

DEPARTMENT OF GEOGRAPHY, GEOLOGY AND ENVIRONMENTAL SCIENCE

The majors, minors, programs, and certificates in the GGES department provide students with integrative knowledge and analytical skills to address environmental and social issues. Students can choose different emphases of study while also selecting courses that broaden knowledge across natural and social sciences. Our students find employment in both private and public sectors as well as funded positions in graduate schools. Our department has scholarship resources; connects students to internships, job opportunities and graduate schools; demonstrates a high rate of undergraduate research participation; and has state-of-the-art lab facilities for students to study and complete work. Students gain skills in quantitative, qualitative, and mapping analysis.

Areas of study, with opportunities to integrate, include:

- **Human-Environmental Interaction** – Environmental monitoring, landscape change, sustainability, resource management, environmental policy and planning.
- **GIS, Field Mapping, and Cartography** – Geographic Information Systems (GIS), remote sensing, geospatial data analysis and visualization, interactive maps, analysis of environmental and socioeconomic patterns, high-accuracy Global Positioning Systems (GPS), and drone field mapping.
- **Geologic Resources and Formations** – Geologic field work; geologic mapping, mineral resources formation, resource extraction and management, geologic hazard mitigation, stratigraphy, paleoecology and taphonomy of sedimentary systems; museum studies.
- **Urban and Regional Analysis** – Economic development, business and service location strategies, sustainable growth, segregation and inequality.
- **Environmental Processes** – Climate patterns and change, soil and landform development, environmental hazards and water quality.
- **Culture and International Relations** – Global development and human rights, population and international migration, governance and institutions, language, religion and gender.

Majors in Geography, Geology and Environmental Sciences

- Environmental Science - Geosciences Emphasis (BA/BS) (<http://www-public.courseleaf.com/undergraduate/letters-sciences/geography-geology-environmental-science/environmental-science-geosciences/>)
- Environmental Science - Natural Science Emphasis (BA/BS) (<http://www-public.courseleaf.com/undergraduate/letters-sciences/geography-geology-environmental-science/environmental-science-natural-science-emphasis/>)
- Environmental Science - Sustainability & Environmental Management Emphasis (BA/BS) (<http://www-public.courseleaf.com/undergraduate/letters-sciences/geography-geology-environmental-science/environmental-science-environmental-resource-management-emphasis/>)
- Geography - Environment and Society Emphasis (BA/BS) (<http://www-public.courseleaf.com/undergraduate/letters-sciences/geography-geology-environmental-science/geography-general-ba-bs/>)

- Geography - Geology Emphasis (BA/BS) (<http://www-public.courseleaf.com/undergraduate/letters-sciences/geography-geology-environmental-science/geography-geology-emphasis-ba-bs/>)
- Geography Education (BSE) (<http://www-public.courseleaf.com/undergraduate/letters-sciences/geography-geology-environmental-science/geography-bse/>)

Minors in Geography, Geology and Environmental Science

- Environmental Studies (<http://www-public.courseleaf.com/undergraduate/letters-sciences/geography-geology-environmental-science/environmental-studies-minor/>)
- Geography (<http://www-public.courseleaf.com/undergraduate/letters-sciences/geography-geology-environmental-science/geography-minor/>)
- Geography - Elementary Education (<http://www-public.courseleaf.com/undergraduate/letters-sciences/geography-geology-environmental-science/geography-elementary-education-minor/>)
- Geology (<http://www-public.courseleaf.com/undergraduate/letters-sciences/geography-geology-environmental-science/geology-minor/>)
- GIS (<http://www-public.courseleaf.com/undergraduate/letters-sciences/geography-geology-environmental-science/gis-minor/>)

Certificate in Geography, Geology and Environmental Science

- GIS (<http://www-public.courseleaf.com/undergraduate/letters-sciences/geography-geology-environmental-science/gis-certificate/>)