

Physical Geography

Bachelor of Science Degree Effective Fall 2017

Primary Contact: **Main Office:** Evans Liberal Arts Building (ELA) 130, Phone: 512-245-0372, e-mail: GEOUndergradProg@txstate.edu **Web Site:** geo.txstate.edu

Liberal Arts Academic Advisors: Flowers Hall Room 322, Phone 512-245-1852, e-mail laadvising@txstate.edu

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Major Faculty: Dr. David Butler, Dr. Tom Ballinger, Dr. Richard Dixon, Dr. Richard Earl, Dr. Jason Julian, Dr. Nancy Li, Dr. Kimberley Meitzen

For all faculty office locations, phone numbers, e-mail addresses, and office hours, as well as information about Geography Department people, programs, courses and activities, check the Texas State Geography Web Site at www.geo.txstate.edu and bulletin boards on ELA 1st and 3rd floors.

Major Concentration Description: This major emphasizes the physical science elements of geographical study. Physical Geography prepares students for employment in applied climatology and meteorology, oceanography, geomorphology, resource evaluation, environmental analysis, and areas where an understanding of the complex relationship between nature and society is required. Students considering graduate studies in Physical Geography or any of the earth and atmospheric sciences should select this degree option. Check <http://www.geo.txstate.edu> for more information.

Degree/Major Requirements

1. Students majoring in Physical Geography complete the Bachelor of Science degree.
2. The B.S. degree requires a minimum of 36 semester hours of geography.
3. The B.S. degree requires a.) minimum 2.5 major GPA for geography courses attempted at Texas State University and b.) minimum 2.25 Texas State GPA for all courses taken at Texas State University.
4. Students must make a grade of "C" or better in all Geography courses to receive credit toward their major.
5. The degree requires a minor area of study with a minimum of 18 semester hours.
6. Texas State requires a minimum of 120 semester hours of coursework to graduate including: a) General Education Core requirements, b) major requirements, c) minor requirements, and d) additional elective courses selected from disciplines other than major or minor.
7. At least 36 semester hours must be advanced (3000 – 4000) level courses.
8. At least 9 semester hours must be writing intensive (WI).
9. All Geography prerequisite courses must be completed with a "C" or better.

Recommended non-geography electives include: MATH 2321/2331: Mathematics for Life Sciences I & II; CHEM 1341/1141 & 1342/1142: General Chemistry I & II; or CHEM 1430: Chemistry for Non-Science Majors; PHYS 1410/1420: General Physics I & II; AG 3426: Soil Science; ENG 3303: Technical Writing (fulfills one of the literary perspectives). Physics is recommended for students considering graduate studies in Atmosphere Sciences.

Minor Requirements: Minor may be any approved Texas State minor. Geology, Physics, Biology, Chemistry, Computer Science, or Mathematics minors are highly recommended to complement your physical geography major. Other minors may be appropriate depending upon your interests and career goals. Geology is recommended for students interested in Earth Sciences or Water Resources. Discuss possible options with your advisor.

Optional Certificates: Certificates are designed to enhance your employability and offer you a firm foundation in a particular discipline that is complementary to your major field of study. The courses that you complete for a certificate may count toward your major or minor depending on your field of study. If you are interested in pursuing a certificate, please contact the Undergraduate Program Staff Administrator in ELA room 130.

GIS - Geographic Information Science – 20 hours
Environmental Interpretation – 16 to 17 hours

Location Analysis – 16 to 18 hours
Water Resources Policy – 16 to 17 hours

Physical Geography Course Checklist

Bachelor of Science: 36 Semester Hours Minimum

STUDENTS MUST MAKE A GRADE OF "C" OR BETTER IN ALL GEOGRAPHY COURSES TO RECEIVE CREDIT TOWARD THEIR MAJOR.

REQUIRED of all Geography majors: **(14 hours)**:

- 1309 Introduction to Cultural Geography **and/or** 1310 World Geography
- 2410 Introduction to Physical Geography (Prerequisite: MATH 1315 or above [excluding MATH 1316] with a grade of "C" or higher.)
- 2426 Fundamentals of GIS (Prerequisite: MATH 1315 or above [excluding MATH 1316] with a grade of "C" or higher.)
- 3301 Research Methods in Geography (Prerequisite: MATH 1315 or above [excluding MATH 1316] with a grade of "C" or higher.)

