entire University student population. May be repeated for additional credit. Lab 4, Cr 1
MUEN-3137	Guitar Orchestra	The Guitar Orchestra emphasizes basic ensemble performance skills, reading ability, improvisation and repertoire. Membership is determined by permission of the director through audition. Advanced guitar skills required. Course may be repeated for additional credit. Lab 4, Cr 1

MUEN-3138	Early Music Consort	The Early Music Consort is a small ensemble focusing on the music of the Renaissance and early Baroque eras. Members of the group sing and perform on various sizes of the recorder in Renaissance attire. Membership is open to the entire University student population. This course may be repeated for additional credit. Lab 4, Cr 1.
MUEN-3139	Mariachi	Mariachi is dedicated to the study and performance of mariachi music. It is a performance course with emphasis on the different stylistic trends of the mariachi repertoire. Membership is determined by permission of the director through audition. May be repeated for additional credit. Lab 4, Cr 1.
MUEN-3140	Clarinet Ensemble	The clarinet Ensemble studies and performs a wide variety of music representing the literature and genres of clarinet throughout history. Lab 4, Cr 1.
MUEN-3141	Chamber Ensembles	Chamber Ensembles offer the student the opportunity to perform without a conductor in small ensemble- such as woodwind or brass quintets, or specialized vocal ensembles- that are coached by a faculty member. Membership is open to the entire University student population. May be repeated for additional credit. Lab 4, Cr 1
MUEN-3142	Accompanying	Accompanying introduces students to the skills necessary to be effective collaborative pianists, including sight reading, ensemble playing, score reading and communication skills. May be repeated for additional credit. Lab 4, Cr 1
MUEN-3151	University Singers	The University Choir studies and performs a wide variety of choral music, from madrigals and folk songs to modern arrangements and masterworks. Membership is open to the entire University student population. May be repeated for additional credit. Lab 4, Cr 1
MUEN-3152	Bravo Opera Workshop	The Bravo Opera Company studies and performs a wide variety of music from the opera repertoire and works of musical theatre. Membership is open to the entire University community and is determined by permission of the director through audition. Course may be repeated for additional credit. Lab 4, Cr 1
MUEN-3161	Master Chorale	Master Chorale is an elite choral ensemble open to music and non-music major through audition and director approval. The Master Chorale studies and performs outstanding choral literature of all eras and styles. May be repeated for additional credit. Lab 4, Cr 1
MUSI-1105	Mariachi Methods	Mariachi Methods is an intensive study of the principles and methods of mariachi music pedagogy. This course may be repeated for credit when the topic varies. The topics are: Mariachi trumpet, voice, strings/harp, and armonia/guitarron. May be taken six times for a total of six credit hours. Lec 1, Cr 1.
MUSI-1111	Elementary Sight Singing and Ear Training I	Singing tonal music in treble, bass, and clefs. Aural study, including dictation, of rhythm, melody, and diatonic harmony. Lab 3, Cr 1
MUSI-1112	Elementary Sight Singing and Ear Training II	Continuation of MUSI 1111 Elementary Sight Singing and Ear Training I. Lab 3, Cr 1
MUSI-1114	Keyboard Skills I	This course is designed to teach students keyboardists the requisite skills to interpret and perform works in the jazz idiom. Lab 3, Cr 1
MUSI-1115	Keyboard Skills II	A continuation of Keyboard Skills I. Lab 3, Cr 1
MUSI-1162	Diction I	A study of phonetic sounds of the German and Italian languages to promote the ability to sing in those languages, utilizing the International Phonetic Alphabet (IPAM). Lab 2, Cr 1
MUSI-1165	Diction II	A continuation of MUSI 11162 with an emphasis on the Spanish and French languages. Lab 2, Cr 1
MUSI-1166	Woodwind Class I	Introduction to the mechanics and care of the flute, clarinet, and saxophone! embouchure, breath control, tonguing and intonation problems, literature, maintenance, and minor repair are emphasized. Lec 3, Cr 1
MUSI-1168	High Brass I	A study of the techniques of playing the trumpet and French horn. Topics covered include the embouchure, articulation, breath control, tone production, equipment, brass instrument history, transportation, maintenance and repair. Lab 3, Cr 1
MUSI-1181	Piano Class	Development of piano techniques and musical style in a class situation. This course is intended and usually limited to music majors and minors. Others may be admitted to this course as room permits. This course may be repeated up to four times for credit. In each subsequent taking of this course the level of difficulty increases. Music majors must be enrolled in this course until they pass the piano proficiency exam. Students must pass proficiency before student teaching. Lab 3, Cr 1
MUSI-1183	Voice Class I	Introduction to instruction in the fundamentals of singing, with emphasis on breathing and tone production. Lab 3, Cr 1

MUSI-1188	Percussion Class	Percussion class introduces basic knowledge of all areas of percussion with an emphasis on classroom percussion pedagogy and materials. Emphasis will be placed on knowledge of the instruments, familiarity with optimum sounds and tone production, appropriate actuators, appropriate literature, and various teaching approaches. Lab 3, Cr 1.
MUSI-1189	Strings Class I	Introduction to the fundamentals of the viola, cello and bass, with emphasis on basic technique and bowing. Lab 3, Cr 1
MUSI-1192	Guitar Class I	Development of guitar technique and musical style in a class situation. Lab 3, Cr 1
MUSI-1193	Guitar Class II	Continuation of MUSI 1192. Lab 3, Cr 1
MUSI-1211	Music Theory I	Analysis and writing of tonal melody and diatonic harmony up to and including the 7th chords. Analysis and writing of small compositional forms. Correlated study at the keyboard. Lec 3, Cr 2
MUSI-1212	Music Theory II	Continuation of MUSI 1211 Music Theory I. Lec 3, Cr 2
MUSI-1263	Improvisation	Designed to provide background in the art of improvisation and knowledge of basic materials and practices as a foundation for improvising or extemporaneous playing. Lec 1, Lab 2, Cr 2
MUSI-1301	Music Fundamentals	An introduction to the elements of music. Includes study of music reading in notation, rhythm, time signature and meters, scales, key signatures, intervals, and chords. Includes an introduction to sight singing. Lec 3, Cr 3
MUSI-1304	Teaching Music in the Elementary School	Students will learn the basic principles, elements, history, and teaching methodologies of music and apply the knowledge to appropriate strategies for classroom instruction. Lec 3, Cr 3
MUSI-1306	Music Appreciation	A non-technical survey course designed for the intelligent appreciation of traditional musical styles represented throughout history. Recording, videos, and live performances help illustrate the influence of music within the various fine arts. Lec 3, Cr 3
MUSI-1308	Music Literature and History I	This course is a study of musical styles, genres, composers and literature from selected world music cultures and from the western art music tradition from antiquity through the Renaissance. Lec 3, Lab 1, Cr 3
MUSI-2111	Advanced Sight Singing and Ear Training III	Singing more difficult tonal music. Aural study, including dictation, of more complex rhythm, and melody. Lab 3, Cr 1
MUSI-2112	Advanced Sight Singing and Ear Training II	Continuation of MUSI 2111 Advanced Sight Singing & Ear Training I. Lab 3, Cr 1
MUSI-2166	Woodwind Class III	This course teaches students the fundamental techniques of playing and teaching the clarinet through development of performance skills, pedagogy, methods and repertoire. Lab 3, Cr 1.
MUSI-2168	Low Brass Class	Introduction to the mechanics and care of the trombone, euphonium and tuba! embouchure, articulation, breath control, tone production of equipment, bass instrument history, transposition, maintenance and repair. Continuation of MUSI 1168. Lab 3, Cr 1
MUSI-2211	Music Theory III	The study of figured bass, alto and tenor clfes, elementary formal concepts, intervals, scales, chords structure, chord progressions simple cadences, use of inversions, non-harmonic tones, seventh chords, modulations and harmonization of melodies. Part-writing, sight singing, keyboard and aural skills are also included. Lec 3, Cr 2
MUSI-2212	Music Theory IV	Continuation of MUSI 2211, MUSI Theory III. Lec 3, Cr 2
MUSI-2310	Special Topics in Music	A variety of special topics in music. Topics will be of a survey nature and may include: Jazz, Rock, Folk, Contemporary Music, Latin American Music and Texas Border Music. Course may be repeated for credit. Topics will vary. Open to all college students. Lec 3, Cr 3
MUSI-3211	Orchestration and Arranging	A study of the basic techniques of instrumentation, including ranges, transpositions, and characteristics of band, jazz band and orchestral instruments. This course will also study the basic techniques of vocal arranging. Lec 2, Cr 2
MUSI-3289	Introduction to Conducting	An introduction to the basic techniques of conducting. This course is intended both instrumental and choral music majors. Lab 3, Cr 2
MUSI-3304	Elementary Music Techniques - General	This general music course provides an introduction to the following elementary music methods and approaches: Kodaly, Orff, Dalcroze, Music Memory, and CM (Comprehensive Musicianship). It also surveys the National Standards in Music Education and the National Assessment of Music Education in the schools. Lec 3, Cr 3

