

COLLEGE OF ARTS AND SCIENCES

COLLEGE OF ARTS AND SCIENCES

Ronald John Hy, *Dean*
Trudy A. Anderson, *Assistant Dean*
James R. Pierce, *Assistant Dean*
Janis Bryant, *Executive Assistant to the Dean*
Pamela Correll, *Academic Adviser*
Dariela Pena, *Academic Adviser*
Fore Hall 212. MSC 117. Extension 2761.

The College of Arts and Sciences is unique in offering students a broad-based, liberal arts education transmitting a core of knowledge and cultural values. The college provides the service courses required by all university academic degree programs and specialized courses that may lead to employment or post baccalaureate studies.

The college is committed to providing a humanistic and analytical education through a student-focused educational environment. Its faculty excel in teaching, scholarship and service. The curriculum and its orientation are responsive to the cultural diversity of the students and to the entire South Texas region. In this way, the college helps to expand the academic, social and cultural horizons and expectations of the people it serves.

Through teaching, scholarship and service, the college provides students with a core of cultural knowledge and understanding necessary to function as global citizens and with the life skills and judgment essential to contribute fully to society. The college provides oral and written communication skills and computer literacy required for all disciplines and helps students attain general professional competency in the area of their major. Fulfilling its mission, the college fosters lifelong learning.

The college is composed of the following departments (with the nonteaching degrees each offers):

- Art (B.A.; B.F.A.)
- Biology (B.A.; B.S.)
- Chemistry (B.A.; B.S.)
- Communications and Theatre Arts (B.A., Communications, Theatre Arts; B.S., Communication Sciences and Disorders)
- History (B.A.)
- Language and Literature (B.A., English, Spanish)
- Mathematics (B.A.; B.S.)
- Music (B.M., Music, Performance)
- Physics and Geosciences (B.A., Geography, Geology, Physics; B.S. Geology, Physics)
- Political Science (B.A.)
- Psychology and Sociology (B.A., Psychology, Sociology; B.S., Criminology; B.S.W., Social Work)

The college also houses programs in Military Science and Religion.

Teaching Certification

Students seeking a certificate to teach in the secondary schools of Texas must earn a bachelor's degree in a recognized major. The State Board for Educator Certification approved new teaching fields and grade levels for certification beginning in 1999. Majors in the College of Arts and Sciences that may lead to all-level certification include the following:

- Art
- Music

Majors in the College of Arts and Sciences that may lead to secondary certification (grades 8-12) including the following:

- Biology (Life Science)
- Chemistry
- Communications (Speech, Journalism)
- English (see Language and Literature)
- Geography (see Physics and Geosciences)
- Geology (Earth Science emphasis, see Physics and Geosciences)
- History
- History (Social Studies emphasis)
- Mathematics
- Physics (Physical Science)
- Spanish (See Language and Literature)

For specific degree requirements, contact the chair of the department of the academic discipline involved. For additional information, refer to the College of Education section regarding the Standard Certificate in this catalog.

Pre-Law

Students who desire to enter the law profession should consult the Pre-Law Adviser in the Department of Political Science upon enrollment regarding a degree plan and selection of courses.

Pre-Health Professions

Students who desire to pursue any pre-health profession (medicine, dentistry, physical therapy, pharmacy, nursing, etc.) should consult the Pre-Health Professions Adviser in the Department of Biology. General information regarding programs offered by Texas A&M-Kingsville are listed separately in this catalog.

Requirements for the Degree

All students obtaining a bachelor's degree must satisfy the "General Requirements for Graduation" as set forth in an earlier section of this catalog. This includes, among others, the communication skills requirement, residence requirements, correspondence courses limitations and grade average rules.

Each program sets the minimum number of hours required for its major and for graduation which can be no less than **124 hours** and may be more where required. A minimum of 45 of the total number of hours must be on the advanced level. Individual degree programs are outlined below.

A minimum grade point average of 2.0 is required on (1) all course work specified for the degree, (2) all course work attempted at this university, (3) all courses in the major and the minor where required on work taken at this university and (4) all courses transferred for the minor when no courses in the minor field are taken at this university.

College 1201 Courses

ARTS 1201, BIOL 1201 and SOCI 1201 are designed to satisfy a college-wide requirement using broadly interdisciplinary content. They do not count as hours in any specific major or minor.

Communication Skills

Under the University's General Education Requirements, all students earning baccalaureate degrees must be able to express themselves clearly and effectively in written and oral English and to use the computer as a tool in the discipline of choice. In terms of courses, this means six semester hours of written English (ENGL 1301-1302), three semester hours of oral communications and three semester hours of computer literacy.

Beyond these general university requirements in communication skills, each department also must certify that its majors are writing at the level of proficiency required for that field/discipline. In order to determine this, each department typically requires of its majors a sample, course-related written paper. Students must consult the department of their chosen major to determine what is required in additional proficiencies.

Foreign Language

All Bachelor of Arts degrees must include two years (12 SCH) of foreign language study.

Major

A major shall consist of a minimum of 24 semester hours in one subject, 6 of which must be taken at this university. At least 50% of the work offered in the major field must be advanced. Electives in the major field are limited to 6 hours above the number of hours required for the degree. Double majors must complete the specific requirements for both fields.

Any hours taken in the major and the minor beyond the maximum limits set here will correspondingly increase the total number of hours required for the degree by the same amount. The total number of hours required for Option II Secondary Teaching Certification degree plans may not exceed 139 hours.

Minors

Students receiving a Bachelor of Arts or a Bachelor of Science degree (except for double majors, the B.A. in Geography - Environmental Studies emphasis, the B.S. in Geology-Ground Water and Option I Secondary Education programs) must have a recognized minor. Unless otherwise indicated, a minor consists of a minimum of 18 hours. Certain minors require more; see "Recognized Minors" below. Six hours in the minor field must be on the advanced level. Electives in any minor are limited to 6 hours above the minimum number of hours required in that field. See "Majors" above.

Recognized Minors

The following minors are available to Arts and Sciences majors: Agribusiness, Agriculture Science, Animal Science, Anthropology, Art, Biology, Business Administration, Chemistry, Computer Science, Criminology, English, Environmental Science, French, Generic Special Education, Geography, Geology, Health, History, Human Sciences, Industrial Technology, Journalism, Kinesiology, Mathematics, Mexican American Studies, Military Science, Music, Philosophy, Physics, Plant Science, Political Science, Psychology, Range and Wildlife Management, Reading, Sociology, Southwest Borderlands Studies, Spanish, Speech, Theatre Arts, Urban Studies and Women's Studies.

In addition, any body of courses which leads to a specific state-recognized teaching certification or similar endorsement, and which meets the minimum requirements indicated above for all minors, may be accepted as a minor, subject to approval by the dean and by the student's major department. An interdisciplinary or other specialized minor which meets the minimum requirements indicated above, may be recognized in individual cases, subject to approval by the student's major department, the dean and any department in which at least 9 hours of the proposed minor will be taken. The dean's office will circulate a list of minors that has been approved under either of these conditions.

Special conditions apply to the following:

Agriculture minors: The academic coordinator in Agriculture must be consulted for required courses.

Biology: The minimum number required will be 24 semester hours or an amount corresponding to six 3 or 4 credit hour courses.

Business Administration: The following courses are required: ACCT 2301, ACCT 2302, ECON 2301, ECON 2302, CISA 1301 and any three 3000- or 4000- level courses from at least two disciplines in Business Administration.

Chemistry: The minimum number shall be 24 semester hours or an amount corresponding to six 3 or 4 credit hour courses (excluding CHEM 1405, CHEM 1407, CHEM 1481); CHEM 2421 and CHEM 3323/3123 may not **both** be counted for the minimum amount.

English: The minimum number shall be 18 semester hours beyond ENGL 1301-ENGL 1302, 12 of which must be advanced.

Environmental Science: A multidisciplinary minor is offered. Requirements may be obtained from the Chair, Department of Chemistry.

Health: The following courses are required: EDHL 1304, EDHL 2327, EDHL 3331, EDHL 3333, EDHL 3381, EDHL

4331, 4337; BIOL 2401, BIOL 2402; and CHEM 1405.

History: The minimum requirement shall be 21 semester hours, consisting of HIST 1301-1302, HIST 2321-2322, HIST 3301 and 6 hours of advanced electives.

Industrial Technology: The minimum requirement shall be 18 semester hours, consisting of ITEN 1311 or ITEN 2321; ITEN 1315 or ITEN 3300; ITEN 2301 or ITEN 3324; and at least three approved advanced ITEN courses in a specified concentration.

Kinesiology: The following courses are required: EDKN 1103, EDKN 1102, EDKN 1308, EDKN 2128, EDKN 3342, EDKN 4311, EDKN 4325, EDKN 4326 and one other kinesiology activity (in addition to those otherwise required); BIOL 2401, BIOL 2402.

Mexican American Studies: A multidisciplinary minor is offered. Requirements are listed in the Department of Psychology and Sociology under the heading of Southwest Borderlands Studies.

Military Science: An interdisciplinary minor consists of 22 semester hours.

Music: Consult the Department of Music section of the catalog for requirements.

Physics: PHYS 2125/PHYS 2325, PHYS 2126/PHYS 2326 and PHYS 3343 are required, plus additional PHYS to total 18-24 semester hours; at least 3 of the additional hours must be advanced. Prospective PHYS minors should consult with their adviser and the physics faculty to identify courses that will meet their needs.

Southwest Borderlands Research Institute: A multidisciplinary minor is offered. Requirements are listed in the Department of Psychology and Sociology under the heading of Southwest Borderlands Studies.

Urban Studies: An interdisciplinary minor of at least 18 hours of selected courses in POLS, HIST, GEOG, SOCI, ECON, ACCT and BUAD. For details see the Geography section of the catalog.

Women's Studies: Students seeking an understanding of women's issues and influence may pursue a minor in women's studies. This minor requires 18 semester hours, including SOCI 2363/WMST 2363 and SOCI 4364/WMST 4300, the core courses. The remaining 12 semester hours may be selected from the following six courses: PSYC 3313/WMST 3313, PSYC 2305/WMST 2305, ARTS 3302/MUSI 3302/THEA 3302/WMST 3302, HIST 4360/WMST 4360, POLS 4364/WMST 4364 and ENGL 4370/MST 4370 (only when taught from a women's studies perspective). For more information, contact Dr. Berlie Maez, Director, The Women's Center, Memorial Student Union, Room 203, MSC 135, (361) 593-2166.

DEPARTMENT OF ART (ARTS)

Todd A. Lucas, *Co-Chair*

Charles E. Wissinger, *Co-Chair*

Bailey Art Building 190. MSC 157. Extension 2619.

Professors

Barraza, Scherpereel

Associate Professors

Lucas, Wissinger

Assistant Professors

Forehand, Vargas

Teaching Retiree

Schmidt

In the Art Department students learn the fundamentals of artistic expression in order that their developed individuality may lead to one of the many directions found in the field of art. A wonderful gallery allows the department to carry out an ambitious exhibition program that is part of the university commitment to contribute to the cultural environment of nearby communities. In addition, participation by students and faculty in exhibitions provides a significant expressive and educational experience.

The professional B.F.A. degree is offered with possibilities to seek depth through drawing, painting, sculpture, printmaking or ceramics; begin efforts for a career in advertising art, graphic design or art history; or become certified as an all-level art teacher. Art courses are offered for students seeking certification in a second teaching field or as a specialization in an elementary teaching degree. The B.A. with a major in art is designed for students who wish to obtain a liberal arts degree. Most courses are open to interested students as electives.

1201. Introduction to the Arts and the Sciences.

2(2-0)

Designed to serve a dual function: primarily as an introduction to a specific disciplinary area (i.e., arts and humanities: art, history, communications/theatre arts, language and literature, music) and secondarily as general university-level instruction in the methods and practice of critical thinking, analysis and communication. The 30 clock hour course assigns 20 hours to an academic core that is discipline-specific and 10 hours to instruction in and application of academic habits and skills. The course is required of all entering freshmen and transfer students with fewer than 20 hours.

1303. Art History I. (ARTS 1303)

3(3-0)

A lecture course in the history of painting, sculpture, architecture and other art forms from prehistoric times to the 14th century.

1304. Art History II. (ARTS 1304)

3(3-0)

A lecture course in the history of painting, sculpture, architecture and other art forms from the 14th century to the present.

1311. Design I. (ARTS 1311)

3(2-4)

An art studio course in the theory and practice of design. Focus is on the development and application of critical thinking skills to visual problems through the fundamental principles and elements of design. Includes possible applications in secondary education and/or art related professions. Studio fee, \$5.

1312. Design II. (ARTS 1312)

3(2-4)

An art studio course in the formal elements of design in three dimensions. Critical thinking skills are furthered through explorations of volume and form. Includes possible applications in secondary education and/or art related professions. Studio fee, \$5.

1316. Drawing I. (ARTS 1316)

3(2-4)

A basic course organized to promote confidence in working with the techniques, media and aesthetics of drawing. Studio fee, \$10.

- 1317. Drawing II.** (ARTS 1317) 3(2-4)
Studio problems of modelling forms in space, perspective and composition, and combining these into visual expression. Prerequisite: ARTS 1316. Studio fee, \$10.
- 1325. Principles of Art.** 3(2-4)
Studio activities with art materials in conjunction with a survey of the history and philosophy of art. Includes the study of art's essential elements. Studio fee, \$5.
- 2301. Structure of the Arts.** 3(2-4)
Art, Music and Theatre Arts are combined in selected problems dealing with arts structure. Creative production is the result of studio activity and critique. Studio fee, \$5.
- 2313. Graphic Design.** (ARTS 2313) 3(2-4)
Studio emphasis on theory and practice of advertising (commercial) art. Planning layout, developing messages, selecting media and executing art. Prerequisite: ARTS 1311. Studio fee, \$10.
- 2316. Painting.** (ARTS 2316) 3(2-4)
Studio emphasis in the theory of color and the use of paint to suggest form and space, convey ideas and emotions and explore the dynamics of visual expression. Prerequisite: ARTS 1316. Studio fee, \$10.
- 2326. Sculpture.** (ARTS 2326) 3(2-4)
An art studio course which explores three-dimensional concepts of form in a variety of sculptural media. Prerequisite: ARTS 1312. Studio fee, \$10.
- 2333. Printmaking.** (ARTS 2333) 3(2-4)
An art studio course which explores various printmaking techniques, including planographic, intaglio, stencil and relief with emphasis on their expressive power. Prerequisite: ARTS 1311 or ARTS 1316. Studio fee, \$10.
- 2346. Ceramics.** (ARTS 2346) 3(2-4)
An art studio course in the use of clay for hand building and wheel throwing. Design and decoration are studied from historical and aesthetic perspectives. Prerequisite: ARTS 1312 or ARTS 1316. Studio fee, \$10.
- 3302. Women and the Arts.** 3(3-0)
Issues surrounding the participation of women in the arts. Selected women who have contributed to the visual and performing arts throughout history are studied in relation to the culture of their time and the principles related to the arts. No previous experience in theatre, art or music required. Prerequisite: completion of visual/performing arts component requirement. (Credit may be obtained in only one of ARTS 3302, MUSI 3302, THEA 3302 or WMST 3302.)
- 3377. Materials and Their Use in Art.** 3(2-4)
Study and studio use of the tools, materials, techniques and methods used in the many art processes not covered by drawing, painting, sculpture, printmaking or ceramics. Studio fee, \$10.
- 3388. Elements of Art.** 3(2-4)
The essential elements of visual design as they relate to the studio production of works of art. Studio fee, \$10.
- 4300. Advanced Drawing.** 3(2-4)
Studio drawing with emphasis on greater mastery of technical skills toward development of a personal vision. May be repeated as needed. Prerequisites: ARTS 1311, ARTS 1316 and ARTS 1317. Studio fee, \$20.
- 4311. Advanced Painting.** 3(2-4)
Studio painting with emphasis on greater master of technical skills toward development of a personal vision. May be repeated as needed. Prerequisite: ARTS 1311, ARTS 1316 and ARTS 2316. Studio fee, \$20.

4322. Advanced Sculpture. 3(2-4)
Studio sculpture with emphasis on greater master of technical skills toward development of a personal vision. May be repeated as needed. Prerequisites: ARTS 1311, ARTS 1316 and ARTS 2326. Studio fee, \$20.

4333. Advanced Printmaking. 3(2-4)
Studio printmaking with emphasis on greater master of technical skills toward development of a personal vision. May be repeated as needed. Prerequisites: ARTS 1311, ARTS 1316 and ARTS 2333. Studio fee, \$20.

4344. Advanced Ceramics. 3(2-4)
Studio ceramics with emphasis on greater master of technical skills toward development of a personal vision. May be repeated as needed. Prerequisites: ARTS 1311, ARTS 1316 and ARTS 2346. Studio fee, \$20.

4355. Advanced Graphic Design. 3(2-4)
Studio emphasis on greater mastery of technical skills chosen from the many directions associated with graphic design, such as typography, layout, visualization, conceptual problem solving, the ad campaign, illustration or computer aided design. Students prepare portfolios for entry into undergraduate, graduate or work-related programs. May be repeated as needed. Prerequisites: ARTS 1311, ARTS 1316 and ARTS 2313. Studio fee, \$20.

4399. Senior Exhibition. 3(3-0)
The execution of a successful professional gallery exhibition by a B.F.A. candidate. Prerequisite: registration for graduation in the semester taken.

**Degree Requirements
Bachelor of Arts
Art**

Freshman Year				Junior Year			
ARTS 1201	2	ARTS 1304	3	Advanced Elective	6	Advanced Elective	6
ARTS 1303	3	ARTS 1317	3	ARTS, Advanced	6	ARTS, Advanced	6
ARTS 1316	3	ENGL 1302	3	*CHEM/PHYS	4	*CHEM/ PHYS same	4
ENGL 1301	3	^Kinesiology	1	POLS 2301	<u>3</u>	POLS 2302	<u>3</u>
Modern language	3	Modern language	3		19		19
^Visual/performing arts	<u>3</u>	^Social/behavioral	<u>3</u>				
	17		16				
Sophomore Year				Senior Year			
ENGL 2342	3	CISA 1301	3	Advanced Elective	3	Advanced Minor	6
HIST 1301	3	ENGL 2362	3	Advanced Minor	6	ARTS, Advanced	3
^Kinesiology	1	HIST 1302	3	ARTS, Advanced	6	*BIOL/GEOG/ GEOL -same	4
MATH 1314	3	^Kinesiology	1	*BIOL/GEOG/GEOL	<u>4</u>	COMS 1311	<u>3</u>
Minor	3	Minor	3		19		16
Modern language	<u>3</u>	Modern language	<u>3</u>				
	16		16				

Total Hours Required: 138

**Must include laboratory*

**Degree Requirements
Bachelor of Fine Arts**

Freshman Year				Junior Year			
ARTS 1201	2	ARTS 1304	3	ARTS, Advanced	6	ARTS, Advanced	9
ARTS 1303	3	ARTS 1312	3	POLS 2301	3	POLS 2302	3
ARTS 1311	3	ARTS 1317	3	*Science	<u>4</u>	*Science	<u>4</u>
ARTS 1316	3	ENGL 1302	3		16		16
ENGL 1301	3	^Kinesiology	1				
MATH 1314	<u>3</u>	^Social/behavioral	<u>3</u>				
	17		16				
Sophomore Year				Senior Year			
ARTS 2313	3	ARTS 2333	3	Advanced Electives	6	Advanced Electives	6
ARTS 2316	3	ARTS 2346	3	ARTS, Advanced	6	ARTS, Advanced	6
ARTS 2326	3	^Computer literacy	3	Elective	<u>3</u>	ARTS 4399	<u>3</u>
COMS 1311	3	HIST 1302	3		15		15
HIST 1301	3	^Kinesiology	1				
^Kinesiology	<u>1</u>	^Literature/philosophy	<u>3</u>				
	16		16				

Total Hours Required: 127

**Must include laboratory*

^For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

**Degree Requirements
Bachelor of Fine Arts
All-Level Art with Teaching Certification**

Freshman Year				Junior Year			
ARTS 1201	2	ARTS 1304	3	ARTS 3377	3	ARTS 4333	3
ARTS 1303	3	ARTS 1312	3	ARTS 3388	3	ARTS 4344	3
ARTS 1311	3	ARTS 1317	3	ARTS 4300	3	ARTS 4355	3
ARTS 1316	3	ENGL 1302	3	ARTS 4311	3	EDED 3302	3
ENGL 1301	3	^Kinesiology	1	COMS 1311	3	EDED 3333	3
MATH 1314	<u>3</u>	*Science	<u>4</u>	POLS 2301	<u>3</u>	POLS 2302	<u>3</u>
	17		17		18		18
Sophomore Year				Senior Year			
ARTS 2316	3	ARTS 2313	3	ARTS, Advanced	6	ARTS 4399	3
ARTS 2326	3	ARTS 2333	3	ARTS 4322	3	EDED 4623	6
ENGL 2342 or		ARTS 2346	3	EDED 3310	3	EDRG 4314	3
ENGL 2362	3	EDED 2301	3	EDED 3332	3	EDSE 4391	<u>3</u>
HIST 1301	3	HIST 1302	3	EDED 3362	<u>3</u>		15
^Kinesiology	1	^Kinesiology	1		18		
*Science	<u>4</u>	SOCI 2361	<u>3</u>			Total Hours Required:	139
	17		19				

**Must include laboratory*

^For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

DEPARTMENT OF BIOLOGY (BIOL)

Glenn H. Perrigo, *Chair*

Biology-Earth Science Building 108. MSC 158. Extension 3803.

Regents Professor

Perez

Professors

Baskin, Galloway, Pierce

Associate Professors

Brown, Hempel, Massa, Perez-Ballestero, Perrigo, Soto

Assistant Professors

Escudero, Pledger

Lecturers

Powell, Ratcliff

Faculty Emeriti

Chaney, Peacock, Wood

The mission of the Department of Biology at Texas A&M University-Kingsville is to provide excellence in teaching, research and service in a unique biotic and cultural region of Texas. The strong research base of our faculty allows us to teach the latest information in organismal and biomedical science. Also, our commitment to the success of our students ensures that you will achieve your maximum potential.

1106. General Biology Laboratory I.

1(0-3)

A laboratory experience that focuses on laboratory techniques, data collection and analysis. The experience reinforces and promotes an understanding of the cell structure, energy transformation, reproduction and genetic variability. Pre- or corequisite: BIOL 1306. Laboratory fee, \$6.

1107. General Biology Laboratory II.

1(0-3)

Experimental and observational techniques used to study plant and animal life at the organismal, population and community levels including morphology, physiology, reproduction and ecology. Pre- or corequisite: BIOL 1307. Laboratory fee, \$6.

1108. Introductory Cellular and Molecular Biology Laboratory. (BIOL 1108)

1(0-2)

A laboratory experience that focuses on laboratory techniques, data collection and analysis. The experience reinforces and promotes an understanding of the cell structure, energy transformation, reproduction and genetic variability. Prerequisites: exemption from or credit in WRIT 0300, READ 0300 and ALGE 0301. Corequisite: BIOL 1308. Laboratory fee, \$6.

1111. Introductory Botany Laboratory. (BIOL 1111)

1(0-2)

A laboratory experience that reinforces an understanding of plant form, function and identification. Prerequisites: exemption from or credit in WRIT 0300, READ 0300 and ALGE 0301. Pre or corequisite: BIOL 1311. Laboratory fee, \$5.

1113. Introductory Zoology Laboratory. (BIOL 1113)

1(0-2)

A laboratory experience that reinforces an understanding of animal form, function and identification. Prerequisites: exemption from or credit in WRIT 0300, READ 0300 and ALGE 0301. Pre or corequisite: BIOL 1313. Laboratory fee, \$5.

1201. Introduction to the Arts and the Sciences.

2(2-0)

Designed to serve a dual function: primarily as an introduction to the specific disciplinary area (i.e., sciences and mathematics: biology, chemistry, geosciences, physics, mathematics) and secondarily as general university-level instruction in the methods and practice of critical thinking, analysis and communication. The 30 clock hour course assigns 20 hours to an academic core that is discipline-specific and 10 hours instruction in and application of academic habits and skills. The course is required of all entering freshmen and transfer students with fewer than 20 hours.

1306. General Biology I. 3(4-0)
Survey of contemporary biology that covers the chemical basis of life, structure, function and physiology of the cell, molecular biology and microevolution. Three lecture hours and one discussion hour a week for one semester. Concurrent enrollment in BIOL 1106 recommended. Prerequisites: exemption from or completion of WRIT 0300, READ 0300 and ALGE 0301 with a grade of C or better.

1307. General Biology II. 3(4-0)
Continuation of a two-semester course in biological concepts; will emphasize organismal diversity and comparative anatomy, reproduction, physiology, ecology, behavior and evolution. Three lecture hours and one discussion hour a week for one semester. Concurrent enrollment in BIOL 1107 recommended. Prerequisite: BIOL 1306.

1308. Introductory Cellular and Molecular Biology. (BIOL 1308) 3(3-0)
Introduction to the cellular and molecular basis of biology. Key molecular concepts such as cell theory and structure, energy transformations, reproduction and genetic variability are covered. Concurrent enrollment in BIOL 1108 is recommended. Prerequisites: exemption from or credit in WRIT 0300, READ 0300 and ALGE 0301.

1311. Introductory Botany. (BIOL 1311) 3(3-0)
Survey of the plant kingdom with emphasis on the evolution and diversity of form, function followed by a survey of plant diversity and ecology. Concurrent enrollment in BIOL 1111 is recommended. Prerequisites: exemption from or credit in WRIT 0300, READ 0300 and ALGE 0301.

1313. Introductory Zoology. (BIOL 1313) 3(3-0)
Survey of the animal kingdom with emphasis on the evolution, structure and function followed by a survey of animal diversity and ecology. Concurrent enrollment in BIOL 1113 is recommended. Prerequisites: exemption from or credit in WRIT 0300, READ 0300 and ALGE 0301.

2375. Life Science. 3(3-2)
Emphasizes cell structure, energy transformation, plant and animal structures and functions, diversity and classification. Prerequisite: CHEM 1376. Laboratory fee, \$5.

2401. Human Anatomy and Physiology I. (BIOL 2401) 4(3-3)
Gross and microscopic anatomy and physiology of the cells and tissues, integument, skeletal, muscular and nervous systems. Six hours of chemistry recommended. Prerequisites: exemption from or credit in WRIT 0300, READ 0300 and ALGE 0301. Laboratory fee, \$6.

2402. Human Anatomy and Physiology II. (BIOL 2402) 4(3-3)
Gross and microscopic anatomy and physiology of the circulatory, respiratory, digestive, excretory, endocrine and reproductive systems. Prerequisites: BIOL 2401; 6 hours of chemistry recommended. Laboratory fee, \$6.

2421. Elementary Microbiology. (BIOL 2421) 4(3-3)
Fundamental principles of the relationship of microorganisms to the life of human beings, including their morphology, growth, nutrition and study. Prerequisites: BIOL 1306/BIOL 1106; 6 hours of chemistry recommended. Laboratory fee, \$6.

3112. Genetics Lab. 1(0-3)
Fundamental experiments to demonstrate the concepts of inheritance, including cytogenetics techniques, quantitative Mendelian genetics, biochemistry of genetics, linkage and DNA mapping and protein electrophoresis of population and speciation genetics. Prerequisites: concurrent enrollment or already taken BIOL 3402; 12 semester hours of biology; 6 semester hours of chemistry recommended. Laboratory fee, \$6.

3301. Evolutionary Theory. 3(3-0)
A study of Darwinism, mechanisms of evolutionary change and a history of life in the context of contemporary biology. Prerequisite: BIOL 3402 or equivalent.

- 3375. Economic Entomology.** 3(3-0)
The characteristics, life history and identification of insects important to man, with particular reference to agriculture. Stress will be on control measures for harmful species. Prerequisite: 12 semester hours of biology.
- 3401. Invertebrate Zoology.** 4(3-3)
Classification, anatomy, life history and evolution of invertebrates exclusive of insects. Prerequisite: 12 semester hours of biology. Laboratory fee, \$5.
- 3402. Genetics.** 4(3-3)
Fundamental concepts of heredity, including cell reproduction, transmission genetics, biochemistry of genetics, gene structure and function and genetics of population. Lecture and recitation meetings. Prerequisites: 12 semester hours of biology; 6 semester hours of chemistry recommended.
- 3403. Plant Taxonomy.** 4(3-3)
An introductory course concerned with developing skill in recognition and identification of seed plants at the species and family levels. Emphasis will be placed on collection, use of keys and manuals and herbarium techniques. Prerequisite: 12 semester hours of biology. Laboratory fee, \$6.
- 3404. Biotechniques.** 4(3-3)
Focus on applications of modern molecular techniques that are used in biology. Technical report writing and computer skills will be emphasized. Prerequisite: freshman biology.
- 3405. Vertebrate Zoology.** 4(3-3)
Anatomy, classification and natural history of the vertebrates; methods of collecting, preserving and identifying local vertebrates. Prerequisite: 12 semester hours of biology. Laboratory fee, \$4.
- 3407. Ecology.** 4(3-3)
Ecology of water and land forms of South Texas. Prerequisite: 12 semester hours of biology. Laboratory fee, \$5.
- 3408. Animal Physiology.** 4(3-3)
A study of the fundamental process of the animal systems. Prerequisites: 12 semester hours of biology and 6 semester hours of chemistry. Laboratory fee, \$6.
- 3409. Field Biology I.** 4(20-20)
A study of the ecology and conservation of southern Texas flora and fauna. Prerequisite: 6 semester hours of biology. Laboratory fee, \$5.
- 4102. Seminar.** 1(1-0)
Current biological literature with critical class reports. Course may be repeated for credit. Prerequisite: 12 semester hours of biology. Assessment Exam Fee, \$21.
- 4304. Research Projects in Biology.** V:1-3
An independent review of literature and a laboratory or field problem yielding a formal report on the research. Variable credit dependent upon the project. May be repeated not to exceed accumulated total of 3 semester hours applicable to requirements for the major in biology. Prerequisite: advanced standing and prior approval of the problem by the supervising instructor.
- 4355. Topics in Biology.** 3(3-0)
Lectures in selected topics. May be repeated for credit once under a different topic. Prerequisite: 12 semester hours of biology or equivalent.
- 4401. Molecular Biology.** 4(3-3)
The application of modern molecular techniques to manipulate the replication and expression of genes. The laboratory will introduce basic and advanced molecular techniques. Prerequisites: 12 semester hours of biology and BIOL 3402. Laboratory fee, \$6.

- 4402. Vertebrate Embryology.** 4(2-4)
Embryonic development of the frog, chick and pig. Prerequisite: 12 semester hours of biology. Laboratory fee, \$5.
- 4406. Bacteriology.** 4(3-3)
Survey of medical, public health, water, sewage and milk bacteriology. Bacteriological technique is emphasized. Prerequisites: 12 semester hours of biology, including BIOL 2421; 6 semester hours of chemistry recommended. Laboratory fee, \$6.
- 4408. Immunology.** 4(3-3)
Experimental studies in the principles of infection and immunity. Prerequisite: 12 semester hours of biology, including BIOL 4406; organic chemistry recommended. Laboratory fee, \$6.
- 4410. Topics in Biology.** 4(3-3)
Lectures, literature investigation and research in selected topics. May be repeated for credit once under different topic. Prerequisite: 12 semester hours of biology or equivalent. Laboratory fee, \$5.
- 4411. Plant Physiology.** 4(3-3)
The study of the physiological functions of vascular plants including water relations, photosynthesis, respiration, hormone synthesis. Prerequisites: 12 hours of biology including BIOL 1307/BIOL 1107. Laboratory fee, \$6.
- 4413. Non-flowering Plants.** 4(3-3)
The study of structure, physiological function, life cycles and the economical and biological importance of algae, bryophytes, lichens, ferns and gymnosperms. Prerequisites: 12 hours of biology including BIOL 1307/BIOL 1107. Laboratory fee, \$6.
- 4425. Ornithology.** 4(3-3)
Classification, structures, physiology, natural history and field identification of birds. Prerequisite: 12 semester hours of biology. Laboratory fee, \$5.
- 4426. Cellular Physiology.** 4(3-3)
Physiochemical function at the cellular level. Prerequisites: 12 semester hours of biology and CHEM 3323/3123, CHEM 3325/3125; PHYS 1301/1101 and PHYS 1302/1102 recommended. Laboratory fee, \$6.
- 4427. Herpetology.** 4(3-3)
Classification, anatomy, life history and distribution of reptiles and amphibians with special emphasis on local forms. Prerequisite: 12 semester hours of biology. Laboratory fee, \$5.
- 4429. Mammalogy.** 4(3-3)
Classification, distribution, life histories, economic importance, techniques of field study, methods of collection and preservation of mammals. Prerequisite: 12 semester hours of biology. Laboratory fee, \$5.
- 4430. Parasitology.** 4(3-3)
Introduction to parasitism with special reference to human and other vertebrate hosts. Prerequisite: 12 semester hours of biology. Laboratory fee, \$5.
- 4431. Ichthyology.** 4(3-3)
Classification, anatomy, life history and distribution of fishes, with special emphasis on local fresh water forms. Prerequisite: 12 semester hours of biology. Laboratory fee, \$5.