CORE: The following courses are **required (13 hours)**

- 3305 Climatology (Prerequisite: GEO 2410 or GEO 1305 with a grade of "C" or higher.)
- 3425 Geomorphology (Prerequisite: GEO 2410 or GEOL 1410 with a grade of "C" or higher.)

A least two courses from the following along with 3305 & 3425:

- 1305 Meteorology
- 3335 Oceanography (Prerequisite: GEO 2410 or GEOL 1410 or BIO 1320 or BIO 1430 with a grade of "C" or higher.)
- 4316 Landscape Biogeography – **Spring Only** (Prerequisite: GEO 2410 with a grade of "C" or higher.)

TECHNIQUES: Select **two or more** of the following courses

- 3411 Maps and Mapmaking (Prerequisite: GEO 2426 with a grade of "C" or higher.)
- 3416 Principles of Remote Sensing (Prerequisite: GEO 2410 with a grade of "C" or higher.)
- 3426 Advanced GIS (Prerequisite: GEO 2426 and GEO 3301 with a grade of "C" or higher.)
- 4424 GPS & GIS – **Fall Only** (Prerequisite: GEO 2426 and either GEO 3411 or GEO 3426 with a grade of "C" or higher.)
- 4412 Digital Remote Sensing – **Spring Only (WI)** (Prerequisite: GEO 3301 and GEO 3416 with a grade of "C" or higher.)
- 4422 Web Mapping – **Fall Only** (Prerequisite: GEO 3411 with a grade of "C" or higher.)
- 4430 Field Methods **(WI)** (Prerequisite: GEO 2410 and GEO 3301 with a grade of "C" or higher.)

ELECTIVES: Select from the following courses to bring total hours to 36:

- 2310 Introduction to Environmental Geography
- 2420 Introduction to Geographic Information Techniques – **credit for transfer work only**
- 2427 Management and Implementation of GIS – **credit for transfer work only** (Prerequisite: GEO 2426 or equivalent.)
- 3321 Energy Resource Management **(WI)** (Prerequisite: MATH 1315 or above [excluding MATH 1316] with a grade of "C" or higher.)
- 3349 Population Geography (Prerequisite: MATH 1315 or above [excluding MATH 1316] with a grade of "C" or higher.)
- 3434 Water Resources (Prerequisite: GEO 2410 or CHEM 1141 & 1341 with a grade of "C" or higher.)
- 4310 Regional Field Studies **(WI) – Spring & Summer Only** (check with advisor)
- 4313 Environmental Management **(WI)** (Prerequisite: GEO 2410 with a grade of "C" or higher, Senior standing.)
- 4314 River Basin Management **(WI) – Spring Only** (Prerequisite: GEO 3434 or GEO 4325 with a grade of "C" or higher.)
- 4323 Conservation Leadership – **Spring Only** (Prerequisite: Junior or Senior standing.)
- 4325 Fluvial Processes – **Fall Only** (Prerequisite: GEO 3425 or GEO 3434 with a grade of "C" or higher.)
- 4334 Groundwater Resources – **Fall Only** (Prerequisite: GEO 3434 with a grade of "C" or higher.)
- 4339 Environmental Hazards (Prerequisite: GEO 2410 with a grade of "C" or higher.)
- 4350 Solid Waste Planning and Management – **Fall Only** (Prerequisite: GEO 2410 with a grade of "C" or higher.)
- 4380 Internship in Geography
- Regional Geography Electives **(One course may be selected as an approved elective):** GEO 3307 Europe, GEO 3308 Latin America, GEO 3309 US & Canada **(WI)**, GEO 3328 N. Africa & Middle East, GEO 3329 Texas, GEO 3332 S & SE Asia **(WI)**, GEO 3333 China and Japan **(WI)**, GEO 4306 Southwest US, GEO 4328 Russian Realm **(WI)**.

**Consider joining one of Texas State Geography's Student Organizations.
Check bulletin boards across the hall from ELA 139 for more information.**