MUSI-3306	Secondary Choral Techniques	This course provides an introduction to: basic choral literature for intermediate and secondary choirs! small ensemble literature! solo vocal repertoire! jazz/show choir/choreography! concert programming! counting systems! sight-reading methods and texts. It also surveys the rule, regulations, and competition of the University Interscholastic League. Lec 3, Cr 3
MUSI-3307	Secondary Instrumental Techniques	This course provides an introduction to the following: solo instrumental repertoire! concert programming! counting systems! sight-reading methods and texts! jazz band literature and improvisation materials. It also survey the rules, regulations, and competition of the University Interscholastic League. Lec 3, Cr 3.
MUSI-3308	Music History II	Music History II is a comprehensive study of musical styles, genres, composers and literature of the Western art music tradition from the seventeenth and eighteenth centuries. Lec 3, Lab 1, Cr 3
MUSI-3309	Music History III	Music History III is comprehensive study of musical styles, genes, composers and literature of the Western art music tradition from the nineteenth and twentieth centuries. Lec 3, Lab 1, Cr 3
MUSI-3310	Jazz Arranging	This course investigates the various techniques used in composing and arranging for the small and large jazz ensembles. Course topics include: instrumental ranges, transpositions, basic chord voicings and reharmonization. Several written arrangements for the various ensembles common to the genre will be part of the course requirements. Lec 3, Cr 3
MUSI-3312	Counterpoint and Analysis	A survey of polyphony of the eighteenth through the twentieth centuries with emphasis on creative projects. Lec 3, Cr 3
MUSI-3313	Advanced Jazz Harmony	This course is a study of advanced concepts in jazz harmony and counterpoint. Topics will include the following: reharmonization, superimposition, Coltrane analytical techniques, and advanced improvisation techniques. Lec 3, Cr 3
MUSI-3363	Intermediate Jazz Improvisation	This course is a continuation of MUSI 1263 Improvisation. Application of the Locrian, Lydian and Phrygian modes, to jazz improvisation will be studied. Additionally the whole-tone, diminished and altered dominant scale application will be studied. Lec 3, Cr 3
MUSI-3370	Topics in Music Literature	Topics in Music Literature is a study of performance practice and literature applied to various topics in both instrumental and vocal music. Special emphasis will be given to solo literature with additional consideration given to chamber music and teaching literature. Course may be repeated for credit when the topics vary. Lec 3, Cr 3
MUSI-3380	Music Pedagogy	Music Pedagogy is a program that prepares individuals to provide instruction and tutoring to clients in private and institutional settings specially associated with the individual's area of instrumental/vocal concentration. Lec 3, Cr 3
MUSI-4211	Computer Applications in Music	An introduction to computer programs important to the musician and music educator. Topics covered include MIDI applications, sequencing, music notation, word processors, spreadsheet, classroom management programs, marching drill programs and the Internet. Lec 3, Cr 2
MUSI-4289	Advanced Conducting	The study and application of advanced conducting techniques with emphasis on the development of analytical and interpretive skills in both instrumental and choral conducting. Lec 2, Cr 2
MUSI-4301	Senior Experience in Music	This course provides a capstone experience for the music major. It is designed to make connections of the various elements of the music degree. This course also serves as a review for the TExES teacher certification exam. Lec 3, Cr 3
NURS-2301	Pathophysiology	This course is the study of how pathophysiological processes influence human body systems. Selected disease and trauma induced alteration of regulatory mechanisms in the human organism are explored using teaching strategies to develop students' skills for future intellectual inquiry and self-directed learning. Lec 3, Cr 3.
NURS-2302	Fundamentals of Nursing Practice	This course focuses on roles of the nurse, history, healthcare delivery systems, theoretical models, principles of professional nursing, trends, concepts, and evidence-based practice. Principles of growth and development throughout the lifespan guide the study of communication, teaching/learning, and health and wellness. Lec 3, Cr 3
NURS-2304	Pharmacotherapeutics	This course focuses on the science of pharmacology with emphasis on the actions, adverse effects and nursing implications of major drug classifications. The safe administration of medications within a legal/ethical framework is stressed. Lec 3, Cr 3

NURS-3207	Nursing in the Community	Overview of the delivery of nursing care in a community-based setting, application of systematic problem-solving process and critical thinking skills. Cr 2 (Credit-by-Escrow).
NURS-3303	Nursing of the Family in Psychosocial Crisis	This course is a broad spectrum of psychological phenomena. The content of this course includes psychosocial assessment and intervention strategies. Emphasis is placed on the integration of the teaching process, pharmacology, and nurse- and -client therapeutic relationship within the nursing process framework. Topics included in this course are affective disorder, stress, adaptation, personality disorder, psychoses and anxiety. Cr 3 (Credit-by-Escrow).
NURS-3305	Nursing Research	This course introduces the student to knowledge and skills for evaluating published research and applying findings to practice. This includes ethical considerations for assuring the protection of human subjects in research. Students will interpret statistical findings in selected research articles. Lec 3, Cr 3
NURS-3308	Health Assessment in Nursing Practice	Development of skills and techniques required for a comprehensive health assessment within a legal/ethical framework. Cr 3 (Credit-by-Escrow).
NURS-3309	Pharmacology and Client Care	Introduction to the science of pharmacology. Emphasis on the actions, interactions, adverse effects, and nursing implications of each drug classification as it applies to body systems through the lifespan. Cr 3 (Credit-by-Escrow).
NURS-3412	Pediatric Nursing	This course focuses on nursing care of children along the health-illness continuum. The role of the nurse in acute care and the community is emphasized. The course provides supervised learning experiences in the simulation center and cooperating agencies. Lec 2, Clinical 6, Cr 4
NURS-3414	Maternal Child Health	This course involves the application of the nursing process to manage the health needs childbearing families and women's health issues. Nursing care focuses on alleviating or modifying stressors and promoting health. The course provides supervised learning experiences in the simulation center and cooperating agencies. Lec 2, Clinical 6, Cr 4
NURS-3503	Health Assessment and Skills	This course focuses on knowledge and skills to perform a systematic health history and head to toe assessment across the lifespan. Students practice health assessment skills in the simulation center. Lec 2, Lab 9, Cr 5
NURS-3604	Clinical Skills in Nursing	The focus of this course is on the clinical nursing skills associated with the delivery of competent nursing care to clients/patients with varied alternations of their health status. Cr 6 (Credit-by-Escrow).
NURS-3612	Medical Surgical Nursing I	This course focuses on care of individuals experiencing non-life treating problems with fluid/electrolytes, integumentary, musculoskeletal, respiratory, and cardiovascular systems. Student are introduced to all components of the nursing process. The course provides supervised learning experiences in the simulation center and cooperating agencies. Lec 3, Clinical 9, Cr 6
NURS-3616	Medical Surgical Nursing II	This course focuses on the care of individuals experiencing problems with sensorineural, immune, gastrointestinal, endocrine, renal/urinary and reproductive systems. Students practice all components of the nursing process with increasing degrees of skill. The course provides supervised learning experiences in the simulation center and cooperating agencies. Lec 3, Clinical 9, Cr 6
NURS-3701	Nursing of the Adult Client with Alterations in Homeostasis	This course focuses on the nursing care of the adult client in a variety of settings and at various stages of the health-illness continuum. Pharmacology, nutrition, comfort, rest, inflammatory and infection, immunity, surgical intervention, oxygenation, circulation, elimination integument cellular growth and thermal regulation are included in this course. Cr 7 (Credit-by-Escrow)
NURS-3702	Nursing of the Childbearing and Childrearing Families	This course focuses on nursing care associated with Childbearing and Childrearing. Topics are centered in the antepartal, postartal, and neonatal periods. Nursing care of children of all ages and various stages of the health-illness continuum is examined. Cr 7 (Credit-by-Escrow).
NURS-3705	Advanced Concepts of Clinical Decision Making	Application of advanced concepts and skills for development of the professional nurse's roles in complex client/nursing situations. Cr 7(Credit-by-Escrow).
NURS-4217	Issues in Professional Nursing	This course examines contemporary issues and trends affecting professional nurses and the profession, including changes in social and cultural societal attitudes. Students analyze relevant nursing topics including nursing's role as client advocate. Foundations for study are philosophy and theory of holism as the basis for ethical nursing practice. Lec 2, Cr 2.
NURS-4305	Perspectives in Professional Nursing Practice	This course examines the components of a holistic bio-psychosocial spiritual model of nursing practice with a changing and diverse healthcare environment. Lec 3, Cr 3



