# Department of Geography

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Paul Hudak, Chair

# **Faculty**

Dong, Ferring, Hudak, Lyons, Maxey, McGregor, Nagaoka, Oppong, Pan, Rice, Tierney, Tiwari, Williams, Wolverton

#### Introduction

Geography is both an academic and an applied field, and our graduates enjoy highly successful careers in diverse parts of the job market. Majors are prepared for a broad range of employment, including geographic information systems, regional and urban planning, retail and industrial site location planning, transportation planning, parks and recreation planning, housing and community development, land and water resources management, environmental consulting and regulatory work, land surveying and cartography, archaeology and meteorology. Completion of the department's programs also prepares students for graduate course work in geography, archaeology and environmental science.

The Department of Geography offers courses for students majoring in geography or other fields. Students in the colleges of arts and sciences, business, education, and public affairs and community service will find that geography provides excellent support for their majors. Students majoring in any field may minor in geography, geology or archaeology (all offered through this department); complete courses to fill core requirements; obtain the department's certificate in geographic information systems; or take courses for general interest.

Geography courses are divided into two subfields: regional science and earth science. Regional science involves the study of the organization of human activity (particularly, the economic, socio-political and cultural dimensions) across space as they affect

and in turn respond to the world about us. Earth science courses explore physical processes that operate inside the earth, at its surface and in the atmosphere, and interactions between humans and the physical environment. The earth science courses are under both physical geography and geology headings.

Students planning to transfer to another institution to pursue a geology major should consult with the undergraduate advisor.

## **Programs of Study**

The department offers two undergraduate programs and a graduate program in the following areas:

- · Bachelor of Arts, and
- Bachelor of Science, both with a major in geography; and
- Master of Science with a major in applied geography.

Through course selection, students may elect to emphasize earth science or regional science.

# Bachelor of Arts with a Major in Geography

#### **Degree Requirements**

- 1. Hours Required and General/College Requirements: A minimum of 120 semester hours, of which 42 must be advanced, and fulfillment of degree requirements for the Bachelor of Arts degree as specified in the "General University Requirements" in the Academics section of this catalog and the College of Arts and Sciences requirements.
- 2. Major Requirements: 39 hours including completion of GEOG 1170 or GEOG 1200, GEOL 1610 or GEOG 1710, GEOG 2110, GEOG 3190 and GEOG 4800; three techniques courses from GEOG 4050, GEOG 4060, GEOG 4170, GEOG 4400, GEOG 4500, GEOG 4520, GEOG 4550, GEOG 4560, GEOG 4570, GEOG 4580; and five advanced topics courses selected from Groups A and B. At least two courses must be selected from each group.

GEOG 4900 and GEOG 4920 can be applied to the techniques group, topics Group A or topics Group B.

Group A: Earth Science. GEOG 4030 (6 hours: counts as one course in Group A and one course in Group B), GEOG 4240, GEOG 4250, GEOG 4350 and GEOG 4750; GEOL 3000, GEOL 3020, GEOL 4630, GEOL 4650, GEOL 4710 and GEOL 4850.

Group B: Regional Science. GEOG 3010, GEOG 3100, GEOG 3750, GEOG 3800, GEOG 4030 (6 hours: counts as one course in Group A and one course in Group B), GEOG 4040 (6 hours: counts as two courses in Group B), GEOG 4120, GEOG 4210, GEOG 4220, GEOG 4410 and GEOG 4420.

SOPHOMORE YEAR

A minimum grade of C is required in GEOG 4800, Applied Geography (the program's capstone course).

- 3. Other Course Requirements: MATH 1680 or equivalent.
- 4. Minor: Optional.
- 5. Electives: See four-year plan.

### BA with a Major in Geography

The following four-year plan is one example of a variety of ways in which you can complete your chosen degree in four years, and will serve as guide for you to design your pathway to degree completion. Variations will depend on whether you need to take prerequisites or have college credit from exams or dual enrollment.

The College of Arts and Sciences expects you to have completed the State recommended high school program and be ready to enroll for Language 2040 or a mathematics course above college algebra. If you are not prepared for this level, the necessary prerequisites will either replace electives or increase the hours required for the degree.

