



# Geography & Earth Science

COLLEGE OF SCIENCE AND HEALTH

## Undergraduate Programs

### MAJORS:

- Geography\* with concentrations in:
  - Environmental Science
  - Geographic Information Science

### MINORS:

- Earth Science\*
- Geographic Information Science
- Geography\*
- Geoarchaeology

\*Teacher certification available

## Sample Courses

- Earth Environments
- World Cultural Regions
- Conservation of Global Environments
- Maps & Society
- Global Warming & Climate Change
- Contemporary Global Issues
- Spatial Data Analysis
- Landforms: Processes & Regions
- Geography of Europe
- Intro to Climate Systems
- Economic & Political Geography
- Biogeography
- Maps and GIS
- Geographic Information Systems, Intro & Advanced
- Remote Sensing of the Environment
- Meteorology and Weather Forecasting
- Environmental Hazards
- Geomorphology
- Sustainable Development and Conservation
- Transportation Geography
- Earth's Polar Regions
- Map Design and Geovisualization

## Department Overview

Geography is the science of place and space. Geographers ask where things are located on the surface of the earth, why they are located where they are, how places differ from one another, and how people interact with the environment. There are two main branches of geography: human geography and physical geography. Human geography is concerned with the spatial aspects of human existence - how people and their activity are distributed in space, how they use and perceive space, and how they create and sustain the places that make up the earth's surface. Human geographers work in the fields of urban and regional planning, transportation, marketing, real estate, tourism, and international business. Physical geographers study patterns of climates, land forms, vegetation, soils, and water. They forecast the weather, manage land and water resources, and analyze and plan for forests, rangelands, and wetlands. Many human and physical geographers have skills in cartography and Geographic Information Systems (GIS). Geographers also study the linkages between human activity and natural systems.

Students who are considering studying geography and earth science will probably answer yes to one or more of the following questions: Are you curious about places? Do you like to study maps? Are you interested in the constantly changing pattern of human activity and natural phenomena on the landscape? Are you interested in foreign areas? Do you like to work outside? Are you a problem solver? Are you good at seeing connections among seemingly unrelated processes? Can you adapt to rapid technological change? Do you try to see the bigger picture? Are you interested in connections between humans and the environment?

View degree requirements:  
[www.uwlax.edu/catalog](http://www.uwlax.edu/catalog)

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### Department Features

The department has dedicated instructors, willing to devote considerable amounts of their time to individual students in order to enhance their educational experience at UWL. There are opportunities to work with faculty members on undergraduate research projects, or to participate in small group extended field trips to selected parts of the United States and abroad. The department has its own well-equipped laboratories for instruction in cartography, remote sensing and GIS, as well as a soil laboratory and an on-campus weather station.

### INTERNSHIPS

The Geography & Earth Science Department encourages, promotes, and assists students to seek internship opportunities in the private sector as well as all levels of government agencies. There are a wide variety of organizations within the La Crosse area that provide geography internships. These include grass-root non-profit organizations, private companies, and city, county, state, and federal government offices.

### Program Features

The geography major is designed to provide students with a strong, broad background in geography and earth science and GIS while offering them flexibility in choosing relevant electives in geography and in related support areas. The goal of this curriculum is to prepare students for (1) entry-level positions in business and government, and (2) graduate programs in geography and earth science. The program also encourages and provides ample opportunity for students to participate in internship programs and to conduct undergraduate research.

### Career Opportunities

For students planning to end their formal education with the bachelor's degree, a geography major provides marketable skills and the broad perspectives on environment and society that enable graduates to move beyond entry-level positions. For similar reasons, geography provides a sound foundation for students who plan to enter graduate work in a variety of fields.

- Business Site Selector
- Cartographer
- Demographer
- DNR Resource Planner
- Field Technician
- Foreign Service Officer
- GIS Technician
- Land Use and Urban Planner
- Meteorologist
- Pollution Control Specialist
- Satellite and Air Photo Image Interpreter

### GRADUATE EDUCATION

While there is not a graduate program in geography or earth science at UWL, the undergraduate program is of such breadth that a well-qualified graduate would find no difficulty being accepted into graduate school. Students seeking advanced degrees frequently have college or university teaching as a career goal, but may also be seeking additional training in an applied geography or earth science field.

### Occupational Outlook

Geography is an attractive major for students. Its theories and methods provide analytical techniques applicable to a wide range of questions asked over a broad spectrum of occupations. The potential for practicing geography in private enterprise and government has grown considerably in recent years, although few such positions are designated with the title of geographer. Career opportunities exist in areas where the spatial perspective and the facility of using maps, aerial photographs, and satellite images are especially useful. Included are such areas as city and regional planning, environmental management, market research, map design and publication, international business, and many state and national governmental agencies such as the U.S. Geological Survey, the Natural Resources Conservation Service, the National Weather Service, the National Park Service, and the National Biological Survey.

Graduating majors have not had difficulty obtaining employment because of the variety of jobs available to people with geographic training. Most recently, the need for environmental planners in both government and industry has resulted in tremendous demand for our graduates with applied geography skills. The long-term opportunities for geographers and earth scientists are the brightest they have been in years, given the needs our society has placed on understanding our environment and for careful planning of our land, both locally and internationally.

### JOB TITLES OF GRADUATES

- Business Trade Area Analyst
- Cartographer, Department of Defense
- Educational Media Specialist, National Geographic Society
- GIS, Soil Conservation Service
- GIS Technician, Department of Transportation
- GIS Technician, Wisconsin Department of Administration
- GIS Technician, private development company
- GIS, Wisconsin Department of Natural Resources
- Instructor, U.S. Military Academy, West Point
- Meteorologist, National Weather
- Planner, Department of Natural Resources
- Soil Conservationist
- State Park Service Naturalist
- Transportation Research and Planning
- US Army Corps of Engineers
- Water Resources Planner
- Cartographer, Garmin, USA
- Environmental Analyst, State Highway and Transportation Dept., Arkansas
- Researcher/GIS Specialist, Historical Information Gathers, Inc., MN
- City Planner, Onalaska, WI
- GIS Lab Manager, USGS, La Crosse, WI
- IT/GIS Security, Gundersen, La Crosse, WI
- GIS Analyst, SYNCADD Systems, Inc, USA