NURS-4306	Leadership in Nursing	This course presents concepts of nursing leadership, management and professional development. Emphasis is on the synthesis of skills, knowledge and attitudes to coordinate holistic, evidence based care in healthcare organizations. Lec 3, Cr 3
NURS-4307	Transcultural Nursing	This course focuses on theoretical foundations for understanding cultural diversity in health and illness beliefs and behaviors and practical implications of this understanding. The student will gain experience in gaining knowledge and skills in gathering culturally relevant data to assist in the holistic assessment of patients from a variety of cultural backgrounds. Lec 3, Cr 3
NURS-4309	Research and Evidence Based Nursing Practice	This course introduces students to research processes, emphasizing databased utilization, current research, systematic reviews, and evidence based clinical standards/guidelines within the caring and holistic nursing framework. Students create research proposals designed to improve patient outcomes using best practices, professional standards, and safety guidelines established for individuals, family, communities, and colleagues. Lec 3, Cr 3
NURS-4311	Contemporary Issues in Professional Nursing	This course examines contemporary issues and trends affecting the professional nurse and the profession, including the change in the social and cultural attitudes of society. A major focus is an in-depth analysis of topics relevant to nursing today and in the future. The role nurse as the client's advocate is studied. A foundation of this course is the philosophy and theory of holism as a basic for ethical practice. Lec 3, Cr 3
NURS-4312	Mental Health Nursing	This course takes a theoretical approach to application of the nursing process to improve health outcomes for persons with alterations in mental health. The course provides supervised learning experiences in the simulation center and cooperating agencies. Lec 2, Clinical 3, Cr 3
NURS-4313	Transcultural Nursing	
NURS-4336	Special Topics	This course focuses on a current health care issue. Topics vary from semester to semester and are offered on a rotating basis. Different topics may be repeated for credit. Lec 3, Cr 3
NURS-4406	Health Promotion in Professional Nursing	This course examines health-promotion using the Healthy People 2010 framework. The course explores holistic nursing in health-promotion. Students learn about health-promotion of culturally diverse populations with holistic communication, assessment, and identification of strategies to promote health of individuals/ populations. Concepts included are wellness, illness, healing, population-based nursing, and lifestyle modification. Lec 4, Cr 4
NURS-4407	Foundations of Holistic Nursing	This course provides a foundation for holistic nursing practice with an emphasis on the core values of holistic nursing, self-care, caring-healing interventions, and nurses as instruments of healing. Nursing theory, research, evidence based practice, ethics, philosophy, and the holistic caring process are introduced from a holistic perspective. Lec 4, Cr 4
NURS-4519	Nursing Leadership	This course emphasizes theoretical and experiential approaches to professional nursing leadership in health-care systems. Students implement evidence based projects based on current theories of leadership, management, and change. Topic include transformational leadership, reflective practice, collaboration communication, succession planning, delegation, resource management, cost effective strategies, quality improvement, and accountability. Lec 5, Cr 5
NURS-4611	Health Promotion in Professional Nursing	This course examines health promotion with Healthy People as a framework and emphasis on holistic nursing core values, communication, assessment, wellness, illness, healing, population-based nursing, lifestyle modification, and health promotion strategies for culturally diverse individuals, families, and populations throughout the lifespan from infancy to older adults. Lec 6, Cr 6
NURS-4612	Leadership in Professional Nursing	This course emphasizes a theoretical and experimental approach to identifying the role of the professional nurse in the health-care system. Current theories of leadership, management, and change are related to the practice of professional nursing. Lec 6, Cr 6
NURS-4613	Community Health Nursing	This course provides didactic and clinical learning experience in community and public health nursing. The students employ basic epidemiological principles while engaging in health promotion and maintenance strategies in a variety of community health settings and in the clinical stimulation lab. Lec 3, Clinical 9, Cr 6

NURS-4614	Medical Surgical Nursing III	This course focuses on theoretical and clinical application of the nursing care of patients experiencing complex multiple system health problems requiring advanced knowledge and skills. The course provides supervised learning experiences in the simulation center and cooperating agencies. Lec 3, Clinical 9, Cr 6
NURS-4615	Professional Nursing in the Community	Theories related to nursing and public health science are presented within the framework of critical-thinking and caring. Students analyze interrelationships between populations and communities with emphasis on health, illness epidemiology, health promotion, risk reduction, research utilization, and evidence-based practice. Students explore resources and collaborative efforts for providing competent, holistic care to diverse population from regional, national and global perspectives. Lec 6, Cr 6
NURS-4624	Medical Surgical Nurs IV Practicum	This course is a culminating experience providing students opportunities to incorporate entry-level competencies into practice by applying theory, knowledge and skills learned in previous courses. The course provides supervised learning experiences in the simulation center and cooperating agencies using preceptors. Practicum 18, Cr 6
PHIL-1301	Introduction to Philosophy	Introduction to Philosophy is designed to acquaint students with the range of topics within philosophy and to provide them with general notions of the history of ideas. More specifically, the course will stress critical thinking as the foundation for all philosophical analysis. Topics include epistemology, metaphysics, ethics, and logic. Lec 3, Cr 3
PHIL-2303	Introduction to Logic/Critical Thinking	The course concentrates on syllogistic logic to help the students better understand and critically evaluate arguments. Lec 3, Cr 3
PHIL-2306	Introduction to Ethics	Analysis of basic principles and methods of evaluating human behavior, including critical examination of both classical and contemporary ethical theories, with emphasis upon their application to personal decision making and contemporary moral issues. Lec 3, Cr 3
PHIL-3304	Introduction to World Religions	This course introduces the student in a non-sectarian way to the basic principles of many of the world religions: Christianity, Judaism, Islam, Buddhism, Hinduism, and new religious movements and spiritualities. Lec 3, Cr 3
PHIL-4301	Special Topics in Philosophy	This course is an in-depth study of significant philosophical topics or the views of selected philosophers. It may be repeated two times for credit (maximal 6 credit hours) if the topic varies. Lec 3, Cr 3
PHYS-1101	College Physics I Lab	Laboratory experiments in classical mechanics, heat, and wave motion. Lab 3, Cr 1
PHYS-1102	College Physics Laboratory II	Laboratory experiments in electricity, magnetism, light, and modern physics. Lab 3, Cr 1
PHYS-1105	Elementary Physics and Acoustics Laboratory	The following lab topics will be treated: nature of vibrations, relation to music, sound waves and characteristics, vibratory sources of sounds used in music, stretched strings, air columns, percussive instruments and voice, noise, musical scales, electronic recording, and synthesis of sound. Lab 3, Cr 1
PHYS-1110	Elementary Physics Through Video Games Laboratory	Laboratory experiments in mechanics, heat, electricity and magnetism designed for non-science majors and students in the technology programs. Lab 3, Cr 1
PHYS-1111	Introduction to Astronomy Laboratory	Laboratory experiments in introductory astronomy based on observations of stars, planets, and galaxies. Lab 3, Cr 1
PHYS-1115	21st Century Energy Issues: Physical Science I Laboratory	Laboratory to accompany and support PHYS 1315. Activities include measuring solar and wind resources, generating mechanical, electrical and thermal energy and field trips. Lab 3, Cr 1
PHYS-1301	College Physics I	Fundamentals of classical mechanics, heat and thermodynamics, vibratory motion, waves and sound. Lec 3, Cr 3
PHYS-1302	College Physics II	Fundamentals of electricity, magnetism, electromagnetic interaction, light, and modern physics. Lec 3, Cr 3
PHYS-1305	Elementary Physics and Acoustics	The following topics will be treated: nature of vibrations, relation to music, sound waves and characteristics, vibratory sources of sounds used in music, stretched strings, air columns, percussive instruments and voice, noise, musical scales, electronic recording, and synthesis of sound. Lec 3, Cr 3
PHYS-1310	Elementary Physics Through Video Games	A course designed primarily for non-science majors and students in the technology programs to explain the basic concepts of matter, mechanics, heat, electricity and magnetism with emphasis on applications and problem solving, and to illustrate the philosophy and methods of science. Lec 3, Cr 3