#### FRESHMAN YEAR

FALL HO	
FALL	URS
ENGL 1310, College Writing I, or ENGL 131	3,
Computer Assisted College Writing I*	3
GEOG 1170, Culture, Environment and	
Society, or GEOG 1200, World Regional	
Geography (GEOG 1200 is recommended	l) 3
LANG 2040, Foreign Language (intermediate	2,
may be used to satisfy a portion of the	
Understanding the Human Community	
requirement)**	3
MATH (see approved list)**	3
PSCI 1040, American Government*	3
Total	15
SPRING HO	URS
ENGL 1320, College Writing II, or ENGL 132	
Computer Assisted College Writing II*	3
GEOG 1710, Earth Science, or GEOL 1610,	
Introductory Physical Geology (may be	
used to satisfy a portion of the Natural	3
used to satisfy a portion of the Natural Science requirement)**	3
used to satisfy a portion of the Natural Science requirement)** LANG 2050, Foreign Language	3
used to satisfy a portion of the Natural Science requirement)** LANG 2050, Foreign Language (intermediate, may be used to satisfy a	
used to satisfy a portion of the Natural Science requirement)** LANG 2050, Foreign Language (intermediate, may be used to satisfy a portion of the Understanding the Human	
used to satisfy a portion of the Natural Science requirement)** LANG 2050, Foreign Language (intermediate, may be used to satisfy a portion of the Understanding the Human Community requirement)**	3
used to satisfy a portion of the Natural Science requirement)** LANG 2050, Foreign Language (intermediate, may be used to satisfy a portion of the Understanding the Human Community requirement)** PSCI 1050, American Government*	3
used to satisfy a portion of the Natural Science requirement)** LANG 2050, Foreign Language (intermediate, may be used to satisfy a portion of the Understanding the Human Community requirement)** PSCI 1050, American Government* Visual and Performing Arts*	3 3 <u>3</u>
used to satisfy a portion of the Natural Science requirement)** LANG 2050, Foreign Language (intermediate, may be used to satisfy a portion of the Understanding the Human Community requirement)** PSCI 1050, American Government*	3

FALL	HOUDE
GEOG 2110, Foundations of Geographic	
Research HIST 2610, United States History to 186 Elective Humanities* Physical Science**	3 3 <u>3</u>
Total	15
SPRING HIST 2620, United States History Since Geography Group A (advanced) Elective Elective Laboratory Science** Total	HOURS 1865* 3 3 3 3 3 3 15
JUNIOR YEAR	
<b>FALL</b> GEOG 3190, Quantitative Methods in	HOURS
Geography Geography Techniques (advanced) Elective (advanced) Elective	3 3 3
Social and Behavioral Sciences* (GEOG	-
Culture, Environment and Society	
recommended) Total	<u>3</u> 15
SPRING Geography Group A or B (advanced) Geography Group B (advanced) Elective (advanced) Elective Elective Total	3 3 3 3 3 3 3 15
SENIOR YEAR	
FALL Geography Group A (advanced) Geography Techniques (advanced) Geography Techniques (advanced) Elective Elective Total	3 3 3 3 3 3 3 15
SPRING GEOG 4800, Applied Geography Geography Group B (advanced) Elective (advanced) Elective (advanced) Elective Total	HOURS  3 3 3 3 3 15
*See the University Core Curriculum section	of this

\*See the University Core Curriculum section of this catalog for approved list of course options.

\*\* See Arts and Sciences degree requirements section of this catalog for approved list of course options.

Actual degree audits may vary depending on availability of courses in a given semester.

Some courses may require prerequisites not listed.

Students may wish to use opportunities for electives to complete a minor of their choice.