**Degree Requirements
Bachelor of Arts
Biology***

Freshman Year				Junior Year			
BIOL 1201	2	BIOL 1307/ BIOL 1107	4	BIOL 3408, BIOL 4411, or BIOL 4426	4	BIOL 3301	3
BIOL 1306/ BIOL 1106	4	CHEM 1112	1	CHEM 3323/ CHEM 3123	4	CHEM 3325/ CHEM 3125	4
CHEM 1111	1	CHEM 1312	3	FREN 2311 or SPAN 2311/ SPAN 2301	3	FREN 2312 or SPAN 2312/ SPAN 2302	3
CHEM 1311	3	ENGL 1302	3	Minor	4	POLS 2302	3
ENGL 1301	3	HIST 1301	3	POLS 2301	3		
^Kinesiology	1	^Kinesiology	1				
MATH 1314	3	MATH 1316	3				
	<u>17</u>		18		<u>18</u>		16
Sophomore Year				Senior Year			
BIOL 2421	4	BIOL 3402	4	Advanced BIOL	8	Advanced BIOL	4
FREN 1311 or SPAN 1313/ SPAN 1301	3	BIOL 3407	4	Advanced Minor	3	Advanced Elective	3
HIST 1302	3	^Computer literacy	3	BIOL 4102	1	Advanced Minor	3
^Kinesiology	1	FREN 1312 or SPAN 1314/ SPAN 1302	3	Elective	3	^Communication	3
^Literature/philosophy	3	^Visual/performing arts	3	GEOG/PSYC/SOCI	3		
^Social/behavioral	3		<u>17</u>		18		
	<u>17</u>					Total Hours Required:	134

*For additional requirements see section entitled "General Requirements for Graduation" in an earlier section of this catalog. Students must earn a letter grade of C or better in ENGL 1302 to demonstrate writing proficiency. Note: Choice of minor will result in some variation in course sequence and total hours on the degree. Consult departmental chair for information on minor programs.

A major consists of at least 36 semester hours in Biology. Minor requires 18-24 hours with at least 6 hours in advanced work. At least 50% of the work offered in the major field must be advanced.

^For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

**Degree Requirements
Bachelor of Science
Biology***

Freshman Year				Junior Year			
BIOL 1201	2	BIOL 1307/BIOL 1107	4	Advanced Minor or Any Elective	4	BIOL 3301	3
BIOL 1306/BIOL 1106	4	CHEM 1112	1	BIOL 3408, BIOL 4411, or BIOL 4426	4	BIOL 3407	4
CHEM 1111	1	CHEM 1312	3	CHEM 3323/ CHEM 3123	4	CHEM 3325/ CHEM 3125	4
CHEM 1311	3	ENGL 1302	3	HIST 1302	3	POLS 2302	3
ENGL 1301	3	^Kinesiology	1	POLS 2301	3	^Visual/performing arts	3
^Kinesiology	1	MATH 1316	3		<u>18</u>		
MATH 1314	3		15				
	<u>17</u>						
Sophomore Year				Senior Year			
BIOL 2421	4	BIOL 3402	4	Advanced BIOL	8	Advanced BIOL	4
CISA 1301 or CSEN 2304	3	^Communication	3	Advanced Minor	4	Advanced Electives	8
^Kinesiology	1	HIST 1301	3	BIOL 4102	1		12
^Literature/philosophy	3	PHYS 1302/PHYS 1102	4		13		
PHYS 1301/PHYS 1101	4	STAT 1342, STAT 4303, or STAT 4301	3			Total Hours Required:	127
^Social/behavioral	3		17				
	<u>18</u>						

*For additional requirements see section entitled "General Requirements for Graduation" in an earlier section of this catalog. Students must earn a letter grade of C or better in ENGL 1302 to demonstrate writing proficiency.

Note: Choice of minor will result in some variation in course sequence and total hours on the degree.

Consult departmental chair for information on minor programs.

A major consists of at least 36 semester hours in Biology. Minor requires 18-24 hours with at least 6 hours in advanced work. At least 50% of the work offered in the major field must be advanced.

**Degree Requirements
Bachelor of Science
Biology with Teaching Certification**

Freshman Year			Junior Year		
BIOL 1201	2	BIOL 1307/BIOL 1107	4	BIOL 3402	4
BIOL 1306/BIOL 1106	4	CHEM 1112	1	BIOL 3403 or	
CHEM 1111	1	CHEM 1312	3	BIOL 3407	4
CHEM 1311	3	ENGL 1302	3	CHEM 3323/	
ENGL 1301	3	HIST 1301	3	CHEM 3123	4
[^] Kinesiology	1	[^] Kinesiology	1	COMS 1311	3
MATH 1314	<u>3</u>	MATH 1316	<u>3</u>	SOCI 2361	<u>3</u>
	17		18		18
Sophomore Year			Senior Year		
EDED 2301	3	ARTS 2301	3	BIOL 3401 or	
ENGL 2342, ENGL 2362		EDHL 1254	2	BIOL 3405	4
or ENGL 2314	3	ENGL 2342, ENGL 2362		BIOL 4406, BIOL 4408,	
HIST 1302	3	or ENGL 2314	3	or BIOL 4426	4
[^] Kinesiology	1	PHYS 1302/PHYS 1102		EDED 3332	3
PHYS 1301/PHYS 1101		or PHYS 1407	4	EDED 3362	3
or PHYS 1405	<u>4</u>	POLS 2301	3	POLS 2302	<u>3</u>
	14	STAT 1342	<u>3</u>		17
			18		
				EDED 4623	6
				EDRG 4314	3
				EDSE 4391	<u>3</u>
					12
				Total Hours Required: 132	

[^]For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

DEPARTMENT OF CHEMISTRY (CHEM)

Thomas R. Hays, *Interim Chair*

Nierman Science Hall 102. MSC 161. Extension 2914.

Professors

Castro, Olivares, Thompson

Associate Professors

Beller, Bhattacharya, Gonzalez-Garcia, Hays

Assistant Professors

Bashir, Chi

Visiting Assistant Professor

Abu-Samn

Lecturer

Martino

Faculty Emeritus

Ruhnke

The aim of the department is to provide certain service courses for other departments whose subject matter is based, in part, on the fundamentals of chemistry; a cultural background for those who are interested in science and desire the B.S. or B.A. degree but do not expect to become professional chemists; and proper education for those who wish to become professional chemists. The B.S. degree is certified by the American Chemical Society. The M.S. degree in Chemistry is also offered.

1111. General Inorganic Chemistry Laboratory I. (CHEM 1111) 1(1-3)

A laboratory experience that focuses on laboratory techniques, data collection and analysis. The experience reinforces and promotes an understanding of the principles of stoichiometry, gases, liquids, solutions and energy. One hour of recitation. Pre- or corequisite: CHEM 1311. Laboratory fee, \$5.

1112. General Inorganic Chemistry Laboratory II. (CHEM 1112) 1(1-3)

A laboratory experience that focuses on laboratory techniques, data collection and analysis. The experience reinforces and promotes an understanding of the principles of stoichiometry, gases, liquids, solutions and energy. One hour of recitation. Prerequisite: CHEM 1311 and CHEM 1111; Pre- or corequisite: CHEM 1312. Laboratory fee, \$5.

1311. General Inorganic Chemistry I. (CHEM 1311) 3(3-0)

The first course for students majoring in a field of science, engineering or agriculture. Principles of stoichiometry, thermochemistry, atomic and molecular structures, gases, liquids, solids and solutions and the chemistry of the elements and their compounds. Prerequisite: MATH 1314 and either one year of high school chemistry or CHEM 1481.

1312. General Inorganic Chemistry II. (CHEM 1312) 3(3-0)

The second course for students majoring in a field of science, engineering or agriculture. Principles of chemical kinetics, chemical equilibrium, thermodynamics, electrochemistry and the chemistry of the elements and their compounds. Prerequisites: CHEM 1111 and CHEM 1311.

1376. Elementary Chemistry. 3(3-2)

A survey of fundamental concepts of chemistry. Topics include atomic structure, elements and the periodic table, nuclear chemistry, acids and bases and organic, inorganic and biochemical compounds. Prerequisite: PHYS 1375. Laboratory fee, \$5.

1405. General Introduction to Chemistry. (CHEM 1405) 4(3-2)

Elementary studies in chemistry for those students not majoring in science. Emphasizes body chemistry and physiological action of drugs, foods, nutrients, poisons, cancer-causing agents, etc. Includes environmental, social, political, historical and agricultural aspects of the science. Laboratory fee, \$5 each semester.

- 1407. General Introduction to Chemistry.** (CHEM 1407) 4(3-2)
The second course in elementary studies for those students not majoring in science. Emphasizes body chemistry and physiological action of drugs, foods, nutrients, poisons, cancer-causing agents, etc. Includes environmental, social, political, historical and agricultural aspects of the science. Laboratory fee, \$5 each semester.
- 1481. Elementary Principles of Chemistry.** 4(3-2)
A course for students who must take CHEM 1311, but whose background does not include a satisfactory command of mathematics or chemistry as determined by placement examinations. May not be counted as part of the general science requirements for a major or minor in chemistry. Laboratory fee, \$5.
- 2401. Inorganic Quantitative Analysis.** (CHEM 2401) 4(3-4)
Principles and methods of separation and analysis. Includes standard volumetric and gravimetric methods and an introduction to instrumental methods. Prerequisites: CHEM 1112 and CHEM 1312. Laboratory fee, \$5.
- 2421. Elementary Organic Chemistry.** 4(3-3)
Aliphatic and aromatic compounds with a special emphasis given to aliphatic compounds. Prerequisite: CHEM 1112 and CHEM 1312. Laboratory fee, \$5.
- 3123. Organic Chemistry Laboratory I.** 1(0-4)
Introduction to laboratory practices and procedures in organic chemistry, with emphasis on hydrocarbon chemistry. Pre- or corequisite: CHEM 3323. Laboratory fee, \$5.
- 3125. Organic Chemistry Laboratory II.** 1(0-4)
Introduction to laboratory practices and procedures in organic chemistry, with emphasis on hydrocarbon chemistry. Pre- or corequisite: CHEM 3325. Laboratory fee, \$5.
- 3181. Chemical Literature.** 1(1-0)
Prerequisite: at least 3 semesters of chemistry.
- 3323. Organic Chemistry I.** 3(3-0)
Introduction to the important concepts and principles in the bonding and reactions of organic molecules, with intensive study of the chemistry of non-aromatic hydrocarbons. Prerequisites: CHEM 1312, CHEM 1112. To count for a major or minor in Chemistry, CHEM 3123 must also be taken.
- 3325. Organic Chemistry II.** 3(3-0)
Continuation of CHEM 3323. An intensive study of the reactions and mechanisms of aromatic hydrocarbons and the main non-hydrocarbon functional groups. Prerequisites: CHEM 3323, CHEM 3123. To count for a major or minor in Chemistry, CHEM 3125 must also be taken.
- 3331-3332. Physical Chemistry.** 6(3-0)
A fundamental approach to the study of physical and chemical phenomena, including the study of thermodynamics, chemical kinetics, phase equilibria, electrochemistry, molecular structure and quantum mechanics. Required of all chemistry and chemical engineering majors. Prerequisite: one year each of physics and calculus.
- 3451. Environmental Chemistry.** 4(3-3)
Sources and causes of land, water and air pollution; the methods of measurement and abatement. May not be counted as part of the minimum requirements for a major in chemistry. Prerequisites: CHEM 1112, CHEM 1312 and two additional 3- or 4-credit hour courses in either biology or geology or more advanced chemistry. Laboratory fee, \$5.
- 4141. Biochemistry Laboratory.** 1(1-3)
An introduction to the biochemical techniques (methods used for protein purification, for protein characterization and for analysis of other important biomolecules). Prerequisite: CHEM 4341.
- 4181. Chemical Seminar.** 1(1-0)
Prerequisites: at least 6 semesters of Chemistry and CHEM 3181.

4131-4132. Physical Chemical Measurements. 2(0-4)

A laboratory course on the techniques and apparatus used in the measurement of properties of chemical systems. Attention is also given to the limits of accuracy and the sources of error in a given technique. Required of chemistry majors. Prerequisite: CHEM 2401. Prerequisite or corequisite: CHEM 3331, CHEM 3332. Laboratory fee, \$5.

4311. Advanced Inorganic Chemistry. 3(3-0)

Prerequisite: at least 6 semesters of chemistry including CHEM 2401 and Physical Chemistry.

4341. Biochemistry I. 3(3-0)

Introduction to the important concepts, nomenclature and compounds of biochemistry with special emphasis on the chemical interpretation of the structures and function of biological macromolecules. Prerequisite: CHEM 3325.

4342. Biochemistry II. 3(3-0)

An introduction to the major biochemical cycles and pathways in living organisms, including reaction steps, regulation and mechanisms. Prerequisite: CHEM 4341.

4345. Principles of Biochemistry. 3(3-0)

A one-semester presentation of the major areas of biochemistry, emphasizing the structure and function of biomolecules and major metabolic activities of living organisms, including humans. Prerequisites: CHEM 2421 or CHEM 3325.

4381. Selected Topics in Chemistry. V:1-3

Literature and research in areas of chemistry not otherwise treated in depth in available courses. May be repeated when topic changes for a maximum of 6 semester hours of credit.

4385. Senior Research. V:1-3

Supervised individual journal-quality research involving advanced chemical concepts and a variety of experimental techniques and instruments. May be taken for a maximum of 6 semester hours. Prerequisites: physical chemistry, senior standing and prior approval of the project director.

4401. Modern Methods of Instrumental Analysis. 4(3-4)

Introduction to the theory and practice of optical and electro-analytical methods of analysis. Prerequisites: CHEM 2401 or CHEM 2371 and CHEM 3331 and CHEM 3332. Laboratory fee, \$5.

4421. Advanced Chemical Synthesis. 4(2-6)

Introduction to advanced and sophisticated synthesis of organic, biochemical and inorganic compounds. Laboratory includes multi-step syntheses, stereochemical problems, literature-searching techniques, etc. Prerequisites: CHEM 3323/3123, CHEM 3325/3125. Laboratory fee, \$5.

**Degree Requirements
Bachelor of Arts
Chemistry**

Freshman Year				Junior Year			
BIOL 1201	2	CHEM 1112	1	BIOL/GEOG/ GEOG- <i>same</i>	4	CHEM 3332	3
CHEM 1111	1	CHEM 1312	3	CHEM 3331	3	GEOG/PSYC/SOCI	3
CHEM 1311	3	ENGL 1302	3	COMS, BCOM	3	Minor	0-3
ENGL 1301	3	HIST 1302	3	Minor	0-3	Minor	0-3
HIST 1301	3	[^] <i>Kinesiology</i>	1	Mod Lang (1st)	3	Mod Lang (2nd)	3
[^] <i>Kinesiology</i>	1	MATH 1348	3	[^] <i>Visual/performing arts</i>	3	POLS 2302	<u>3</u>
MATH 1314	3	POLS 2301	<u>3</u>				12-18
MATH 1316	<u>3</u>		17		<u>3</u>		
	19				16-19		
Sophomore Year				Senior Year			
CHEM 2401	4	BIOL/GEOG/GEOG	4	CHEM, Advanced	7	CHEM 4132	1
CHEM 3323/ CHEM 3123	4	CHEM 3325/ CHEM 3125	4	CHEM 4131	1	CHEM 4311	3
ENGL 2342	3	ENGL 2362	3	[^] <i>Computer literacy</i>	3	Elective, Advanced	7
MATH 2413	4	[^] <i>Kinesiology</i>	1	Minor (Advanced)	3	Minor, Advanced	6
PHYS 1301/ PHYS 1101	<u>4</u>	MATH 2414	4	Mod Lang (3rd)	3	Mod Lang (4th)	<u>3</u>
	19	PHYS 1302/ PHYS 1102	<u>4</u>	[^] <i>Social/behavioral</i>	<u>3</u>		20
			20		20		
						Total Hours Reqd:	143-152

**Degree Requirements
Bachelor of Science
Chemistry
Certified by the American Chemical Society**

Freshman Year				Junior Year			
BIOL 1201	2	CHEM 1112	1	CHEM 3331	3	Advanced Minor	3
CHEM 1111	1	CHEM 1312	3	COMS/BCOM	3	CHEM 3332	3
CHEM 1311	3	ENGL 1302	3	CSEN 2304	3	Restricted Elective*	9
ENGL 1301	3	HIST 1302	3	ENGL 2342 or		[^] <i>Visual/performing arts</i>	
HIST 1301	3	[^] <i>Kinesiology</i>	1	ENGL 2362	3		<u>3</u>
MATH 1314	3	MATH 1348	3	POLS 2302	3		18
MATH 1316	<u>3</u>	POLS 2301	<u>3</u>	Restricted Elective*	<u>3</u>		
	18		17		18		
Sophomore Year				Senior Year			
CHEM 2401	4	CHEM 3181	1	Advanced Minor	3	Advanced Elective**	6
CHEM 3323/ CHEM 3123	4	CHEM 3325/ CHEM 3125	4	Adv. Elective**	3	CHEM 4132	1
[^] <i>Kinesiology</i>	1	ENGL 2314	3	CHEM 4131	1	CHEM 4181	1
MATH 2413	4	[^] <i>Kinesiology</i>	1	CHEM 4401	4	CHEM 4311	3
PHYS 2325/ PHYS 2125	<u>4</u>	MATH 2414	4	Restricted Elective*	3	CHEM 4381	1
	17	PHYS 2326/ PHYS 2126	<u>4</u>	[^] <i>Social/behavioral</i>	<u>3</u>	CHEM 4421	<u>4</u>
			17		17		16
						Total Hours Required:	138

**Restricted Elective: Biology (8 hours minimum); Modern Language (6 hours minimum in a single language); STAT 4303; Geology (8 hours minimum); or other career-related elective approved by chair.*

***Advanced Elective: Approval of chair required.*

This program qualifies a graduate for certification to the American Chemical Society as a chemist meeting the professional standards of that organization. Consult departmental chair for information on minor programs.

[^]For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

DEPARTMENT OF COMMUNICATIONS AND THEATRE ARTS

Edwin N. Rowley, *Chair*

Speech Building 174. MSC 178. Extension 3401.

Professors

Deacon, Fields, Smith

Associate Professors

Beams, Elkins, Faherty, Rowley

Assistant Professor

Oller

Lecturers

Ramos, Saltarelli

The department provides instruction for students studying in the fields of speech, journalism, radio/television, theatre arts and communication sciences and disorders. The department also provides instruction for students in education who have chosen teaching fields in journalism, speech or theatre arts. The department offers specialization on the elementary level for both speech and theatre arts.

Students majoring or minoring in the various areas of the department are expected to take advantage of the experience and training offered to them in the various activities sponsored by the university and the department. The student of journalism is expected to work with the student publication, *The South Texan*. Credit for this work can be received by registering for COMJ 2129. The student of speech is expected to register for COMS 1144 for a minimum of 3 semester hours of elective credit. The student of theatre arts is required to register for theatre practice or rehearsal and performance each semester enrolled, except while student teaching. The student is also required to participate in a theatre activity each semester while at the university. The student whose interests lie in radio/television is expected to participate in studio activities each semester with KTAI FM 91.1 or TAMUK TV-2. Students in communication sciences and disorders have the opportunity to gain practical experience in the Communication Disorders Clinic.

All activities of the department are also open to members of the university who are not majoring or minoring in the department.

Little Theatre and Jones Auditorium: Throughout the year the department presents a series of plays, including a summer musical (in cooperation with the Department of Music). The two theatres also host other presentations of a varied nature.

COMMUNICATION (COMM)

1307. Introduction to the Mass Media. (COMM 1307) 3(3-0)

Mass communication in modern society. Communication processes, legal consideration and social implications.

2309. Editing. (COMM 2309) 3(2-3)

Theory and practice in copyreading, proofreading, headline writing, page layout and design, picture editing and news staff supervision. Extensive practice with electronic copy processing systems. Prerequisite: COMM 2311.

2311. Newswriting. (COMM 2311) 3(2-3)

Theory and practice of newswriting and relationships with sources. Lectures and assignments covering news for print and electronic media. Discussions of journalistic ethics and other problems confronting reporters. Prerequisites: ENGL 1301, ENGL 1302.

3301. Reporting. 3(2-3)

Theory and practice in news gathering and writing; types and techniques of public affairs reporting. Lab assignments include coverage of university departments and activities, municipal and county government, schools and courts for *The South Texan*. Lab requires use of computers as editing terminals and data bases. Prerequisite: COMM 2309.

3308. Radio and Television News and Script Writing. 3(3-0)
Writing correctness, clarity and style in radio and television: includes collecting, writing and editing news, continuity, drama, address and commercial copy.

4306. Selected Topics in Communication. 3(3-0)
Literature and research in areas of communication. Includes such topics as international press, yearbook production, semantics and history of public address. May be repeated once for credit when topic varies. Prerequisite: 6 semester hours of communication, journalism and/or speech.

4317. Mass Media, the Public and the Law. 3(3-0)
Legal and ethical limitation and responsibilities of the mass media, relationship and interaction between broadcaster, governmental regulatory agencies and the public. Prerequisite: 6 semester hours of journalism and/or radio-tv.

4391. Independent Study in Communication. V:1-3
Intensive work in a special area of the student's major or minor. A maximum of 6 semester hours of credit in independent study may be applied toward graduation. Prerequisite: 6 semester hours in communication, speech or journalism.

COMMUNICATION SCIENCES AND DISORDERS (CSDO)

A Master's Degree in communication disorders is required in order to be a licensed speech-language pathologist in the State of Texas. An overall grade point average of 3.0, a grade point average of 3.0 in all CSDO courses, adequate written and oral communication skills (see CSDO 4223) and a passing grade on the CSDO exit exam prior to graduation are required so as to prepare the student for acceptance into a master's program.

2325. Phonetics. 3(3-0)
Training in the use of the International Phonetic Alphabet and practice in the transcription of normal and disordered speech.

3122. Clinical Observation in Speech Pathology and Audiology. 1(0-2)
Observation of clinical practice in speech pathology and audiology. Satisfactory completion required before the student can begin clinical practice. May be repeated for a total of 2 semester hours. Prerequisite: grade of C in, or concurrent registration in, CSDO 3305. Credit/Noncredit.

3305. Introduction to Communication Disorders. 3(3-0)
Cause, diagnosis and therapies of communication defects. Observation (CSDO majors: 25 hours; nonmajors: 15 hours) of speech and language therapy conducted in CSDO clinic each afternoon.

3313. Introduction to Audiology. 3(3-1.5)
Basic audiological concepts and their applicability to instrumentation and educational procedures utilized in the habilitation and/or rehabilitation of the pre-school and school aged child. Prerequisite: CSDO 3321.

3321. Anatomy of the Auditory and Vocal Mechanisms. 3(3-0)
Designed to acquaint the student with the physiology and functions of the vocal and auditory mechanisms. Prerequisite: CSDO 3305.

3325. Clinical Methodologies. (3-1.5)
Designed to acquaint the student with clinical methods in speech-language pathology before beginning clinical practice. Topics include target behaviors, treatment methods and controlling and maintaining target behaviors. Prerequisites: CSDO 2325 and CSDO 3305.

4223. Clinical Practice in Speech/Language Pathology. 2(0-4)
Administration of speech/language therapy and diagnostic evaluation under direct supervision. May be repeated once. Attendance required at weekly clinical conference. Prerequisites: CSDO 3325 (may also be taken concurrently), CSDO 4321 and CSDO 4333; an overall grade point average of 3.0; a grade point average of 3.0 in all CSDO courses; successful completion of the departmental communication skills examination; and senior standing in CSDO. Laboratory fee, \$5.

4321. Articulatory and Phonological Disorders. 3(3-0)
In-depth study of the development of speech sounds, etiologies of articulation and phonological disorders, assessment, procedures and therapeutic approaches for working with individuals with articulation disorders. Demonstration and simulated practice will be provided in class. Prerequisites: CSDO 2325 and CSDO 3305.

4327. Diagnostics in Speech/Language Pathology. 3(3-0)
Course will provide the student with information to demonstrate an understanding of the diagnostic process in the area of Communication Disorders. Knowledge of test protocols and assessment methods in language, articulation, voice and stuttering disorders. Prerequisites: CSDO 3305, CSDO 4321 and CSDO 4333.

4329. Voice and Fluency Disorders. 3(3-0)
Lecture will consist of specific knowledge regarding the symptoms and etiologies of voice and fluency disorders. A basic knowledge of diagnostic and therapeutic procedures will also be obtained. Prerequisites: CSDO 3305 and CSDO 3321.

4331. Speech and Hearing Science. 3(3-0)
Physical properties of sound, sound measurement, basic auditory function, acoustic and physiological phonetics and the perception of speech. Prerequisite: CSDO 3321.

4333. Normal Language Acquisition. 3(3-0)
Symbolic system used by humans to communicate; role of learning in perception, comprehension and expression of linguistic codes; sequential development of normal language skills. Prerequisite: CSDO 3305 or permission of instructor.

4335. Communication Disorders in Children. 3(3-0)
Interventions (principles and methods) for developmentally delayed or disordered language; specific procedures for planning and implementation of therapy. Prerequisites: CSDO 3305 and CSDO 4333.

4336. Communication Disorders in Adults. 3(3-0)
The study of adult disordered communicative processes. Consideration is given to signs and symptoms, etiology, clinical course and vocational-social impact of these disorders. Principles of assessment and intervention are highlighted. Prerequisites: CSDO 2325, CSDO 3305 and CSDO 3321.

JOURNALISM (COMJ)

2129. Publications Laboratory. (COMM 2129) 1(0-2)
Practical experience in publications. The course may be repeated for a maximum of 6 semester hours of credit. Prerequisite: COMM 2311.

2427. Photojournalism. 4(3-2)
Basic techniques of film, exposure, development, flash, filters and printing and composition as they relate to press photography. Laboratory fee, \$5.

3304. Feature and Special Articles. 3(3-0)
Identifying and developing feature story ideas. Reporting and writing feature articles and arranging for appropriate pictures for publication in newspapers or periodicals. Emphasis on training students in identifying markets for nonfiction writing. Prerequisite: junior standing.

3321. Principles of Advertising. 3(3-0)
Advertising writing, layout, typography and art work. Advertising campaigns, selling, practice exercises and advertising work for publication.

4301. History of Journalism. 3(3-0)
Development of the newspaper in England and the United States with attention to the social, economic and political forces which brought about changes in journalistic techniques and in basic ideas as to newspaper functions. Study of the careers of noted journalists.

- 4302. Editorial Writing.** 3(3-0)
Purpose and style of editorial comment. Editorial page editing. Prerequisite: junior standing.
- 4322. Public Relations.** 3(3-0)
Principles of public relations and their application in business, industry, education, government, social agencies and other institutions; the media of public relations; research methods used in public relations; journalistic implications of the public relations process. Case studies and analysis. Practice in public relations planning and writing.
- SPEECH (COMS)**
- 1144. Forensic Lab.** (SPCH 1144) 1(0-1)
Participation and training in forensic activities, such as debate, extemporaneous speaking, oral interpretation and oratory. May be repeated for a total of 6 semester hours. Required for those participating in intercollegiate competition.
- 1311. Introduction to Oral Communication.** (SPCH 1311) 3(3-0)
Theory and practice of speech communication in interpersonal, small group and public speaking.
- 1313. Principles of Speech.** 3(3-0)
Theory and practice of choral speaking, oral reading of children's poetry and prose, creative drama, public speaking and small group discussion with children. Recommended for future elementary teachers.
- 1315. Business and Professional Communication.** (SPCH 1321) 3(3-0)
Theories and skills of speech communication as applied to business and professional situations.
- 1325. Speech Improvement with Phonetics.** 3(3-0)
Use of the International Phonetic Alphabet and its application to the sounds in the English language.
- 1336. Introduction to Television Production.** (COMM 1336) 3(2-3)
The techniques of TV program production and procedures involved. Student participation in videotaped productions from the studio and remote locations.
- 2118. Radio Control Room Operations.** 1(1-0)
Practical experience in campus radio broadcasting activities. May be repeated for a total of 6 semester hours. Prerequisite: 3 semester hours of radio or television.
- 2301. Audio Production.** 3(3-0)
Survey of the techniques and equipment of audio production. Topics will include the use of microphones, tape machines and accessories. Both analog and digital processes will be covered.
- 2331. Radio Announcing and Production.** (COMM 2331) 3(2-3)
The principles of speech for radio and an analysis of the background and trends in broadcasting. An application of the principles for practical experience with emphasis on radio production.
- 2335. Discussion and Debate.** (SPCH 2335) 3(3-0)
Small group theories and techniques as they relate to group processes and interaction as well as the basic principles and practice of argumentation and debate. Prerequisite: COMS 1311 or high school experience.
- 2342. Voice, Phonetics and Diction.** (SPCH 1342) 3(3-0)
Voice production, the International Phonetic Alphabet and its application to the production of the sounds of American English. Required for majors.
- 3304. Advanced Oral Interpretation.** 3(3-0)
Analysis and practice of techniques in the oral interpretation of drama, poetry, prose, programmed readings, lecture recital and group interpretations. Prerequisite: 6 semester hours of speech.

3331. Persuasive Communication. 3(3-0)
Theories and techniques of persuasive communication including the psychological, logical and ethical principles involved. Types of speaking and persuasion in the media will be studied. Required for speech concentration. Prerequisite: COMS 1311 or equivalent.

3337. Intermediate Television Production and Direction. 3(2-4)
Expanded operation and theory of television equipment is utilized in the production and direction of programs for the local educational cable television system. Prerequisite: COMS 1336.

4316. Advanced Seminar in Speech Communication. 3(3-0)
Advanced theory and practice in selected types of speech communication, debate and oral interpretation. Contest speaking, tournament management and communication evaluation. Prerequisite: 6 hours of Speech or Communication.

4331. Readings in Speech Communication and Theatre Arts. 3(3-0)
Research in contemporary thought in speech communication and theatre arts. Prerequisites: COMS 1311, COMS 2335, COMS 2342. (Credit may not be obtained in both COMS 4331 and THEA 4331.)

4335. Advanced Studio and Remote Television Production. 3(1-5)
Mastery of television equipment utilization both in the studio and field. Practical experience in electronic news gathering and electronic field production for educational cable television. Prerequisite: COMS 3337.

THEATRE ARTS (THEA)

1120. Theatre Practice I. (DRAM 1120) 1(0-2)
Experience in the participation in and evaluation of rehearsal and performance activities related to departmental productions. Required for Theatre Arts majors and minors. May be repeated once.

1121. Theatre Practice II. (DRAM 1121) 1(0-2)
Experience in the participation in and evaluation of rehearsal and performance activities related to departmental productions. Required for Theatre Arts majors and minors. May be repeated once.

1241. Makeup for the Stage. (DRAM 1241) 2(1-3)
The theory and practice of stage makeup with emphasis on the latter.

1322. Acting I. (DRAM 1351) 3(2-2)
Beginning concepts of the use of the voice and body in the creation of a character for the stage.

1330. Stagecraft. (DRAM 1330) 3(2-3)
Techniques and practices involved in nonprofessional theatre production, e.g., the school and community theatre. Required participation in actual stage work in production.

2301. Structure of the Arts. 3(2-4)
Art, Music and Theatre Arts are combined in selected problems dealing with arts structure. Creative production is the result of studio activity and critique. Laboratory fee, \$5.

2352. Acting II. (DRAM 1352) 3(2-2)
A continuation of the study of acting concepts involved in the creation of a character for the stage. Prerequisite: THEA 1322.

3131. Rehearsal and Performance I. 1(0-2)
Experience in acting and crew work in departmental productions. Required for Theatre Arts majors and minors. May be repeated once. Prerequisite: THEA 2352 or equivalent.

3132. Rehearsal and Performance II.

1(0-2)

Experience in acting and crew work in departmental productions. Required for Theatre Arts majors and minors. May be repeated once. Prerequisite: THEA 2352 or equivalent.

3302. Women and the Arts.

3(3-0)

Issues surrounding the participation of women in the arts. Selected women who have contributed to the visual and performing arts throughout history are studied in relation to the culture of their time and the principles related to the arts. No previous experience in theatre, art or music required. Prerequisite: completion of visual/performing arts component. (Credit may be obtained in only one of ARTS 3302, MUSI 3302, THEA 3302 or WMST 3302.)

3311. Advanced Problems in Scenography and Performance.

3(2-3)

Consideration of topics such as scenery and lighting design, advanced problems of acting, costume history and construction. May be repeated once for credit when topic changes.

4302. Play Direction.

3(3-0)

Problems of selecting and producing the play, practice in directing the one-act play. Prerequisites: THEA 1241, THEA 2352, THEA 1330.

4304. Creative Drama.

3(3-0)

Theory and practice in techniques of various forms of improvised drama and story dramatization. Prerequisite: 6 semester hours of Speech and Theatre Arts.

4308. Selected Topics in Theatre History and Criticism.

3(3-0)

Studies of the major periods of theatre, such as Greek to Elizabethan, Elizabethan to modern and the development of theatrical criticism. May be repeated once as topic varies. Prerequisite: sophomore standing.

4331. Readings in Speech Communication and Theatre Arts.

3(3-0)

Research in contemporary thought in speech communication and theatre arts. Prerequisites: COMS 1311, COMS 2335, COMS 2342. (Credit may not be obtained in both COMS 4331 and THEA 4331.)

4392. Independent Study in Theatre Arts.

V:1-3

Intensive work in a special area of the student's major or minor. A maximum of 6 semester hours of credit in individual study may be applied toward graduation.