PHYS-1311	Introduction to Astronomy	This course is designed as an introduction to the study of Astronomy. Topics included are the formation of the planetary system, birth, and death of stars. Black holes, neutron stars and supernovas, and the current status of research in astronomy are also presented. Lec 3, Cr 3
PHYS-1315	21st Century Energy Issues: Physical Science I	A survey of topics from physics, chemistry, astronomy, meteorology, and geology that affect the energy revolution that will shape the geopolitical events of the 21st century. Concepts of energy are explored. Energy source alternatives are presented and studied, including fuel cell, hybrid cars, solar power, wind energy. Lec 3, Cr 3
PHYS-2125	University Physics I Laboratory	Laboratory experiments in classical mechanics, including kinematics, dynamics statics, fluids, oscillation, and waves. Lab 3, Cr 1
PHYS-2126	University Physics II Laboratory	Laboratory experiments in thermodynamics, electricity and magnetism, light, and optics. Lab 3, Cr 1
PHYS-2325	University Physics I	This course is the first of a two-semester sequence of course for physics, engineering physics, and computer science majors. The topics addressed will be an introduction to classical mechanics including statics, fluids, oscillation, and waves. Lec 3, Cr 3
PHYS-2326	University Physics II	This is the second course in the two-semester introductory sequence for physics, engineering physics, and computer science majors. The topics addressed will be an introduction to thermodynamics, electricity and magnetism, light, and optics. Lec 3, Cr 3
PHYS-3150	Problem Solving in Physics	This course will cover problem solving techniques in physics with the intent to prepare students for the Graduate Record Examination in physics. Lab 1, Cr 1
PHYS-3201	Advanced Physics Laboratory I	A course in experimental physics designed to give the student experience with real world apparatus such as lasers, high field magnets, detectors, radioactive sources, vacuum equipment, and sophisticated electronic devices such as lock-in amplifiers and multichannel scalars. The course also emphasizes writing of reports in the format of the ATP Style Manual. Lab 6, Cr 2
PHYS-3301	Introduction to Nanoscience	This course is intended to serve as a leveling course to familiarize beginning undergraduate scholars in Nanoscience Concentration with the fundamental concepts underlying various nanotechnologies topics. The course will cover the following: introduction to nanophysics; fabrication at nanoscale, overview of nanodevices, materials and nanoscale metrology.
PHYS-3310	Classical Mechanics	This course introduces a rigorous treatment of particle kinematics and dynamics. Topics may include systems of particles and conservation laws, rigid body motion, Lagrangian mechanics, small oscillations and coupled oscillators. Lec 3, Cr 3
PHYS-3315	Physics of Biological Systems	This course will teach students how to apply the basic principles of physics to the problems of Life Sciences. Lec 3, Cr 3
PHYS-3320	Thermodynamics	This course develops the methods of classical and statistical thermodynamics. Topics treated may include the principles of classical thermodynamics, canonical and grand canonical ensembles, partition functions, classical ideal gases as well as Fermi and Bose gases, and an introduction to simple interacting systems. Lec 3, Cr 3
PHYS-3400	Modern Physics	This course introduces concepts of modern physics, including special relativity, the foundations of quantum theory and its application to atomic and molecular structures. Atomic nuclear reactions and an introduction to elementary particles may also be covered. Lec 3, Lab 3, Cr 4
PHYS-3490	Mathematics for Scientists and Engineers I	This course studies the application of various mathematical techniques to advanced problems in physics. Topics may include functions of a complex variable, the calculus of residues, integral transformations, the special functions of mathematical physics and partial differential equations with special applications to the heat equation and Schrödinger's equation. Lec 3, Lab 3, Cr 4
PHYS-3492	Mathematics for Scientists and Engineers II	This course is the second of a two semester course that introduces the student to mathematical techniques used in the physical sciences. Topics covered in the second semester include Fourier series, ordinary differential equations, partial differential equations, complex analysis, and integral transforms. Lec 3, Lab 3, Cr 4
PHYS-4250	Special Relativity	This course provides a detailed treatment of Einstein's special theory of relativity. Topics will include Lorentz transformations, relativistic kinematics and dynamics, relativistic optics and electromagnetism. Lec 2, Cr 2
PHYS-4300	Undergraduate Research Project	A special laboratory research project, to be carried out under the direction of a faculty member, resulting in a written report. Lec 1, Lab 9, Cr 3

PHYS-4301	Introduction to Bio-Nanotechnology	This new course is intended to expose students to multidisciplinary science which either applies nanotechnology to living systems or makes use of the biological structures to create novel materials. This course introduces concepts in nanomaterials and their use with biocomponents to synthesize and address larger systems.
PHYS-4302	Nano Optics	This course focuses on interaction of light with matter at a sub-wavelength scale. The course begins with an overview of lasers and optics, followed by an introduction into modern optical measurement techniques. It will cover principles of confocal microscopy, near-field optical illumination and detection techniques, and nano-scale optics.
PHYS-4303	Capstone Design	The goal of the Capstone Design projects is to provide the students with an opportunity to design and build a device or a system incorporating elements of nanotechnology. Examples of Capstone Design topics and associated project descriptions are: fabrication of nano membrane filters, nanoscale magnetic patterned media; nanofluids, nanocomposites. Lec 1, Lab 6, Cr 3
PHYS-4315	Analysis of Biomolecules by Physical Methods	The course is designed for students in Bachelors of Science in Engineering Physics/ Bioengineering Program and provides basic information on physical methods currently used in bioengineering and biomedical research study physical properties of vitally important macromolecules. Lec 3, Cr 3
PHYS-4320	Quantum Mechanics	This course introduces the Schr <sup>^</sup> dinger equation and several solutions in three dimensions. Applications to the harmonic oscillator and the hydrogen atom are presented. Lec 3, Cr 3
PHYS-4321	Advanced Quantum Mechanics	The course introduces perturbation theory and other approximation techniques for solving the Schrodinger equation. Topics may include two-level systems, scattering and Bell's theorem. Lec 3, Cr 3
PHYS-4330	Electromagnetic Theory	This course covers electrostatics, magnetostatics, and electrodynamics with applications toward electromagnetic waves and wave guides. Lec 3, Cr 3
PHYS-4331	Advanced Electromagnetic Theory	This course covers advanced topics in electromagnetism, including special relativity, radiation, and electromagnetism in matter. Lec 3, Cr 3
PHYS-4340	Solid State Physics	This course introduces the physics of solids. Topics to be covered may include the structural, thermal, electric, and magnetic properties of crystalline solids and free electron theory of metals, and application of energy bands and elementary semiconductor physics. Lec 3, Cr 3
PHYS-4360	Stellar Astrophysics	The course covers the introduction to astrophysical processes governing the structure and evolution of stars. The physics of white dwarfs, neutron stars, and black holes will also be discussed. Lec 3, Cr 3
PHYS-4380	Special Topics in Physics	Special topics in physics, arranged for individuals or small groups. May be repeated for credit up to a maximum of six hours. Lec 3, Cr 3
PHYS-4390	Computational Methods for Engineers and Physicists	This is an introduction to the techniques and use of computers to solve engineering and physical problems. The topics covered include the study of finite difference methods, the implementation of linear algebra problems to solve systems of equations, and the use of Monte Carlo methods, spectrum analysis and techniques of scientific visualization will be covered. Lec 3, Cr 3
PSCI-4210	Physical Sciences for Educators I	This is the first part of hands on physical science course designed for education majors in EC-8 programs. The course will provide the students with basic theoretical background in physical science (properties of matter, mechanics, waves), and will develop skills in physical experimentation. Lec 3, Cr 2
PSCI-4220	Physical Science for Educators II	This is one of two parts of a hands-on physical science course designed for education majors in EC-8 programs. The course will provide the students with basic theoretical and experimental background in electricity, magnetism, and electronics. Lec 3, Cr 2
PSYC-2102	Orientation for Psychology Majors	This course prepares students for success and services within the psychology major. Topics include: research, ethics, APA style, critical thinking, study skills, civic engagement and professional development. This course is required of all majors. Lec 1, Cr 1.
PSYC-2301	Introduction to Psychology	A survey of the scope and methods of psychology! cultivation of a scientific attitude toward behavior. Lec 3, Cr 3
PSYC-2308	Child Psychology	This course investigates the physical, behavioral, mental, emotional and social changes that accompany growth and development during infancy and childhood. Lec 3, Cr 3
PSYC-2314	Lifespan Growth and Development	The study of the biological, cognitive and psychosocial changes in development of the individual from conception through maturity to death. Lec 3, Cr 3