# Bachelor of Science with a Major in Geography

#### **Degree Requirements**

- 1. Hours Required and General/College Requirements: A minimum of 120 semester hours, of which 42 must be advanced, and fulfillment of degree requirements for the Bachelor of Science degree as specified in the "General University Requirements" in the Academics section of this catalog and the College of Arts and Sciences requirements.
- 2. **Major Requirements:** Completion of two of the following course groups, in addition to the courses required for the Bachelor of Arts with a major in geography. The two course groups (four courses in total) substitute for the foreign language requirement of the Arts and Sciences degree requirements.
- **Group I Computer Programming and Information Systems.** Any two of the following: CSCE 1020, Program Development, 4 hours; BCIS 3610, Basic Information Systems, 3 hours; GEOG 4560, Visual Programming for Geographic Information Systems, 3 hours.
- **Group II Mathematics.** Two courses (excluding MATH 1350), each at least 3 hours, in addition to the college requirement for meeting the Arts and Sciences degree requirements.
- Group III Physical and Natural/Life Science. Two advanced level courses, each at least 3 hours, in physics, chemistry or biology, subject to approval by the geography undergraduate advisor. Group III courses may be from different departments (for example, one in physics and one in chemistry).
- 3. Other Course Requirements: MATH 1680 or equivalent.
- 4. **Minor:** Optional.
- 5. Electives: See four-year plan.

#### Concentrations

Students who wish to concentrate in *earth science* should select three courses from Group A and two courses from Group B as listed under the BA with a major in geography, and students who wish to concentrate in *regional science* should select two courses from Group A and three courses from Group B.

## BS with a Major in Geography

The following four-year plan is **one** example of a variety of ways in which you can complete your chosen degree in four years, and will serve as guide for you to design your pathway to degree completion. Variations will depend on whether you need to take prerequisites or have college credit from exams or dual enrollment.

The College of Arts and Sciences expects you to have completed the State recommended high school program and be ready to enroll for Language 2040 or a mathematics course above college algebra. If you are not prepared for this level, the necessary prerequisites will either replace electives or increase the hours required for the degree.