**Degree Requirements
Bachelor of Arts
Communication (Journalism)**

Freshman Year				Junior Year			
ARTS 1201	2	CISA 1301	3	COMM, adv.	3	ARTS 2301, MUSI 2301, or THEA 2301	3
COMM 1307	3	COMM 2311	3	COMM, adv.	3	COMM	3
ENGL 1301	3	ENGL 1302	3	COMS 1311, COMS 1315, COMS 2335	3	COMM	3
HIST 1301	3	HIST 1302	3	Elective, adv.	3	[^] Kinesiology	1
MATH 1314	3	[^] Kinesiology	1	Minor	<u>3</u>	Minor	3
Modern language	<u>3</u>	Modern language	<u>3</u>		15	Minor	<u>3</u>
	17		16			Minor	<u>3</u>
							16
Sophomore Year				Senior Year			
COMM 2309	3	COMM 3301	3	COMM, adv.	3	COMM, adv.	3
ENGL 2342 or 2362	3	ENGL 2342 or 2362	3	COMM, adv.	3	Elective, adv.	3
[^] Kinesiology	1	Modern language	3	Elective, adv.	3	Elective, adv.	3
Modern language	3	POLS 2302	3	Elective, adv.	3	Minor, adv.	3
POLS 2301	3	*Science, same	<u>4</u>	Minor	3	Minor, adv.	3
*Science	<u>4</u>		16	Minor, adv.	<u>3</u>	[^] Social/behavioral	<u>3</u>
	17				18		18

Total Hours Required: 133

33 hours in Communication or Speech/18 advanced; 21 hours in minor field/6 advanced (art, journalism, theatre arts, a modern language, a social science or other field approved by department chair or 24 hours in English); 21 hours of electives to be approved by adviser.

**Must include laboratory*

**Degree Requirements
Bachelor of Arts
Communication (Speech)**

Freshman Year				Junior Year			
ARTS 1201	2	ARTS 2301, MUSI 2301 or THEA 2301	3	COMM or COMS, adv.	3	CISA 1301	3
COMS 1311	3	COMM or COMS	3	COMS 3331	3	COMM or COMS	3
ENGL 1301	3	ENGL 1302	3	Elective, adv.	3	COMM or COMS	3
HIST 1301	3	HIST 1302	3	Elective, adv.	3	Elective, adv.	3
MATH 1314	3	HIST 1302	3	[^] Kinesiology	1	Minor	<u>3</u>
Modern language	<u>3</u>	[^] Kinesiology	1	Minor	<u>3</u>		15
	17	Modern language	<u>3</u>		16		
			16				
Sophomore Year				Senior Year			
COMS 2342	3	ENGL 2342 or ENGL2362	3	COMM or COMS, ADV.	3	COMM or COMS, ADV.	3
ENGL 2342 or ENGL2362	3	Minor	3	COMM or COMS, ADV.	3	COMM or COMS, ADV.	3
[^] Kinesiology	1	Modern language	3	Elective, adv.	3	Elective, adv.	3
Modern language	3	POLS 2302	3	Elective, adv.	3	Elective, adv.	3
POLS 2301	3	*Science, same	<u>4</u>	Minor	3	Minor, adv.	3
*Science	<u>4</u>		16	Minor	<u>3</u>	Minor, adv.	<u>3</u>
	17				18		18

Total Hours Required: 133

33 hours in Communication or Speech/18 advanced; 21 hours in minor field/6 advanced (art, journalism, theatre arts, a modern language, a social science or other field approved by the department chair or 24 hours in English); 21 hours of electives to be approved by adviser.

**Must include laboratory.*

[^]For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

**Degree Requirements
Bachelor of Science
Communication Sciences and Disorders
Minor in Psychology**

Freshman Year				Junior Year			
ARTS 1201	2	CISA 1301	3	Adv PSYC Elec (Minor)	3	Adv PSYC Elec (minor)	3
CSDO 2325	3	ENGL 1302	3	CSDO 3321	3	CSDO 3313	3
ENGL 1301	3	HIST 1302	3	CSDO 4321	3	CSDO 3325	3
HIST 1301	3	[^] Kinesiology	1	CSDO 4333	3	CSDO 4335	3
Math	3	PSYC 2301	3	Elective	<u>3</u>	ENGL 4310	3
*Science	<u>4</u>	*Science	<u>4</u>		15	[^] Kinesiology	<u>1</u>
	18		17				16
Sophomore Year				Senior Year			
ARTS 2301	3	COMS 1311/		CSDO 4327	3	**Adv. Electives	6
ENGL 2314	3	COMS 1315/		CSDO 4331	3	CSDO 4329	3
[^] Kinesiology	1	COMS 2335	3	CSDO 4336	3	Electives	<u>6</u>
POLS 2301	3	CSDO 3305	3	Elective	3		15
PSYC Elec. (Minor)	<u>6</u>	POLS 2302	3	PSYC 3381	<u>3</u>		
	16	PSYC Elective	3		15	Total Hours Required:	127
		Sophomore English	<u>3</u>				
			15				

**Students will choose one Biology from BIOL 1306/BIOL 1106 or BIOL 2401; and CHEM 1105/CHEM 1305 or PHYS 1375 or PHYS 1471.
**Consider CSDO 4223 as an elective.*

**Degree Requirements
Bachelor of Arts
Speech with Teaching Certification**

Freshman Year				Junior Year			
ARTS 1201	2	*CISA 1301	3	COMS 2335	3	COMS 3304	3
COMS 1311	3	COMS 1313	3	EDED 3302	3	COMS 3331	3
ENGL 1301	3	COMS 2342	3	EDHL 1254	2	EDRG 4314	3
HIST 1301	3	ENGL 1302	3	Language (3rd)	3	Language (4th)	3
MATH 1314	3	HIST 1302	3	2nd Teaching Field	3	2nd Teaching Field	<u>3</u>
SOCI 2361	<u>3</u>	[^] Kinesiology	<u>1</u>	2nd Teaching Field	<u>3</u>		15
	17		16		17		
				Summer Session I and II			
				EDED 3333	3	COMS 4316	3
				2nd Teaching Field	<u>3</u>	2nd Teaching Field	<u>3</u>
					6		6
Sophomore Year				Senior Year			
ARTS 2301/MUSI 2301 or THEA 2301	3	COMM 1307	3	COMS 4331	3	EDED 3362	3
ENGL 2342	3	ENGL 2362	3	EDED 3332	3	EDED 4623	6
[^] Kinesiology	1	Language (2nd)	3	2nd Teaching Field	3	EDSE 4391	<u>3</u>
Language	3	POLS 2302	3	2nd Teaching Field	3		12
POLS 2301	3	**Science (2nd)	<u>4</u>	2nd Teaching Field	<u>3</u>		
**Science	<u>4</u>		16		15	Total Hours Reqd:	130-137
	17						

*Total hours vary depending on second teaching field.
*May take EDED 2301 plus 3 hours MATH/STAT/or PHIL 3301.
**Must be consecutive lab science.*

[^]For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

DEPARTMENT OF HISTORY (HIST)

Dean T. Ferguson, *Chair*

Rhode Hall 263. MSC 166. Extension 4106.

Regents Professor

L. Hunter

Professors

Davis, Huebel

Associate Professors

Baker, Ferguson, Houf, Knight, Melendy, Tuller

Lecturer

Pierson

Faculty Emeriti

Albro, Chandler, Rayburn

A Bachelor of Arts degree in History prepares students for careers in law, education, government, business and the military and for study culminating in an advanced or professional degree.

A major in History requires completion of 33 semester hours in History, consisting of five required courses and six elective courses.

A minor in History requires completion of 21 semester hours in History, consisting of five required courses and two elective courses.

Students majoring or minoring in History must complete the introductory courses, HIST 1301, HIST1302 and HIST 2321 and HIST 2322. They must complete HIST 3301 prior to or concurrently with their first upper-level elective course.

Upper-level courses are grouped into four areas of study: United States, Europe, Latin America and Non-western. Majors must take at least one upper-level course in each of three of these four areas of study. Majors must complete at least one 4000-level Crucial Topics course in which they will produce a significant research paper, which will serve as a senior thesis.

1301-1302. American History. (HIST 1301) (HIST 1302) 6(3-0)

A survey of the United States from the era of exploration to the present time. HIST 1301 extends through the period of Reconstruction (1877) and HIST 1302 includes the period following Reconstruction to the present.

2321-2322. The Development of World Civilization. (HIST 2321)(HIST 2322) 6(3-0)

The rise and fall of great world civilizations from pre-literary times to the present. Emphasis is on the political, religious, economic and cultural characteristics of these civilizations and their contributions to the contemporary world.

3301. Methods of Historical Research. 3(3-0)

Procedures and methods of historical research. Introduction to types of historical data, the analysis of sources, the use of computer techniques in historical research and the methods of historical writing. Prerequisite: 6 semester hours of history.

3312. Europe in the Middle Ages. 3(3-0)

Political, economic and cultural developments in Europe from the fall of the Roman Empire to the Renaissance. Prerequisite: 12 semester hours of History and/or Political Science.

3314. Great Britain Since 1603. 3(3-0)

Britain from the union of England and Scotland through the English Civil War, the Glorious Revolution, the rise and decline of the British Empire, to the present. Prerequisite: 12 semester hours of History and/or Political Science.

3316. Europe, 1815-1914. 3(3-0)
Political, social and economic developments in Europe from the Congress of Vienna to the outbreak of World War I with emphasis on the rise of liberalism, nationalism and imperialism. Prerequisite: 12 semester hours of History and/or Political Science.

3318. Europe Since 1914. 3(3-0)
Political, social and economic developments in Europe from World War I to the present. Prerequisite: 12 semester hours of History and/or Political Science.

3320. Russia. 3(3-0)
Russia from the earliest times to the present with emphasis on the Soviet period. Prerequisite: 12 semester hours of History and/or Political Science.

3324. History of Technology and Society. 3(3-0)
A historical study of the development of technology and the shaping of human societies. Prerequisites: 6 semester hours of History and 6 semester hours of Political Science.

3332. American Controversy and Conflict, 1816 to 1850. 3(3-0)
Major questions of the period; sectionalism, national rights versus states' rights, the slavery issue, expansion in the continental United States. Prerequisites: 12 semester hours of History and/or Political Science.

3334. The Civil War and Reconstruction. 3(3-0)
Secession, formation of the Confederacy, military campaigns and Reconstruction. Prerequisite: 12 semester hours of History and/or Political Science.

3336. America's Rise to World Power. 3(3-0)
Progressivism, World War I, the 1920s, the Great Depression and World War II. Prerequisite: 12 semester hours of History and/or Political Science.

3338. The United States Since 1945. 3(3-0)
Post-war abundance, the Cold War, social and cultural changes, the Vietnam era and the post-Nixon years. Prerequisite: 12 semester hours of History and/or Political Science.

3340. United States Social and Cultural History. 3(3-0)
The development of American society and culture with emphasis on religious trends, ethnic groups and the family. Prerequisite: 12 semester hours of History and/or Political Science.

3342. United States Foreign Policy. 3(3-0)
American foreign relations from the Revolution to the present with emphasis on the 20th century. Prerequisite: 12 semester hours of History and/or Political Science.

3344. American Frontier. 3(3-0)
The influence of successive frontiers upon American political, economic and social development from the earliest settlements to 1890. Prerequisite: 12 semester hours of History and/or Political Science.

3346. Texas History. 3(3-0)
Spanish background, Anglo-American settlement, the Revolution and Republic and statehood; economic, cultural and political development. Prerequisite: 12 semester hours of History and/or Political Science.

3348. History of the Mexican-American in the Southwest. 3(3-0)
A survey from the first Spanish settlers to the present. Prerequisite: 12 semester hours of History and/or Political Science.

3350. Latin America. 3(3-0)
Historical background of contemporary Latin America. Prerequisite: 12 semester hours of History and/or Political Science.

3356. Mexico. 3(3-0)
Political, economic and social history of Mexico from pre-Columbian times to the present. Emphasis on the last century.
Prerequisite: 12 semester hours of History and/or Political Science.

3360. Women in History. 3(3-0)
Investigation of the social, economic and political position of women from the Renaissance to contemporary America and a comparison of the ideal expounded by different historical epochs with woman's actual role in each society. (Credit may not be obtained in both HIST 3360 or WMST 4360.) Prerequisite: 12 semester hours of History and/or Political Science.

3362. Economic History. 3(3-0)
Historical development of concepts and practices regarding money, banking, industry and commerce, agribusiness and labor.
Prerequisite: 12 semester hours of History and/or Political Science.

3370. Asian History. 3(3-0)
An introduction to political, social, cultural and economic Asian history from antiquity to the present. Emphasis on the study not only of important Asian leaders, cultures and societies, but also of the various religions and philosophies which originated in Asia.

4370. Crucial Topics in European History. 3(3-0)
Intensive seminar on a specialized topic in European history, culminating in the production of a significant research paper. May be repeated for credit as the topic changes. Prerequisite: HIST 3301 and one other advanced History course.

4380. Crucial Topics in United States History. 3(3-0)
Intensive seminar on a specialized topic in United States history, culminating in the production of a significant research paper. May be repeated for credit as topic changes. Prerequisite: HIST 3301 and one other advanced History course.

4392. Crucial Topics in Latin American History. 3(3-0)
Intensive seminar on a specialized topic in Latin American history, culminating in the production of a significant research paper. May be repeated for credit as the topic changes. Prerequisite: HIST 3301 and one other advanced History course.

4396. Crucial Topics in Non-Western History. 3(3-0)
Intensive seminar on specialized topics in Non-Western history, culminating in the production of a significant research paper. May be repeated for credit as the topic changes. Prerequisites: HIST 3301 and one other advanced History course.

**Degree Requirements
Bachelor of Arts
History**

Freshman Year				Junior Year			
ARTS 1201	2	CISA 1301*	3	Elective, adv.	3	Electives, adv.	3
COMS 1311	3	ENGL 1302	3	HIST 3301 or		HIST, adv.	6
ENGL 1301	3	HIST 1302	3	HIST 4368	3	^Kinesiology	1
HIST 1301	3	^Kinesiology	1	HIST, adv.	3	Minor	<u>6</u>
MATH or PHIL 3301	3	Mod Lang (2nd)	3	^Kinesiology	1		16
Mod Lang (1st)	<u>3</u>	^Social/behavioral	<u>3</u>	Minor	3		
	17		16	^Visual/performing	<u>3</u>		
					16		
Sophomore Year				Senior Year			
ENGL 2342	3	ENGL 2362	3	Electives, adv.	6	Electives, adv.	3
HIST 2321		HIST 2322	3	HIST, adv.	3	HIST, adv.	6
Lab Science (1st)	4	Lab Science (2nd)	4	Minor, adv.	<u>3</u>	Minor, adv.	<u>6</u>
Mod Lang (3rd)	3	Mod Lang (4th)	3		12		15
POLS 2301	<u>3</u>	POLS 2302	<u>3</u>				
	16		16				
						Total Hours Required:	124

**Degree Requirements
Bachelor of Arts
History with Teaching Certification**

Freshman Year				Junior Year			
ARTS 1201	2	EDED 2301	3	EDED 3302	3	EDED 3304	3
ENGL 1301	3	EDHL 1254	2	HIST 3301	3	**HIST, adv.	6
HIST 1301	3	ENGL 1302	3	HIST 3346	3	^Kinesiology	1
Lab Science (1st)	4	HIST 1302	3	^Kinesiology	1	Second Tch. Field	<u>6-9</u>
MATH 1314	3	Lab Science (2nd)	4	POLS 2301	3		16-19
Mod Lang (1st)	<u>3</u>	Mod Lang (2nd)	<u>3</u>	Second Tch. Field	<u>3-6</u>		
	18		18		16-19		
Sophomore Year				Senior Year			
ARTS2301/MUSI 2301 or THEA 2301	3	COMS 1311	3	EDED 3332	3	EDED 3362	3
ENGL 2342	3	ENGL 2362	3	EDRG 4314	3	EDED 4623	<u>6</u>
HIST 2321	3	HIST 2322	3	**HIST, adv.	9		9
Mod Lang (3rd)	3	Mod Lang (4th)	3	Second Tch. Field	<u>3</u>		
Second Tch. Field	3	POLS 2302	3		18	Total Hours Reqd:	132-138
SOCI 2361	<u>3</u>	Second Tch. Field	<u>3</u>				
	18		18				

Total hours vary depending on second teaching field.
Summer Session work may be advisable to reduce term loads.

^For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

*Or other courses meeting the Computer Literacy Requirement described in an earlier section of this Catalog.

**Advanced History must be from approved listing for certification.

**Degree Requirements
Bachelor of Arts
History with Teaching Certification
(Composite Social Studies Emphasis)**

Freshman Year			Junior Year				
ARTS 1201	2	COMS 1311	3	ECON 2301	3	ECON 2302	3
ARTS 2301/MUSI 2301 or THEA 2301	3	EDED 2301	3	EDED 3302	3	EDED 3304	3
ENGL 1301	3	ENGL 1302	3	GEOG 1303	3	EDHL 1254	2
HIST 1301	3	HIST 1302	3	*HIST, adv.	3	*HIST, adv.	6
MATH 1314	3	[^] Kinesiology	1	HIST 3301	3	HIST 3346	3
Mod Lang (1st)	<u>3</u>	Mod Lang (2nd)	<u>3</u>	POLS, adv.	<u>3</u>	POLS 2304	<u>3</u>
	17		16		18		20
Sophomore Year			Senior Year				
ENGL 2342	3	ENGL 2362	3	EDED 3332	3	EDED 3362	3
GEOG 1301/GEOG 1101 or GEOG 1302/ GEOG 1102	4	GEOG 1405	4	EDRG 4314	3	EDED 4623	<u>6</u>
HIST 2321	3	HIST 2322	3	GEOG 3331	3		9
Mod Lang (3rd)	3	[^] Kinesiology	1	*HIST, adv.	6		
POLS 2301	3	Mod Lang (4th)	3	POLS, adv.	<u>3</u>	Total Hours Required: 134	
SOCI 2361	<u>3</u>	POLS 2302	<u>3</u>		18		
	19		17				

Summer Session work may be advisable to reduce term loads.

[^]For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

**Advanced History must be from approved listing for certification*

DEPARTMENT OF LANGUAGE AND LITERATURE

Susan L. Roberson, *Chair*

Fore Hall 110. MSC 162. Extension 2516.

Regents Professor

Thomas

Professors

Halford, Mucchetti, Sabrio

Associate Professors

Downs, Richard, Roberson

Assistant Professors

Johnson-Vela, Rios, Rode, Rus, Vela Cordova

Instructor

Rodriguez-Jimenez

Lecturers

Acuff, Borse, Goswami, Hailey, Tanner, Wright

Faculty Emeriti

Gunn, Herrick, Rhode, Rovira, Smith

The department provides instruction in the fields of English, French and Spanish.

Special Notations for French and Spanish:

1. Students who have successfully completed a 2000- or 3000-level course in the same language with a grade of *C* or better may not take a less advanced course in the same language for credit.
2. Students who completed their secondary education in an institution where a foreign language was the principal language of instruction cannot enroll in elementary or intermediate courses in that language.
3. A maximum of 12 semester hours of college credit in first or second level for previously completed work in foreign languages may be allowed. Credit may be obtained in one of three ways: (1) by achieving an acceptable score in the CEEB Advanced Placement Examination (this examination must be taken prior to first registration at A&M-Kingsville; see "Credit by Advanced Placement Examination [CEEB]" for details); (2) by local examination (see "Credit by Local Examination" for details); or (3) by obtaining an acceptable score in the MLS Cooperative Foreign Language Test.

ENGLISH (ENGL)

1301. Rhetoric and Composition. (ENGL 1301)

3(3-0)

Study of English grammar and usage and the principles of effective expository and argumentative writing; development of reading skills; analysis of short essays as models for writing. Required of all freshmen.

1302. Rhetoric and Composition. (ENGL 1302)

3(3-0)

Continuation of ENGL 1301 with more exacting standards for writing skills and reading comprehension; analysis of short essays with an emphasis on argument, language and ideas. Includes research skills component. Required of all freshmen. Prerequisite: ENGL 1301.

2314. Technical Writing. (ENGL 2314)

3(3-0)

Scientific writing style and technical methods of exposition: definition, description, process, analysis and interpretation. Prerequisites: ENGL 1301, ENGL 1302.

2342. Readings in Poetry and Novel. (ENGL 2322)

3(3-0)

Study of poems and novels by American, British and world authors emphasizing the characteristics of each genre and further refining writing skills. Prerequisites: ENGL 1301, ENGL 1302.

- 2362. Readings in Short Story and Drama.** (ENGL 2323) 3(3-0)
Study of short stories and plays by American, British and world authors emphasizing the characteristics of each genre and further refining writing skills. Prerequisites: ENGL 1301, ENGL 1302.
- 3300. Special Topics in Writing.** 3(3-0)
Practice and refinement of the writing process with emphasis on audience, purpose and form, paying attention to rhetorical invention, arrangement and style appropriate to the particular topic. May be repeated when a different topic is scheduled. Prerequisite: completion of sophomore English requirement.
- 3373. Children's Literature.** 3(3-0)
Books for children from nursery school through middle school. Students participate in writing poetry, choral reading, book reviewing, story telling and responding to books in a variety of ways. Prerequisite: 6 semester hours of sophomore English.
- 3376. Mythology.** 3(3-0)
Greek and Roman mythology; epics of Western Europe, as background for the study of literature in the English language. Prerequisite: 6 semester hours of sophomore English.
- 3399. Special Topics in Literature or Language for Non-English Majors.** 3(3-0)
Readings in special topics such as science fiction, detective novels, Chicano literature, Black literature, women's studies or the dialects of American English. Prerequisite: completion of sophomore requirements in English.
- 4310. Introduction to Linguistics.** 3(3-0)
An introduction to the scientific study of language. Prerequisite: 6 semester hours of sophomore English.
- 4311. English Grammar and Usage.** 3(3-0)
The structure of the present-day English language, with attention to its varieties and history. Prerequisite: 6 semester hours of sophomore English.
- 4322. British Literature of the Middle Ages.** 3(3-0)
Selected readings in translation from Old English to Middle English poetry and prose, with emphasis on *Beowulf*, the Arthurian legends and the *Canterbury Tales*. Prerequisite: 6 semester hours of sophomore English.
- 4325. Literature of the British Renaissance.** 3(3-0)
Selected readings in poetry, prose and non-Shakespearean drama of the 16th and 17th centuries. Prerequisite: 6 semester hours of sophomore English.
- 4327. Restoration and Eighteenth-Century British Literature.** 3(3-0)
The period from 1660 to 1800 with representative works of the major writers in verse, prose and drama. Prerequisite: 6 semester hours of sophomore English.
- 4331. The Major Plays of Shakespeare.** 3(3-0)
A close analysis of representative comedies and histories and the major tragedies. Prerequisite: 6 semester hours of sophomore English.
- 4341. Studies in the British Novel.** 3(3-0)
Study of significant British novels, with emphasis upon such authors as Fielding, Richardson, Eliot, Hardy, Burgess and Joyce. Prerequisite: 6 semester hours of sophomore English.
- 4343. Nineteenth-Century British Literature.** 3(3-0)
Major writers of the Romantic and Victorian periods. Cultural background and representative works, including poetry and nonfiction prose. Prerequisite: 6 semester hours of sophomore English.
- 4346. Twentieth Century British Literature.** 3(3-0)
Chief modern British writers of poetry, prose and drama. Prerequisite: 6 semester hours of sophomore English.

4361. Studies in the American Novel. 3(3-0)
Study of significant American novels. Emphasis may be on historical development, certain periods, special topics treated by American novelists or varieties of American fiction. Prerequisite: 6 semester hours of sophomore English.

4365. Colonial and Nineteenth-Century American Literature. 3(3-0)
Survey of the chief nineteenth-century poets and prose writers, with some attention to their colonial predecessors. Prerequisite: 6 semester hours of sophomore English.

4366. Twentieth-Century American Literature. 3(3-0)
Survey of the chief twentieth-century American poets and prose writers. Prerequisite: 6 semester hours of sophomore English.

4370. Special Topics in Literature or Language. 3(3-0)
Selected topics in British or American literature and/or world literature and language. A topic for intensive investigation will be selected for each offering of the course. May be repeated once for credit. Prerequisite: 6 semester hours of sophomore English. (Credit may not be obtained in both ENGL 4370, when topic is taught from a women's studies perspective and WMST 4370.)

4384. Studies in Drama. 3(3-0)
Selected topics in American, British or Continental drama. Emphasis may be on historical development, certain periods or some other approach to the study of drama. May be repeated once when a different topic is scheduled. Prerequisite: 6 semester hours of sophomore English.

4390. Explorations in English. 3(3-0)
An integrated study of language, language activities, composition, the composing process, literature, relating literature and reading and mass media. Current research will be explored. Prerequisite: 9 advanced hours of English.

FRENCH (FREN)

1311. Elementary French I. (FREN 1311) 3(3-0)
For students without previous knowledge of the language. An introductory course teaching the fundamentals of French in order to develop listening, speaking, reading and writing abilities. Language laboratory required.

1312. Elementary French II. (FREN 1312) 3(3-0)
Continuation of FREN 1311. Language laboratory required. Prerequisite: FREN 1311 or departmental approval.

2311. Intermediate French. (FREN 2311) 3(3-0)
Continuation of FREN 1312. Emphasis on speaking and listening abilities. Language laboratory required. Prerequisite: FREN 1312 or two or more years of high school French with departmental approval.

2312. Intermediate French. (FREN 2312) 3(3-0)
Continuation of FREN 2311. Emphasis on reading and writing abilities. Language laboratory available. Prerequisite: FREN 1312 or two or more years of high school French with departmental approval.

3301. Advanced Grammar and Composition. 3(3-0)
The basic principles and formal study of grammar. Prerequisite: 12 semester hours of French.

3321. French Literature to 1800. 3(3-0)
History of French literature in the Middle Ages, Renaissance and classical period through the 18th century. Conducted in French. Prerequisite: 12 semester hours of French.

3322. French Literature from 1800. 3(3-0)
History of French literature from 1800 through contemporary literature. Conducted in French. Prerequisite: 12 semester hours of French.

4301. Advanced Written and Oral Composition. 3(3-0)
Written and oral presentations: expository, persuasive, narrative and descriptive. Prerequisite: 3 semester hours of advanced French.

4310. Selected Topics in French Civilization and Literature. 3(3-0)
Topics include aspects of French civilization such as art, music and cinema and themes presented through all literary genres such as changing roles in society, education, religion and justice. Conducted in French. May be repeated for credit as topic changes. Prerequisite: 6 semester hours of advanced French.

SPANISH (SPAN)

1301. Elementary Spanish I. 3(3-1)
An introductory course for students who possess a passive or spoken knowledge of Spanish and who wish to develop greater competency in Spanish. Stress on the four basic skills: listening, speaking, reading and writing. Language laboratory required.

1302. Elementary Spanish II. 3(3-1)
Continuation of SPAN 1301. Language laboratory required. Prerequisite: SPAN 1301 or departmental approval.

1313. Elementary Spanish I. (SPAN 1311) 3(3-1)
Open only to students with little or no previous contact with the Spanish language. An introductory course teaching the fundamentals of Spanish in order to develop listening, speaking, reading and writing abilities. Language laboratory required.

1314. Elementary Spanish II. (SPAN 1312) 3(3-1)
Continuation of SPAN 1313. Language laboratory required. Prerequisite: SPAN 1313 or departmental approval.

2301. Intermediate Spanish I. 3(3-0)
A review of Spanish grammar and expansion of basic language skills. Selected readings by Hispanic writers. Conducted in Spanish. Language laboratory available. Prerequisite: SPAN 1302; SPAN 1314 or two or more years of high school Spanish with departmental approval.

2302. Intermediate Spanish II. 3(3-0)
Continuation of SPAN 2301. Language laboratory available. Prerequisite: SPAN 2301 or SPAN 2311.

2311. Intermediate Spanish I. (SPAN 2311) 3(3-1)
A review of Spanish grammar and expansion of basic language skills. Language laboratory required. Prerequisite: SPAN 1314 or three or more years of high school Spanish with departmental approval.

2312. Intermediate Spanish II. (SPAN 2312) 3(3-0)
Continuation of SPAN 2311. Language laboratory required. Prerequisite: SPAN 2311.

3301. Advanced Spanish Grammar. 3(3-0)
A review of the basic principles of Spanish grammar to be followed by a detailed study of the finer points of grammar and syntax. Prerequisite: SPAN 2302 or SPAN 2312.

3302. Spanish Composition. 3(3-0)
Literary and technical writing and composition; instruction and practice in basic writing; analysis of different literary prose pieces as models for writing. Conducted in Spanish. Prerequisite: SPAN 2312 or SPAN 2302.

3321. Survey of Spanish Peninsular Literature. 3(3-0)
The history of Spanish literature from its beginning to the present. Conducted in Spanish. Prerequisite: SPAN 2302 or SPAN 2312.

3361. Survey of Spanish-American Literature.

3(3-0)

The history of Spanish-American literature from its beginning to the present. Conducted in Spanish. Prerequisite: SPAN 2302 or SPAN 2312.

4311. Spanish Linguistics.

3(3-0)

A detailed linguistic study of Spanish and a contrastive comparison with English. Prerequisite: SPAN 2302 or SPAN 2312.

4319. Hispanic Culture.

3(3-0)

Survey of Hispanic culture. Main aspects of culture as found in Spain, Spanish America and the Hispanic communities in the U.S.A. Conducted in Spanish. Prerequisite: SPAN 2302 or SPAN 2312.

4320. Topics in Spanish Literature.

3(3-0)

Topics in Spanish American and Spanish Peninsular literature. Conducted in Spanish. May be repeated as topics change. Prerequisites: SPAN 2302 or SPAN 2312.

Degree Requirements
Bachelor of Arts
English

Freshman Year			Junior Year	
ARTS 1201	2	*ARTS 2301, MUSI 2301	Elective	3
ENGL 1301	3	or THEA 2301	ENGL 4322, ENGL 4325,	ENGL 4310/
FREN 1311 or		CISA 1301 or	ENGL 4327 or	ENGL 4311
SPAN 1301/SPAN 1313	3	EDED 2301	ENGL 4384	ENGL 4341/
HIST 1301	3	ENGL 1302	ENGL 4384	ENGL 4343/
^Mathematics	<u>3</u>	FREN 1312 or	ENGL 4331	ENGL 4346/
	14	SPAN 1302/	^Kinesiology	ENGL 4384
		SPAN 1314	Minor, adv.	ENGL 4384
		HIST 1302	POLS 2301	^Kinesiology
				Minor, adv.
				**PHIL/RELG elective
				POLS 2302
				<u>3</u>
				16
				16
Sophomore Year			Senior Year	
COMS 1311/		ENGL 2342 or	Elective, adv.	3
COMS 1315/		ENGL 2362	ENGL, adv.	3
COMS2335	3	FREN 2312	ENGL 4361, ENGL 4365,	ENGL 4361/ENGL 4365/
ENGL 2342 or		SPAN 2302/	ENGL 4366 or	ENGL 4366/
ENGL 2362	3	SPAN 2312	ENGL 4370	ENGL 4370
FREN 2311		Minor or elective	Minor, adv.	Minor, adv.
or SPAN 2302/		Science w/lab	Minor or elective, adv.	Minor or elective, adv.
SPAN 2311	3	^Social/behavioral	<u>3</u>	<u>3</u>
^Kinesiology	1		15	15
Minor or elective	3			
Science w/lab	<u>4</u>			
	17			
				Total Hours Required: 124

*Or any 3 SCH of lab or studio courses from Art, Music, Theatre Arts.

**To be chosen from PHIL 1301/3301/3321/3322 or RELG 1301/3339.

All courses must be approved by the department.

^For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

**Degree Requirements
Bachelor of Arts
English with Teaching Certification**

Freshman Year				Junior Year		EDED 3332	3
ARTS 1201	2	COMS 1311	3	EDED 3302	3	EDED 3362	3
ENGL 1301	3	EDED 2301	3	EDED 3310	3	EDRG 3344	3
FREN 1311 or		ENGL 1302	3	EDED 3333	3	EDRG 4389	3
SPAN 1301/		FREN 1312 or		EDRG 3314	3	ENGL 4341/	
SPAN 1313	3	SPAN 1302/		ENGL 4311	3	ENGL 4343/	
HIST 1301	3	SPAN 1314	3	ENGL 4331	<u>3</u>	ENGL 4346/	
[^] Mathematics	3	HIST 1302	3		18	ENGL 4384	3
[^] Visual/performing arts	<u>3</u>	[^] Kinesiology	<u>1</u>			ENGL 4361/	
	17		16			ENGL 4365/	
						ENGL 4366/	
						ENGL 4370	<u>3</u>
							18
Sophomore Year				Senior Year		EDED 4623	6
ENGL 2342 or		ENGL 2342 or		EDRG 3321	3	EDSE 4391	3
ENGL2362	3	ENGL 2362	3	EDRG 4314	3	ENGL 4361/	
FREN 2311/FREN 2312		FREN 2311/FREN 2312		EDRG 4330	3	ENGL 4365/	
or SPAN 2301/		or SPAN 2302/		ENGL 4322/		ENGL 4366	
SPAN 2311	3	SPAN 2312	3	ENGL 4325/		ENGL 4370	<u>3</u>
[^] Kinesiology	1	[^] Kinesiology	1	ENGL 4327/			12
POLS 2301 or		POLS 2301 or		ENGL 4384	3		
POLS 2302	3	POLS 2302	3	ENGL 4390	<u>3</u>		
Science w/lab	4	Science w/lab	<u>4</u>		15		
[^] Social/behavioral	<u>3</u>		14			Total Hours Req'd:	127
	17						

Note: Apply for EDED and EDRG

[^]For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

DEPARTMENT OF MATHEMATICS

Daniel J. Suson, *Interim Chair*

Rhode Hall 358. MSC 172. Extension 3517.