PSYC-2317	Statistics of Psychology	This course covers measures of central tendency and variability, statistical inference and correlation. Lec 3, Cr 3
PSYC-3301	Research Methods in Psychology	This course covers quantitative research methods and techniques used in contemporary psychological research, instruction in the steps involved in the scientific approach to solving problems, and in applying the experimental method in the laboratory. Lec 3, Lab 1, Cr 3
PSYC-3302	Adolescent Psychology	This course investigates the physical, behavioral, mental, emotional and social changes that accompany growth and development in adolescence. Lec 3, Cr 3
PSYC-3303	Adulthood and Aging	This course investigates the physical, behavioral, mental, emotional and social changes that accompany growth and development during the adult years from maturity to old age. Lec 3, Cr 3
PSYC-3312	Psychology of Gender	This course asks how biological and cultural factors influence the development of gender roles and identities and stereotypes of masculinity and femininity and how these affect our lives at the personal, social, and institutional levels. Lec 3, Cr 3
PSYC-3313	Abnormal Psychology	This course explores the origins, categories and treatments of mental, emotional and behavioral disorders ranging from relatively mild stress and anxiety disorders to the more severe schizophrenias and organic mental disorders. Lec 3, Cr 3
PSYC-3318	Theories Learning	This course is the study of how behavior of an individual undergoes enduring changes as a result of exposure to events in the environment. The main focus is on classical operant, and observational learning. Lec 3, Cr 3
PSYC-3322	Biopsychology	In this course, psychology will be approached from the perspective of the human being as a living organism and as part of the biological world. Emphasis will be on how the nervous system, specially the brain, is related to various aspects of behaviors and experiences. Lec 3, Cr 3
PSYC-3324	Health Psychology	This is a relatively new field of psychology that studies mental, emotional and behavioral factors that affect the onset, duration, recovery and prevention of physical illnesses. Lec 3, Cr 3.
PSYC-3326	Social Psychology	This course examines how an individual's behaviors and thinking influences and is influenced by the presence of others. Topics include attribution, conformity, persuasion, attitude structure and change, leadership, and prejudice and discrimination. Lec 3, Cr 3
PSYC-3333	Theories of Personality	This is an examination of some of the major theories of how we acquire the distinctive behavioral, mental, and emotional characteristics which make us unique individuals. Lec 3, Cr 3
PSYC-3343	Tests and Measurements in Psychology	This course looks at theoretical issues and practical problems involved in designing and administering tests and measures such as questionnaires, surveys, aptitude, and achievement tests, personnel selection, and personality inventories. Lec 3, Cr 3
PSYC-3363	Human Sexuality	This course explores the multidimensional nature of human sexuality including the physiological, psychological, and sociological aspects of human sexuality. Lec 3, Cr 3
PSYC-3374	Topics in Psychology	This course is deigned to address contemporary developments in psychology. The topics may vary and the course may be repeated twice for credit. Lec 3, Cr 3
PSYC-4302	Advanced Statistics for Psychology	This course reviews and expands on basic principle of statistical analysis with an emphasis on inferential techniques such as analysis of variance and integrated with the use of prepackaged statistical analysis programs such as SPSS. Lec 3, Cr 3
PSYC-4305	Behavior Management and Modification	This course applies various techniques derived from learning theories for the treatment of behavioral and emotional problems, decreasing the frequency of undesirable behaviors and increasing the frequency of desirable behaviors. Lec 3, Cr 3
PSYC-4319	Cognitive Processes	This course examines mental activities from an information processing perspective. Topics include perception, pattern recognition, attention, memory, decision making, and problem solving. Lec 3, Cr 3
PSYC-4322	Sensation and Perception	This course looks at how the sensory nervous system monitors the internal and external environments and how the central nervous system organizes, evaluates and acts on incoming sensory information. Lec 3, Cr 3
PSYC-4330	Psychology and the Legal Systems	This course provides an interdisciplinary introduction to the field of Forensic Psychology, including basic concepts of the American legal process in civil and criminal cases and application of the science of Psychology in the legal system for the development and implementation of law and policy. Lec 3, Cr 3

PSYC-4356	Industrial and Organizational Psychology	This course explores psychological and behavioral factors involved with organizational design and effectiveness! leadership, personnel selection, placement, training, promotion retention! morale, job satisfaction and productivity. Lec 3, Cr 3
PSYC-4360	Clinical and Counseling Psychology	This course introduces the methods of applying psychological principles to the diagnosis and treatment of emotional and behavioral problems and providing help with problems of social adjustment and vocational and educational goals. Lec 3, Cr 3
PSYC-4363	Systems and Theories in Psychology	This course chronicles the development of psychological thought from the ancient Greeks into modern era in terms of the most influential people and the ideas and theories that they have proposed. This is a capstone course required of psychology majors. Lec 3, Cr 3
PSYC-4374	Advanced Topics in Psychology	This course is designed to address contemporary developments in psychology. The topics may vary and the course may be repeated twice for credit. Lec 3, Cr 3
PSYC-4380	Independent Study	This course allows students to arrange a personalized study schedule on a topic of their interest. The topic may be one which is not covered in the above courses or one which goes into more depth than is usually the case. Indst 3, Cr 3
ROTC-1201	Leadership and Personal Development	This course introduces cadets to the personal challenges and competencies that are critical for effective leadership. Cadets learn how the personal development of life skills such as critical thinking, goal setting, time management, physical fitness, and stress management relate to Army. Lec 2, Lab 1, Cr 2
ROTC-1202	Introduction to Tactical Leadership	This course overviews leadership fundamentals such as setting direction, problem-solving, presenting briefs, providing feedback, and using effective writing skills. Cadets will explore dimensions of leadership values, attributes, and actions in the context of practical, hands-on, and interactive exercises. Lec 2, Lab 1, Cr 2
ROTC-2201	Innovative Team Leadership	Cadets practice aspects of personal motivation and team building in the context of planning, executing, and assessing team exercises and participating in leadership labs. Focus is on continued development of leadership values and attributes through an understanding of Army rank, structure, and duties. Lec 2, Lab 1, Cr 2
ROTC-2202	Foundations of Tactical Leadership	This course examines the challenges of leading tactical teams in the COE. The course highlights dimensions of terrain analysis, patrolling, and operation orders. This course provides a smooth transition into ROTC 3401. Lec 2, Lab 1, Cr 2
ROTC-3201	Basic Army Physical Development	An in-depth study of the Army's physical fitness program. From this curriculum, a student can develop a physical fitness program that best suits one's ability or physical desire. One can learn to perform individual physical assessments. Lec 2, Cr 2
ROTC-3202	Advance Army Physical Training	A practicum in physical development where a student applies the physical development skills learned in Basic Army Physical Development and applies them to a program that best suits the individual. Lec 2, Cr 2
ROTC-3401	Adaptive Team Leadership	This course challenges cadets to study, practice, and evaluate adaptive leadership skills as they are presented with challenging scenarios related to squad tactical operations. Cadets receive systematic and specific feedback on their leadership attributes and actions. Lec 3, Lab 1, Cr 4
ROTC-3402	Leadership in Changing Environments	This course uses increasingly intense situational leadership challenges to build cadet awareness and skills in leading small units. Skills in decision-making, persuading and motivating team members when under fire are explored, evaluated, and developed. Lec 3, Lab 1, Cr 4
ROTC-4401	Developing Adaptive Leaders	This course develops cadet proficiency in planning, executing, and assessing complex operations, functioning as a member of a staff, and providing performance feedback to subordinates. Cadets assess risk, make ethical decisions, and lead fellow ROTC cadets. Lec 3, Lab 1, Cr 4
ROTC-4403	Leadership in a Complex World	This course explores the dynamics of leading in the complex situations of current military operations in the COE. Cadets examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. Lec 4, Cr 4
RSPT-3333	Respiratory Care Case Management	Introduction to the role of case manager of the care of cardiopulmonary disorders. Specific practice will be provided in developing case manager skills in the management of asthma and COPD. Lec 1, Lab 6, Cr 3.
RSPT-4210	Polysomnography Instrumentation I	This course is designed to teach the function, operation and design of electroneuro diagnostic equipment. Monitoring devices, electrode application and patient connection will be covered in detail. Lec 2, Cr 2.