**HOURS** 

#### FRESHMAN YEAR

FALL

ENIOL 1210 C II MI W I ENIOL	1212
ENGL 1310, College Writing I, or ENGL	
Computer Assisted College Writing I*	3
GEOG 1170, Culture, Environment and	
Society, or GEOG 1200, World Region	nal
Geography (GEOG 1200 recommend	ed) 3
PSCI 1040, American Government*	3
MATH (see approved list)**	3
Understanding the Human Community*	<u>3</u>
Total	<u>5</u> 15
10131	15
SPRING	HOURS
ENGL 1320, College Writing II, or ENGL	
Computer Assisted College Writing II	
GEOG 1710, Earth Science, or GEOL 161	10,
Introductory Physical Geology	
(may be used to satisfy a portion of th	e
Natural Sciences requirement)**	3
PSCI 1050, American Government*	3
Understanding the Human Community*	3
Visual and Performing Arts*	3 3 <u>3</u>
10131	15
Total	15
SOPHOMORE YEAR	
SOPHOMORE YEAR FALL	15 HOURS
SOPHOMORE YEAR	
SOPHOMORE YEAR FALL	
SOPHOMORE YEAR FALL GEOG 2110, Foundations of Geographic Research	HOURS
SOPHOMORE YEAR FALL GEOG 2110, Foundations of Geographic Research HIST 2610, United States History to 1865	HOURS
SOPHOMORE YEAR FALL GEOG 2110, Foundations of Geographic Research HIST 2610, United States History to 1865 BS Geography Course Group I, II, or III	HOURS  3 5* 3 3-4
SOPHOMORE YEAR FALL GEOG 2110, Foundations of Geographic Research HIST 2610, United States History to 1865 BS Geography Course Group I, II, or III Humanities*	HOURS  3 5* 3 3-4 3
SOPHOMORE YEAR FALL GEOG 2110, Foundations of Geographic Research HIST 2610, United States History to 1865 BS Geography Course Group I, II, or III Humanities* Physical Science**	HOURS  3 3 3 4 3 3 3
SOPHOMORE YEAR FALL GEOG 2110, Foundations of Geographic Research HIST 2610, United States History to 1865 BS Geography Course Group I, II, or III Humanities*	HOURS  3 5* 3 3-4 3
SOPHOMORE YEAR FALL GEOG 2110, Foundations of Geographic Research HIST 2610, United States History to 1865 BS Geography Course Group I, II, or III Humanities* Physical Science** Total	HOURS  3 3 3 4 3 3 3
SOPHOMORE YEAR FALL GEOG 2110, Foundations of Geographic Research HIST 2610, United States History to 1865 BS Geography Course Group I, II, or III Humanities* Physical Science** Total SPRING	3 3 3-4 3 3 15-16 HOURS
SOPHOMORE YEAR FALL GEOG 2110, Foundations of Geographic Research HIST 2610, United States History to 1865 BS Geography Course Group I, II, or III Humanities* Physical Science** Total SPRING HIST 2620, United States History Since 1	3 3 3-4 3 15-16 HOURS 865* 3
SOPHOMORE YEAR FALL GEOG 2110, Foundations of Geographic Research HIST 2610, United States History to 1865 BS Geography Course Group I, II, or III Humanities* Physical Science** Total SPRING HIST 2620, United States History Since 1 BS Geography Course Group I, II, or III	3 3 3-4 3 15-16 HOURS 865* 3 3-4
SOPHOMORE YEAR FALL GEOG 2110, Foundations of Geographic Research HIST 2610, United States History to 1865 BS Geography Course Group I, II, or III Humanities* Physical Science** Total SPRING HIST 2620, United States History Since 1 BS Geography Course Group I, II, or III Geography Group A or B (advanced)	HOURS  3 3 4 3 3 15–16  HOURS 865* 3 3–4 3
SOPHOMORE YEAR FALL GEOG 2110, Foundations of Geographic Research HIST 2610, United States History to 1865 BS Geography Course Group I, II, or III Humanities* Physical Science** Total SPRING HIST 2620, United States History Since 1 BS Geography Course Group I, II, or III Geography Group A or B (advanced) Elective	33 3-4 33 15-16 HOURS 865* 3 3-4 3
SOPHOMORE YEAR FALL GEOG 2110, Foundations of Geographic Research HIST 2610, United States History to 1865 BS Geography Course Group I, II, or III Humanities* Physical Science** Total SPRING HIST 2620, United States History Since 1 BS Geography Course Group I, II, or III Geography Group A or B (advanced)	HOURS  3 3 4 3 3 15–16  HOURS 865* 3 3–4 3

JUNIOR YEAR	
FALL	<b>HOURS</b>
GEOG 3190, Quantitative Methods	
in Geography	3
BS Geography Course Group I, II, or III	3
Geography Group A (advanced)	3
Elective	3
Elective	3
Total	15
SPRING	HOURS
BS Geography Course Group I, II, or III	3
Geography Group A (advanced)	3
Geography Group B (advanced)	3
Elective	3
Social and Behavioral Sciences* (GEOG Culture, Environment and Society,	1170,
recommended)	3
Total	15
SENIOR YEAR	
FALL	<b>HOURS</b>
Geography Group B (advanced)	3
Geography Techniques (advanced)	3

Elective (advanced)	3
Elective	<u>3</u>
Total	15
SPRING	HOURS
GEOG 4800, Applied Geography	3
Geography Techniques (advanced)	3
Elective (advanced)	3
Elective (advanced)	3
Elective (advanced)	3
Total	15

Geography Techniques (advanced)

\*See the University Core Curriculum section of this catalog for approved list of course options.

\*\* See Arts and Sciences degree requirements section of this catalog for approved list of course options.

Actual degree audits may vary depending on availability of courses in a given semester.
Some courses may require prerequisites not listed.
Students may wish to use opportunities for electives to complete a minor of their choice.

#### **Minors**

#### Archaeology

A minor in archaeology requires 18 hours, including ANTH 1010, ARCH 2500 and ARCH 2800; and a total of 9 hours selected from ARCH 3650, ARCH 4620 (multiple sections for separate credit) and ARCH 4810.