Professors

Bingham, Bodjanova, Cecil, Goode, Land, Morey, Wang, Wu

Associate Professors

Carroll, Sedory, Thurston

Assistant Professor

Chen

Lecturer

Sabrio

Teaching Retiree

Kay

The department offers several programs designed to give the student an insight into the structure and applications of mathematics and statistics necessary for industrial or governmental employment, teaching or pursuit of an advanced degree in mathematics and statistics.

Students are allowed to register for freshman mathematics and statistics courses appropriate to their high school mathematics preparations and/or entrance examination scores as determined by the department.

MATHEMATICS (MATH)

1314. College Algebra. (MATH 1314)

3(3-0)

College-level topics in algebra including functions, graphs, variation, piecewise defined functions, equations of lines, elementary curve fitting, quadratic equations and functions, systems of linear and nonlinear equations, composition of functions, inverse functions, exponential and logarithmic functions and applications related to these topics. Prerequisite: two years of high school algebra and/or appropriate scores on mathematics placement tests.

1316. Trigonometry. (MATH 1316)

3(3-0)

Fundamental notions and definitions, functions of angles, logarithms, circular measure, solution of triangles. Required of all engineering students. Prerequisite: two years of high school algebra or MATH 1314 (MATH 1314 and MATH 1316 may be taken concurrently.)

1324. Mathematics for Business and Economics I. (MATH 1324)

3(3-0)

A course designed for students in business administration. Selected topics from finite mathematics including: linear inequalities, vectors, matrices, linear programming and probability. Prerequisite: two years of high school algebra and/or appropriate scores on mathematics placement tests. Laboratory fee, \$5.

1325. Mathematics for Business and Economics II. (MATH 1325)

3(3-0)

Applications of the theory of extrema. Area under a curve and its applications. Introduction to statistical measures. Prerequisite: MATH 1314 or MATH 1324.

1334. Contemporary Mathematics.

3(3-0)

An introduction to several contemporary applications of mathematics for the nonmajor. Emphasis is on the variety of problems which can be modeled and solved by analytic and quantitative means. Topics will vary, but may include such as: applications of graph theory to management problems; encoding and encrypting information; problems of social choice-fair division, voting systems, conflict; topics in geometry; and data analysis. Prerequisites: ALGE 0301 and/or appropriate scores on mathematics placement tests.

1348. Analytic Geometry. (MATH 1348)

3(3-0)

Equations and their graphs. Cartesian and polar coordinates, the straight line, circles and conic sections. Operations with vectors, the dot and cross product. Prerequisites: MATH 1314 and MATH 1316.

1350. Fundamentals of Mathematics I. 3(3-0)
Problems from number theory, number systems, systems of operations and proportional reasoning. Requires approaching problems from multiple perspectives, drawing connections among those perspectives and strengthening flexibility and fluency in mathematical thinking and communicating. Not applicable for credit in the physical sciences or engineering. Prerequisite: MATH 1314 or higher.

1351. Fundamentals of Mathematics II. 3(3-0)
Problems from probability, statistics, measurement, geometry and spatial thinking. Requires approaching problems from multiple perspectives, drawing connections among those perspectives and strengthening flexibility and fluency in mathematical thinking and communicating. Not applicable for credit in the physical sciences or engineering. Prerequisite: MATH 1350.

2413. (Formerly MATH 2313.) Calculus I. 3(3-0)
Limits and continuity. Definition of the derivative of a function and techniques of differentiation. Applications of the derivative to maximizing or minimizing a function, curve sketching and rate of change problems. Introduction to the integral of a function, with an application to areas. Prerequisite: MATH 1348.

2414. (Formerly MATH 2314.) Calculus II. 3(3-0)
This course is a continuation of MATH 2413. Differentiation and integration of logarithmic, exponential and trigonometric functions. Techniques of integration. Applications of the integral to problems such as volumes of revolution, work, arc length and fluid pressure. Prerequisite: MATH 2313 or MATH 2413.

3415. (Formerly MATH 3315.) Calculus III. 3(3-0)
This course is a continuation of MATH 2414. Topics to be covered include sequences, series, expansion of functions, multiple integrals and partial derivatives. Prerequisite: MATH 2314 or MATH 2414. Laboratory fee, \$5.

3320. Differential Equations. 3(3-0)
The ordinary differential equations of physics, chemistry and engineering; methods for their solution and the properties of their solution. Introduction to partial differential equations. Prerequisite: MATH 2414. Laboratory fee, \$5.

3325. An Introduction to Mathematical Proofs. 3(3-0)
Principles and techniques of discovering and writing correct mathematical proofs. Independently prove theorems from various areas in mathematics, which may include topics from logic, the structure of the real number system, number theory, geometry and algebra. Prerequisite: MATH 2413.

3340. Linear Algebra with Applications. 3(3-0)
Systems of linear equations. Matrices and determinants. Vector spaces, subspaces, bases and dimension. Linear transformations and their representations by matrices. Orthogonality, eigenvectors and diagonalization. Not applicable for credit in the physical sciences or engineering. Prerequisite: MATH 2413. Laboratory fee, \$5.

3360. Modern Geometry. 3(3-0)
Axiomatic approach, set theory and applications in geometry. Not applicable for credit in the physical sciences or engineering. Prerequisite: MATH 3325.

3370. Discrete Mathematics. 3(3-0)
This course covers many topics in mathematics which are important in computer science. Some of these topics are sets, relations, functions, algorithms, graphs, monoids, lattices, Boolean algebras and groups. Prerequisite: 3 semester hours of advanced mathematics. Laboratory fee, \$5.

3371. Problem Solving with Computers. 3(3-0)
Brief historical overview of computing and computers; strategies for solving problems by computers; programming in a higher level language. Not applicable for credit in the physical sciences or engineering. Prerequisite: MATH 2413. Laboratory fee, \$5.

3390. Selected Topics in Mathematics. 3(3-0)
Different topics will be covered at varying times. May be repeated for credit with consent of the instructor. Prerequisite: 3 semester hours of advanced mathematics.

4321. Real Variables. 3(3-0)
The real number system, its structure and properties. Properties of real functions and sequences, including uniform continuity and the Cauchy criterion. Introduction to the theory of sets. Theory and application of the derivative. Introductory concepts of function spaces, norms and metrics. Prerequisite: 6 semester hours of advanced mathematics, including MATH 3325.

4340. Modern Algebra. 3(3-0)
Properties of the Integers: divisibility, prime factorization and congruences. Integral domains, rings and fields. Groups, permutations and cosets. A historical development of these topics is included. Not applicable for credit in the physical sciences or engineering. Prerequisite: MATH 3325.

4341. Linear Algebra and Matrix Theory. 3(3-0)
Vector spaces and their linear subspaces. Representation of linear transformations by matrices. Normal forms, eigenvalues, special transformations and applications. Prerequisite: 6 semester hours of advanced mathematics. Laboratory fee, \$5.

4370. Vector Analysis. 3(3-0)
Vector algebra and geometry. Scalar and vector products. Vector functions and motion in polar coordinates. Scalar and vector fields with applications to line and surface integrals. Prerequisites: MATH 3415 and MATH 3320 or equivalent.

4371. The Laplace Transformation and its Applications. 3(3-0)
An introduction to the theory of the Laplace Transformation. Applications to the solution of ordinary and partial differential equations, integral equations, difference equations and integro-differential equations. An introduction to other types of integral transformations. Prerequisites: MATH 3415 and MATH 3320.

4372. Mathematics for Physics and Engineering I. 3(3-0)
Infinite series, matrix methods, vector analysis, applied multivariate calculus and Fourier series. Prerequisites: MATH 3415 and MATH 3320 or their equivalent. Laboratory fee, \$5.

4373. Applications of Matrix Methods. 3(3-0)
Matrices and their inverses, determinants, eigenvalues and eigenvectors, Jordan canonical forms. Applications to simultaneous linear equations, matrix calculus and linear differential equations. Prerequisites: MATH 3415 and MATH 3320. Laboratory fee, \$5.

4374. Numerical Analysis. 3(3-0)
The mathematical formation of the concepts in numerical analysis. These concepts include the theory of errors, roots of equations, interpolation, linear systems of equations, numerical differentiation and integration and solutions of ordinary differential equations. Prerequisites: MATH 3415 and MATH 3320. Laboratory fee, \$5.

STATISTICS (STAT)

1342. Elementary Statistics. (MATH 1342) 3(3-0)
Elementary description of tools of statistics inference, including empirical and theoretical distributions, probability, sampling, treatment of both continuous and discrete data, correlation and applications to practical problems. Prerequisite: MATH 1314 or MATH 1324. Laboratory fee, \$5.

4301. Biometrics. 3(3-0)
Methods of analyzing biological data including testing for goodness of fit, contingency tables, testing one-sample and two-sample and paired-sample hypotheses, linear regression and correlation. Prerequisites: MATH 1314 or its equivalent and 15 semester hours of 3000- or 4000-level agriculture or biology courses. Laboratory fee, \$5.

4303. Statistical Methods.

3(3-0)

This course is designed as a service course for students majoring in agriculture, biology, engineering or a social science. Review of basic statistical concepts. Introduction to methods of analysis such as multiple regression, analysis of variance and the design of experiments. Emphasis will be placed on the efficient use of existing computer programs to obtain meaningful analyses. Prerequisite: MATH 2414 or an introductory statistics course. Laboratory fee, \$5.

4350. Probability.

3(3-0)

Sample spaces, combinatorics, independence, conditional probability and Bayes' rule. Discrete and continuous probability distributions, Chebychev's inequality and limit theorems. Prerequisite: MATH 3415.

**Degree Requirements
Bachelor of Science
Mathematics
(Emphasizing Computational Mathematics)**

For this program the first two years are the same as the preceding except that STAT 1342 is to replace BIOL 1308/BIOL 1108, BIOL 1411 or BIOL1413 and that 6-8 hours of biology may be substituted in place of CHEM 1311, CHEM 1111, CHEM 1312 and CHEM 1112.

Junior Year			
CSEN 2330	3	CSEN 4363	3
Elective	3	#MATH, adv. Elective	3
#MATH, adv.	3	#MATH 4373	3
#MATH 3320	3	Mod Lang (4 th)	3
Mod Lang (3rd)	3	POLS 2302	3
POLS 2301	<u>3</u>	STAT 4303	<u>3</u>
	18		18
Senior Year			
ARTS 2301/MUSI 01/THEA 2301	3	CSEN 4362 or CSEN 4366	3
CSEN 2328	3	Elective	3
CSEN 4361	3	#MATH 4321	3
^ <i>Kinesiology</i>	1	PHIL 3301	<u>3</u>
#MATH, adv. Elective	<u>3</u>		12
	13		

**Degree Requirements
Bachelor of Arts
Mathematics with Teaching Certification**

Freshman Year				Junior Year			
BIOL 1201	2	@CHEM or PHYS	4	ARTS 2301, MUSI 2301, or THEA 2301	3	EDED 3333	3
@CHEM or PHYS	4	EDED 2301	3	EDED 3302	3	ENGL 2342	3
COMS 1311	3	ENGL 1302	3	#MATH 3415 or		#MATH 3371	3
ENGL 1301	3	^ <i>Kinesiology</i>	1	MATH 3320	3-4	#MATH 4320 or	
#MATH 1348	3	#MATH 2413	4	#MATH 3360	3	MATH 4321	3
^ <i>Kinesiology</i>	<u>1</u>	#STAT 1342	<u>3</u>	Modern language (same)	3	Modern language	
	16		18	POLS 2301	<u>3</u>	(same)	3
					18-19	POLS 2302	<u>3</u>
							18
Sophomore Year				Summer Session I & II			
BIOL, GEOG or GEOL	4	BIOL, GEOG or GEOL	4	EDHL 1254	2		
HIST 1301	3	HIST 1302	3	EDED 3362	<u>3</u>		
#MATH, Adv	3	^ <i>Kinesiology</i>	1	Senior Year			
MATH 2414	4	#MATH 3325	3	EDED 3332	3	EDED 4623	6
Modern language 1st	<u>3</u>	#MATH 3370	3	ENGL 2362	3	EDRG 4314	3
	17	Modern language (same)	<u>3</u>	#MATH 3340 or		EDSE 4391	<u>3</u>
			17	MATH 4341	3		12
				#MATH 4340 or		Total Hours Req'd: 136-137	
				MATH 4342	3		
				SOCI 2361	<u>3</u>		
					15		

#No mathematics course may be counted toward the degree unless the grade is at least a "C."

**Apply for Admission to Teacher Education after 60 hours.

@Must include CHEM 1312 or PHYS 2326 and their prerequisites.

^For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

MILITARY SCIENCE (ROTC)

U.S. ARMY ROTC

Evelyn Tirado, *Professor of Military Science*
ROTC Building, MSC 204. Extension 3201.

Professor

Tirado

Assistant Professors

Gonzalez, Vela

Instructors

Bell, Juarez, Spratt

The department's objective is the development of selected men and women with potential to serve as commissioned officers in the active Army, National Guard or Army Reserve. A student who completes the program will have developed leadership and managerial potential; have a basic understanding of military fundamentals and the requirements of national security; have acquired an understanding of the fundamental concepts of military art and science; have developed a strong sense of personal honor, integrity and individual responsibility; and have developed a better understanding of human relationships. The leadership and management experience gained through Army ROTC and service as a commissioned officer will benefit the student in civilian as well as in military science and national defense pursuits.

Minor

A student may pursue an interdisciplinary minor in Military Science. Courses for a total of 22 semester hours should be selected in consultation with the Professor of Military Science.

Army Scholarship Program: Any student who meets prerequisites may compete for nationally awarded US Army scholarships which pay for tuition, books, fees and other purely educational costs and a tax-free monthly subsistence allowance for 10 months of each year the scholarship is in effect.

Army Training-Airborne and Air Assault or Other Training: Selected cadets may be eligible to compete for attendance at Airborne, Air Assault or other training as available. Selection is based upon motivation, physical condition and academic Military Science performance.

Veteran's Assistance: Veterans who enroll in upper level Military Science receive a tax-free monthly subsistence allowance for 10 months each of two years in addition to benefits provided by the Veterans' Administration, Veteran's Education Assistance Program or the GI Bill/Army College Fund.

Leadership Laboratory: Required for Military Science courses. Designed to give the student an opportunity to practice hands-on lessons learned in class. Students are placed in leadership roles executing scenarios that challenge their organizational skills through the use of small-unit tactics. Scenarios may involve survival, water safety, rappelling, map reading and land navigation and patrolling using paint ball equipment.

LOWER DIVISION MILITARY SCIENCE CURRICULUM

Lower division courses provide an opportunity for students to satisfy their curiosity about the U.S. Army by exploring their own interests and aptitudes in courses which carry no obligation for further study and no obligation for military service. All Military Science courses may be used to satisfy kinesiology of general education requirements.

1211. Ranger Challenge Laboratory.

2(1-2)

Practical leadership and teamwork training in rappelling, rope bridges, weapons firing, map reading and land navigation, water safety, patrolling and other ranger skills. Includes a weekend field trip where the techniques learned will be applied to competitive events. May be repeated for credit. Prerequisite: approval of the Professor of Military Science.

1301. Master Student and Basic Military Science. 3(2-2)
Designed as an introductory course for ROTC which develops the individual student's skills required for a successful academic experience. Stresses study skills in note taking, motivation, time management, memory, reading, writing, creativity, relationships and physical fitness. Includes a leadership laboratory and a weekend field trip.

1303. Marksmanship and Basic Military Science. 3(2-2)
Basic techniques of rifle and pistol marksmanship with practical experience on indoor range, plus an orientation in basic military science. Includes a leadership laboratory and a weekend field trip.

1304. Wilderness Survival and Basic Military Science. 3(2-2)
Designed to build individual confidence through development of survival skills and participation in adventure training. Stresses map reading, rappelling, cardio-pulmonary resuscitation (CPR) and fundamental military science skills. Includes a leadership laboratory and a weekend field trip.

2303. Leadership and Intermediate Military Science. 3(2-2)
An application of leadership principles and intermediate military skills, with emphasis on individual and squad level tactics, advanced land navigation and first aid techniques. Stresses physical fitness and provides adventure training. Includes a leadership laboratory. Prerequisites: ROTC 1303 and 1304 or approval of Professor of Military Science.

2304. Leadership and Intermediate Military Science. 3(2-2)
A continuation of the application of leadership principles and intermediate military skills. Management and motivational techniques are studied through placement of students in positions of small unit leadership. Stresses physical fitness and provides adventure training in leadership positions. Includes a leadership laboratory. Prerequisite: ROTC 1303, ROTC 1304 and ROTC 2303 or approval of Professor of Military Science.

UPPER DIVISION MILITARY SCIENCE CURRICULUM

The Advanced Military Science Program at A&M-Kingsville allows qualified students to earn a commission as a Second Lieutenant in the active Army, the Army Reserve or the National Guard. These courses also allow the first opportunity for most college students to make a formal and personal commitment to the preservation of the values embodied in the Constitution of the United States. For enrollment in upper level military science courses the student must meet these prerequisites:

- a. be enrolled as a full-time student (12 semester hours minimum for an undergraduate).
- b. be of good moral character as evidenced in the community and the university.
- c. have approximately two academic years remaining toward a baccalaureate degree or advanced degree (the requirement may be waived) and a minimum GPA of 2.0.
- d. meet medical fitness requirements as prescribed by U.S. Army regulations.
- e. either (1) satisfactorily complete any two of ROTC 1301, ROTC 1303 or ROTC 1304, then, ROTC 2303 and ROTC 2304; (2) possess qualification through any JROTC program (full or partial qualification depending upon participation); (3) satisfactorily complete the six-week summer basic camp at Fort Knox, Kentucky; (4) qualify through enlistment in the National Guard or Army Reserve (after successful completion of basic training); or (5) honorably complete enlisted service with a favorable reenlistment code, or have at least 60 semester hours and agree to attend the six-week summer basic camp at Fort Knox, Kentucky, the summer following enrollment in upper-level military science courses.

Qualified enrollment in upper division military science courses entitles each cadet to a tax-free monthly subsistence allowance for 10 months per year for two years.

3303. Advanced Military Science. 3(3-2)
Methods and techniques of planning, preparing and conducting individual and collective military training and operations. Leadership laboratory may be conducted off campus on weekends.

3304. Advanced Military Science. 3(3-2)
The leader's role in small unit tactics. Offensive and defensive operations, use and deployment of communication equipment, weapons and other tactical equipment. Leadership laboratory may be conducted off campus on weekends.

3405.Internship in Military Science.

4(15-25)

Six weeks of total environment training consisting of practical application of leadership and management skills. Formal instruction in tactics, techniques and skills required for all future officers. Prerequisites: ROTC 3303 and/or ROTC 3304 and full contract status with the U.S. Army.

4105.Advanced Military Science.

1(2-0)

Special problems course. Individual study. May be repeated for credit. Approval of Professor of Military Science required.

4303.Advanced Military Science.

3(3-2)

Problem definition and analysis, decision making, planning and organizing, functions of key staff members, interpersonal skills and oral communication. Leadership laboratory activities may be conducted off campus on weekends. Prerequisites: ROTC 3303 and/or ROTC 3304 or approval of Professor of Military Science.

4304.Advanced Military Science.

3(3-2)

Military implications of world political and economic changes as well as changes within American society. Also covered are unit administration, logistics, command and staff functions and the legal basis of the military justice system. Leadership laboratory activities may be conducted off campus on weekends. Prerequisites: ROTC 3303, ROTC 3304 and ROTC 4303 or approval of Professor of Military Science.

DEPARTMENT OF MUSIC (MUSI/MUSA)

Paul M. Hageman, *Chair*

Bellamah Music Building 112. MSC 174. Extension 2803.

Professors

Hageman, KingSanders, Sanders

Associate Professors

Anderson, Cole

Assistant Professors

Archambeault, Fluman, Gill, Gregory, Kono, Kwak, Sholtis, Stone, Warth

Visiting Assistant Professors

Dunnavant, Lee

Instructor

Carrillo

Lecturer

Velez

Faculty Emeriti

Pierson, Stupp

The department serves three purposes: to provide training to qualified students for the music profession, to supply an area of artistic enrichment for nonmusic majors and to create a genuine musical influence on the entire university family. Students wishing to follow careers in professional teaching or performance should pursue the appropriate program. Students completing the degree with a major in music with teacher certification will qualify to receive the All-level Provisional Certificate, vocal or instrumental. This latter program will qualify successful candidates as teachers of music for all grades in Texas under certification regulations established by the Texas Education Agency. The department is an institutional member of the National Association of Schools of Music.

Minors and Electives

Qualified nonmusic majors may continue their music studies either as elective courses or as minor concentrations in applied music or general cultural music. Music ensembles are open to all university students with the consent of the instructors.

The following programs, which provide only nonprofessional training, are designed for those desiring the cultural enrichment of a minor in music:

Music Minor (Cultural): MUSI 1317, MUSI 1117, MUSI 2301, MUSI 2316, MUSI 2317, MUSI 2116, MUSI 2217, MUSI 2306, MUSI 4307, MUSI 4308 (24 semester hours).

Music Minor (Performance) -- MUSI 1316, MUSI 1317, MUSI 1116, MUSI 1117, MUSI 2306, four years of applied music on one instrument or voice at one lesson per week (8 hours) and ensemble participation for four years (8 or 12 hours); half recital required (27 semester hours-voice; 31 semester hours-instrumental).

Frank C. Smith Recital Hall and **Jones Auditorium**: The department presents student, faculty and guest recitals throughout the year, including the annual jazz festival, jazz bash, summer musical, Chopin Workshop, Kingsville Young Performers Competition, operettas, choir concerts and band concerts.

Majors

Department Placement Examinations

Entering undergraduate and graduate music majors will be given placement examinations prior to their first registration. These examinations enable the student with an exceptional background or previous college training to proceed on the basis of this experience.

General Requirements

All full-time (12 semester hours or more) music majors are required to:

- a. All students seeking the Bachelor of Music with Teacher Certification degree must register for and participate in their prescribed major ensemble until they student teach.
- b. Register for applied music until degree requirements are completed. The student should have attained at least a 4000-level of proficiency and have satisfied all jury and recital requirements.
- c. Register for and pass a minimum of 4 semester hours of class piano (MUSI 1181, MUSI 1182, MUSI 2181, MUSI 2182). A student may test out of any semester of this requirement by successful completion of a piano proficiency exam. If the proficiency test is not passed at the completion of 4 semester hours of class piano, a student may continue to work independently for the exam. The student also has the option of retaking MUSI 2181 - MUSI 2182 or taking one credit of piano applied until the proficiency exam is successfully completed. This exam must be passed prior to registration for MUSI 3394, Advanced Music Concepts, (if in music with teacher certification) or prior to graduation (if performance major).
- d. Enroll in MUSI 1000, Recital Seminar. To receive credit for this non-tuition course, the student must attend a minimum of twenty approved concerts, recitals or University Interscholastic League approved music events per semester. Student must enroll each term except when student teaching; normally seven semesters credit are required for graduation.
- e. Perform in at least one public recital per semester (if registered at 1000-level or above).
- f. Fulfill solo recital requirements as follows:

B.M. Performance	<u>Junior Year</u>	<u>Senior Year</u>
B.M. with Teacher Certification	Half Recital	Full Recital
B.A. Performance Minor		Half Recital
		Half Recital

A faculty hearing committee must approve the entire program at least two weeks prior to the recital performance date. The same committee will approve or disapprove the recital itself.

- g. Prior to the junior year or the time a student would normally have completed 60 semester hours, the student is required to file an official transcript in the music office in order that a degree plan may be prepared and meet with a faculty review committee to determine overall and music grade point average, progress in applied music and progress in keyboard proficiency, as well as whether the student has the necessary qualities to become a successful teacher (if in the field of music with teacher certification).
- h. Beginning in Fall 1995, students majoring in music must make at least a grade of C in every music course taken toward the degree. In sequential music courses, a grade of C must be made in order to progress to the next music course in the sequence.
- i. At the conclusion of the fourth semester of music theory (MUSI 2317-2117), students must take and pass the Sophomore Theory Exam in order to proceed to the upper level theory courses.

Music Theory

The sequence for music theory courses is as follows: MUSI 1316-1116, MUSI 1317-1117, MUSI 2316-2116, MUSI 2317-2117, MUSI 4318, MUSI 3312, MUSI 3314, (MUSI 4319 for performance majors only). Students must make a C or better in order to progress to the next course in the sequence.

1116. Introduction to Basic Aural Training. (MUSI 1116) 1(0-2)
Introduction to aural skills fundamentals including emphasis on melodic, harmonic dictation and sight-singing of music of various ethnic origins and historical style periods.

1117. Basic Aural Training. (MUSI 1117) 1(0-2)
Emphasis on dictation and sight-singing of music of various ethnic origins and historical periods. Prerequisite: MUSI 1116 with a grade of C or better, or a satisfactory score on the departmental Placement Exam (Music Theory).

1163. Jazz Theory and Improvisation. (MUSI 1163) 1(2-0)
A detailed look at the theory of jazz with respect to improvisation.

1164. Advanced Jazz Theory and Improvisation. 1(2-0)
A continuation and practical application of elements of Jazz Theory and Improvisation. Prerequisite: MUSI 1163.

1301. Materials of Music. (MUSI 1301) 3(2-2)
Fundamentals of music with emphasis on developing basic music reading skills on simple melody and/or keyboard instruments. May not apply toward music major or minor. Laboratory fee, \$5.

1316. Introduction to Basic Musicianship. 3(3-0)
Introduction to music fundamentals and skills including pitch recognition in various clefs, rhythm competency, basic harmonic construction and recognition, harmonic and melodic usage in various historical style periods.

1317. Basic Musicianship. 3(3-0)
Introduction to the fundamental elements of music (e.g. pitch, intensity, duration and timbre) and their interrelationship as the foundation of tonal harmonic structure. Prerequisite: MUSI 1316 with a grade of C or better or a satisfactory score on the departmental Placement Exam (Music Theory).

2116-2117. Intermediate Aural Training. (MUSI 2116, MUSI 2117) 2(0-2)
Continuation of MUSI 1117.

2316-2317. Intermediate Musicianship. 6(3-0)
Continuation of MUSI 1317.

3312. Orchestration. 3(3-0)
A continuation and practical application of elements of Music Theory and Aural Training. Study of the compass, techniques and color of the instruments of the orchestra and band and their combinations. Projects in scoring in full orchestra, band and small ensembles.

3314. Composition. 3(3-0)
The practical application of creative principles in analysis and original writing of the smaller forms. The course will include 18th Century counterpoint: two, three and four part writing, canon, fugue and double counterpoint. Prerequisites: MUSI 2316, MUSI 2317.

4318. Analytical Techniques I. 3(3-0)
Aural and visual analysis techniques in all musical styles. All elements in music; form, vocal, piano, chamber and full orchestra scores.

4319. Analytical Techniques II. 3(3-0)
A continuation of MUSI 4318. Required of performance music majors. Prerequisite: MUSI 4318.

History and Literature of Music

1162. Diction. (MUSI 1162) 1(1-1)
Studies and practice in diction of French, German and Italian languages through use of vocal literature of 17th, 18th, 19th and 20th centuries.

2301. Structure of the Arts. 3(2-4)
Art, music and theatre arts are combined in selected problems dealing with arts structure. Creative production is the result of studio activity and critique. Laboratory fee, \$5.

2306. Introduction to Music History and Literature. 3(3-0)
Designed for music students with some background in music. Techniques of intelligent listening with historical perspective. Emphasis on basic concepts in music and their evolution: texture, form, tonality, etc. Listening techniques to develop aural sensitivity to stylistic features. Outside listening required.

2308. History of Jazz. 3(3-0)
The study of the history and development of jazz music, including the various styles and influences that have shaped the many trends in jazz music. Jazz artists and recordings from both a musical and a historical perspective. Open to both music and non-music majors.

2310. History of Rock and Roll. 3(3-0)
The history of rock music from its roots to its most recent trends, with the emphasis on rock as a musical style. Musical parameters (rhythm, harmony, melody, form, texture) as they apply to rock music. Thorough historical detail and social context for the various rock styles presented. Open to both music and non-music majors.

3302. Women and the Arts. 3(3-0)
Issues surrounding the participation of women in the arts. Selected women who have contributed to the visual and performing arts throughout history are studied in relation to the culture of their time and the principles related to the arts. No previous experience in theatre, art or music required. Prerequisite: completion of visual/performing arts component requirement. (Credit may be obtained in only one of ARTS 3302, MUSI 3302, THEA 3302 or WMST 3302.)

3320. Music of Many Cultures. 3(3-0)
Theories, practices and styles of traditional music of various cultures throughout the world such as Sub-Saharan Africa, India, Israel, Thailand, Bali, China, Japan, South America, Polynesia and Native America.

4307-4308. Music History and Literature. 6(3-0)
Development of musical styles, schools of composition, bibliography and evolution of the art of music. Outside listening required. Prerequisite: MUSI 2306.

Music Education

1190. Marching Band Techniques. 1(0-2)
Fundamentals of and the techniques involved in directing a marching band.

1195. Instruments for Elementary Music. 1(0-3)
Study of instruments used in the elementary music classroom including various recorders, the Orff instrumentarium (xylophone, metallophone, glockenspiel) and frame drum.

3196. Basic Conducting. 1(0-3)
Theory and practice of conducting for both vocal and instrumental groups, with emphasis on dealing with incomplete instrumentation and young performers in vocal and instrumental music. Include conducting techniques, score reading and analysis and rehearsal techniques.

3391. Foundations of Music. 3(3-0)
Develop a foundation for music literacy and skills through vocal expression, instrumental playing and movement. The basic elements of music; i.e., beat, rhythm, melody, form, timbre and harmony, will be covered. Laboratory fee, \$5.

3393. Elementary Music Concepts. 3(3-0)
The study of basic musical concepts for application in the elementary classroom through performance and participation. Prerequisite: MUSI 1195. Laboratory fee, \$5.

3394. Advanced Music Concepts. 3(3-0)
Philosophy, content organization and discussion of the modern performance concepts of music. Emphasis placed on evaluation of musical concepts with analysis of consequent problems.

3397. Conducting II. 3(2-2)
Theory and practice of conducting and organizing groups at the secondary school level. Includes refining baton skills, score analysis, arranging/scoring techniques, performance practices of choral and instrumental ensembles, programming, rehearsal techniques and laboratory experience. Prerequisites: MUSI 3312 and MUSI 3196.

4330. Introduction to Orff Schulwerk. 3(3-0)
Philosophy and pedagogy of Orff Schulwerk. Emphasis on rhythmic speech, body percussion, singing, playing musical instruments appropriate for use by children, elemental forms, pentatonic folk melodies, soprano recorder and improvisation. Prerequisite: MUSI 3393.

4399. Special Problems.

V:1-3

For advanced students in music who wish to pursue further some special field of learning. May be repeated for a maximum of 6 semester hours when problem changes.

Applied Music

The courses in applied music are designed to meet the requirements and desires of the students who wish to major in performance, to major in music with teacher certification or take applied music as an elective or minor, or to begin study in applied music to use as a teaching tool or as an area of enrichment where public performance is not the goal.

Instruction at the undergraduate and graduate levels is offered in the following areas:

Flute	Trumpet	Violin
Oboe	French Horn	Viola
Bassoon	Trombone	Cello
Clarinet	Euphonium	Double Bass
Saxophone	Tuba	Piano
	Percussion	Voice

Catalog Numbers:

The first of the four digits indicates level (i.e., 1-Freshman; 2-Sophomore; 3-Junior; 4-Senior; 5-Graduate); the second digit (1,2,3 or 4) indicates the number of semester hours credit and the minimum hours of daily practice; the third digit indicates the semester and the fourth digit is zero.

Students normally progress to the next higher level each year. Occasionally it may require more than one year of study to accomplish this progress. The progress of a student from one level of applied music to another is dependent on the jury held at the conclusion of each semester.

1000. Recital Seminar.

0(0-2)

Attend 20 concerts or recitals during the semester. Required of all music majors for seven semesters or until the student teaching experience. Credit/Noncredit.

Class Instruction

Classes are designed for the beginner in the various areas of performance. A minimum of two hours individual practice weekly is required.

1166. Woodwinds I. (MUSI 1166)

1(0-2)

Pedagogy and techniques of clarinet and saxophone. Laboratory fee, \$5.

1167. Woodwinds II. (MUSI 1167)

1(0-2)

Pedagogy and techniques of flute and double reed instruments. Laboratory fee, \$5.

1174. High Brass.

1(0-2)

Pedagogy and techniques of trumpet and French horn. Laboratory fee, \$5.

1175. Low Brass. (MUSI 1168)

1(0-2)

Pedagogy and techniques of trombone, euphonium and tuba. Laboratory fee, \$5.