RSPT-4215	Polysomnography Instrumentation II	This course will provide an advanced study of waveform characteristics and montage development, filters and PSG electronics. Signal pathways, reference electrodes, impedance checking and filter settings in calibration waves will be covered. Lec 2, Cr 2.
RSPT-4221	Clinical Polysomnography-Sleep Staging I	Direct patient diagnostic monitoring will be performed under close supervision in a sleep lab. Differential amplifiers, amplifier calibration, artifact correction and the professional role of the sleep technician will be demonstrated. Clinical 16, Cr 2.
RSPT-4314	Mechanical Ventilation for Non RCPs	Understanding ventilator concepts and technology including indications, complications, and troubleshooting. The learner will be required to write a significant paper as part of this course. Lec 3, Cr 3.
RSPT-4319	Mechanical Ventilation of the Neonatal/ Pediatric Patient	Preparation to conduct the therapeutic procedures to achieve to achieve adequate spontaneous and artificial ventilation of the neonatal and pediatric patient. Topics include volume, pressure, and fluid ventilation and the indications, complications, and physiological effects ventilator support. Lec 3, Cr 3.
RSPT-4320	Fundamentals of Polysomnography	This course will offer an introduction to the physiology of sleep including sleep neurology, sleep architecture, classification of sleep disorders. There will be a review of basic cardiac physiology and ECG arrhythmia recognition. Sleep pathologies will be discussed according to etiology, pathophysiology, symptoms, diagnosis, treatment and prognosis. Lec 3, Cr 3.
RSPT-4323	Clinical Polysomnography-Sleep Staging II	This is an advanced clinical education in sleep staging rules light, delta and REM sleep scoring and analysis. EEG, EMG, ECG and respiratory events will be discussed in depth with the components of the polysomnogram reports. Lec 16, Cr 3.
RSPT-4325	Clinical Simulations in Respiratory Care	A review of the National Board for Respiratory Care Clinical Simulation Examination matrix and practices. The learner will learn techniques used to take this exam and have practice in multiple patient care scenarios. Lec 3, Cr 3.
RSPT-4330	Polysomnography Therapeutic Intervention	In-depth study of the treatments available for sleep apnea will be performed, including CPAP, BIPAP, oxygen therapy, patient adjunctive fitting, surgical intervention and the role of the sleep technician in titration. Special attention will be given to titration algorithms, nocturnal seizure disorder studies, MSLT's and MWT's. Lec 3, Cr 3.
RSPT-4333	Issues and Trends in Respiratory Care	Students will discuss current trends in the application of respiratory care with particular attention to procedures that have evidence of improved patient outcomes. Issues concerning the practice of respiratory care will be researched and discussed. Lec 3, Cr 3.
RSPT-4358	Advanced Respiratory Care Patient Assessment	Instruction in the integration of patient examination techniques, clinical lab studies, x-ray, pulmonary function, arterial blood gases, and invasive and non-invasive hemodynamics results in patient assessment. Lec 2, Lab 4, Cr 3.
SGNL-1301	Beginning American Sign Language I	This course is an introduction to the basic skills needed in the production and comprehension of American Sign Language (ASL), focusing on the manual alphabet, numbers, conversational skills, culturally appropriate behaviors, and ASL grammar. Lec 3, Cr 3
SGNL-1302	Beginning American Sign Language II	A continuation of SGNL-1301. Lec 3, Cr 3.
SOCI-1301	Introduction to Sociology	The study of human society! relationship of culture, social interaction, and group life to personality and human behavior! analysis of group structure, social organization, and social process. Lec 3, Cr 3
SOCI-1306	Social Problems	A survey and analysis of contemporary social problems, their likely causes and how they affect us with consideration of possible solutions that work toward social improvement. Particular attention is given to local problems. Lec 3, Cr 3
SOCI-2301	Marriage and the Family	A functional analysis of the contemporary American family! basic sociological insights, including a brief historical and cross-cultural perspective as well as intensive study of American courtship, marriage, and family institutions. Lec 3, Cr 3
SOCI-2305	Introduction to Social Research	This course introduces students to the theoretical foundations of research methods in sociology and familiarizes students with the basic qualitative and quantitative skills necessary to conduct sociological research. Lec 3, Cr 3.
SOCI-2317	Statistical Methods in Sociology	Measures of central tendency and variability! statistical inference! correlation and regression. Lec 3, Cr 3

SOCI-2319	Mexican American Experience	An introduction to the study of social, political and cultural processes which have shaped the Mexican American community in the United States with emphasis on the experience of Mexican American people in the Rio Grande Valley of Texas. Lec 3, Cr 3
SOCI-2325	Self and Society	This course will introduce students to sociological social psychology, with an emphasis on symbolic interactionism. The course begins with the theoretical and philosophical underpinnings of the approach, and goes on to explore its key concepts and research applications. Lec 3, Cr 3
SOCI-3313	Criminology	A study of crime, its causes, and its social treatment. Lec 3, Cr 3
SOCI-3323	Hispanics in Global Society	Presents an examination of Mexican-American's economic status, cultural values, style of life, educational attainment, family status and political participation as affected by current socioeconomic conditions and historical antecedents. Lec 3, Cr 3
SOCI-3324	Sociology of Health	Analysis of basic problems in the maintenance and preservation of health and delivery of health care services by social class. Focus is on environmental course of disease, social-psychological response to illness and family cohesion strain and resources as affected by illness. Lec 3, Cr 3
SOCI-3325	Migration	This course examines international migration as a social process, focusing on the American experience. It provides sociological tools to understand why immigration happens, how it occurs and what consequences and outcomes it produces. Lec 3, Cr 3
SOCI-3333	American Communities	This course analyzes the patterns of growth and development of American cities, suburbs, towns, edge cities, and planned communities. Consideration will be given to the demographic, ecological, political, cultural, and technological factors affecting urban communities. Lec 3, Cr 3
SOCI-3335	Social Theory	This course surveys the major theorists of sociology's classical era, as well as modern theoretical approaches such as functionalism, neo-Marxism, symbolic interactionism, ethnomethodology, as an exchange network, and feminist theories. Students are encouraged to take this course as soon as possible after choosing Sociology as a major. Lec 3, Cr 3
SOCI-3363	Gender	This course explores the multidimensional nature of human sexuality including biological, physiological, anatomical, and psycho social, clinical and cultural perspectives. Lec 3, Cr 3
SOCI-3364	Minorities	This course examines inter-group relations that produce status and power differences for groups defined as minorities. The main focus of the course will be the social and cultural processes that place and maintain American minorities in disadvantaged statuses. Various historical experiences involving African Americans, Mexican Americans, and others, will be surveyed. Notable situations of inter-group conflict in various parts of the world will be reviewed. Lec 3, Cr 3
SOCI-3373	Mass Communications and Culture	The course examines the influence of the media as a socializing institution in society and how the media both shapes and reflects the wider culture. Lec 3, Cr 3
SOCI-3374	Religion in Society	This course will survey and analyze religion in contemporary society. Religion will be examined as an institution that provides a variety of functions for social solidarity and differentiation as well as personal and ethnic identity. Lec 3, Cr 3
SOCI-3393	Sociology of Aging	Analysis of the basic problems faced by the aged within a social context. Within an institutional framework, focus is on health, income, work, religion, leisure, and interpersonal relationships of the aged. Lec 3, Cr 3
SOCI-4305	Methods of Social Research	An overview of the use of scientific methods in social research, formulation of research designs, hypothesis testing, sampling, interviewing, observation, coding, use of documents, questionnaires and scales. Emphasis is on interpretation of social data. This is a capstone course for majors. Non-majors are discouraged from enrolling in this course. Lec 3, Cr 3
SOCI-4314	Sociology of Deviance	This course provides a review of theory and research on the nature and extent of deviant behavior. Particular types of individual and subcultural deviance will be addressed. Lec 3, Cr 3
SOCI-4325	Population	An introduction to the study of demography and applications for the study of contemporary population problems. This class will emphasize population shifts both nationally and internationally. Lec 3, Cr 3
SOCI-4343	Sociology of Globalization	The course introduces students to contemporary debate over the political, economic and cultural implications of globalization. Attention is paid to classical literature on the rise of global capitalism and the links between globalization and inequality. Lec 3, Cr 3