#### Geography

Students planning to minor in geography should consult the geography undergraduate advisor. A minor requires 18 hours, and usually includes GEOG 1170 or GEOG 1200, GEOG 1710, and 12 advanced hours.

#### Geology

A minor in geology requires 18–19 hours in geology and earth science, including GEOL 1610, GEOL 3000, GEOL 3020 and GEOL 4650, and two additional courses from GEOG 4350, GEOG 4750, GEOL 4630, GEOL 4710 and GEOL 4850. Geography majors may minor in geology, but none of the courses taken to satisfy the minor can also be applied to the major.

#### Certificates

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#### **Economic Geography (18 hours)**

The geography and economics departments offer an 18-hour interdisciplinary certificate in analysis of geographic data.

The full description of this certificate is published in the Department of Economics section of this catalog.

#### **Geographic Information Systems (18 hours)**

This certificate may be acquired within the geography major but is also open to students in other programs, non-degree seeking students, or outside professionals who wish to add GIS capabilities to their present careers. A six-course sequence fulfills the requirements for the certificate in geographic information systems (GIS):

- GEOG 4500, Introduction to GIS;
- GEOG 4520, Intermediate GIS;
- GEOG 4550, Advanced GIS;
- $\bullet$  GEOG 4560, Introduction to GIS Programming; and
- two instances of GEOG 4570, Special Topics in GIS (one instance must be Advanced GIS Programming).

A grade of at least B is required in every course counted toward the certificate.

# **Graduate Degrees**

Students interested in advanced course work and research in water resources management, land use planning, urban environments, environmental archaeology, geomorphology or geographic information systems should consider the Master of Science with a major in Applied Geography and the graduate programs in environmental science. Faculty from the Department of Geography, in cooperation with the Department of Biological Sciences and the Institute of Applied Sciences, contribute to coordinating the environmental science degrees.

The Department of Geography, in conjunction with the departments of public administration and economics, offers studies in urban and regional planning within the Master of Public Administration degree program. Undergraduates who anticipate entering this program should take a minimum of 12 hours in public administration.

Students interested in archaeology should consider the MS with a major in applied geography or interdisciplinary studies. Faculty from the departments of geography and biological sciences and from the Center for Environmental Archaeology coordinate these degrees, which emphasize geoarchaeology, zooarchaeology and interdisciplinary techniques including GIS, remote sensing and quantitative/spatial analysis.

#### **Courses of Instruction**

All Courses of Instruction are located in one section at the back of this catalog.

#### **Course and Subject Guide**

The "Course and Subject Guide," found in the Courses of Instruction section of this book, serves as a table of contents and provides quick access to subject areas and prefixes.

# Department of History

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Richard McCaslin, Chair

### Faculty

Bose, Calderón, Campbell, Chet, Citino, Eaton, Fuhrmann, Golden, Hagler, Hall, Hilliard, Johnson, Leggiere, Lowe, McCaslin, Mierzejewski, Mitchener, Morris, Moye, Navarro, Paz, Pollack, Pomerleau, Richey, Seligmann, Smith, Stern, Stockdale, Tanner, Torget, Turner, Velikanova, Wallach, Wawro

#### Introduction

History encompasses all aspects of past human endeavor; it encourages students to think broadly and to integrate all of their knowledge into a meaningful whole. From history a person develops a better understanding of current events and a better appreciation of art, architecture, ideas, politics, and fellow human beings and their activities. It also provides a guide for the future. The study of history is important for journalists, teachers, business people, theologians, politicians, scientists, lawyers, librarians, archivists, museologists and those in many other professions. Students planning any career could benefit from majoring or minoring in history or from choosing history as the lead subject in the social science major or for elective credits. History is an interest students may retain for life.

# **U.S. History Requirement**

Texas state law requires that the university may not award a baccalaureate degree or a lesser degree or academic certificate unless the student has credit for 6 semester hours in American history. A student is entitled to submit as much as 3 hours of credit, or its equivalent, in Texas history in partial satisfaction of this requirement. The university may determine that a student has met the requirement by work transferred from another accredited college or upon successful completion of an advanced standing examination. The student may satisfy the entire