1181. Piano Class. (MUSI 1181)

1(0-2)

Beginning study of piano with emphasis on functional aspects, e.g. basic techniques, scales, chords and simple transpositions. Laboratory fee, \$5.

1182. Piano Class. (MUSI 1182)

1(0-2)

Continuation of MUSI 1181. Laboratory fee, \$5.

1183. Voice Class. (MUSI 1183) 1(0-2)
The rudiments of vocal music, breathing, correct use of body muscle for breath control, diction and the development of tone will be studied. Technical development will include the study of interpretation, tone production, pronunciation and vocal expression.

1188. Percussion Class. (MUSI 1188) 1(0-2)
Laboratory fee, \$5.

1189. String Class. (MUSI 1189) 1(0-2)
Laboratory fee, \$5.

2181. Piano Class. (MUSI 2181) 1(0-2)
Functional piano. Continuation of MUSI 1182. Laboratory fee, \$5.

2182. Piano Class. (MUSI 2182) 1(0-2)
Continuation of MUSI 2181. Laboratory fee, \$5.

Ensembles

Ensembles perform on the campus and in various communities throughout Texas. Ensembles may serve as elective courses in any college of the university. A limited number of instruments are available to students who wish to join these groups. Credit in excess of four semesters in a single ensemble will be considered advanced.

1121. University Band. 1(0-4)
The University Band performs standard windband literature. Non-music majors are not required to audition.

1122. Concert Band. 1(0-4)
The Concert Band includes in its repertoire major contemporary works composed for the windband as well as marches and transcriptions. Prerequisite: audition.

1123. Symphony Orchestra. 1(0-3)
Highest levels of musicianship demonstrated through performance of respected orchestral literature. Prerequisite: audition.

1131. Jazz Workshop. 1(0-3)
Performance, arranging and composition of music for the stage band in the modern jazz idiom.

1132. Chamber Music. 1(0-3)
The study, preparation and performance of small-ensemble music in like-instrument groupings, mixed-instrument ensembles and vocal ensembles.

1133. Mariachi. 1(0-3)
The study of mariachi music through instrumental and vocal performance.

1141. Choir. 1(0-4)
Required of all voice majors. Study and performance of choral literature from the Renaissance to the present.

1151. Singers. 1(0-3)
A select small mixed ensemble which performs music especially written for a vocal chamber group. Open by audition to all students.

1157. Opera Workshop. (MUSI 1157) 1(0-5)
Study and performance of scenes and acts from operas as well as full operas. Practical experience in opera production including dramatic aspects of staged music-drama. Emphasis on integration of music, acting and staging.

1159. Musical Theatre. (MUSI 1159) 1(0-5)
Study and performance of works from the musical theatre repertoire.

1227. Marching Band. 2(0-6)
The *Pride of South Texas Marching Band* performs at the half-time of Texas A&M-Kingsville football games as well as selected other events. Required of all wind and percussion majors.

3120. Wind Symphony. 1(0-4)
Highest levels of musicianship are demonstrated through performance of respected windband literature. Prerequisite: audition.

3131. Jazz Band I. 1(0-3)
The premiere instrumental jazz performance ensemble, Jazz Band I performs the highest level of jazz literature stressing improvisation and various styles of jazz. Prerequisite: audition.

3132. Advanced Chamber Music. 1(0-3)
The advanced study, preparation and performance of small-ensemble music in like-instrument groupings, mixed-instrument ensembles and vocal ensembles. Prerequisite: junior standing.

3227. Advanced Marching Band. 2(0-8)
The *Pride of South Texas Marching Band* performs at the halftime of Texas A&M-Kingsville football games as well as selected other events. Leadership skills and marching band teaching techniques are stressed. Prerequisite: completion of two semester of MUSI 1227.

**Degree Requirements
Bachelor of Music
Music (Instrumental) with Teaching Certification**

Freshman Year				Junior Year			
ARTS 1201	2	ENGL 1302	3	EDED 3310	3	EDSE 4391	3
COMS 1311	3	MUSI 1000	0	MUSI 1000	0	MUSI 1000	0
EDED 2301	3	MUSI 1117	1	MUSI 3196	1	MUSI 3120	1
ENGL 1301	3	MUSI 112X	1	MUSA 3210	2	MUSA 3220	2
MUSI 1000	0	MUSI 1182	1	MUSI 3227	2	MUSI 3312	3
MUSA 1110	1	MUSI 1195	1	MUSI 3393	3	MUSI 3394	3
MUSI 1181	1	MUSI 1317	3	MUSI 4307	3	MUSI 3397	3
MUSI 1183	1	MUSA 1120	1	MUSI 4318	3	MUSI 4308	3
MUSI 1227	<u>2</u>	Science	<u>4</u>	Sec. Inst.	<u>1</u>	Sec. Inst.	<u>1</u>
	16		15		18		19
Sophomore Year				Senior Year			
ENGL 2342 or		HIST 1302	3	EDED 3332	3	EDED 4623	6
ENGL 2362	3	MUSI 1000	0	EDED 3333	3	EDRG 4314	3
HIST 1301	3	MUSI 112X	1	MUSI 1000	0	POLS 2302	<u>3</u>
MATH 1314	3	MUSI 2182	1	MUSI 3227	2		12
MUSI 1000	0	MUSI 2117	1	MUSI 3314	3		
MUSI 1227	2	MUSA 2220	2	MUSA 4210	2	Total Hours Required:	138
MUSI 2116	1	MUSI 2306	3	POLS 2301	3		
MUSI 2181	1	MUSI 2317	3	Sec. Inst.	1		
MUSA 2210	2	PHYS 1471	4	SOCI 2361	<u>3</u>		
MUSI 2316	3	Sec. Inst.	<u>1</u>		20		
Sec. Inst.	<u>1</u>		19				
	19						

**Degree Requirements
Bachelor of Music
Music (Vocal) with Teaching Certification**

Freshman Year				Junior Year			
ARTS 1201	2	ENGL 1302	3	EDED 3310	3	EDSE 4391	3
COMS 1311	3	[^] Kinesiology	1	MUSI 1000	0	MUSI 1000	0
EDED 2301	3	MUSI 1000	0	MUSI 1141	1	MUSI 1141	1
ENGL 1301	3	MUSI 1117	1	MUSI 1157	1	MUSI 3312	3
[^] Kinesiology	1	MUSI 1141	1	MUSI 3196	1	MUSA 3220	2
MUSI 1000	0	MUSI 1162	1	MUSA 3210	2	MUSI 3394	3
MUSA 1110	1	MUSI 1182	1	MUSI 3393	3	MUSI 3397	3
MUSI 1141	1	MUSI 1317	3	MUSI 4307	3	MUSI 4308	3
MUSI 1181	1	MUSA 1120	1	MUSI 4318	3	Sec. Inst.	<u>1</u>
MUSI 1195	<u>1</u>	Science	<u>4</u>	Sec. Inst.	<u>1</u>		19
	16		16		18		
Sophomore Year				Senior Year			
ENGL 2342 or		HIST 1302	3	EDED 3332	3	EDED 4623	6
ENGL 2362	3	MUSI 1000	0	EDED 3333	3	EDRG 4314	3
HIST 1301	3	MUSI 1141	1	MUSI 1000	0	POLS 2302	<u>3</u>
[^] Kinesiology	1	MUSI 2117	1	MUSI 1141	1		12
MATH 1314	3	MUSI 2182	1	MUSI 3314	3		
MUSI 1000	0	MUSA 2220	2	MUSA 4210	2	Total Hours Required:	137
MUSI 1141	1	MUSI 2306	3	POLS 2301	3		
MUSI 2116	1	MUSI 2317	3	Sec. Inst.	2		
MUSI 2181	1	PHYS 1471	<u>4</u>	SOCI 2361	<u>3</u>		
MUSA 2210	2		18		20		
MUSI 2316	<u>3</u>						
	18						

[^]For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

**Degree Requirements
Bachelor of Music
Performance (Instrumental Major)**

Freshman Year				Junior Year			
ARTS 1201	2	CISA 1301	3	HIST 1301	3	HIST 1302	3
ENGL 1301	3	ENGL 1302	3	MUSI 1000	0	MUSI 1000	0
MATH 1314	3	MUSI 1000	0	MUSI 3131 or		**MUSI 3120	1
MUSI 1000	0	MUSI 1117	1	MUSI 3132	1	MUSI 3131 or	
MUSI 1131 or		**MUSI 112X	1	MUSI 3196	1	MUSI 3132	1
MUSI 1132	1	MUSI 1131 or		**MUSI 3227	2	MUSI 3312	3
MUSI 1181	1	MUSI 1132	1	MUSA 3410	4	MUSI 3397	3
MUSA 1210	2	MUSI 1182	1	MUSI 4307	3	MUSA 3420	4
**MUSI 1227	2	MUSA 1220	2	MUSI 4318	3	MUSI 4308	3
	<u>14</u>	MUSI 1317	3		<u>17</u>		<u>18</u>
			<u>15</u>				
Sophomore Year				Senior Year			
MUSI 1000	0	MUSI 1000	0	<i>^Communication</i>	3	<i>^Literature/philosophy</i>	3
MUSI 1131 or		**MUSI 112X	1	MUSI 1000	0	MUSI 1000	0
MUSI1132	1	MUSI 1131 or		MUSI 3131 or		**MUSI 3120	1
**MUSI 1227	2	MUSI 1132	1	MUSI 3132	1	MUSI 3131 or	
MUSI 2116	1	MUSI 2117	1	**MUSI 3227	2	MUSI 3132	1
MUSI 2181	1	MUSI 2182	1	MUSI 3314	3	MUSI 4319	3
MUSI 2316	3	MUSI 2306	3	MUSA 4410	4	MUSA 4420	4
MUSA 2410	4	MUSI 2317	3	POLS 2301	3	POLS 2302	3
<i>^Science</i>	4	MUSA 2420	4	<i>^Social/behavioral</i>	3		<u>15</u>
	<u>16</u>	PHYS 1471	4		<u>19</u>		
			<u>18</u>				
						Total Hours Required:	132

***Keyboard majors may substitute MUSI 1141 for MUSI 1227, MUSI 3120, MUSI 1121 or MUSI 1122, but must satisfy Kinesiology requirements.*

**Degree Requirements
Bachelor of Music
Performance (Voice)**

Freshman Year				Junior Year			
ARTS 1201	2	CISA 1301	3	HIST 1301	3	HIST 1302	3
ENGL 1301	3	ENGL 1302	3	MUSI 1000	0	MUSI 1000	0
<i>^Foreign Language</i>	3	<i>^Kinesiology</i>	1	MUSI 1141	1	MUSI 1141	1
<i>^Kinesiology</i>	1	MUSI 1000	0	MUSI 1151		MUSI 1151 or	
MATH 1314	3	MUSI 1117	1	or MUSI 1157		MUSI 1157	1
MUSI 1000	0	MUSI 1141	1	MUSI 3196	1	MUSI 3312	3
MUSI 1141	1	MUSI 1162	1	MUSA 3410	4	MUSI 3397	3
MUSI 1181	1	MUSI 1182	1	MUSI 4307	3	MUSA 3420	4
MUSA 1210	2	MUSA 1220	2	MUSI 4318	3	MUSI 4308	3
	<u>16</u>	MUSI 1317	3		<u>16</u>		<u>18</u>
			<u>16</u>				
Sophomore Year				Senior Year			
<i>^Kinesiology</i>	1	MUSI 1000	0	<i>^Communication</i>	3	MUSI 1000	0
MUSI 1000	0	MUSI 1141	1	MUSI 1000	0	MUSI 1141	1
MUSI 1141	1	MUSI 1151 or		MUSI 1141	1	MUSI 1151 or	
MUSI 1151 or		MUSI 1157	1	MUSI 1151 or		MUSI 1157	1
MUSI 1157	1	MUSI 2117	1	MUSI 1157	1	MUSI 4319	3
MUSI 2116	1	MUSI 2182	1	MUSI 3314	3	MUSA 4420	4
MUSI 2181	1	MUSI 2306	3	MUSA 4410	4	POLS 2302	3
MUSI 2316	3	MUSI 2317	3	POLS 2301	3	Science	4
MUSA 2410	4	MUSA 2420	4	<i>^Social/behavioral</i>	3		<u>16</u>
THEA 1322	3	PHYS 1471	4		<u>18</u>		
	<u>15</u>		<u>18</u>			Total Hours Required:	133

^For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

DEPARTMENT OF PHYSICS AND GEOSCIENCES

Daniel J. Suson, *Chair*

Hill Hall 113. MSC 175. Extension 2618.

Regents Professor

Norwine

Professors

Cox, Hewett, McGehee, Suson

Assistant Professor

Yu

Lecturer

Buckley

The Department of Physics and Geosciences serves the needs of three types of students: those majoring or minoring in geography, geology or physics; technical or pre-professional students; and students who take physics and geoscience courses out of interest or to satisfy science requirements. The department seeks to prepare students who are majoring or minoring in geography, geology or physics to successfully pursue a graduate degree in that or a related field, compete with graduates from other institutions for industrial and governmental positions or follow a career in science education. It does this through its specialized programs in nuclear and health physics, geographic information sciences (GIS), geological and physical modeling, engineering physics, broadcast meteorology and astronomy. For students in technical areas, the department endeavors to provide the background necessary for success in their chosen profession. For non-technical majors, the department strives to enlighten students concerning some of the basic realities of our universe and to instill in them an appreciation of the methods of scientific inquiry and the impact of science on our modern world.

The Bachelor of Science Degree in geology requires a minor of 18 to 24 hours in mathematics or a science or courses to fit one of two more generalized areas. Courses taken to satisfy a minor must be acceptable for a major in the same department. Students should plan this phase of their course work in consultation with their adviser so that it will best support their career and educational goals. Minors available for the B.S. degree in Geology are as follows:

Biology minor: two courses from BIOL 1308/BIOL 1108, BIOL 1311/BIOL 1111 or BIOL 1313/BIOL 1113 and BIOL 3401 and/or BIOL 3405 and additional work to total 18 hours, including at least 6 advanced.

Chemistry minor: four chemistry courses, including two advanced, beyond CHEM 1311/CHEM 1111, CHEM 1312/CHEM 1112.

Mathematics minor: MATH 2414 and 6 hours advanced mathematics, beyond MATH 1314, MATH 1316, MATH 1348 and MATH 2413, to total at least 18 hours.

Physics minor: PHYS 2325/PHYS 2125, PHYS 2326/PHYS 2126 (in place of PHYS 1301/PHYS 1101, PHYS 1302/PHYS 1102) and additional work to total at least 18 hours, including 6 advanced.

Applied Computational Methods option: mathematics through MATH 2413 and three courses, including 6 advanced hours, from computer science, advanced statistics or advanced quantitative methods. Computer science hours applied toward this option must be in addition to any used in place of modern language.

Nonspecialized option: mathematics through MATH 2414 and two advanced courses in biology, chemistry, physics, mathematics or statistics to total at least 18 hours.

GEOGRAPHY (GEOG)

1101. Physical Geography: Meteorology Laboratory.

1(0-2)

A laboratory experience that focuses on laboratory techniques, data collection and analysis. The experience reinforces and promotes greater understanding of concepts of meteorology presented in GEOG 1301. Prerequisite or corequisite: GEOG 1301. Laboratory fee, \$5.

1102. Physical Geography: Climate and Mankind Laboratory. 1(0-2)
A laboratory experience that focuses on laboratory techniques, data collection and analysis. The experience reinforces and promotes greater understanding of concepts of climatology and its effect on human civilization, as presented in GEOG 1302. Prerequisite or corequisite: GEOG 1302. Laboratory fee, \$5.

1301. Physical Geography: Meteorology. (GEOG 1301) 3(3-0)
Earth motions and their meanings; system of location and time; composition and structure of the earth's atmosphere. Meteorology and weather prediction, including storms. Air pollution meteorology. Field trips will be arranged.

1302. Physical Geography: Climate and Mankind. (GEOG 1302) 3(3-0)
Climatic classification, types and world regions. Climatic change, fluctuations and their effects on human ecology (e.g., droughts). Agricultural and urban climatology. Microclimates. The distribution of soils and natural vegetation as related to climate. Field trips will be arranged.

1303. World Geography. (GEOG 1303) 3(3-0)
Major geographic regions of the world. Landscapes and peoples of continents; major culture realms and nations, resources, land-use and industries. Contrasts between developed and emerging nations.

1405. Physical Geography: Science and Environment. 4(3-2)
An introduction to the nature, history, philosophy, methods and significance of science generally and environmental science in particular, with particular emphasis on spatial aspects: the role of place. Field trips may be arranged. Laboratory fee, \$5.

3302. Introduction to Broadcast Meteorology. 3(3-0)
Principles and practice of broadcast meteorology, a joint effort of the Department of Physics and Geosciences and Department of Communication and Theatre Arts. Introduction to television weather broadcasting with emphasis on creating accurate forecasts and on the techniques of communicating weather information to the public. Prerequisites: GEOG 1301 with GEOG 1302 recommended.

3305. Environmental Geography. 3(3-0)
The nature, geographic distribution, use and misuse of global resources with emphasis on those of North America. Ecosystems, air, water, soil, mineral and energy resources will be considered. Prerequisites: 3 semester credit hours of Geography or a science course (see General Education Requirements natural sciences component).

3310. The World in Change: Crucial Topics in Contemporary Geography. 3(3-0)
Intensive study of the geography of selected world "crisis" regions. Examples include the Middle East, Sub-Saharan Africa and the former U.S.S.R. and Eastern Europe. May be repeated for credit as the topic changes. Prerequisite: 6 semester hours of geography or 12 semester hours of social sciences.

3331. United States and Canada. 3(3-0)
The regional aspects of landforms, climate, resources and peoples of United States and Canada. Prerequisite: 6 hours of geography or 12 hours of social science.

3335. Mexico and Middle America. 3(3-0)
A regional study of the physical and cultural geography of Mexico, Central America and the Antillean Island, including adjacent waters. Prerequisite: 6 hours of geography.

3421. Geomorphology. 4(3-3)
Description, classification and quantitative analysis of landforms and surface processes in relation to human development. Regional physiography of the United States and topographic map interpretation. May be used as geology credit. Field trip will be arranged. Prerequisite: GEOL 1302/GEOL 1102 or GEOL 1303/GEOL 1103, MATH 1316. Laboratory fee, \$5.

3450. Field Mapping, Cartography and Global Positioning. 4(3-3)
The principles and practice of plane surveying and the global positioning system (GPS) and their interface with geographic information systems (GIS). Basic principles of cartography and use of cartographic tools and software. Management of

cartographic data and GPS data. Local field trips will be arranged. Prerequisite: MATH 1314 and MATH 1316 or MATH 1324. Laboratory fee, \$5.

4315. Elements of Urban and Regional Planning. 3(3-0)

Introduction to the historical development and practice of urban and regional planning in the United States. Particular focus on planning applications to housing, regional economics, transportation, environmental and water problems of South Texas and as appropriate, areas of the border areas of Mexico. Prerequisites: GEOG 1303 and any 3 additional hours in geography or HIST 1301 and HIST 1302 or POLS 2301 and POLS 2302 or consent of instructor.

4420. Special Topics in Geoscience. V:1-4

Concepts, developments or discoveries in geography. May be repeated for a maximum of six semester hours credit. Prerequisite: 12 semester hours of geography and/or geology.

4425. Geographic Information Systems. 4(3-3)

The acquisition, management, processing and interpretation of geographic data. Spatial data structures and the display, manipulation and analysis of geographic information. Applications of spatial analysis. May be used as a geology credit. Prerequisite: CISA 1301 or CSEN 2304 or GEOG 3450. Laboratory fee, \$5.

4435. Remote Sensing. 4(3-3)

The technology and interpretation of aerial photography and satellite imagery, including multi-spectral, thermal and radar images. Digital image processing using a raster geographic information system. Applications of remote sensing and guided projects in areas of student interest. May be used as a geology credit. Prerequisite: MATH 1314 and 6 hours of science, engineering or agriculture. Laboratory fee, \$5.

GEOLOGY (GEOL)

1101. Earth Science I Laboratory. 1(0-2)

A laboratory experience that focuses on laboratory techniques, data collection and analysis. The experience reinforces and promotes greater understanding of concepts of physical geology, oceanography and meteorology presented in GEOL 1301. Prerequisite or corequisite: GEOL 1301. Laboratory fee, \$5.

1102. Earth Science II Laboratory. 1(0-2)

A laboratory experience that focuses on laboratory techniques, data collection and analysis. The experience reinforces and promotes greater understanding of astronomy, earth-surface processes, geomorphology and historical geology as presented in GEOL 1302. Prerequisite or corequisite: GEOL 1302. Laboratory fee, \$5.

1103. Physical Geology Laboratory. (GEOL 1103) 1(0-2)

A laboratory experience that focuses on laboratory techniques, data collection and analysis. The experience reinforces and promotes greater understanding of earth materials and the physical processes at work on and in the earth. Prerequisite or corequisite: GEOL 1303. Laboratory fee, \$5.

1104. Historical Geology Laboratory. (GEOL 1104) 1(0-2)

A laboratory experience that focuses on laboratory techniques, data collection and analysis. The experience reinforces and promotes greater understanding of the events and processes that have shaped the earth and influenced the development of life through time. Prerequisite or corequisite: GEOL 1304. Laboratory fee, \$5.

1105. Environmental Geology Laboratory. 1(0-2)

Laboratory course to accompany GEOL 1305. Application of geologic information to interactions between people and their physical environment, featuring local field trips and case studies from South Texas where appropriate. Prerequisite: registration or credit in GEOL 1305. Laboratory fee, \$10.

1301. Earth Science I. (GEOL 1301 or GEOL 1401) 3(3-0)
Introduction to principles and methods of earth science. Nature of the earth and its setting in space as revealed by a survey of physical geology, meteorology and oceanography. Designed for students not majoring in science or engineering. Occasional field trips may be arranged.

1302. Earth Science II. (GEOL 1302 or GEOL 1402) 3(3-0)
Survey of astronomy, the effects of physical processes operating on the earth's surface (geomorphology) and of earth history as interpreted from fossils and rocks (historical geology). The significance to society of the earth sciences including environmental problems and natural resource exploration and utilization. Occasional field trips may be arranged. Designed for students not majoring in science or engineering. Prerequisite: GEOL 1301.

1303. Physical Geology. (GEOL 1303) 3(3-0)
General composition and form of the earth's surface and the volcanic, erosional, depositional and deformational processes which operate on it. The properties of the interior of the earth inferred from earthquakes and other external evidence. Occasional field trips may be arranged.

1304. Historical Geology. (GEOL 1304 or GEOL 1404) 3(3-0)
The important change through which the earth has passed since its origin as a planet; especially, the history of the orderly evolution of life and physical features evidenced in the rocks of the earth. Occasional field trips may be arranged. Prerequisite: GEOL 1303. Laboratory fee, \$5.

1305. Environmental Geology. 3(3-0)
Basic concepts of environmental geology, including topics in natural hazards, natural resources, contamination of soils, sediments and water and environmental geology and risk. Case examples from South Texas environmental geologic research are included to provide relevant examples.

2376. Nature of the Earth and Universe. 3(3-2)
Survey of the basic concepts of geosciences. This course begins with an introduction to astronomy and the Earth's position in our solar system. The course includes the interrelationships between the solid portion, hydrosphere, atmosphere and biosphere of the Earth. Prerequisite: BIOL 2375. Laboratory fee, \$5.

3407. Field Geology. 4(3-3)
Geologic mapping on topographic maps and aerial photographs. Interpretation of field relationships. Basic topographic surveying methods and measurements using the Global Positioning System (GPS). Two weekend field trips required, including geologic mapping in the field and written reports. Other problems simulated in the laboratory. Prerequisite: GEOL 1304/GEOL 1104. Laboratory fee, \$5.

3409. Mineralogy. 4(3-3)
Morphological crystallography and symmetry concepts. Methods of identification of minerals by their physical and chemical properties. Origin of economic minerals and ore deposits. Geological significance of common rock-forming minerals. One weekend field trip required. Prerequisites: GEOL 1303/GEOL 1103 and 6 hours of chemistry. Laboratory fee, \$5.

3411. Petrology. (3-3)
Classification and origin of igneous, sedimentary and metamorphic rocks. Laboratory emphasis on identification and interpretation of hand specimens. One weekend field trip required. Prerequisite: GEOL 3409. Laboratory fee, \$5.

3431. Stratigraphy and Sedimentology. 4(3-3)
Study of the composition, environment, sequence and correlation of stratified rocks. Occasional field trips will be arranged. Prerequisites: GEOL 1303/GEOL 1103 and GEOL 1304/GEOL 1104. Laboratory fee, \$5.

3445. Oceanography. 4(3-3)
Methods and principles of oceanography. The physical and chemical properties of the seas, life in the sea and a comprehensive treatment of marine geology. Saturday field trips will be arranged. Prerequisites: GEOG 1301/GEOL 1101 or GEOL 1303/GEOL 1103 or GEOL 1301/GEOL 1101. Laboratory fee, \$5. May be used for geography credit.

3481. Structural Geology. 4(3-3)
The inherent and imposed structures in rocks and their modes of formation. Mechanical principles of rock deformation, petrofabrics, regional structural interpretation, theories of mountain building and geotectonics. Prerequisites: GEOL 1303/GEOL 1103 and GEOL 1304/GEOL 1104. Laboratory fee, \$5.

4107. Applied Geology Laboratory. 1(0-3)
Laboratory course to accompany GEOL 4307. Field and laboratory applications of geological concepts in solving geological engineering problems. Study of engineering principles and properties of earth materials. Exploration of engineering design and methods of site investigations. Prerequisite: registration or credit in GEOL 4307. Laboratory fee, \$20.

4307. Applied Geology. 3(3-0)
Applications of geological concepts in solving geological engineering problems. Study of engineering principles and properties of earth materials. Exploration of engineering design and methods of site investigations. Prerequisites: GEOL 1305, MATH 1316, CHEM 1111/CHEM 1311.

4325. Aqueous Geochemistry. 3(3-1)
Introduces the processes controlling the chemical composition of surface and groundwater. Prerequisites: GEOL 1303/GEOL 1103, CHEM 1111, CHEM 1112, CHEM 1311 and CHEM 1312.

4395. Special Problems. V:1-3
Supervised individual research of a geological problem that meets the needs and interest of the student. May be repeated for a maximum of 3 semester hours credit. Prerequisite: 18 semester hours of geology prior to registration. Laboratory fee, \$5.

4405. Senior Research Project. 4(3-3)
Collaborative research project involving the student and a geology faculty member, focused on a topic that requires mastery of geologic knowledge appropriate to the student's plans for a professional career or advanced study in the field. Prerequisite: senior standing in geology. Activity fee, \$10.

4417. Summer Field Course I. 4(3-V)
A summer term program covering geologic field methods and techniques. Includes the use and maintenance of field equipment, measurement, description and interpretation of stratigraphic sections, identification and interpretation of field relations of sedimentary rocks and preparation of geological field reports. Classwork six days per week. Simultaneous enrollment in GEOL 4418 is mandatory. Prerequisites: GEOL 3411, GEOL 3431, GEOL 3407 and GEOL 3481. Laboratory fee, \$6. Special Field Course Fee required.

4418. Summer Field Course II. 4(3-V)
A summer term program covering geologic field methods and techniques. Includes the identification and interpretation of field relations of igneous and metamorphic rocks; geologic mapping on topographic, aerial-photo and plane-table base; and preparation of geological field reports. Classwork six days per week. Simultaneous enrollment in GEOL 4417 is mandatory. Prerequisites: GEOL 3411, GEOL 3431, GEOL 3407 and GEOL 3481. Laboratory fee, \$6. Special Field Course Fee is required.

4420. Special Topics in Geoscience. 4(3-3)
One or more important concepts, developments or discoveries in geology. May be repeated once for credit. Prerequisite: 12 semester hours of geography and/or geology. Laboratory fee, \$5.

4425. Hydrogeology. 4(3-2)
Principles of fluid, mass and energy transport in geologic formations are emphasized to handle human affair problems such as water supply, contamination and energy resources. Prerequisite: GEOL 1303/GEOL 1103 and GEOL 1304/GEOL 1104.

PHYSICS (PHYS)

1101. College Physics I Laboratory. (PHYS 1101) 1(0-4)
A laboratory course to accompany PHYS 1301. Corequisite: PHYS 1301. Laboratory fee, \$5.

- 1102. College Physics II Laboratory.** (PHYS 1102) 1(0-4)
A laboratory course to accompany PHYS 1302. Corequisite: PHYS 1302. Laboratory fee, \$5.
- 1105. Elementary Physics I Laboratory.** (PHYS 1105) 1(0-2)
A laboratory course to accompany PHYS 1305. Corequisite: PHYS 1305. Laboratory fee, \$5.
- 1107. Elementary Physics II Laboratory.** (PHYS 1107) 1(0-2)
A laboratory course to accompany PHYS 1307. Corequisite: PHYS 1307. Laboratory fee, \$5.
- 1111. Descriptive Astronomy I Laboratory.** (PHYS 1111) 1(0-3)
A laboratory course to accompany PHYS 1311. Corequisite: PHYS 1311. Laboratory fee, \$5.
- 1112. Descriptive Astronomy II Laboratory.** (PHYS 1112) 1(0-3)
A laboratory course to accompany PHYS 1312. Corequisite: PHYS 1312. Laboratory fee, \$5.
- 1301. College Physics I.** (PHYS 1301 or PHYS 1401) 3(3-0)
A trigonometry-based introduction to physics. Topics include kinematics, vector analysis, force dynamics, equilibrium, work, energy, momentum, collisions, fluid dynamics and thermal physics. Prerequisites: MATH 1314, MATH 1316 and one year of high school physics or PHYS 1305 and PHYS 1105. Concurrent enrollment in PHYS 1101 is recommended.
- 1302. College Physics II.** (PHYS 1302 or PHYS 1402) 3(3-0)
A continuation of PHYS 1301. Topics include periodic motion, sound, electric force, electric current, resistance, electric circuits, magnetism, electromagnetic induction, AC circuits, light and optics. Prerequisite: PHYS 1301 and PHYS 1101. Concurrent enrollment in PHYS 1102 is recommended.
- 1305. Elementary Physics I.** (PHYS 1305 or PHYS 1405) 3(3-0)
A qualitative introduction to physics for students with little preparation in the physical sciences. Topics include kinematics, vector analysis, force dynamics, equilibrium, work, energy, momentum, collisions, fluid dynamics and thermal physics. Concurrent enrollment in PHYS 1105 is recommended.
- 1307. Elementary Physics II.** (PHYS 1307 or PHYS 1407) 3(3-0)
A qualitative introduction to physics intended for students with little preparation in the physical sciences. Topics include periodic motion, sound, electric force, electric current, resistance, electric circuits, magnetism, electromagnetic induction, AC circuits, light, optics and modern physics. Concurrent enrollment in PHYS 1107 is recommended.
- 1311. Descriptive Astronomy I.** (PHYS 1311 or PHYS 1411) 3(3-0)
A survey of the astronomy of our solar system. Topics include the history of astronomy, naked-eye phenomena, telescopes, gravity and orbits and the nature and history of the Earth, moon, planets, asteroids and comets. Concurrent enrollment in PHYS 1111 is recommended.
- 1312. Descriptive Astronomy II.** (PHYS 1312 or PHYS 1412) 3(3-0)
A survey of stellar astronomy and cosmology. Topics include the behavior of light; the sun as a star; positions, motions and brightness of the stars; stellar evolution; the Milky Way and other galaxies; and cosmology. Concurrent enrollment in PHYS 1112 is recommended.
- 1375. Physics.** 3(3-2)
A survey of the most basic concepts of physics. Topics include scientific measurements, motion, momentum, energy, gravitation, matter, heat, electricity, magnetism, sound, light, atomic structure and nuclear energy. Prerequisite: MATH 1314. Laboratory fee, \$5.
- 1471. The Acoustical Foundations of Music.** 4(3-2)
A general introduction and survey of the physical and acoustical foundations of music. Topics include the fundamental physics relevant to music, the reception of musical sound, intervals, scales, tuning, temperament, auditorium and room acoustics and the production of sounds by musical instruments including electronic. Laboratory fee, \$5.