SOCI-4352	Social Inequality	This course addresses research, concepts and theory related to the causes and consequences of inequality in social life. It examines how inequality is built into the structure and culture of major social institutions! government, economy, religion, family, education. Lec 3, Cr 3
SOCI-4365	Sexuality and Society	This course introduces students to the myriad ways in which sexual desire and sexual activity are structured by social relations, and to the ways that sexuality, sexual practices, and sexual identities vary in time and space. Attention is paid to cross-cultural and historical accounts of sexual practices. Lec 3, Cr 3
SOCI-4374	Special Topics in Sociology	This course covers topics of special interest within Sociology. This course may be repeated twice for a total of six hours, as topics vary. Lec 3, Cr 3
SOCI-4383	Independent Studies	Designed to offer students the opportunity to gain experience in research or in-depth theoretical/ empirical readings in a substantive area not normally covered within standard courses. Research projects or advanced readings will vary according to student interest and faculty availability. Sequential registration for up to nine hours is permitted as topics vary. Lec 3, Cr 3
SOCW-2361	Introduction to Social Welfare	This course traces the philosophy and historical development of social welfare as an institution in Europe and America. Included is general overview of social welfare institution, structures and functions including social work concepts, ethics, and practice. A service learning activity of 35 volunteer hours with a social agency is required. Lec 3, Cr 3
SOCW-2362	Social Welfare Institution and Legislation	The development of social welfare institutions in the United States. Pays particular attention is to the structures and the functions of social welfare as an institution, social welfare organizations, historic and current social welfare legislation, gaps in the social welfare systems, and problems of social reforms. Lec 3, Cr 3
SPAN-1311	Beginning Spanish I	An introduction to the basic principles of grammar, emphasizing pronunciation, oral practice, conversation, and dictation. Also includes simple exercises in composition and easy reading within a cultural framework. Lec 3, Cr 3
SPAN-1312	Beginning Spanish II	This course is the continuation of SPAN 1311. Lec 3, Cr 3
SPAN-2311	Intermediate Spanish I	A comprehensive review of Spanish grammar. Lec 3, Cr 3
SPAN-2312	Intermediate Spanish II	Continuation of SPAN 2311. Lec 3, Cr 3
SPAN-2313	Spanish Native/ Heritage Speakers I	Review and application of skill in reading and writing. Emphasizes vocabulary acquisition, reading composition, and culture. Designed for individuals with oral proficiency in Spanish, this course is considered equivalent to SPAN 2311. Lec 3, Cr 3
SPAN-2315	Spanish Native/ Heritage Speakers II	This course is a continuation of SPAN 2313. Lec 3, Cr 3.
SPAN-2316	Career Spanish I	This course is a study of Spanish language skills designed to meet the interest and needs of students pursuing careers in fields such as education, medicine, and technology. Taught in Spanish. Lec 3, Cr 3
SPAN-2317	Career Spanish II	An introduction to Spanish business correspondence and the translation of commercial documents from English to Spanish. Given in Spanish. Lec 3, Cr 3
SPAN-2389	Academic Cooperative	This course is an introduction for bilingual students to the fundamental nature of translation, the formal and morpho-syntactical differences between English and Spanish and practical translation procedure. Close attention given to language interference. May be retaken for credit as topics changes but no more than 2 times may apply towards Spanish Translation degrees. Lec 3, Cr 3
SPAN-3301	Spanish Literature (1100 - 1750)	A survey of the literature of Spain from the beginning to 1750. Given in Spanish. Lec 3, Cr 3
SPAN-3302	Spanish Literature (1750-Present)	A survey of the literature of Spain from the mid-18th century to present. Given in Spanish. Lec 3, Cr 3
SPAN-3303	Advanced Spanish Grammar and Composition I	This course is an advanced study of grammatical concepts combined with intensive training in Spanish composition. Given in Spanish. Lec 3, Cr 3
SPAN-3304	Advanced Spanish Grammar and Composition II	This course is the continuation of SPAN-3303. Lec 3, Cr 3.
SPAN-3309	Contemporary Spanish Literature	This course is a study of the principal literary works of the Spanish culture from the generation of 1898 to the present. Given in Spanish. Lec 3, Cr 3
SPAN-3310	Masterpieces of Spanish American Literature I	An investigation of the literary works of the principal narrators, poets and dramatists of Spanish America from the beginning of Spanish Colonialism to Modernism. Analysis of form and content and study of the historical background and literary currents in each work. Given in Spanish. Lec 3, Cr 3

SPAN-3311	Masterpieces of Spanish American Literature II	An investigation of the literary works of the principal narrators, poets and dramatists of Spanish America from Modernism to the present. Analysis of form and content and study of the historical background and literary currents in each work. Given in Spanish. Lec 3, Cr 3
SPAN-3330	Advanced Spanish Grammar	A study of grammatical concepts with concentration on basic sentence structure, the paragraph, principles of punctuation, and functional grammar. Course designed for Spanish majors and minors as well as Education Minors in bilingual education. Given in Spanish. Lec 3, Cr 3
SPAN-3332	Spanish/ English Translation	This course is an orientation in the theory and professional practice of translating a text from Spanish to English, including consideration of both cultural and morphosyntactical problems. Lec 3, Cr 3
SPAN-3333	English/ Spanish Translation	This course is an orientation in the theory and professional practice of translating a text from English to Spanish, including consideration of cultural and morpho-syntactical problems. Lec 3, Cr 3
SPAN-3334	Translation Technologies	This course is an overview of practical software and computational methodologies for the professional practice of translation, including advanced word-processing, terminological database management and translation memory use. Lec 3, Cr 3
SPAN-3335	Topics in Translation	This course studies topics in the theory and practice of Spanish and English Translation in areas other than business and legal texts, including but not limited to the following: education, medical specialties, and technology. May be repeated two times for a total of 9 hours. Lec 3, Cr 3
SPAN-3340	The Hispanic World	This course introduces students to the diverse cultures of the Hispanic world. Lec 3, Cr 3
SPAN-4303	Hispanic Civilization	A panoramic view of the political, literary, and cultural history of Spain and the Spanish-speaking countries of America. Recommended as a review for the ExCet examination in Spanish. Given in Spanish. Lec 3, Cr 3
SPAN-4305	Cervantes	A study of the principal works of Miguel de Cervantes with emphasis on Don Quijote. Given in Spanish. All readings, examinations, and papers in Spanish. Lec 3, Cr 3
SPAN-4307	Spanish American Novel	An investigation of the Spanish American novel of the 19th and 20th centuries. Students will become knowledgeable of the literary currents associated with the genre within their historical and social contexts! become aware of the key elements of the novel! develop the ability to analyze the key elements, identify literary techniques and devices, and develop the ability to articulate the findings of his/her own analysis and criticism. Given in Spanish. Lec 3, Cr 3
SPAN-4310	Spanish Phonology and Phonetics	This course analyzes the phonetic and phonological systems of the Spanish language. Given in Spanish. Lec 3, Cr 3
SPAN-4311	The Mexican Novel	The study of the major novels of Mexico from beginning to the present. Given in Spanish. Lec 3, Cr 3
SPAN-4312	Structure of the Spanish Language	An analysis of sentence structure in Modern Spanish from a generative perspective. Introduction to the goals and methods of generative grammar and a presentation of their relevance to the syntax of Spanish. Topics covered include pronominal deletion, sentence embedding, and sentence topicalization. Given in Spanish. Lec 3, Cr 3
SPAN-4316	Acquisition of the Spanish Language	A review of the basic principles of Spanish grammar. Emphasis on orthography and the acquisition of a formal writing style. Basic orientation in the theory and acquisition of the Spanish language among bilingual Spanish-speaking children. Introduction to the historical evolution of the Spanish language and the role of dialect and register. Discussion of modern techniques and methodologies used in the teaching of Spanish. Taught in Spanish. Lec 3, Cr 3
SPAN-4317	Spanish Language in Social Context	This course analyzes the language variation in the Spanish-speaking world. Given in Spanish. Lec 3, Cr 3
SPAN-4332	English/Spanish Commercial Translation	Intensive practice in translation from English to Spanish and Spanish to English of commercial, financial, and marketing texts, as well as shipping, insurance, and customs house documents. Given in Spanish. Lec 3, Cr 3
SPAN-4334	English/Spanish Legal Translation	An analysis of legal language in English and Spanish. Intensive practice in the translation from English to Spanish and Spanish to English of contracts and government regulations, as well as texts relating to international organizations, civil law, and criminal law. Given in Spanish. Lec 3, Cr 3
SPAN-4368	Children's Literature in Spanish	A broad survey of literary works in Spanish appropriate for the young reader by the principal narrators, poets, and dramatists of the Hispanic World. Given in Spanish. Lec 3, Cr 3

