

Geography with a concentration in Earth Systems, BS

A Bachelor of Science with a major in Geography and a concentration in Earth Systems focuses on the Earth's natural systems and how they affect people and society. With this concentration, students will develop skills to study earth processes.

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 "[University Core Curriculum](#)" in the Academics section of this catalog and the [College of Liberal Arts and Social Sciences degree requirements](#) requirements (excluding foreign language).

Major requirements, 36 hours

A minimum grade of C is required in all major courses to graduate with a major in this department.

Required courses, 12 hours

- [GEOG 2110 - Foundations of Geographic Research](#)
- [GEOG 2170 - Culture, Environment and Society](#)
- [GEOG 2180 - Geosystems, Environment and Society](#)
- [GEOG 4800 - Geography Capstone](#)

Earth systems concentration, 24 hours

Earth science

Choose five courses, at least one in each area.

Geomorphology

- [GEOG 4350 - Geomorphology](#)
- [GEOL 3010 - Environmental Geology](#)
- [GEOL 3020 - Historical Geology](#)
- [GEOL 3030 - Earthquakes and Volcanoes](#)

Climatology

- [GEOG 3800 - Weather and Climate](#)

Hydrology

- [GEOG 4750 - Surface Water Hydrology](#)

- [GEOL 4850 - Introduction to Groundwater Hydrology](#)

Biogeography

- [GEOG 3420 - Applied Biogeography](#)
- [GEOG 4710 - Ecosystems: Structure, Function and Services](#)

Techniques

Choose two courses.

- [GEOG 3500 - Introduction to Geographic Information Systems](#)
- [GEOG 4170 - Field Methods and Mapping](#)
- [GEOG 4185 - Statistical Research Methods in Geography](#)
- [GEOG 4525 - Using LiDAR Data in GIS](#)
- [GEOG 4530 - Digital Image Analysis](#)
- [GEOG 4550 - Advanced Geographic Information Systems](#)

Human geography

Choose one course.

- [GEOG 3100 - United States and Canada: Economies, Cities and Sustainability](#)
- [GEOG 3200 - Sustainability](#)
- [GEOG 3770 - Latin America: Geography and Globalization](#)
- [GEOG 4115 - Our Energy Futures](#)
- [GEOG 4420 - Capitalism, Nature and Climate Change](#)

Other course requirements

Mathematics

- [MATH 1680 - Elementary Probability and Statistics](#) (or equivalent)

Science

- [GEOG 1710 - Earth Science](#)

One additional science course

- [BIOL 1132 - Environmental Science](#)
- [BIOL 2140 - Principles of Ecology](#)
- [BIOL 2241 - Biology of Higher Plants](#)
- [BIOL 2251 - Biodiversity and Conservation of Animals](#)
- [CHEM 1360 - Context of Chemistry](#)
- [CHEM 1410 - General Chemistry for Science Majors](#) (or equivalent)
- [PHYS 1315 - Introduction to the World of Physics](#)
- [PHYS 1410 - General Physics I](#) (or equivalent)

Minor

Optional.

Electives

Hours required for electives may vary based on course selection and the University Core Curriculum requirements. Electives may be required to satisfy the advanced hour requirement (42) and/or the minimum total hours required for the degree. For specific information see an academic advisor in the College of Liberal Arts and Social Sciences.