- 2125. University Physics I Laboratory.** (PHYS 2125) 1(0-4)
A laboratory course to accompany PHYS 2325. Corequisite: PHYS 2325. Laboratory fee, \$5.
- 2126. University Physics II Laboratory.** (PHYS 2126) 1(0-4)
A laboratory course to accompany PHYS 2326. Corequisite: PHYS 2326. Laboratory fee, \$5.
- 2325. University Physics I.** (PHYS 2325 or PHYS 2425) 3(3-0)
A calculus-based introduction to physics. Topics include: kinematics, vector analysis, force dynamics, equilibrium, work, energy, momentum, collisions, fluid dynamics and thermal physics. Prerequisite: one year of high school physics or PHYS 1305 and PHYS 1105. Corequisite: MATH 2413. Concurrent enrollment in PHYS 2125 is recommended.
- 2326. University Physics II.** (PHYS 2326 or PHYS 2426) 3(3-0)
A continuation of PHYS 2325. Topics include periodic motion, sound, electric force, electric current, resistance, electric circuits, magnetism, electromagnetic induction, light, optics and modern physics. Prerequisite: PHYS 2325 and PHYS 2125 or PHYS 1302 and PHYS 1102. Corequisite: MATH 2414. Concurrent enrollment in PHYS 2126 is recommended.
- 3110. Advanced Laboratory.** 1(1-3)
A laboratory course focusing on advanced techniques and experiments. Experiments will be drawn from the full range of physics classes. The student will understand the role of experimental design, advanced data analysis and reduction, and the use of computers while investigating physical phenomena. Prerequisites: PHYS 2126, PHYS 2326.
- 3313. Mechanics.** 3(3-0)
A mathematical treatment of the fundamentals of classical mechanics. Topics include particle dynamics in one, two and three dimensions; conservation laws; dynamics of a system of particles; motion of rigid bodies; central force problems; accelerating coordinate systems; gravitation; Lagrange's equations and Hamilton's equations. Prerequisites: PHYS 1301/1101 or PHYS 2325/2125; MATH 2414.
- 3323. Electromagnetic Field Theory.** 3(3-0)
A mathematical treatment of the fundamentals of classical electromagnetic theory. Topics include electrostatics and electrodynamics, vector calculus, theory of dielectrics, magnetostatic fields, electromagnetic induction, magnetic fields of currents and Maxwell's equations. Prerequisite: PHYS 2326/2126. Corequisite: MATH 3415 or MATH 3320.
- 3333. Thermodynamics.** 3(3-0)
A mathematical treatment of the fundamentals of thermal physics. Topics include the concept of temperature, equations of state, the first and second laws of thermodynamics, entropy, change of phase and thermodynamic functions. Prerequisite: PHYS 2326/2126. Corequisite: MATH 3415.
- 3343. Modern Physics I.** 3(3-0)
A course in special relativity and elementary quantum mechanics. Topics include space-time, relativistic energy and momentum, the uncertainty principle, Schrödinger's equation, observables and operators, bound states, potential barriers and the hydrogen atom. Prerequisite: PHYS 2326/2126. Corequisite: MATH 3415 or MATH 3320.
- 3362. Introduction to Nuclear Engineering.** 3(3-0)
Basic radioactivity, nuclear and neutron physics as applied to nuclear engineering. Prerequisites: PHYS 3343; credit or registration in CSEN 2304 or equivalent; MATH 3320.
- 4303. Mathematical Methods of Physics.** 3(3-0)
A course presenting mathematical techniques used in physics and engineering. The course will survey, at a brief introductory level and from a physics-oriented perspective, numerous mathematical techniques from areas such as infinite series, integral transforming, applications of complex variables, matrices and tensors, special functions, partial differential equations, Green's functions, perturbation theory, integral equations, calculus of variations and groups and group representations. Prerequisites: MATH 3415 or MATH 3320; 3 hours of advanced physics.

4323. Optics. 3(3-0)
A mathematical treatment of the modern theory of optics. Topics include Huygen's principle as applied to geometric optics, interference, diffraction, polarization, crystal optics, electromagnetic theory of light, the interaction of light with matter and quantum optics. Prerequisites: PHYS 3323; MATH 3415 or MATH 3320.

4343. Modern Physics II. 3(3-0)
A continuation of Modern Physics I. Topics include atomic, molecular, nuclear, statistical, solid state, laser and elementary particle physics. Prerequisites: PHYS 3343; MATH 3415 or MATH 3320.

4353. Quantum Theory. 3(3-0)
A mathematical treatment of quantized physical phenomena. Topics include the wave theory of matter, the principle of superposition, probability, expectation values, coordinate representation, momentum representation, indeterminacy, Hermitian operators, angular momentum and spin. Quantum solutions for simple barriers, potential wells, the harmonic oscillator and the hydrogen atom are presented. Prerequisites: PHYS 3343, MATH 3415 and MATH 3320.

4362. Radiological Safety. 3(3-0)
Interactions of nuclear radiations with matter and biological systems. Theory and practice of radiation dosimetry as applied to radiation protection. Design and application of radiation dosimetry systems for personnel monitoring, area radiation monitoring and accident situations. Includes external and internal dosimetry as well as long-term risk analysis. Prerequisite: PHYS 3362.

4363. Environmental Nuclear Engineering. 3(3-0)
Environmental aspects of nuclear power. Natural radiation environment and the distribution of radioactivity added to the environment by human activities. Evaluation of effects of radiation and radioactivity on the environment and on humans. Prerequisite: PHYS 4362.

4364. Radiation Protection Engineering. 3(3-0)
Analysis of radiation hazard situations and design of nuclear facilities from a safety standpoint. Prerequisite: PHYS 4362.

4370. Geophysics. 3(3-0)
Fundamentals of the mechanics of geophysics. Study of the instruments and methods used in geophysical exploration. Prerequisite: 6 semester hours of advanced physics and/or engineering.

4390. Selected Topics in Modern Physics. 3(3-0)
A detailed study of one or more important physical discoveries, developments and/or theories. Course may be repeated for credit. Prerequisite: senior standing.

4391. Research Projects in Physics. V:1-3
Supervised research involving advanced physics concepts. May be repeated for a maximum of 6 semester hours. Includes, but is not limited to, literature searches, experimental techniques and theoretical tools; enrollment for only a literature-search project is limited to 1 hour credit. Prerequisites: Two advanced Physics courses and approval by the supervising faculty.

4460. Nuclear Physics. 4(3-4)
A study of natural and artificial radioactivity. Topics include the neutron, the positron, nuclear structure and forces, binding energies, nuclear fission and fusion, particle accelerators and cosmic rays. Prerequisite: PHYS 3343. Laboratory fee, \$5.

**Degree Requirements
Bachelor of Arts
Geography**

Freshman Year				Junior Year			
BIOL 1201	2	ENGL 1302	3	Foreign Language	3	Elective, adv.	3
ENGL 1301	3	GEOG 1102	1	GEOG 3305	3	Foreign Language	3
GEOG 1101	1	GEOG 1302	3	GEOG 3331	3	GEOG 3450	4
GEOG 1301	3	HIST 1302	3	^ <i>Kinesiology</i>	1	Minor, adv.	3
HIST 1301	3	^ <i>Kinesiology</i>	1	Minor, adv.	3	^ <i>Social/behavioral</i>	<u>3</u>
MATH 1314	<u>3</u>	MATH 1316	<u>3</u>	PSYC 3381/			16
	15		14	SOCI 3381	<u>3</u>		
					16		
Sophomore Year				Senior Year			
ENGL 2342	3	^ <i>Computer literacy</i>	3	Elective, adv.	3	GEOG, adv.	3-4
Foreign Language	3	ENGL 2362	3	GEOG 3421	4	Elective, adv.	3
GEOG 1303	3	Foreign Language	3	Minor, adv.	3	GEOG 4425	4
GEOL 1301/GEOL 1101		GEOL 1302/GEOL 1102		POLS 2301	3	Minor, adv.	3
or GEOL 1303/		or GEOL 1304/		^ <i>Visual/performing arts</i>	<u>3</u>	POLS 2302	<u>3</u>
GEOL 1103	4	GEOL 1104	4		16		16-17
Minor	<u>3</u>	^ <i>Kinesiology</i>	1				
	16	Minor	<u>3</u>				
			17				
						Total Hours Req'd:	126-127

Minor: A minor consists of 18 to 24 hours in a discipline approved by the Geosciences Chair. Students with interest in Geographic Information Systems should minor in Computer Science. Students with interest in Cultural Geography should minor in Anthropology, History, Political Science, Sociology, Southwest Borderlands Studies or a foreign language.

**Degree Requirements
Bachelor of Arts
Geography with Teaching Certification***

Freshman Year				Junior Year			
BIOL 1201	2	CISA 1301 or		^ <i>Communication</i>	3	EDED 3302	3
ENGL 1301	3	EDED 2301	3	EDHL 1254	2	EDED 3333	3
Foreign Language	3	ENGL 1302	3	GEOL 3445	4	GEOG Adv.	3
GEOG 1303	3	Foreign Language	3	**Second Tch. Field	4	GEOG 3421	4
HIST 1301	3	GEOG 1101	1	**Second Tch. Field	<u>4</u>	**Second Tch. Field	<u>4</u>
MATH 1314	<u>3</u>	GEOG 1301	3		17		17
	17	HIST 1302	3				
		^ <i>Kinesiology</i>	<u>1</u>			Summer II	
			17			POLS 2301	3
						POLS 2302	<u>3</u>
							6
Sophomore Year				Senior Year			
ARTS 2301, MUSI 2301		ENGL 2342, 2362		EDED 3332	3	EDED 4623	6
or THEA 2301	3	or 2314	3	EDED 3362	3	EDRG 4314	3
ENGL 2342, ENGL 2362		Foreign Language	3	GEOG Adv.	3	EDSE 4391	<u>3</u>
or ENGL 2314	3	GEOG 1102	1	GEOG 3331	3		12
Foreign Language	3	GEOG 1302	3	**Second Tch. Field	<u>4</u>		
^ <i>Kinesiology</i>	1	**Second Tch. Field	4		16	Total Hours Required:	133
**Second Tch. Field	<u>4</u>	SOCI 2361	<u>3</u>				
	14		17				

**Total hours vary depending on second teaching field.*

***Second Teaching field consists of 18 to 24 hours in Biology, Chemistry, Geology, Mathematics, Physics or other area approved by Geosciences Chair.*

^For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

**Degree Requirements
Bachelor of Arts
Geography (Environmental Studies Emphasis)**

Freshman Year				Junior Year			
BIOL 1201	2	ENGL 1302	3	^Computer literacy	3	Elective, adv.	3
ENGL 1301	3	Foreign Language	3	GEOG 3305	3	GEOG 3450	4
Foreign Language	3	GEOG 1102	1	GEOG 3331	3	GEOL 3445	4
GEOG 1101	1	GEOG 1302	3	^Kinesiology	1	POLS 2302	3
GEOG 1301	3	HIST 1302	3	POLS 2301	3	^Visual/performing arts	<u>3</u>
HIST 1301	3	^Kinesiology	1	PSYC 3381/SOCI 3381	<u>3</u>		17
MATH 1314	<u>3</u>	MATH 1316	<u>3</u>		16		
	18		17				
Sophomore Year				Senior Year			
CHEM 1311/CHEM 1111 or BIOL 1311/ BIOL 1111	4	CHEM 1312/CHEM 1112 or BIOL 1313/ BIOL 1113	4	CHEM 3451/RWSC 2330/Adv. GEOL	3-4	Elective, adv.	4
ENGL 2342	3	ENGL 2362	3	Elective, adv.	4	GEOG 4425	4
Foreign Language	3	ENGL 2362	3	GEOG 3421	4	GEOG, adv.	3-4
GEOL 1301/GEOL 1101 or GEOL 1303/ GEOL 1103	4	Foreign Language	3	^Kinesiology	1	PLSS 3410/RWSC 3328/BIOL 3409	<u>3-4</u>
PHYS 1301/PHYS 1101 or PHYS 1305/ PHYS 1105	<u>4</u>	GEOL 1303	3	POLS 4361	<u>3</u>		14
	18	GEOL 1302/GEOL 1102 or GEOL 1304/ GEOL 1104	<u>4</u>		15-16		
			17			Total Hours Required: 132	

If an advanced alternative to RWSC 2330 is chosen, 3 hours of electives may be non-advanced. Where 3-4 is indicated, each 4-hour choice reduces required elective hours by 1.

**Degree Requirements
Bachelor of Arts
Geology with Earth Science Teaching Certification**

Freshman Year				Junior Year			
BIOL 1201	2	ENGL 1302	3	^Communication	3	EDED 3302	3
ENGL 1301	3	Foreign Language	3	GEOL, Advanced	4	EDED 3333	3
Foreign Language	3	GEOL 1102	1	GEOG 3421	4	GEOL 3407	4
GEOL 1101	1	GEOL 1302	3	POLS 2301	3	GEOL 3445	4
GEOL 1301	3	HIST 1302	3	Supporting Field	<u>3-4</u>	Supporting Field	<u>3-4</u>
HIST 1301	3	^Kinesiology	1		17-18		17-18
MATH 1314	<u>3</u>	MATH 1316	<u>3</u>				
	18		17				
Sophomore Year				Senior Year			
EDED 2301	3	ENGL 2342, ENGL 2362 or ENGL 2314	3	EDHL 1254	2	EDED 4623	6
ENGL 2342, ENGL 2362 or ENGL 2314	3	Foreign Language	3	POLS 2302	3	EDRG 4314	3
Foreign Language	3	GEOL 3407	4	Supporting Field	3-4	EDSE 4391	<u>3</u>
GEOL 3409	4	^Kinesiology	1	Supporting Field	<u>3-4</u>		12
^Kinesiology	1	SOCI 2361	3		11-13		
^Visual/performing arts	<u>3</u>	Supporting Field	<u>3-4</u>			Total Hours Reqd: 126-131	
	17		17-18				

*At least 18 hours for a support field in one of the following: biology, chemistry, mathematics or physics; at least 6 hours of which must be advanced courses.

^For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

**Degree Requirements
Bachelor of Arts
Geology**

Freshman Year				Junior Year			
BIOL 1201	2	CHEM 1112	1	BIOL 1306/BIOL 1106		BIOL1307/BIOL 1107	
CHEM 1111	1	CHEM 1312	3	or PHYS 1301/1101	4	or PHYS 1302/ PHYS 1102	4
CHEM 1311	3	ENGL 1302	3	Foreign Language	3	Foreign Language	3
ENGL 1301	3	GEOL 1104	1	GEOL 3481	4	GEOL 3407	4
GEOL 1103	1	GEOL 1304	3	HIST 1302	3	GEOL 3431	4
GEOL 1303	3	HIST 1301	3	Minor	<u>0-4</u>	Minor	<u>0-4</u>
MATH 1314	<u>3</u>	[^] Kinesiology	1		14-18		15-19
	16	MATH 1316	<u>3</u>				
			18				
Sophomore Year				Senior Year			
ENGL 2314	3	[^] Computer literacy	3	Minor, adv.	3-4	Elective, adv.	3
Foreign Language	3	ENGL 2314 or		Minor, adv.	3-4	Elective, adv.	3
GEOL 3409	4	ENGL 2362	3	GEOL, adv.	4	Minor, adv.	3-4
[^] Kinesiology	1	Foreign Language	3	[^] Social/behavioral	3	Minor, adv.	3-4
MATH 1348	3	GEOL 3411	4	[^] Visual/performing arts	<u>3</u>	GEOL, adv.	<u>4</u>
POLS 2301	<u>3</u>	[^] Kinesiology	1		16-18		16-18
	17	POLS 2302	<u>3</u>				
			17				

Total Hours Required: 129

Minor: CHEM, BIOL, MATH, PHYS or a related field selected with approval of the department chair.

**Degree Requirements
Bachelor of Science
Geology**

Freshman Year				Junior Year			
BIOL 1201	2	CHEM 1112	1	GEOL 3481	4	GEOL 3407	4
CHEM 1111	1	CHEM 1312	3	MATH 2414 or Minor	3-4	GEOL 3431	4
CHEM 1311	3	ENGL 1302	3	PHYS 1101+	1	+PHYS 1102	1
ENGL 1301	3	GEOL 1104	1	PHYS 1301+	3	+PHYS 1302	3
GEOL 1103	1	GEOL 1304	3	POLS 2301	3	POLS 2302	<u>3</u>
GEOL 1303	3	[^] Kinesiology	1	[^] Visual/performing arts	<u>3</u>		15
[^] Kinesiology	<u>1</u>	MATH 1316	<u>3</u>		17-18		
	14		15	Summer			
				GEOL 4417	4		
				GEOL 4418	<u>4</u>		
					8		
Sophomore Year				Senior Year			
ENGL 2342	3	[^] Communication	3	GEOL, adv.	4	[^] Computer literacy	3
GEOG 3421	4	ENGL 2314 or		Minor, adv.	3	GEOL Elective, adv.	4
GEOL 3409	4	ENGL 2362	3	++Restricted Elective	3	Minor, adv.	3
HIST 1301	3	GEOL 3411	4	[^] Social/behavioral	<u>3</u>	Restricted Elective++	<u>3</u>
MATH 1348	<u>3</u>	HIST 1302	3		13		13
	17	[^] Kinesiology	1				
		MATH 2413	<u>4</u>				
			18				

Total Hours Req'd: 133-134

+Physics minors or those wishing to prepare for a career in geophysics should take PHYS 2325/PHYS 2125, PHYS 2326/PHYS 2126 in place of PHYS 1301/PHYS1101 and PHYS 1302/PHYS 1102.

++Restricted Electives must be chosen from science, mathematics, statistics, engineering, computer science, soil science and foreign language. Freshman-level courses do not count toward this requirement without permission of the department chair. Restricted electives may not count toward a minor or concentration (except biology or physics). Students planning graduate studies in geology are strongly encouraged to take a foreign language.

[^]For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

**Degree Requirements
Bachelor of Science
Geology
(Concentration in Groundwater)**

Freshman Year				Junior Year			
BIOL 1201	2	CHEM 1112	1	CHEM 3331	3	GEOG 4425 or	
ENGL 1301	3	CHEM 1312	3	GEOG 3421	4	GEOG 4435	4
GEOL 1101	1	ENGL 1302	3	GEOL 3481	4	GEOL 3407	4
GEOL 1303	3	GEOL 1104	1	GEOL 4425	4	GEOL 3431	4
CHEM 1111	1	GEOL 1304	3	MATH 3415 or		^Kinesiology	1
CHEM 1311	3	MATH 2413	4	MATH 3320	<u>3-4</u>	^Visual/performing arts	<u>3</u>
MATH 1348	<u>3</u>	PHYS 2125	1		18-19		16
	16	PHYS 2325	<u>3</u>				
			19	Summer II			
				GEOL 4417	4		
				GEOL 4418	<u>4</u>		
					8		
Sophomore Year				Senior Year			
CHEM 2421	4	CHEM 3451	4	^Communication	3	GEOL 4325	4
ENGL 2314	3	^Computer literacy	3	GEOL, Advanced	4	HIST 1302	3
GEOL 3409	4	GEOL 3411	4	MATH 3415 or		^Kinesiology	1
MATH 2414	4	HIST 1301	3	STAT 4303	3-4	^Literature/philosophy	3
PHYS 2126	1	^Kinesiology	<u>1</u>	POLS 2301	3	POLS 2032	<u>3</u>
PHYS 2326	<u>3</u>		15	^Social/behavioral	<u>3</u>		14
	19				16-17		

Total Hours Req'd: 142-143

**Degree Requirements
Bachelor of Arts
Physics**

Freshman Year				Junior Year			
ARTS	3	^Computer Literacy	3	Elective	3	Elective, adv	3
BIOL 1201	2	ENGL 1302	3	Foreign Language	3	Foreign Language	3
ENGL 1301	3	HIST 1302	3	MATH 3415	4	MATH 3320	3
HIST 1301	3	^Kinesiology	1	PHYS 3333	3	PHYS elective adv	3
^Kinesiology	1	MATH 1348	3	PHYS 3343	<u>3</u>	^Social/behavioral	<u>3</u>
MATH 1316	<u>3</u>	**PHYS 1112	1		16		15
	15	**PHYS 1312	<u>3</u>				
			17				
Sophomore Year				Senior Year			
ENGL 2314	3	^Communication	3	Elective, adv	3	Elective	3
Foreign Language	3	Foreign Language	3	Elective, adv	3	Elective, adv	3
MATH 2413	4	^Kinesiology	1	Elective, adv	3	Elective, adv	3
PHYS 2125	1	MATH 2414	4	PHYS 3313	3	Elective, adv	3
PHYS 2325	3	PHYS 2126	1	PHYS 3323	<u>3</u>	PHYS, elective, adv	<u>3</u>
POLS 2301	<u>3</u>	PHYS 2326	3		15		15
	17	POLS 2302	<u>3</u>				
			18				

Total Hours Required: 128

Minor: Mathematics

^For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

** Or any other Physics course

**Degree Requirements
Bachelor of Science
Physics**

Freshman Year				Junior Year			
BIOL 1201	2	CHEM 1112	1	^Computer literacy	3	Elective	3
CHEM 1111	1	CHEM 1312	3	Elective	3	MATH 3320	3
CHEM 1311	3	ENGL 1302	3	MATH 3415	4	PHYS, adv	3
ENGL 1301	3	^Kinesiology	1	PHYS 3333	3	+PHYS, adv	3
HIST 1301	3	++MATH 1348	3	PHYS 3343	<u>3</u>	^Social/behavioral	<u>3</u>
^Kinesiology	1	++PHYS 1112	1		16		15
+MATH 1316	<u>3</u>	++PHYS 1312	<u>3</u>				
	16		15				
Sophomore Year				Senior Year			
^Communication	3	ENGL 2314	3	Elective, adv	3	Elective	3
HIST 1302	3	^Kinesiology	1	MATH, adv	3	Elective, adv	3
MATH 2413	4	MATH 2414	4	+MATH, adv	3	+MATH, adv	3
PHYS 2125	1	PHYS 2126	1	PHYS 3323	3	PHYS 4353	3
PHYS 2325	3	PHYS 2326	3	PHYS 3313	<u>3</u>	+Physics, adv	<u>3</u>
POLS 2301	<u>3</u>	POLS 2302	3		15		15
	17	^Visual/performing arts	<u>3</u>				
			18				
						Total Hours Required:	127

***Or any other laboratory based physics course.*

+Or any other physics, mathematics, chemistry, engineering or computer science course. Courses in other supporting areas may also be substituted with departmental approval.

++Or an additional advanced MATH course.

**Degree Requirements
Bachelor of Science
Physics with Teaching Certification**

Freshman Year				Junior Year			
BIOL 1201	2	CHEM 1112	1	EDED 3302	3	EDED 3304	3
CHEM 1111	1	CHEM 1312	3	MATH 3415	4	MATH 3320	3
CHEM 1311	3	ENGL 1302	3	POLS 2302	3	PHYS, adv	3
COMS 1311	3	^Kinesiology	1	PHYS 3333	3	PHYS 4353	3
EDHL 1254	2	MATH 1348	3	PHYS 3343	3	Second Teaching Field	3-6
ENGL 1301	3	PHYS 1112 or		Second Teaching Field	<u>3-6</u>	SOCI 2361	<u>3</u>
HIST 1301	<u>3</u>	PHYS 1111	1		19		18
	17	PHYS 1312 or					
		PHYS 1311	3				
		Second Teaching Field	<u>3</u>				
			18				
Sophomore Year				Senior Year			
EDED 2301	3	ENGL 2362 or		EDED 3332	3	EDED 4623	6
ENGL 2342	3	ENGL 2314	3	EDED 3362	3	EDRG 4314	3
HIST 1302	3	MATH 2414	4	MATH, adv	3	EDSE 4391	<u>3</u>
^Kinesiology	1	MUSI 2301/ARTS 2301/ or THEA 2301	3	PHYS 3313	3		12
MATH 2413	4	PHYS 2126	1	PHYS, 3323	3		
PHYS 2125	1	PHYS 2326	3	Second Teaching Field	<u>3-6</u>	Total Hours Required:	137
PHYS 2325	<u>3</u>	POLS 2301	3		18		
	18	Second Teaching Field	<u>0-3</u>				
			17				

Some choices of Second Teaching Field will require additional hours, as indicated, which will require summer school attendance.

To obtain certification in Physics as a second teaching field, the student must include PHYS 1112, 1312, (or 1111, 1311), PHYS 2125-2126, 2325-2326, PHYS 3313, PHYS 3323, PHYS 3333, PHYS 3343 (24 hours).

^For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

DEPARTMENT OF POLITICAL SCIENCE (POLS)

Mario E. Carranza, *Chair*

Rhode Hall 356. MSC 165. Extension 3501.

Professors

Carranza, Goswami, Hartwig, Hy, Mattingly, Phaup

Associate Professor

Price

Lecturer

Lipscomb

A Political Science (POLS) major provides a broad, liberal arts education for students with the following career objectives: 1) law school; 2) graduate school; 3) a wide range of local, state and national government jobs; 4) international positions; 5) employment in the private sector (which also deals with public policy, government and politics) and 6) high school teaching. A POLS major requires 30 semester credit hours; a POLS minor requires 18 semester credit hours.

2301. The Government and Politics of the United States. (GOVT 2302) (GOVT 2305) 3(3-0)

A survey of the structures, functions and processes of the political system of the United States. Fulfills 3 semester hours of the legislative degree requirement of 6 hours.

2302. The Government and Politics of Texas. (GOVT 2301) (GOVT 2306) 3(3-0)

A survey of the structures, functions and processes of the Texas political system. Fulfills 3 semester hours of the legislative degree requirements of 6 hours.

2304. Introduction to Political Science. (GOVT 2304) 3(3-0)

Development of political science as an academic discipline; the scientific method; major research approaches to the study of political phenomena with emphasis upon the contributions of behaviorialists, policy scientists and traditional political scientists.

2340. World Politics. 3(3-0)

Analysis of the contemporary state system and forces shaping the world in which we live. Students will be given a framework within which to analyze global political issues and international institutions and their impact on American politics and government.

3302. Research and Analysis in Political Science. 3(3-0)

The practice of political science. The construction of research designs; major research tools; methods of political analysis; political science writing. Prerequisite: 6 semester hours of Political Science.

3321. Political Theory: Ancient and Medieval. 3(3-0)

The theories of the major thinkers of the periods and of their development. Prerequisite: 6 semester hours of Political Science.

3322. Political Theory: Early Modern and Modern. 3(3-0)

Theories of the major thinkers and the related intellectual and political movements. Prerequisite: 6 semester hours of Political Science.

3341. International Relations. 3(3-0)

The underlying principles governing political relations among sovereign states and the application of these principles to contemporary international problems. Prerequisite: 6 semester hours of Political Science including POLS 2340, or consent of the instructor.

- 3351. Comparative Politics.** 3(3-0)
The structures, functions and processes of selected political systems. May be repeated once for credit. Prerequisite: 6 semester hours of Political Science.
- 4311. Voting Behavior and Public Opinion.** 3(3-0)
The relation of public opinion and voting behavior to democratic government; techniques employed in analyzing political attitudes and voting behavior. Prerequisite: 6 semester hours of Political Science.
- 4312. Interest Groups and Political Parties.** 3(3-0)
Formation, structure and functions of interest groups and political parties within the political system. Prerequisite: 6 semester hours of Political Science.
- 4313. The President and Congress.** 3(3-0)
Structure, functions and policy roles of the national executive and legislative branches of government. Prerequisite: 6 semester hours of Political Science.
- 4314. State and Local Government and Administration.** 3(3-0)
Structure and functions of governmental institutions; administrative practices of state and local governments. Prerequisite: 6 semester hours of Political Science.
- 4315. Urban Politics.** 3(3-0)
A study of urban political processes and major public problems confronting urban areas. Prerequisite: 6 semester hours of Political Science.
- 4317. Nuclear Proliferation and U.S. Non-Proliferation Policies.** 3(3-0)
Causes of and U.S. responses to, nuclear proliferation in Third World regions, focusing on “problem countries.” Topics include the non-proliferation regime, the “nuclear repentants,” nuclear arms control and the threat of nuclear terrorism. Prerequisite: 6 semester hours of Political Science or consent of instructor.
- 4324. Technology and Society.** 3(3-0)
A study of technology and society from the perspective of social values, ethics, sociology, social environment, politics and economics. Prerequisite: 6 semester hours of Political Science and six semester hours of History.
- 4326. Contemporary Political Theory.** 3(3-0)
Examination of one or more of the major issues in post-World War I Political Theory. Prerequisite: 6 semester hours of Political Science.
- 4331. Constitutional Law.** 3(3-0)
A survey of American constitutional law, using leading cases, both historic and contemporary, of the Supreme Court of the United States. Establishment of the federal political system for which the Constitution provided and the judicial allocations of political and economic power within that system. (Credit may not be obtained in both POLS 4331 and CRIM 4331.) Prerequisite: 6 semester hours of Political Science.
- 4332. Constitutional Law.** 3(3-0)
A survey of American constitutional law using leading cases, both historic and contemporary, of the Supreme Court of the United States. Matters of rights and liberties, their recognition and definition, policies of rights developed by the Supreme Court of the United States. (Credit may not be obtained in both POLS 4332 and CRIM 4332.) Prerequisite: 6 semester hours of Political Science.
- 4333. The American Judicial Process.** 3(3-0)
The federal judicial system in terms of structure, function and process with stress on court interaction at both intracourt and intersystem levels. (Credit may not be obtained in both POLS 4333 and CRIM 4333.) Prerequisite: 6 semester hours of Political Science.

- 4342. International Organization.** 3(3-0)
Basic features, functions and problems of international organizations through the League of Nations, the United Nations and its specialized agencies and other important regional organizations in the context of the world situation. Prerequisite: 6 semester hours of Political Science including POLS 2340, or consent of the instructor.
- 4343. International Law.** 3(3-0)
An introduction to the study of international law. This course examines the definition, object and sources of international law as well as its relationship to domestic law and to the study of international relations. Prerequisite: 6 semester hours of Political Science, including POLS 2340, or comparable preparation with consent of the instructor.
- 4353. The Government and Politics of Russia and the Former Soviet States.** 3(3-0)
The study of the political evolution of Russia and the former Soviet Union with respect to national identity, governing institutions, ideology, politics and security concerns, with particular emphasis on post-Soviet developments. Prerequisite: 6 semester hours of Political Science.
- 4354. The Government and Politics of Latin America.** 3(3-0)
The structures, functions and processes of the political systems of the nations of Central America, the Caribbean and South America. Prerequisite: 6 semester hours of Political Science.
- 4355. The Government and Politics of Mexico.** 3(3-0)
The structures, functions and processes of the political system of Mexico. Prerequisite: 6 semester hours of Political Science.
- 4356. European Politics.** 3(3-0)
A study of the major political systems of Europe, including both national governments and supranational institutions. Prerequisite: 6 semester hours of Political Science.
- 4361. Public Administration.** 3(3-0)
The place of public administration in government; the relations of the bureaucracy to other government institutions and the public. Prerequisite: 6 semester hours of Political Science.
- 4363. Policy and Policy-Making in the United States.** 3(3-0)
Public policy and its formation through the interaction of political groups and governmental institutions in selected areas of public policy; relevant comparisons to other national systems. Prerequisite: 6 semester hours of Political Science.
- 4364. Women and Politics.** 3(3-0)
Description, analysis and assessment of women's place in a democracy through a focus on women's capacity to relate to and use political power. (Credit may not be obtained in both POLS 4364 and WMST 4364). Prerequisite: 6 semester hours of Political Science.
- 4370. Special Studies in Political Science.** V:1-3
An intensive examination of special topics of study in political science. Course may be repeated for credit when the topic of study changes. Prerequisite: 6 semester hours of Political Science or consent of the instructor.

**Degree Requirements
Bachelor of Arts
Political Science**

Freshman Year				Junior Year			
ENGL 1301	3	*CISA 1301	3	Elective, adv.	3	Minor, adv.	3
HIST 1301	3	COMS 1311	3	Minor, adv.	3	Minor, adv.	3
[^] Kinesiology	1	ENGL 1302	3	POLS 2340 or adv	3	POLS, adv.	3
MATH 1314 or 1324	3	HIST 1302	3	POLS 3302	3	POLS, adv. from	
Modern Lang (1st)	3	[^] Kinesiology	1	[^] Visual/Performing Arts	<u>3</u>	social/behavioral	3
POLS 2304	3	Same Mod Lang(2nd)	<u>3</u>		15	SOCI 3381, BUAD 3355	
SOCI 1201	<u>2</u>		16			(with prerequisite)	
	18					or Approved	
						Elective, adv.	<u>3</u>
							15
Sophomore Year				Senior Year			
ENGL 2342 or ENGL 2314	3	ECON 2301	3	Minor, adv.	3	Minor, adv.	3
GEOG 1303 or		ENGL 2362 or ENGL 2314	3	PHIL 3301, ECON 2302		Minor, adv. or Elect.,	
Approved Elective		[^] Kinesiology	1	or Elective	3	adv.	3
from Lit./Cult.	3	Lab science (2nd)	4	POLS, adv.	3	POLS, adv.	3
Lab Science (1st)	4	Same Mod Lang (4th)	3	POLS, adv.	3	POLS, adv. or	
POLS 2301	3	POLS 2302	<u>3</u>	POLS, adv. or		Approved Elective,	
Same Mod Lang. (3rd)	<u>3</u>		17	Approved Elective,		adv.	<u>3</u>
	16			adv.	<u>3</u>		12
					15		
						Total Hours Required:	124

*Or EDED 2301 plus 3 credit hours from MATH, STAT or PHIL 3301.

[^]For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

PRE-HEALTH PROFESSIONS PROGRAMS

Randy Powell, *Lecturer, Pre-Health Professions Adviser and JAMP Faculty Director*
Seale Hall Suite 210. MSC 158. Extension 3797

The Texas A&M University-Kingsville Pre-Health Professions Advising Office provides information and assistance to prospective, current and former students of Texas A&M University-Kingsville interested in pursuing health-related careers. Services include one-on-one academic, career and admissions advising, information on professional school selection, seminars on various health professions, access to summer enrichment programs and much more. Interested students should contact the Pre-Health Professions Advising Office as early in their academic careers as possible to take full advantage of the myriad of opportunities available.