SPAN-4369	Hispanic Theater	A study of selected dramatic works of representative Hispanic authors from a variety of geographical locales and cultures within the Spanish-speaking world. Interpretation and analysis of the aesthetic and ethical dimensions of the works, as well as the creative process that brought them to life on the stage. Given in Spanish. Lec 3, Cr 3
SPAN-4371	Chicano Narrative	A general introduction to short stories and novels written in Spanish by U.S. citizens of Mexican descent. This survey begins with a picaresque novel considered to be a forerunner of today's Chicano novel, continues with post WWII male writers, and ends with a more recent novel by a woman writer exploring feminist issues. Given in Spanish. Lec 3, Cr 3
SPAN-4373	Topic Studies in Hispanic Culture	This course is an advanced study of topics in Hispanic culture, civilization, languages, or literature in areas not generally available as part of regular course offerings. May be repeated three times for a total of 9 hours, as topics change. Lec 3, Cr 3
SPAN-4392	Senior Seminar	This course focuses on the integration, synthesis, and evaluation of the graduating senior's cumulative studies of Hispanic Letters and the Spanish language. Portfolio preparation and evaluation! the planning, preparation and writing of a Senior Mini-thesis! and a Capstone Examination. Lec 3, Cr 3
SPCH-1311	Introduction to Communication	In this course students will learn about the study of communication and potential careers. The course will survey communication topics, research and contexts of communication practice! overview of communication from both humanities and social science perspectives. Course will examine and connect various perspectives on human behavior under the concept "communication". This is an introductory course in a vast field and it is recommended as the first course for communication majors and minors. Lec 3, Cr 3
SPCH-1315	Applied Communication	The focus of this course is the promotion of the student success- in college and life after college- through the adoption of effective communication skills. Special emphasis will be placed on developing skills in listening, interviewing, small group interaction, and public speaking and how those skills enhance student success. Lec 3, Cr 3
SPCH-1318	Interpersonal Communication	Designed to study communication barriers between individuals based on cultural, physical, and psychological differences. Emphasis will be placed on improving one-to-one communication and small group interaction. Lec 3, Cr 3
SPCH-2333	Group Communication & Discuss	This course is design to provide students with the necessary skills to participate in decision-making, problem solving, and group discussion effectively. Lec 3, Cr 3
SPEA-3390	Introduction to Exceptional Children - A.C.P.	This course examines the philosophical, historical and legal foundations of special education. Emphasis is placed on the characteristics and needs of individuals with disabilities from early childhood through the transition into adulthood. Specific needs for individualization such as assistive technology and related services are addressed. Lec 3, Cr 3
SPEA-4320	Legal Roles of Special Education -A.C.P	This course examines legal and ethical issues of special education. Roles and responsibilities of special educators, administrators and related support personnel are discussed in addition to the relationship between assessment and instructional planning for students at different levels (EC-12). An emphasis is placed on collaboration during key transition periods. Lec 3, Cr 3
SPEA-4330	Problems in Language and Literacy for Individuals With Special Needs- A.C.P	This course examines monolingual and bilingual language development and literacy acquisition for students at different levels (EC-12), with emphasis on common communication disorders. Emphasis will be placed on assessment of culturally and linguistically diverse populations, the need for assistive technology and social skills interventions. Lec 3, Cr 3
SPEA-4380	Classroom Instruction for Individuals With Special Needs- A.C.P	This course will examine assessment and instructional methods, techniques and strategies used in special education to promote academic performance in all content areas including math, language arts and reading. Emphasis is placed on facilitating achievement in a variety of settings and situations for students at different levels (EC-12). Lec 3, Cr 3
SPED-3390	Introduction to Exceptional Children	This course is an introduction to the physical and psychological characteristics of the exceptional child. Emphasis is on the theory, characteristics, and educational planning for learners with special needs. Lec 3, Cr 3

SPED-4313	Directed Teaching - Generic Special Education	This course must be taken by all undergraduate students working toward special education certification. The course requires observing and teaching in a public school special education classroom all day, Monday through Friday, for six weeks. This work is done under the direction of a fully certified teacher of the class to which the student is assigned and under the supervision of a college professor who observes and evaluates the student's process. Seminars and individual conferences are a required part of the course. Lec 3, Cr 3
SPED-4320	Legal Roles and Responsibilities of the Special Educator	This course examines the legal and ethical issues of special education. The roles and responsibilities of special educators, administrators, and related support personnel are discussed in addition to the relationship between assessment and instructional planning for students at different levels (EC- 12). An emphasis is placed on the need for collaboration during key transition periods in an individual's life. Lec 3, Cr 3
SPED-4330	Problems in Language and Literacy for Individuals With Special Needs	This course examines monolingual and bilingual language development and literacy acquisition for students at different levels (EC-12), with an emphasis on common communication disorders. Issues related to assessment, such as the needs of culturally and linguistically diverse populations, will be addressed. Related issues and common problems such as the need for assistive technology or social skills interventions will also be addressed. Lec 3, Cr 3
SPED-4350	Teaching Struggling Learners Inclusive Classrooms	This course will explore response to intervention (RTI) models of service delivery for struggling learners in inclusive classrooms. Curriculum-based measurement and skills for effective collaboration will be major emphases of the course. Lec 3, Cr 3
SPED-4380	Classroom Instruction for Individuals with Special Needs	This course will examine the assessment and instructional methods, techniques and strategies used in special education to promote an individual's academic performance in all content areas including math, language arts, and reading. An emphasis is placed on facilitating achievement in a variety of settings and situations for students at different levels (EC-12). Lec 3, Cr 3
SPED-4386	Modifications Inclusive Setting	For General Education Teachers. This course focuses on instructional and behavioral strategies for teaching students with mild/moderate disabilities in inclusive settings. Emphasis is placed on techniques and strategies that enhance language and literacy development. Modifications related to language arts, mathematics, and science instruction, as well as various behavior management strategies, are addressed. Lec 3, Cr 3
SPED-4395	Practicum in Generic Special Education	This course will examine the special education methods, techniques and strategies used with individuals with disabilities in a variety of school settings for students at different levels (EC-12). Classroom practice with behavior management, assessment techniques and instructional planning for individuals with disabilities will be emphasized. Field experience with collaboration and consultation models will also be included. Lec 3, Cr 3
TECT-3301	Foundations of Technology Training	Study of principles and methods of classroom and laboratory control, teaching and integrating career oriented into educational goals. Lec 3, Cr 3
TECT-3302	Technology Training Methods and Strategies	In this course, students will apply adult learning theories, training strategies and methods, and innovative technologies to design and deliver effective training that correspond to the way adults learn. Lec 3, Cr 3
TECT-3303	Training Methods in Industry	An organized course designed to provide instruction and guidance by trained resource persons in selected topics related to technology. The course may be repeated with different topics. Six hours may be applied to an undergraduate degree. Lec 3, Cr 3
TECT-4304	Consulting Practice in Technology Training	The course is designed to allow students to apply professional experiences, previously applied education principles, and knowledge along with skills acquired in the BAT and BAAS, to the consultancy process by identifying an instructional need, developing a training plan and implementing training solutions. Lec 3, Cr 3
TECT-4305	Current Issues in Technology Training	This course introduces learners to a framework for the study of issues in technology training. Students will utilize innovative learning and presentation technologies to identify, analyze, and evaluate issues that impact adult learning and performance in the workplace. Lec 3, Cr 3
TECT-4306	Multicultural Technology Training	This course provides students with an understanding of learner diversity and its effect on technology training and adult learning. Students will learn how to design and deliver trainings that create inclusive learning environments and incorporate learner's multicultural learning and communication styles. Lec 3, Cr 3

TRSP-3332	Spanish/English Translation	This course is an orientation in the theory and professional practice of translating a text from Spanish to English, including consideration of both cultural and morphosyntactical problems. Lec 3, Cr 3
TRSP-3333	English/ Spanish Translation	This course is an orientation in the theory and professional practice of translating a text from English to Spanish, including consideration of cultural and morpho-syntactical problems. Lec 3, Cr 3
TRSP-3334	Translation Technologies	This course is an overview of practical software and computational methodologies for the professional practice of translation, including advanced word-processing, terminological database management and translation memory use. Lec 3, Cr 3
TRSP-3335	Topics in Translation	This course studies topics in the theory and practice of Spanish and English Translation in areas other than business and legal texts, including but not limited to the following: education, medical, specialties, and technology. It may be repeated for a total of 9 credit hours as the topics change. Lec 3, Cr 3
TRSP-4332	Commercial Translation	Intensive practice in translation from English to Spanish and Spanish to English of commercial, financial, and marketing texts, as well as shipping, insurance, and customs house documents. Lec 3, Cr 3
TRSP-4334	Legal Translation	An analysis of legal language in English and Spanish. Intensive practice in the translation from English to Spanish and Spanish to English of contracts and government regulations, as well as texts relating to international organizations, civil law and criminal law. Lec 3, Cr 3
TRSP-4366	Interpreting I	A basic orientation in the theory and practice of interpreting English to Spanish and Spanish to English on sight translation and short consecutive interpreting, and also preparation for simultaneous interpreting. Lec 3, Cr 3
TRSP-4367	Interpreting II	Advanced practice in English to Spanish and Spanish to English consecutive and simultaneous interpreting with close attention to terminology and documentation. Conference interpretation. Lec 3, Cr 3