Physical Geography

Geography Major Concentration, Bachelor of Science Degree

Texas State University Geography Advising Services

**Primary Contact:** Stella LoPachin  
**Main Office:** Evans Liberal Arts Building (ELA) 130 / Phone: 512-245-0372  
e-mail: GEOUndergradProg@txstate.edu

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

**Major Advisors:**  
Dr. Richard Earl (Office ELA 365 / Phone 512-245-3204 / e-mail re02@txstate.edu)  
Dr. Richard Dixon (Office ELA 134 / Phone 512-245-7436 / e-mail rd11@txstate.edu)

**Major Faculty:**  
Dr. David Butler, Dr. Richard Dixon, Dr. Richard Earl, Dr. Jason Julian, Dr. Kimberley Meitzen, Dr. James Petersen, and Dr. Philip Suckling

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](http://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](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. The B.S. degree requires at
   a.) least a 2.5 GPA for geography courses attempted at Texas State University and
   b.) at least a 2.25 GPA for all courses taken at Texas State University.
3. The degree requires a minor area of study with a minimum of 18 semester hours.
4. 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.
5. At least 36 semester hours must be advanced (3000 – 4000) level courses.
6. At least 9 semester hours must be writing intensive (WI).
7. 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
- 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 especially 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 especially recommended for students interested in Earth Sciences or Water Resources. Discuss possible options with your advisor.

**Optional Certificates:**

- **GIS - Geographic Information Science** - 19 to 20 hours
- **Environmental Interpretation** - 15 to 16 hours
- **Location Analysis** - 16 to 18 hours
- **Water Resources Policy** - 16 to 17 hours

Check [http://www.geo.txstate.edu/degrees-programs/certificates.html](http://www.geo.txstate.edu/degrees-programs/certificates.html) or online Class Schedule/Catalog [https://ssb.txstate.edu](https://ssb.txstate.edu) for more details.
Physical Geography Course Checklist

Bachelor of Science: 36 Semester Hours Minimum

REQUIRED:

- ______ 1309 Introduction to Cultural Geography and/or 1310 World Geography
- ______ 2410 Introduction to Physical Geography (Prerequisite: Math 1315 (excluding Math 1316) with a grade of "C" or higher)
- ______ 3301 Quantitative Methods (Prerequisite: Math 1315 (excluding Math 1316) with a grade of "C" or higher)

CORE: The following courses are required (12 -13 hours)

- ______ 3305 Climatology - Prerequisite: GEO 2410 with a minimum grade of "C" OR Math 1315 & GEO 1305 with a minimum grade of "C" in both courses.
- ______ 3325 Geomorphology - Prerequisite: GEO 2410 with a grade of "C" or higher.

A least two courses from the following along with 3305 & 3325:

- ______ 1105/1305 Meteorology Lab & Lecture
- ______ 3335 Oceanography - Prerequisite: GEO 2410 with a grade of "C" or higher.
- ______ 4316 Landscape Biogeography - Prerequisite: GEO 2410 with a grade of "C" or higher.

TECHNIQUES: Select three or more of the following courses

- ______ 2426 Fundamentals of GIS - Prerequisite: Math 1315 with a grade of "C" or higher.
- ______ 3411 Maps and Mapmaking - Prerequisite: Math 1315 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: "C" or higher in Geo 2426.
- ______ 4324 GPS & GIS - Prerequisite: GEO 2426 and either 3411 or 3426 with a grade of "C" or higher.
- ______ 4412 Digital Remote Sensing (W.I.) - Prerequisite: GEO 3416 with a grade of "C" or higher.
- ______ 4422 Computer Cartography - Prerequisite: GEO 3411 with a grade of "C" or higher.
- ______ 4430 Field Methods (W.I.) - 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
- ______ 2427 Management and Implementation of GIS - Prerequisite: GEO 2426 or equivalent.
- ______ 3321 Energy Resource Management (W.I.) - Prerequisite: Math 1315 with a grade of "C" or higher.
- ______ 3349 Population Geography
- ______ 3434 Water Resources - Prerequisite: GEO 2410 with a grade of "C" or higher.
- ______ 4310 Regional Field Studies (W.I.) (check with advisor)
- ______ 4313 Environmental Management (W.I.) - Prerequisite: GEO 2410 with a grade of "C" or higher (Junior or Senior status).
- ______ 4314 River Basin Management (W.I.) - Prerequisite: GEO 2410 with a grade of "C" or higher.
- ______ 4325 Fluvial Processes - Prerequisite: GEO 3325 or GEO 3434 with a grade of "C" or higher.
- ______ 4334 Groundwater Resources - Prerequisite: GEO 3434 with a grade of "C" or higher.
- ______ 4339 Environmental Hazards and Land Management - Prerequisite: GEO 2410 with a grade of "C" or higher.
- ______ 4350 Solid Waste Planning and Management - 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 (W.I.) US & Canada, GEO 3328 N. Africa & Middle East, GEO 3329 Texas, GEO 3332 (W.I.) S & SE Asia, GEO 3333 (W.I.) China and Japan, GEO 4306 Southwest US, GEO 4328 (W.I.) Russian Realm.

Steps to Graduation
Consult with an academic advisor or geography faculty member.
Declare intention to major in Geography with Department Academic Advisor Flowers Hall 322.
Declare minor with Geography Department Academic Advisor.
Apply for graduation on-line the first two weeks of the semester of graduation on line.

Consider joining one of Texas State Geography's student organizations.
Check bulletin board across the hall from ELA 139 for more information.