Programs and Majors

Although a student may major in any field and if qualified, be accepted into a health professional school, the Bachelor of Science degree in Biology from Texas A&M University-Kingsville provides for the vast majority of prerequisite courses for the following graduate degree programs:

Medicine (M.D.), Doctor of Osteopathic Medicine (D.O.), Dentistry (D.D.S.), Pharmacy (PharmD), Physical Therapy (P.T.), Occupational Therapy (O.T.), Physician Assistant (P.A.) and Optometry (O.D.).

Texas A&M University-Kingsville also offers the prerequisite courses for several undergraduate, pre-health professions degrees available at other Coastal Bend and South Texas institutions such as:

Nursing (B.S.N.), Associate Degree in Nursing (A.D.N.), Clinical Laboratory Sciences, Physical Therapy Assistant (P.T.A.), Occupational Therapy Assistant (O.T.A.), Radiology Technician (C.R.T.), Dental Hygiene, Respiratory Care Therapist and many other allied health fields.

Early Admissions Programs

Dental School Early Admission Programs

Texas A&M University-Kingsville offers 3+4 Early Admissions Programs in dentistry with University of Texas Health Science Center-San Antonio Dental School, Texas A&M University System Health Science Center-Baylor College of Dentistry and the University of Texas Health Science Center at Houston Dental Branch. These programs provide early acceptance to dental school for qualified students during the spring semester of their freshman year and are called 3+4 because students typically spend three years at Texas A&M University-Kingsville meeting the basic degree requirements and then spend the required four years in dental training. Students who complete the program will receive a B.S. from Texas A&M-Kingsville and a D.D.S. from one of the Texas Dental Schools in seven rather than eight years. The requirements for each of these programs are unique to each institution. Interested students should contact the Pre-Health Professions Adviser for specific information.

Partnership for Primary Care (PPD)

<http://medicine.tamu.edu/studentaffairs/pcc01.htm>

The Partnership for Primary Care Program is available for qualified students. Texas A&M University System Health Science Center-College of Medicine will award Texas A&M University-Kingsville students early acceptance into its medical school prior to the start of the undergraduate freshman year or at the end of the undergraduate freshman year provided:

- the student's legal residence is in a federally-recognized, medically underserved region in the State of Texas,
- the student graduates in the top 10% of his/her high school graduating class,
- the student earns a minimum high school grade point average of a 3.5 on a 4.0 scale,
- the student scores a 1200 SAT or 26 ACT,
- the student demonstrates commitment to the medical profession and
- the student maintains a 3.5 or better college grade point average each year of enrollment at Texas A&M University-Kingsville.

In addition, students who meet the minimum admissions requirements for the Partnership for Primary Care program and are accepted to Texas A&M University-Kingsville prior to February 15th of the year they plan on beginning college will automatically qualify for the Presidential Series Scholarship Program. Students will be awarded scholarships depending on their exact qualifications by Texas A&M University-Kingsville.

Joint Admission Medical Program (JAMP)

<http://www.utsystem.edu/jamp/>

Senate Bill 940 of the 77th Texas Legislature created the Joint Admission Medical Program (JAMP) to be administered by the Joint Admission Medical Program Council. JAMP provides services to support and encourage **highly qualified economically disadvantaged students** pursuing a medical education. Students selected from JAMP will receive undergraduate and graduate scholarships and summer stipends; JAMP also guarantees the admission of those students who are qualified to a participating Texas medical school provided they satisfactorily complete all program requirements (See Pre-Health Professions Adviser for specific regulations). Qualified students must meet the following criteria:

- be a Texas resident
- apply for admission to one of the participating universities and enter college as a first-time freshman immediately following graduation from high school,
- take the SAT or ACT and earn a score not less than the mean for the State of Texas and provide the scores to the participating university,
- complete and submit the FASFA and be eligible to receive a Pell Grant in the student's freshman year of college and
- complete 15 hours of undergraduate credit during the fall semester of their freshman year with a 3.25 GPA or higher (no more than 3 hours of AP credit can be counted toward this requirement).

Summer Enrichment Programs

Various summer enrichment programs designed to facilitate and enhance the students' entry into professional school are available to Texas A&M University-Kingsville students. These programs provide stipends, academic enrichment, clinical experience, admissions counseling, rigorous standardized entrance exam preparation and the opportunity for the professional school faculty and staff to become familiar with their particular strengths well in advance of their application. A sample of the available programs typically attended by pre-health professions students include:

- The University of Texas Medical Branch/UT Pan American Academic Enrichment Program
- The University of Texas Medical Branch Medical School Familiarization Program
- Minority Medical Education Program
- Texas A&M University System Health Science Center-College of Medicine Bridge to Medicine MCAT Preparatory Program
- The University of Texas-Houston Health Science Center Medical School Summer Enrichment Program
- Baylor College of Medicine Honors Premedical Academy
- Johns Hopkins University School of Medicine Human Anatomy Course for Undergraduates
- The University of Texas Health Science Center-San Antonio Dental School Summer Dental Research Program
- Texas A&M University System Health Science Center-Baylor College of Dentistry Pre-Dental Summer Enrichment Program
- The University of Texas Dental Branch at Houston Summer Enrichment Program
- Texas Tech University Health Sciences Center Rural Pre-Health Professional Summer Academy

Required Course Prerequisites for Medical and Dental Schools in Texas:

In addition to the General Educational and Specific Degree Requirements as the vast majority of students accepted to medical and dental school earn a baccalaureate degree prior to acceptance, the following courses represent the minimum requirements for acceptance as declared by the medical and dental schools in Texas. However, numerous additional courses and nonacademic activities are just as critical to be a successful pre-medical or pre-dental student. Frequent consultation with the Pre-Health Professions Adviser is very important. The Medical College Admissions Test (MCAT) and Dental Admissions Test (DAT) are also required for medicine and dentistry, respectively.

Academic Area	Course Numbers	Total Semester Hours
Biology	required: BIOL 1201 or equivalent, BIOL 1308/BIOL 1108, BIOL 1311/BIOL 1111 BIOL 1313/BIOL 1113, BIOL 2421, BIOL 3402 strongly recommended: BIOL 3408, BIOL 4401, BIOL 4402, BIOL 4406 BIOL 4408, BIOL 4426	22
Chemistry	required: CHEM 1311/CHEM 1111, CHEM 1312/CHEM 1112, CHEM 3323/CHEM 3123, CHEM 3325/CHEM 3125 strongly recommended: CHEM 4341 and CHEM 4342 CHEM 4341 is required for Dental School	16-19
English	ENGL 1301, ENGL 1302 courses in literature strong recommended	6
Mathematics (not required for Dental School)	MATH 2413 (may require completion of MATH 1314, MATH 1316, MATH 1348 if student has not earned CLEP or AP credit)	4
Physics	PHYS 1301/PHYS 1101 or PHYS 2325/PHYS 2125 PHYS 1302/PHYS 1102 or PHYS 2326/PHYS 2126	8

Pre-Pharmacy Program

The Pre-Pharmacy Program consists of at least two years of college credit; however, the number of students gaining acceptance to Colleges of Pharmacy that complete a baccalaureate degree prior to entry is growing rapidly as the general applicant pool to all schools in Texas becomes more competitive every year. In general, applicants to pharmacy programs will be evaluated on the quality of overall academic performance, recommendation forms and interviews. The Pharmacy College Admission Test (PCAT) is also required. All students must meet the general admission requirements for admission to Texas A&M University-Kingsville to pursue the pre-pharmacy curriculum.

PROPOSED PRE-PHARMACY COURSEWORK		GROUP A COURSES	
English Composition I & II	6	Art, Music or Theatre	3
Calculus I	3	Literature, Philosophy, Language, Anthropology or Geography	3
Statistics	3	Sociology, Psychology, Economics or Computer Science	3
Speech Communications	3	History, U.S. or Texas	6
General Biology I & II/Labs	8	Political Science	6
College Physics I/Lab	4	Total Hours	21
General Chemistry I & II/Labs	8		
Organic Chemistry I & II/Labs	8		
Microbiology/Lab	4		
Total Hours	47		

FIRST PRE-PROFESSIONAL YEAR				SECOND PRE-PROFESSIONAL YEAR			
FIRST SEMESTER		SECOND SEMESTER		THIRD SEMESTER		FOURTH SEMESTER	
General Biology I/Lab	4	General Biology II/Lab	4	Organic Chemistry I/Lab	4	Organic Chemistry II /Lab	4
General Chemistry I/Lab	4	General Chemistry II/Lab	4	College Physics I/Lab	4	<i>From Group A</i>	12
Calculus	3	Speech Communications	3	Microbiology/Lab	4	Total Hours	16
English Composition I	3	English Composition II	3	Statistics	3		
<i>From Group A</i>	3	<i>From Group A</i>	3	<i>From Group A</i>	3		
Total Hours	17	Total Hours	17	Total Hours	18		
Total Pre-Pharmacy Semester Credit Hours (SCH): 68							
Please note that each accredited pharmacy program has its own additional requirements. Students should see the pre-pharmacy adviser for a specific course program.							

The curriculum of the Texas A&M University Irma Lerma Rangel College of Pharmacy is designed to provide the student with the foundation to be a general practitioner who possesses the core knowledge and skills needed for the provision of pharmaceutical care upon completing the requirements for the Doctor of Pharmacy (Pharm. D.) degree. Students matriculate into the College after meeting the 68 SCH pre-pharmacy requirements in the basic physical and biological sciences and humanities. The programmatic curriculum of the College leads to granting the Doctor of Pharmacy (Pharm. D.) degree by Texas A&M University-Kingsville. The curriculum in the College of Pharmacy includes biomedical sciences, pharmaceutical sciences, pharmacy practice, and behavioral, social and administrative pharmacy sciences. The curriculum, which requires the successful completion of 144 SCH, is organized so that the student progresses through the pharmaceutical science and clinical science didactic into summative experiential rotations. Please visit www.tamuk.edu/pharmacy for more information regarding the professional program.

Pre-Optometry, Pre-Physical Therapy, Pre-Occupational Therapy, Pre-Physician Assistant, Pre-Clinical Lab Sciences Generic Curriculum:

Students interested in the careers listed above must complete the General Education Requirements in addition to the following courses. However, there are variations in those requirements for each institution offering the respective graduate degrees. The listing below itemizes only the common courses required of all four careers listed in this section. Additional courses and nonacademic activities are just as critical in order to be successful. Therefore, frequent consultation with the Pre-Health Professions Adviser is very important. The Optometry Admissions Test (OAT) is required for optometry school. The Graduate Record Examination (GRE) is required for physical therapy, occupational therapy and physician assistant schools.

Academic Area	Course Numbers	Total Semester Hours
Biology	BIOL 1201 or equivalent, BIOL 1308/BIOL 1108, BIOL 1313/BIOL 1113 BIOL 2401, BIOL 2402, BIOL 2421, BIOL 3408	26
Chemistry	CHEM 1311/CHEM 1111, CHEM 1312/CHEM 1112, CHEM 3323/CHEM 3123 *CHEM 3325/CHEM 3125 and CHEM 4341 are also required for Optometry	12-19
Physics	PHYS 1301/PHYS 1101 or PHYS 2325/PHYS 2125, PHYS 1302/PHYS 1102 or PHYS 2326/PHYS 2126	8
Additional Mathematics (only required for Optometry)	MATH 2413 (may require completion of MATH 1314, MATH 1316, MATH 1348 (if student has not earned CLEP or AP credit)	4
Statistics	STAT 1342	3
Additional English (only required for Physical Therapy)	ENGL 2314	3

Psychology*	PSYC 2301, PSYC 4325, one additional advanced PSYC	3-9
Sociology	SOCI 1301	3

*Hours and specific courses vary depending on the specific program

A Medical Terminology course may also be required for some graduate schools (usually available as an Internet course from various institutions).

Pre-Nursing Generic Curriculum

The curriculum for a nursing degree depends on whether a student is interested in applying to a two-year nursing program (Associate Degree in Nursing) or a four-year nursing program (Bachelor of Science in Nursing). The following lists most of the courses required for the various two-year and four-year programs at most schools of nursing in Texas. Students interested in pursuing a two-year degree in nursing are not required to take general education courses, though it is recommended. Schools of nursing differ greatly in their entrance requirements. After deciding on a school or schools, the student should write to the Director of Admissions for the latest catalog and follow the program outlined as nearly as possible. Students should consult the Pre-Health Professions Adviser for specific course programs.

A.D.N. Track

Academic Area	Course Numbers	Total Semester Hours
Biology*	BIOL 1201 or equivalent, BIOL 2401, BIOL 2402, BIOL 2421	14
Chemistry*	CHEM 1405, CHEM 1407	4-8
English**	ENGL 1301, ENGL 1302	6
Psychology	PSYC 2301	3
Growth & Development***	PSYC 2314	3
(Not currently offered)		

B.S.N. Track

In addition to the above courses, a student must also complete:

Academic Area	Course Numbers	Total Semester Hours
Mathematics	MATH 1314	3
Statistics	STAT 1342	3
Literature or Foreign Language	ENGL 2342, ENGL 2362, SPAN 1301, SPAN 1313, FREN 1311	3
History	HIST 1301, HIST 1302	6
Political Science	POLS 2301, POLS 2302	6
Nutrition*	HSCI 2350	3
Sociology*	SOCI 1301	3
Social/Behavioral Sci Electives*	(examples of; not inclusive) PSYC 2306/SOCI 2306, PSYC 3301/SOCI 3301, PSYC 3314, SOCI 4307, PSYC 4322, PSYC 4342, SOCI 4341, SOCI 4362	6
Communications	COMS 1311	3
Computer Literacy	CISA 1301	3
Visual/Performing Arts	(examples of; not inclusive) ARTS 2301, MUSI 2301 or THEA 2301 ARTS 1303, ARTS 1304 or any 3 hour lab or studio course in ARTS, MUSI or THEA	3
Kinesiology (students >23 years are exempt)	Any 3 different courses as defined in the Kinesiology Activity Courses section of the catalog.	3

*Hours and specific courses vary depending on the specific program.

**Additional courses in English may be required at some nursing schools for the B.S.N. track.

***PSYC 2314 specifically is not currently offered at Texas A&M University-Kingsville. However, Developmental Psychology is offered most spring semesters as a psychology topics course and fulfills this prerequisite.

DEPARTMENT OF PSYCHOLOGY AND SOCIOLOGY

James M. Puckett, Jr., *Chair*

Manning Hall 120. MSC 177. Extension 2701.

Professors

Dempster, Domino, Green, Juarez, Puckett, Torres Raines

Associate Professors

Anderson, Chen, Vowell

Assistant Professors

Chang, Coulton, Daughtry, Guerrero, Kelly, Lin, Rhoades, Turner

Instructor

Garza

Lecturers

Hill, Rock, Walker

Faculty Emeritus

Bittinger

The Department of Psychology and Sociology is committed to the goals of a liberal education emphasizing human growth and intellectual development through an understanding of individual behavior, social interaction and cultural awareness at the undergraduate and graduate levels. The various programs in the department are geared specifically to the professional preparation of social scientists and practitioners in the areas of human development, gender and minority relations, families and children, Mexican American culture and folklore, U.S.-Mexico borderlands studies, abnormal and deviant behavior, counseling, social work, and criminology.

The department promotes critical analyses and creative approaches surrounding the well-being of South Texas. It provides a comprehensive level of quality instruction, research and community involvement. By doing so it supports the academic, research and service goals of the College of Arts and Sciences and the mission of the University.

The department offers majors and minors in Criminology, Psychology, Sociology; a major in Social Work and minors in Anthropology, Mexican American Studies and Southwest Borderlands Studies.

ANTHROPOLOGY (ANTH)

2301. Introduction to Archeology. (ANTH 2302)

3(3-0)

General introduction to the field of archeology. Emphasis on methods of data collection, analysis and a world review of major events in the development of past human civilizations.

2302. Introduction to Anthropology. (ANTH 2346)

3(3-0)

Major aspects of culture (social organization, economics, religion, etc.); cultural patterns and sociocultural change; prehistory of humans and the development of their culture.

2303. Introduction to Physical Anthropology. (ANTH 2301)

3(3-0)

An introduction to the origins and evolution of humans as reconstructed from the fossil record and from patterns of anatomical, behavioral and genetic similarity among living primates.

3301. Pre-Columbian American Cultures.

3(3-0)

Development of American Indian cultures of Central and South America to time of Spanish Conquest. Maya, Inca, Aztec and related cultural traditions. Optional field trip when possible. Prerequisite: 3 semester hours of Anthropology or Southwest Borderlands Studies. (Credit may not be obtained in both ANTH 3301 and SWBS 3301.)

3302. Principles of Cultural Anthropology.

3(3-0)

Major approaches in the field of cultural anthropology and the major influences on the discipline; introduction to research methodology used in both primitive and modern societies. Prerequisite: ANTH 2302.

3303. Introduction to Folklore and Folklife. 3(3-0)
Survey of the major forms of folklore and folklife and the methods of collection and study. Examines traditional verbal art forms, customs and material culture. Prerequisite: ANTH 2302.

3304. Fundamentals of Archaeology. 3(3-0)
Methods of data collection, analysis and theory in anthropological archaeology. Case studies of cultural development in selected ancient and historic societies. Prerequisite: 6 semester hours of social science.

4301. Social Theory. 3(3-0)
Development of social theory as represented by Comte, Spencer, Durkheim and Weber, to contemporary schools of thought, including functionalism, conflict, symbolic interactionism, structuralism and world systems theory. Prerequisite: ANTH 2302 or SOCI 1301 and 6 semester hours of advanced Anthropology or Sociology. (Credit may not be obtained in both ANTH 4301 and SOCI 4383.)

4303. Folk Medicine. 3(3-0)
An examination of the folk medical system of Mexican Americans from an anthropological perspective. Includes an exploration of household remedies (including herbal remedies), folk illness syndromes, various folk healers (including *parteras*, or midwives, and *sobadores*, or massagers), *curanderismo* (folk healing) and *brujeria* (witchcraft) in present-day Mexican American culture in South Texas and the Southwest. Prerequisite: 3 semester hours of Anthropology or Southwest Borderlands Studies. (Credit may not be obtained in both ANTH 4303 and SWBS 4304.)

4305. Language and Culture. 3(3-0)
Introduction to the social and cultural aspects of language and provides framework and methodology for studying and analyzing the many elements which make up verbal and nonverbal communication in various speech communities in the United States. Prerequisite: 3 semester hours of Anthropology or Southwest Borderlands Studies. (Credit may not be obtained in both ANTH 4305 and SWBS 4305.)

4306. Mexican-American Folklore. 3(3-0)
Examines the various types of culture from an anthropological perspective and provides an in-depth look at various genres of Mexican-American folklore, including folk narrative, folk belief, folk medicine, folk music, folk speech and folk material culture. Prerequisite: 3 semester hours of Anthropology or Southwest Borderlands Studies. (Credit may not be obtained in both ANTH 4306 and SWBS 4306.)

4308. Latin American Culture. 3(3-0)
Origin and development of contemporary cultural forms in Latin America. Industrialization, socioeconomic and demographic change are examined from several theoretical perspectives. Prerequisite: 6 semester hours of Anthropology or Sociology. (Credit may not be obtain in both ANTH 4308 and SWBS 4308.)

4309. Mexican Border Subcultures. 3(3-0)
Analysis of social processes such as competition, accommodation and cooperation occurring in the American Southwest and in Northern Mexico, with attention to such variables as ethnicity and stratification. Prerequisite: 3 semester hours of Anthropology or Southwest Borderlands Studies. (Credit may not be obtained in both ANTH 4309 and SWBS 4309.)

4350. Selected Topics in Anthropology. 3(3-0)
Literature and research in anthropological areas not otherwise treated in depth in available courses. May be repeated once for credit when topics differ. Prerequisite: ANTH 2302 or SOCI 1301 and 6 semester hours of social science.

4382. Methods of Social Research. 3(3-0)
Introduction to the study of the scientific method as applied to social research, including the logic of science, covering the nature of data, hypotheses, concepts and objectivity. Prerequisites: ANTH 2302 or SOCI 1301 and 3 semester hours of advanced Anthropology or Sociology. (Credit may be obtained in only one of ANTH 4382, CRIM 4382 or SOCI 4382.)

CRIMINOLOGY (CRIM)

- 3302. Social Deviance.** 3(3-0)
Survey of the sociological and psychological aspects of deviant behavior. Nature of deviance, types of deviant behavior, causal theories and social policy implications. (Credit may not be obtained in both CRIM 3302 and SOCI 3302.) Prerequisites: SOCI 1301 and 3 semester hours of Criminology or Sociology.
- 3320. Psychology of Criminal Behavior.** 3(3-0)
Psychological processes related to behaviorism, social learning theory, aggression theory, bio-psychological factors, criminal homicide, sexual offenses, drugs and crime, correctional psychology, the criminal offender and the mentally disordered offender. (Credit may not be obtained in both CRIM 3320 and PSYC 3320.) Prerequisites: PSYC 2301 and SOCI 1301.
- 3321. Introduction to Criminology.** 3(3-0)
Extent, types, causation, patterns and organization, apprehension, punishment treatment, agents and agencies related to crime and criminals, including experiences such as field trips and visits to jail may be included. (Credit may not be obtained in both CRIM 3321 and SOCI 3321.) Prerequisite: SOCI 1301.
- 3322. Juvenile Delinquency.** 3(3-0)
Incidences, types, causation, patterns, processes, treatment agencies and research as related to juvenile delinquency. Selected practical experiences such as field trips to juvenile institutions. (Credit may not be obtained in both CRIM 3322 and SOCI 3322.) Prerequisite: SOCI 1301.
- 4320. Law and Society.** 3(3-0)
An in-depth examination of law and society through the philosophy and evolution of legal systems and legal institutions. The major functions of law as agents of social control, dispute resolution and societal engineering are addressed. (Credit may not be obtained in both CRIM 4320 and SOCI 4320.) Prerequisites: SOCI 1301 and 3 semester hours of Criminology or Sociology.
- 4321. Criminological Theory.** 3(3-0)
An overview of the principle theories of criminality and the application of these theories to contemporary crime issues. Prerequisite: CRIM 3321 or SOCI 3321.
- 4325. Sociology of Corrections.** 3(3-0)
Overview of social psychological, cultural, sociological and political factors related to the correctional enterprise. Includes treatment of the context of corrections, correctional practices, correctional issues, correctional institutions and correctional perspectives. May include field trips to correctional institutions. (Credit may not be obtained in both CRIM 4325 and SOCI 4325.) Prerequisite: CRIM 3321 or SOCI 3321.
- 4326. Community Resources in Corrections.** 3(3-0)
An analysis of correctional processes and facilities available at the community level. Topics include: probation, parole, diversion, halfway houses, community reintegration procedures, community treatment centers and volunteer programs. Emphasis is placed on social structure, functions and problems of community-based programs. May include practical experiences such as field trips. Prerequisites: CRIM 3321 and SOCI 1301.
- 4331. Constitutional Law.** 3(3-0)
A survey of American constitutional law, using leading cases, both historic and contemporary, of the Supreme Court of the United States. Establishment of the federal political system for which the Constitution provided and the judicial allocations of political and economic power within that system. (Credit may not be obtained in both CRIM 4331 and POLS 4331.) Prerequisite: 6 semester hours of Political Science.
- 4332. Constitutional Law.** 3(3-0)
A survey of American constitutional law, using leading cases, both historic and contemporary, of the Supreme Court of the United States. Matters of rights and liberties, their recognition and definition, policies of rights developed by the Supreme Court of the United States. (Credit may not be obtained in both CRIM 4332 and POLS 4332.) Prerequisite: 6 semester hours of Political Science.

4333. The American Judicial Process. 3(3-0)
The federal Judicial System in terms of structure, function and process with stress on court interaction at both intracourt and intersystem levels. (Credit may not be obtained in both CRIM 4333 and POLS 4333.) Prerequisite: 6 semester hours of Political Science.

4340. Topics in Criminology. 3(3-0)
Literature and research in the area of criminology not otherwise treated in depth in available courses. Topics will vary according to needs, interests and capability of the instructor. May be repeated once for credit when topic differs. Prerequisite: 6 semester hours of Criminology.

4341. Organized and White-Collar Crime. 3(3-0)
An in-depth view of the social structural and organization factors leading to the development of organized and white collar criminal activity from a sociological perspective. The nature, extent, types, costs, structure and control of these crimes will be treated. Prerequisite: 6 semester hours of Criminology.

4342. Substance Abuse. 3(3-0)
A general survey of current research on psychological, social, legal and situational factors involved in substance usage and its effect on human behavior and criminal activity. Includes a treatment of therapeutic procedures and facilities. (Credit may not be obtained in both CRIM 4342 and PSYC 4342.) Prerequisite: 6 semester hours of Criminology or Psychology.

4345. Victimology. 3(3-0)
An examination of the historical role of crime victims, nature of victimization in modern society, the victimization process, solutions to victimization and victim's rights. Emphasis given to the social, legal, psychological and societal aspects of victimization. Victim-offender interaction and societal response to victimization will also be treated. Prerequisite: 6 semester hours of social science.

4346. Gangs and Gang Behavior. 3(3-0)
Gangs and gang behavior from a cross-cultural perspective. The historical evolution of gangs in America and Europe. Emphasis on the causes, consequences and social control of gangs in relation to society. Prerequisite: 6 semester hours of Criminology.

4348. Violence. 3(3-0)
Types of violence from a historical and cross-cultural perspective, identifying and delineating patterns of violent behavior. Social structure and culture are linked to violence and examined in the context of individuals, groups and societies. Emphasis is placed on the social control of violence. Prerequisite: 6 semester hours of Criminology.

4382. Methods of Social Research. 3(3-0)
Introduction to the study of the scientific method as applied to social research including the logic of science, covering the nature of data, hypotheses, concepts and objectivity. (Credit may be obtained in only one of CRIM 4382, ANTH 4382 or SOCI 4382.) Prerequisites: SOCI 1301 and 3 semester hours of Sociology.

4384. Directed Research in Criminology. V:1-3
Supervised research experience in criminology. Student will assist with a research project by working under the individual guidance of a faculty member. Requirements may include library research, data collection, data entry, statistical analysis and/or assistance in planning and conducting parts of a research project. A paper on the research experience is required. May be repeated for a maximum of 3 semester hours of credit. Prerequisites: SOCI 3381 or PSYC 3381, CRIM 4382 and 6 other semester hours of Criminology. (Consent of instructor required.) Credit/Non-credit.

PSYCHOLOGY (PSYC)

2301. Introduction to Psychology. (PSYC 2301) 3(3-0)
Scientific method of psychology; psychological phenomena and basic processes necessary to understanding human behavior. Emphasis on heredity-environment; personality development, motivation, emotion, attitudes and intelligence. Prerequisite to all other courses in Psychology.

2302. Survey of General Psychology. (PSYC 2302) 3(3-0)
A continuation of PSYC 2301 with emphasis on learning, perception, physiological factors, the senses, experimental design and method. Prerequisite: PSYC 2301.

2305. Women's Issues in Health and Sexuality. 3(3-0)
Examines health and medical issues for women, legal and political realities that influence women's lives and important aspects of intimacy and sexuality with a focus on both physiological and psychological development. Credit can be received in only one of PSYC 2305, EDHL 2305 or WMST 2305.

2306. Human Sexuality. (PSYC 2306) 3(3-0)
Biophysical and psychological aspects of human sexuality. (Credit may not be obtained in both PSYC 2306 and SOCI 2306.)

2308. Child Psychology. (PSYC 2308) 3(3-0)
A scientific study of the child as a sentient organism. The best methods of child study; native and learned behavior patterns and their development; the nature, amount and significance of individual differences; typical and atypical child behavior; emotions; play; language; work in specific capacity and interest; growing personality. Prerequisite: PSYC 2301 and sophomore standing.

3301. Social Psychology. 3(3-0)
Theory and phenomena of social psychology. The nature and type of social variables and the methods used to study them. The effect of social variables upon the behavior of individuals. (Credit may not be obtained in both PSYC 3301 and SOCI 3301.) Prerequisite: 6 semester hours of Psychology or 12 hours of social science.

3303. Psychology of Personal Adjustment. 3(3-0)
Adjustment problems of normal people. Principles of healthy psychological functioning in relation to family, peers, career, community and culture. Prerequisite: 6 semester hours of Psychology.

3304. Introduction to Learning Psychology. 3(3-0)
General principles of learning and memory and an introduction to learning theory. Emphasis on motivation, conditioning and problem-solving. Prerequisite: 6 semester hours of Psychology.

3309. Differential Psychology. 3(3-0)
The extent, nature, cause and significance of individual differences. Prerequisite: 6 semester hours of Psychology.

3313. Psychology of Women. 3(3-0)
An overview of the broad range of psychological issues and biological events which are of significant relevance to women. Explores the richness of the female experience in terms of changing values, attitudes and expectations. (Credit may not be obtained in both PSYC 3313 and WMST 3313.) Prerequisite: 6 hours of Psychology.

3314. Psychology of Adolescence. 3(3-0)
Treats the definition of adolescence, research and theory concerning the biological, moral, sex-role, personality and emotional development. Prerequisite: 6 semester hours of social science approved by the instructor.

3315. Health Psychology. 3(3-0)
Examines and defines the nature of illness and healing through the integration of biophysiological, psychoneuroimmunological, psychological and environmental factors. Examines stress and stress management techniques. Prerequisites: 9 hours of social science and PSYC 2301.

3320. Psychology of Criminal Behavior. 3(3-0)
Psychological processes related to behaviorism, social learning theory, aggression theory, bio-psychological factors, criminal homicide, sexual offenses, drugs and crime, correctional psychology, the criminal offender and the mentally disordered offender. (Credit may not be obtained in both PSYC 3320 and CRIM 3320.) Prerequisites: PSYC 2301 and SOCI 1301.

3381. Statistics for the Behavioral Sciences. 3(3-0)
Statistics for students in psychology, sociology and education. Emphasis upon descriptive and inferential techniques. Basic concepts in sampling data organization and statistic selection. (Credit may not be obtained in both PSYC 3381 and SOCI 3381.) Prerequisite: 6 semester hours of social science.

3387. Experimental Psychology. 3(2-2)
Introduction to experimentation in psychology. Basic experiments will be performed on the discriminative process, motivation and learning. Prerequisites: 6 semester hours of Psychology and PSYC 3381 or equivalent.

4302. Industrial Organizational Psychology. 3(3-0)
Application of psychological principles to the world of work and to organizations. Topics include recruitment and selection of employees, evaluation of job performance, motivation, training, leadership, job satisfaction and work teams. Prerequisite: 12 semester hours of social science and senior standing.

4304. Family Therapy. 3(3-0)
An overview of family systems approaches to etiology and treatment. Family dysfunctions that result from drug and alcohol usage and other causes are emphasized. Prerequisite: 12 semester hours of psychology.

4305. Advanced Human Sexuality. 3(3-0)
Psychosocial factors in human sexuality with emphasis on sexual adjustment, sexual dysfunctions, sexual variations and new approaches in sex therapy. Appropriate field trips may be included. Prerequisite: PSYC 2306 or SOCI 2306. (Credit may not be obtained in both PSYC 4305 and SOCI 4305.)

4308. Theory and Principles of Psychological Testing. 3(3-0)
An introduction into the rationale of psychological measurement. Test construction, validity, reliability, standardization and statistical treatment of test results. Various accepted tests will be examined as they present measurement of significant individual characteristics. Prerequisite: 9 semester hours of Psychology, including PSYC 3381 or its equivalent.

4312. Physiological Psychology. 3(3-0)
Introduction to the physiological substrata of behavior; including basic neuroanatomy, research techniques, basic physiology, sensory processes and central nervous system functions. Prerequisite: PSYC 2301 and PSYC 2302.

4315. Selected Topics in Psychology. 3(3-0)
Literature and research in areas of psychology not otherwise treated in depth in available courses. May be repeated once as topics change. Prerequisite: 12 semester hours of Psychology.

4322. Psychology of Personality. 3(3-0)
A comparison of personality theories and the implications for personality development and change. Prerequisite: 6 semester hours of Psychology.

4323. History and Systems of Psychology. 3(3-0)
Important historical antecedents and contemporary psychological systems. An exit course that integrates diverse material encountered in the discipline. Prerequisite: 6 semester hours of advanced Psychology; senior standing.

4325. Abnormal Psychology. 3(3-0)
Personality development and adjustment, causes of abnormal behavior, neuroses, psychoses, suicide, personality disorders and crime. Prerequisite: 6 semester hours of Psychology.

4328. Psychology of Perception. 3(3-0)
Analysis of basic perceptual phenomena and theories of perception. Emphasis on sensation, attention, meaning and structural concepts. Prerequisite: 6 semester hours of Psychology.

4342. Substance Abuse.

3(3-0)

A general survey of current research on psychological, social, legal and situational factors involved in substance usage and its effect on human behavior and criminal activity. Includes a treatment of therapeutic procedures and facilities. (Credit may not be obtained in both PSYC 4342 and CRIM 4342.) Prerequisite: 6 semester hours of Criminology or Psychology.

4351. Directed Research in Psychology.

V:1-3

Individual instruction course for advanced and qualified undergraduates to obtain supervised research experience in psychology. Student will assist with a research project by working under the individual guidance of a psychology faculty member. Requirements may entail library research, data collection, data entry, statistical analysis and or assistance in planning and conducting parts of a research project. A paper on the research experience is required. Consent of instructor required. May be repeated for a maximum of 3 semester credit hours. Prerequisites: PSYC 3381, PSYC 3387 or SOCI 4382 and 6 other semester hours of psychology. Credit/Non-credit.

SOCIAL WORK (SCWK)

The mission of the social work program is to recruit and prepare racially, ethnically and culturally diverse students for competent practice as beginning generalist social workers with particular emphasis on public service, social justice and empowerment for people who are vulnerable, oppressed and living in poverty. Building on an educational foundation in the liberal arts, the curriculum will promote social work knowledge and skills centered on the professional values of service, social justice, cultural diversity, the dignity and worth of the person, the importance of human relationships and professional integrity and competence.

Accreditation

The social work program is accredited by the Council on Social Work Education.

Degree Requirements

The bachelor's degree in social work requires the completion of 124 semester credit hours including 39 hours in social work and 85 semester credit hours in liberal arts and related courses with 45 advanced hours. The major in social work does not require the student to have a minor.

Admission to the Program

Students admitted to the university may declare their interest in becoming social workers and initiate a general academic program preparatory to this objective. Formal admission into the program is required to register for professional social work (3000 or 4000 level) courses. The qualifications for admission to the program are as follows:

1. Completion of 45 semester hours of course work including at least 30 hours of the following courses or their equivalent.
 - ENGL 1301, ENGL 1302, ENGL 2342 and ENGL 2362
 - MATH 1314 or MATH 1334
 - SOCI 1301
 - PSYC 2301
 - POLS 2301, POLS 2302
 - HIST 1301, HIST 2302
 - CISA 1301
 - SCWK 2331, SCWK 2333
2. Completion of 35 hours of community service work approved by the program.
3. Application for admission must be submitted on forms provided by the program and in accordance with the policies and procedures set out in the Bachelor of Social Work Student Handbook which is available in the program office.

Admission to the Field Sequence

The field sequence consists of the two practicum courses and their corequisite seminars and may be taken in consecutive semesters or concurrently in one semester. Social work majors must meet the following qualifications for admission to the field sequence:

1. Minimum overall 2.0 GPA and a 2.25 GPA in all major social work courses.

2. Completion of all other social work courses required for the degree. Majors completing the field sequence over two semesters may be concurrently enrolled in the practice methods course.

Retention to the Program

Students may be advised to consider another major at any point after admission if they lack the emotional or mental stability, adequate communication skills, interpersonal relationship skills or the level of self-awareness necessary to pursue a social work career, as judged by the social work faculty. Criteria used by the faculty to make such judgments include but are not limited to the instructors' evaluation of a student's classroom performance and adherence to the National Association of Social Workers' Code of Ethics.

2331.Introduction to Social Work. 3(3-0)

Survey of the social work profession, including history, philosophy, ethics and relevance to current social issues. Participation with service agencies to assess interest in pursuing social work as a career. Prerequisite: SOCI 1301.

2333.Human Behavior in the Social Environment 1. 3(3-0)

Study of individuals as they develop physically, cognitively, socially, emotionally and spiritually over the life cycle with emphasis on benchmarks for growth. Utilizing the person-in-the-environment perspective, attention is given to social forces that inhabit growth and social functioning. Prerequisite: SCWK 2331 and PSYC 2301.

3335.Human Behavior in the Social Environment 2. 3(3-0)

A systems approach to examining behaviors of individuals, families, groups, organizations and communities. Critical analysis of the systems of inequality associated with class, race and ethnicity, gender, sexual orientation, physical ability and age. Prerequisite: SCWK 2333 and admission to the social work program. Corequisite: SCWK 3337.

3337.Theories and Models of Social Work Practice. 3(3-0)

Overview of social work practice utilizing generalist models. Emphasis on client strengths and empowerment, the change process and issues of human diversity. Prerequisite: SCWK 2333 and admission to the program. Corequisite: SCWK 3335.

4306. Selected Topics in Social Work. 3(3-0)

Literature and research in areas of social work not otherwise treated in depth in available courses. May be repeated once as topics change. Prerequisites: SCWK 2331, SCWK 2333 and admission to the social work program.

4324. Social Work Methods I. 3(3-0)

Social work practice from a generalist perspective with emphasis on the acquisition of knowledge, skills and values necessary for working at the micro practice level. Students will acquire relationship building, interviewing and problem solving skills necessary for affecting change and enhancing the functioning of individuals, families, groups, organizations and communities. Prerequisites: SCWK 2331, SCWK 2333 and admission to the social work program.

4325. Social Work Methods II. 3(3-0)

Social work practice from a generalist perspective with emphasis on practice at the mezzo level. Students will acquire the knowledge and skills for working with individuals in small groups within the planned change process. Emphasis on values, ethics, human diversity and social justice. Concurrent enrollment in SCWK 4641 recommended. Prerequisite: SCWK 4324 admission to social work program.

4326. Social Work Methods III. 3(3-0)

Social work practice from a generalist perspective with emphasis on practice at the macro practice level. Students will acquire the knowledge and skills necessary in the problem solving process with large groups, communities and organizations and their individual members. Emphasis on values, ethics, human diversity and social justice. Concurrent enrollment in SCWK 4643 recommended. Prerequisites: SCWK 4324 and admission to social work program.

4345.Social Welfare: Policy and Advocacy. 3(3-0)

Historical and current survey of the social service delivery system as a response to human need. History, mission and

philosophy of the social work profession. Conceptual and practical application in policy analysis, advocacy and practice with disempowered groups. Prerequisite: admission to the social work program.

4347.Methods of Social Work Research and Evaluation. 3(3-0)

Principles of social research. Quantitative and qualitative research methodologies, analysis of data including statistical procedures, conclusions of research reports, analysis and evaluation of theoretical bases and systematic evaluation of practice. Prerequisite: admission to the social work program.

4641.Social Work Practicum 1. 6(2-16)

First in a sequence of two field practicums. Educationally directed and professionally supervised direct service activities providing practical experience in the application of theory and skills acquired in the foundation courses. Two hundred (200) clock hours of field placement and a weekly seminar of two hours. Prerequisites: permission of field coordinator and credit or registration in SCWK 4325.

4643.Social Work Practicum 2. 6(2-16)

The second in a sequence of two field practicums. Educationally directed and professionally supervised direct service activities providing practical experience in the application of the theory and skills acquired in foundation courses. The application of research and evaluative techniques to the practice experience. Two hundred (200) clock hours of field placement; weekly seminar of two hours. Prerequisites: permission of field coordinator and credit or registration in SCWK 4326.

SOCIOLOGY (SOCI)

1201.Introduction to the Arts and the Sciences. 2(2-0)

Designed to serve a dual function: primarily as an introduction to a specific disciplinary area (i.e., arts and humanities: art, history, communications/theatre arts, language and literature, music) and secondarily as general university-level instruction in the methods and practice of critical thinking, analysis and communication. The 30 clock hour course assigns 20 hours to an academic core that is discipline-specific and 10 hours to instruction in and application of academic habits and skills. The course is required of all entering freshmen and transfer students with fewer than 20 hours.

1301. Principles of Sociology. (SOCI 1301) 3(3-0)

Study of the nature of human societies, social processes, social interaction, groups, culture, institutions and social change.

1306. Social Problems. (SOCI 1306) 3(3-0)

Survey of contemporary social problems and current trends in the direction of their solution. Prerequisite: SOCI 1301.

2306. Human Sexuality. (SOCI 2306) 3(3-0)

Biophysical and psychological aspects of human sexuality. (Credit may not be obtained in both SOCI 2306 and PSYC 2306.)

2361. Pluralistic Societies. 3(3-0)

Macrocultural and microcultural variables such as ethnicity, religion, age, socioeconomic status, language, gender and exceptionality and their impact upon major institutions such as education, labor markets and government.

2363. Women, Change and Society. 3(3-0)

Interdisciplinary approach utilizing political, historical and sociological factors to analyze the status of American women. Aspects of sex role socialization, institutional interaction, social problems and social movements are analyzed. (Credit may not be obtained in both SOCI 2363 and WMST 2363. Prerequisite: SOCI 1301 or 6 hours of social science.)

3301. Social Psychology. 3(3-0)

Theory and phenomena of social psychology. The nature and type of social variables and the methods used to study them. The effect of social variables upon the behavior of individuals. (Credit may not be obtained in both SOCI 3301 and PSYC 3301.) Prerequisite: 6 semester hours of Psychology or 12 hours of social science.

3302. Social Deviance. 3(3-0)
Survey of the sociological and psychological aspects of deviant behavior. Nature of deviance, types of deviant behavior, causal theories and social policy implications. (Credit may not be obtained in both SOCI 3302 and CRIM 3302.) Prerequisites: SOCI 1301 and 3 semester hours of Sociology or Criminology.

3321. Introduction to Criminology. 3(3-0)
Extent, types, causation, patterns and organization, apprehension, punishment treatment, agents and agencies related to crime and criminals, including experiences such as field trips and visits to jail may be included. (Credit may not be obtained in both SOCI 3321 and CRIM 3321.) Prerequisite: SOCI 1301.

3322. Juvenile Delinquency. 3(3-0)
Incidence, types, causation, patterns, processes, treatment agencies and research as related to juvenile delinquency. Selected practical experiences such as trips to juvenile institutions. (Credit may not be obtained in both SOCI 3322 and CRIM 3322.) Prerequisite: SOCI 1301.

3332. An Introduction to Group Work. 3(3-0)
A study of the dynamics of groups with emphasis on theories and findings concerning groups. Prerequisite: SOCI 1301 or 6 hours of social science.

3351. Urban Sociology. 3(3-0)
The culture, history and growth patterns of cities; demographic, ecological patterns and trends. Problems of housing and community organization. Prerequisite: SOCI 1301.

3381. Statistics for the Behavioral Sciences. 3(3-0)
Statistics for students in psychology, sociology and education. Emphasis upon descriptive and inferential techniques. Basic concepts in sampling data organization and statistic selection. (Credit may not be obtained in both SOCI 3381 and PSYC 3381.) Prerequisite: 6 semester hours of social science.

4305. Advanced Human Sexuality. 3(3-0)
Psychosocial factors in human sexuality with emphasis on sexual adjustment, sexual dysfunctions, sexual variations and new approaches in sex therapy. Appropriate field trips may be included. Prerequisite: SOCI 2306 or PSYC 2306. (Credit may not be obtained in both SOCI 4305 and PSYC 4305.)

4307. The Family and Marriage. 3(3-0)
History and development of the family as an educational and social institution, factors involved in family integrity, role of the individual in family relations, marital adjustments and family conservation in light of the present-day social and economic conditions. Prerequisite: SOCI 1301 or 6 hours of social science.

4308. Selected Topics in Sociology. 3(3-0)
Literature and research in areas of sociology not otherwise treated in depth in available courses. May be repeated once for credit when topics differ. Prerequisite: 12 semester hours of Sociology.

4320. Law and Society. 3(3-0)
An in-depth examination of law and society through the philosophy and evolution of legal systems and legal institutions. The major functions of law as agents of social control, dispute resolution and societal engineering are addressed. (Credit may not be obtained in both SOCI 4320 and CRIM 4320.) Prerequisites: SOCI 1301 and 3 semester hours of Sociology or Criminology.

4324. Technology and Society. 3(3-0)
A study of technology and society from the perspective of social values, ethics, sociology, social environment, politics and economics. Prerequisite: 12 hours of social science.

4325. Sociology of Corrections. 3(3-0)
Overview of social, psychological, cultural, sociological and political factors related to the correctional enterprise. Includes treatment of the context of corrections, correctional practices, correctional issues, correctional institutions and correctional perspectives. May include field trips to correctional institutions. (Credit may not be obtained in both SOCI 4325 and CRIM 4325.) Prerequisite: SOCI 3321 or CRIM 3321.

4341. Sociology of Aging. 3(3-0)
Study of the last stage in the life-cycle of man. The course emphasizes the interdisciplinary approach necessary in the field of gerontology, the biological, psychological and social aspects of the aging process, along with the social impact of growing proportions of aged persons within the social structure of society. Prerequisite: SOCI 1301.

4342. Sociology of Death. 3(3-0)
Sociological perspectives of the dying process and death itself, including the cultural and institutional means of aiding survivors through the grief, mourning and bereavement process. Prerequisite: 12 semester hours of Sociology.

4362. Race Relations. 3(3-0)
Critical analysis of the concept of race, analysis of subordinate peoples in various world societies and in the United States, emphasis on dynamics of problems of subordinate groups. Prerequisite: 6 hours of Sociology.

4364. Minority Women in U.S. Society. 3(3-0)
An integrated study of the impact that socioeconomic and ethnic/racial factors have on minority women within the United States. (Credit may not be obtained in both SOCI 4364 and WMST 4300.) Prerequisite: SOCI 1301 or 6 hours of social science.

4382. Methods of Social Research. 3(3-0)
Introduction to the study of the scientific method as applied to social research including the logic of science, covering the nature of data, hypotheses, concepts and objectivity. Prerequisites: ANTH 2302 or SOCI 1301 and 3 semester hours of advanced Anthropology or Sociology. (Credit may be obtained in only one of SOCI 4382, ANTH 4382 or CRIM 4382.)

4383. Social Theory. 3(3-0)
Development of social theory as represented by Comte, Spencer, Durkheim and Weber, to contemporary schools of thought, including functionalism, conflict, symbolic interactionism, structuralism and world systems theory. Prerequisite: ANTH 2302 or SOCI 1301 and 6 semester hours of advanced Anthropology or Sociology. (Credit may not be obtained in both SOCI 4383 and ANTH 4301.)

4386. Directed Research in Sociology. V:1-3
Individual instruction course for advanced and qualified undergraduates to obtain supervised research experience in sociology. Student will assist with a research project by working under the individual guidance of a sociology faculty member. Requirements may entail library research, data collection, data entry, statistical analysis and/or assistance in planning and conducting parts of a research project. A paper on the research experience is required. Consent of instructor required. May be repeated for a maximum of 3 semester credit hours. Prerequisites: SOCI 3381, SOCI 4382 or PSYC 3387 and 6 other semester hours of Sociology. Credit/Non-credit.

SOUTHWEST BORDERLANDS STUDIES (SWBS)

2301. Foundations of Mexican American Studies. 3(3-0)
History, economics, sociology, demography, folklore, education, art and literature of Mexican Americans.

2302. Introduction to Southwest Borderlands Studies. 3(3-0)
A survey of the multidimensional and interdependent nature of United States-Mexico regional interaction and development. A focus on southwest borderlands dynamics which impact upon culture, social institutions, ecological and demographic characteristics.

3300. Mexican American Literature and Thought. 3(3-0)
Selected Mexican American literature and its accompanying thought covering various periods and the following genres: poetry, the short story, the novel, the theater and the essay. Conducted in Spanish and English.

3301. Pre-Columbian American Cultures. 3(3-0)
Development of American Indian cultures of Central and South America to time of Spanish Conquest. Maya, Inca, Aztec and related cultural traditions. Optional field trip when possible. Prerequisite: 3 semester hours of Anthropology or Southwest Borderlands Studies. (Credit may not be obtained in both SWBS 3301 and ANTH 3301.)

4301. Bicultural Groups in U.S. Society. 3(3-0)
A study of bicultural groups with salient ethnic characteristics, i.e., Blacks, Mexican Americans, Puerto Ricans, Japanese, Italians and Native Americans. Prerequisite: 3 semester hours of Southwest Borderlands Studies or 12 semester hours of social science.

4302. Political Economy of the Borderlands. 3(3-0)
A contemporary focus on the political-economic dynamics characterizing Southwest borderlands regional development. An examination of U.S.-Mexican government programs and policies which impact upon borderlands industrialization, urbanization and migration. Prerequisite: 6 semester hours of social science.

4303. Folk Medicine. 3(3-0)
An examination of the folk medical system of Mexican Americans from an anthropological perspective. Includes an exploration of household remedies (including herbal remedies), folk illness syndromes, various folk healers (including *parteras*, or midwives, and *sobadores*, or massagers), *curanderismo* (folk healing) and *brujeria* (witchcraft) in present-day Mexican American culture in South Texas and the Southwest. Prerequisite: 3 semester hours of Southwest Borderlands Studies or Anthropology. (Credit may not be obtain in both SWBS 4303 and ANTH 4303.)

4304. Human and Natural Resources of the Borderlands. 3(3-0)
Study of development of natural and human resources use in the several cultural areas of the borderlands. Analysis of problem areas such as water resources, international migration, disaster management and manpower development. Prerequisite: 6 semester hours of social science.

4305. Language and Culture. 3(3-0)
Introduction to the social and cultural aspects of language and provides framework and methodology for studying and analyzing the many elements which make up verbal and non-verbal communication in various speech communities in the United States. Prerequisite: 3 semester hours of Southwest Borderlands Studies or Anthropology. (Credit may not be obtained in both SWBS 4305 and ANTH 4305.)

4306. Mexican-American Folklore. 3(3-0)
Examines the various types of culture from an anthropological perspective and provides an in-depth look at various genres of Mexican-American folklore, including folk narrative, folk belief, folk medicine, folk music, folk speech and folk material culture. Prerequisite: 3 semester hours of Southwest Borderlands Studies or Anthropology. (Credit may not be obtained in both SWBS 4306 and ANTH 4306.)

4308. Latin American Culture. 3(3-0)
Origin and development of contemporary cultural forms in Latin America. Industrialization, socioeconomic and demographic change are examined from several theoretical perspectives. Prerequisite: 6 semester hours of Anthropology or Sociology. (Credit may not be obtain in both SWBS 4308 and ANTH 4308.)

4309. Mexican Border Subcultures. 3(3-0)
Analysis of social processes such as competition, accommodation and cooperation occurring in the American Southwest and in Northern Mexico, with attention to such variables as ethnicity and stratification. Prerequisite: 3 semester hours of Southwest Borderlands Studies or Anthropology. (Credit may not be obtained in both SWBS 4309 and ANTH 4309.)

**Degree Requirements
Bachelor of Science
Criminology**

Freshman Year				Junior Year			
ENGL 1301	3	*CISA 1301	3	CRIM (Adv)	3	CRIM (Adv)	3
HIST 1301	3	ENGL 1302	3	CRIM (Adv)	3	CRIM (Adv)	3
[^] Kinesiology	1	HIST 1302	3	CRIM 3321	3	CRIM 3320	3
MATH 1314 or		[^] Kinesiology	1	Minor	3	Elective (Adv)	3
MATH 1334	3	POLS 2301	3	PSYC 3381/ SOCI 3381	<u>3</u>	Minor (Adv)	<u>3</u>
SOCI 1201	2	[^] Visual/			15		15
SOCI 1301	<u>3</u>	performing arts	<u>3</u>				
	15		16				
Sophomore Year				Senior Year			
*COMS 1311	3	Elective	3	CRIM (Adv)	3	CRIM (Adv)	3
ENGL 2342 or		Elective	3	CRIM (Adv)	3	CRIM 4321	3
ENGL 2362	3	[^] Kinesiology	1	CRIM 4382	3	CRIM 4325	3
Lab Science	4	Lab Science	4	Elective (Adv)	3	Elective	3
Minor	3	Minor	3	Minor (Adv)	<u>3</u>	Minor (Adv)	<u>3</u>
POLS 2302	<u>3</u>	PSYC 2301	<u>3</u>		15		15
	16		17				

Total Hours Required: 124

**Fulfills the University's oral communications and computer literacy requirements*

***Any 3 SCH lab or studio ARTS/MUSI/THEA course can be used for Visual/performing arts.*

**Degree Requirements
Bachelor of Arts
Psychology**

Freshman Year				Junior Year			
ENGL 1301	3	*CISA 1301	3	Elective, adv.	3	Elective, adv.	3
HIST 1301	3	ENGL 1302	3	[^] Kinesiology	1	Minor, adv.	3
[^] Kinesiology	1	HIST 1302	3	Minor	3	Modern language	3
MATH 1314 or		[^] Kinesiology	1	Modern Language	3	PSYC 3301, PSYC 4302,	
MATH 1334	3	Minor	3	PSYC 4322	3	or PSYC 4308	3
PSYC 2301	3	PSYC 2302	<u>3</u>	PSYC 4325	<u>3</u>	PSYC 3381	<u>3</u>
SOCI 1201	<u>2</u>		16		16		15
	15						
Sophomore Year				Senior Year			
*COMS 1311	3	**ARTS 2301/		Elective, adv.	3	Minor, adv.	3
Elective	3	MUSI 2301/		Elective, adv.	3	Minor, adv.	3
ENGL 2342 or		THEA 2301	3	Modern language	3	Modern language	3
ENGL 2362	3	ENGL 2342 or		PSYC, adv.	3	PSYC 3387	3
+Lab Science	4	ENGL 2362	3	PSYC 3304, PSYC 4312,		PSYC 4323	<u>3</u>
POLS 2301 or		+Lab Science	4	or PSYC 4328	<u>3</u>		15
POLS 2302	<u>3</u>	Minor	3		15		
	16	POLS 2301 or					
		POLS 2302	<u>3</u>				
			16				

Total Hours Required: 124

**Fulfills the University's oral communications and computer literacy requirements.*

***Any 3 SCH lab or studio ARTS/MUSI/THEA course can be used in place of ARTS/MUSI/THEA 2301.*

+BIOL or CHEM recommended

[^]For courses listed under Core Curriculum Components" see "General Requirements for Graduation with a Baccalaureate Degree" in an earlier section of this Catalog.

**Degree Requirements
Bachelor of Arts
Sociology**

Freshman Year				Junior Year			
ENGL 1301	3	ENGL 1302	3	*COMS 1311	3	Elective	3
HIST 1301	3	HIST 1302	3	Elective, adv.	3	Elective, adv.	3
[^] Kinesiology	1	+Lab Science	4	Minor	3	[^] Kinesiology	1
Modern language	3	Modern language	3	SOCI, adv.	3	Minor	3
SOCI 1201	2	SOCI	<u>3</u>	SOCI 3381	<u>3</u>	SOCI, adv.	3
SOCI 1301	<u>3</u>		16		15	SOCI 4382	<u>3</u>
	15						16
Sophomore Year				Senior Year			
ENGL 2342 or		*CISA 1301	3	Elective	3	Elective, adv.	3
ENGL 2362	3	ENGL 2342 or		Elective, adv.	3	Minor, adv.	3
+Lab Science	4	ENGL 2362	3	Minor, adv.	3	Minor, adv.	3
MATH 1314 or		[^] Kinesiology	1	Minor, adv.	3	SOCI, adv.	3
MATH 1334	3	Modern language	3	SOCI 4383	<u>3</u>	SOCI, adv.	<u>3</u>
Modern language	3	++MUSI 2301/ARTS			15		15
POLS 2301	<u>3</u>	2301/ THEA 2301	3				
	16	POLS 2302	<u>3</u>				
			16				
						Total Hours Required:	124

*Fulfills the University's oral communications and computer literacy requirements.

+BIOL or CHEM recommended

++Any 3 SCH lab or studio ARTS/MUSI/THEA course can be used in place of ARTS/MUSI/THEA 2301.

**Degree Requirements
Bachelor of Social Work**

Freshman Year				Junior Year			
ENGL 1301	3	*CISA 1301	3	*COMS 1311	3	Elective	3
HIST 1301	3	ENGL 1302	3	PSYC 3381 or		Elective	3
[^] Kinesiology	1	HIST 1302	3	SOCI 3381	3	Elective, adv.	3
MATH 1314 or		[^] Kinesiology	1	SCWK 3335	3	PSYC 4325	3
MATH 1334	3	PSYC 2301	3	SCWK 3337	3	SCWK 4324	<u>3</u>
SOCI 1201	2	**MUSI 2301/ARTS		SWBS 2302	<u>3</u>		15
SOCI 1301	<u>3</u>	2301/ THEA 2301	<u>3</u>		15		
	15		16				
Sophomore Year				Senior Year			
Elective	3	ENGL 2362	3	Elective, adv.	3	SCWK 4326	3
ENGL 2342	3	+Lab Science	4	SCWK 4325	3	SCWK 4345	3
[^] Kinesiology	1	POLS 2302	3	SCWK 4641	6	SCWK 4347	3
+Lab Science	4	PSYC 2308	3	SOCI 4307	<u>3</u>	SCWK 4643	<u>6</u>
POLS 2301	3	SCWK 2333	<u>3</u>		15		15
SCWK 2331	<u>3</u>		16				
	17					Total hours required:	124

RELIGION (RELG)

Matthew Hudson, *Director*

Baptist Student Ministries. MSC 205. Telephone 592-9335.

Credit toward university degrees is given for courses offered by an off-campus Bible Chair, under regulations that maintain their equivalence with other courses given at the university. The instructor is under the control of some permanent religious organization of recognized standing, possesses at least the training of instructors in the university, and is approved by the Dean of Arts and Sciences, Provost and Vice President for Academic Affairs and the President. Religious studies courses are subject to the same regulations and supervision as regular courses given in the university.

1111. The Book of Romans. 1(1-0)

A study of the Book of Romans, emphasizing the central religious teachings of the Apostle Paul.

1138. Marriage and Morals. 1(1-0)

The Christian ideal of married life and the practical problems faced before and after marriage and their suggested solutions.

1301. Old Testament Survey. 3(3-0)

Old Testament origin, literature, history and content from the beginning to the Maccabean period.

1303. New Testament Survey. 3(3-0)

New Testament, origin, literature, history and content from the Maccabean period to the close of the Apostolic age.

2303. Life and Teachings of Jesus. 3(3-0)

The life, teaching and significance of Jesus as revealed in the gospels.

2306. Life and Letters of Paul. 3(3-0)

The life of Paul, the work of Paul and an attempt to understand his contributions to the early Church as well as his continuing significance in ethics and doctrines of Christianity.

2311. Christian Ethics. 3(3-0)

An introduction to Christian ethics which sets forth the Biblical foundations for Christian ethical decision and applies these precepts to major ethical problems. These problems will include the self, marriage and the family, race relations, economic life and political life.

3339. Comparative Religions. 3(3-0)

Survey of the religions of the world. Included are studies in the origin, development, literature (scripture) and present status of Hinduism, Buddhism, Jainism, Confucianism, Taoism, Shinto, Judaism, Christianity and Islam.

WOMEN'S STUDIES (WMST)

Becky M. Maez, *Director*

Memorial Student Union 201. MSC 135. Extension 2166.

Women's Studies is based on the premise that an educated person, regardless of discipline, needs to understand the contemporary world at both personal and societal levels. The minor in Women's Studies provides an integral understanding of forces at work in a multicultural, pluralistic society. This minor relates to various careers such as counseling, business, personnel management, social work, advertising, law, politics and education.

A minor in Women's Studies requires 18 semester hours, including SOCI 2363/WMST 2363 and SOCI 4364/WMST 4300, the core courses. The remaining 12 semester hours may be selected from the following six courses:

PSYC 3313/WMST 3313

PSYC 2305/WMST 2305

ARTS 3302/MUSI 3302/THEA 3302/WMST 3302

HIST 4360/WMST 4360

POLS 4364/WMST 4364

ENGL 4370/WMST 4370 (only when taught from a women's studies perspective)

2305. Women's Issues in Health and Psychology. 3(3-0)

Examines health and psychological issues for women, legal and political realities that influence women's emotional and physical well-being and important aspects of intimacy and sexuality with a focus on both physiological and psychological development. (Credit may be obtained in only one of EDHL 2305, PSYC 2305 or WMST 2305.)

2363. Women, Change and Society. 3(3-0)

A comprehensive survey utilizing political, historical and sociological factors to analyze the status of American women. Aspects of sex role socialization, institutional interaction, social problems and social movements are analyzed. Prerequisite: SOCI 1301 or 6 hours of social science. (Credit may not be obtained in both SOCI 2363 and WMST 2363.)

3302. Women and the Arts. 3(3-0)

Issues surrounding the participation of women in the arts. Selected women who have contributed to the visual and performing arts throughout history are studied in relation to the culture of their time and the principles related to the arts. No previous experience in theatre, art or music required. Prerequisite: completion of visual/performing arts component requirement. (Credit may be obtained in only one of ARTS 3302, MUSI 3302, THEA 3302 or WMST 3302.)

3313. Psychology of Women. 3(3-0)

An overview of the broad range of psychological issues and biological events which are of significant relevance to women. Explores the richness of the female experience in terms of changing values, attitudes and expectations. Prerequisite: 6 hours of Psychology. (Credit may not be obtained in both PSYC 3313 and WMST 3313.)

4300. Minority Women in U.S. Society. 3(3-0)

An integrated study of the impact that socioeconomic and ethnic/racial factors have on minority women within the United States. Prerequisite: SOCI 1301 or 6 hours of social science. (Credit may not be obtained in both SOCI 4364 and WMST 4300.)

4360. Women in History. 3(3-0)

Investigation of the social, economic and political position of women from the Renaissance to contemporary America and a comparison of the ideal expounded by different historical epochs with woman's actual role in each society. Prerequisite: 12 semester hours of History and/or Political Science. (Credit may not be obtained in both HIST 4360 and WMST 4360.)

4364. Women and Politics.

3(3-0)

Description, analysis and assessment of women's place in a democracy through a focus on women's capacity to relate to and use political power. Prerequisite: 6 semester hours of Political Science. (Credit may not be obtained in both POLS 4364 and WMST 4364.)

4370. Nature and Women in the American Novel.

3(3-0)

Nature and women have been problematic for American society and, thus, American literature. Nature has been seen both as an early Hell populated by Indian "devils" and as a second Garden of Eden. Similarly, as a group, women have been regarded both as latter-day Eves and as "angels in the house." This course will address these two topics and show the development of the themes concerning them. Students will understand something of the role of nature and of women (as a class) in shaping and reflecting American thought and values. (Credit may not be obtained in both ENGL 4370, when taught from a women's studies perspective and WMST 4370.)

NATURAL TOXINS RESEARCH CENTER (NTRC)

John C. Perez, *Director and Regents Professor*

Elda E. Sanchez, *Assistant Director*

Nora Diaz DeLeon, *Administrative Officer*

Luis Manuel Salguiero, *Biochemist*

Javier Martinez, *Research Scientist*

Rene Palomar, *Research Technician*

Gonzalo Lopez, *Research Assistant II*

Juan C. Lopez Johnston, *Curator/Supervisor*

Lucy Arispe, *Animal Room Technician*

Julia Braswell, *Research Assistant*

<http://ntri.tamuk.edu>

The Natural Toxins Research Center (NTRC) at Texas A&M University-Kingsville was established in 2002. The mission of the NTRC is to provide global research, training and resources that will lead to the discovery of medically important toxins found in snake venoms.

The objectives of the NTRC are to: 1) provide reliable sources of venoms and other products, 2) breed venomous snakes in captivity that are endangered or difficult to acquire, 3) characterize medically important venoms by electrophoretic titration (ET), high performance liquid chromatography (HPLC) and enzyme activities and 4) develop an Internet database that will be useful to investigators. The database will allow the user to view the snakes, venoms and their geographic distribution. The NTRC is recognized for its elaborate serpentarium with 6,300 square feet of space and currently houses over 400 snakes. The facility is computer-controlled and the temperature and photo period of individual rooms and cages can be regulated. The facility was designed with expansion in mind and has the capacity for 660 snakes.

SOUTHWEST BORDERLANDS RESEARCH INSTITUTE (SWBRI)

Kleberg Hall. Extension 2761

The function of the Southwest Borderlands Research Institute is a repository for various types of data and analytical information concerning community and economic development. The Institute also engages students in the process of furnishing information to, and directing project for public, private and nonprofit organizations.

The Institute can furnish data and services such as:

- database design and construction
- data collection and entry
- spatial analysis
- data visualization
- data dissemination
- statistical analysis
- graphics design and construction
- internal and external database management services

Minors

The center offers minors in both of its component areas, Mexican American Studies and Southwest Borderlands Studies, in conjunction with the Departments of Geosciences, History, Language and Literature, Political Science, Psychology and Sociology and the Colleges of Agriculture and Human Sciences, Business Administration and Engineering. Information about these interdisciplinary minors can be found under the Department of Psychology and Sociology course listings for Southwest Borderlands Studies.

Minors in Mexican American Studies are required to complete 18 semester hours of courses related to Mexican Americans, including SWBS 2301. Students electing to minor in Southwest Borderlands Studies are required to take SWBS 2302, SWBS 4302 and SWBS 4304 to complete 18 semester hours of courses related to borderlands

development. No more than 9 semester hours in any department may apply toward the minor in either area of concentration.

Students may select from the following courses in order to complete a minor in either Mexican American Studies or Southwest Borderlands Studies.

GEOG 3335	Mexico and Middle America
HIST 3356	Mexico
HIST 3346	Texas History
HIST 3348	History of the Mexican American in the Southwest
HIST 3350	Latin America
HIST 4392	Crucial Topics in Latin American History
ANTH 3301	Pre-Columbian American Culture
ANTH 4308	Latin American Culture
ANTH 4309	Mexican Border Subcultures
SPAN 4311	Spanish Linguistics
SPAN 4319	Hispanic Folklore

Certificate Program

A certificate program is aimed primarily at the practical needs of professionals, teachers, business and industrial personnel, governmental agencies and social service workers. The program requires attendance and active participation in seminars, workshops and conferences organized by the center and offered throughout the year that focus on Southwest borderlands regional development. A certificate is awarded to participants completing 18 hours documenting expertise in Southwest Borderlands Research and Studies. Continuing Education Units are also offered for those functions planned in conjunction with the Center for Distance Learning and Continuing Education.