

THE FIELD

Geography is an inherently interdisciplinary field—one of the very few academic fields that integrates social and natural sciences through research and teaching that addresses relevant, current, and critical environmental and social issues. As we become increasingly aware of the linkages between the planet's natural and social systems in areas ranging from climate change to urbanization, it is critical that education includes explorations of the ways in which people interact with the planet. This is geography. Geography offers students the opportunity to study the dynamics of global change and to place their local experience in a global perspective.

Geographic subfields and research topics cover an extraordinary range of pressing world issues: global climate change, environmental degradation, resource depletion, natural hazards, economic globalization, migration and urbanization, world hunger, human and Indigenous rights, and ethnic and religious conflict. Geographers make use of multiple methods in their work, from interviews, observations, archival research, and mapping, to new kinds of participatory and collaborative research and the use of satellite imagery and geographic information systems (GIS).

The study of human impacts on the environment is an important theme in both human and physical geography. The UMass geography program is centered around environmental themes. Students interested in environmental studies have the option of completing a bachelor of arts (BA) in geography/environmental geography concentration. As one recent geography graduate explains, "I began studying geography because of my interest in helping with environmental problems . . . the true value of having a diploma in geography is its versatility. In the past, geographers were restricted to mostly teaching positions or as a cartographer, but nowadays the possibilities are almost limitless."

A minor in geography is available.

THE MAJOR

The major combines a solid grounding in required courses with the maximum opportunity to shape an individual program serving personal interests and career intentions. Students should consult with a faculty advisor to ensure that a sound individual program is developed.

Geography majors choose the BA or the bachelor of science (BS) curriculum. Both the BA and the BS require completion of 41 credits. Regardless of concentration or degree (BA or BS), all geography majors complete a common core curriculum including introductory courses in human and physical geography and skills courses including writing, fieldwork, GIS/mapping, and statistics. Career exploration and guidance is included in the Junior Year Writing class.

BA students choose from one of six degree concentrations: human geography, environmental geography and sustainability, climate change and society, geographic information science and technology, globalization and international studies, or urban geography. BA students must also complete the College of Natural Sciences foreign language requirement.

Students pursuing the BS in physical geography follow the same requirement guidelines as those for the BA human geography concentration, but (1) must include three advanced physical geography courses in their upper-division electives, such as GEOGRAPHY 354: Climatology, GEOGRAPHY 458: Climatic Change, and GEOGRAPHY 560: Geomorphology, (2) must complete math and science preparation courses, including calculus, general college physics, general college chemistry, general geoscience courses, and CMPSCI 121: Introduction to Problem Solving with Computers, and (3) are not subject to the foreign language requirement.

HONORS

Contact the departmental honors coordinator for information on how to pursue honors opportunities within the major.

STUDY ABROAD

Majors may choose to study abroad if it supports their academic and career goals. Students should contact the International Programs Office (413-545-2710, umass.edu/ipo) and work closely with their academic advisor to choose the appropriate courses in preparation.

CAREER OPPORTUNITIES

The geography degree program synthesizes broad background knowledge with specific skill sets appropriate to today's competitive job market. The U.S. Department of Labor has recognized geospatial technology, for example, as one of the top-growth industries today, alongside nanotechnology and biotechnology. Employers appreciate not only these technical geospatial skills, but also geographers' analytical skills, ability to work in teams, broad knowledge base, and cultural sensitivity.

A wide range of careers demanding knowledge of geographic concepts and mastery of geographic techniques are open in business, government, teaching, and cartography/spatial data analysis in fields such as environmental management and planning; environmental quality; intelligence; conservation; highway planning; and city, community, and regional planning and development at the local, state, and federal levels. Private industry also is expected to employ increasing numbers of geographers for market research and location analysis. Graduates with a bachelor's degree in geography may find positions connected with making, interpreting, or analyzing maps, or in research, either working for government or industry. Others may obtain employment as research or teaching assistants in educational institutions while studying for advanced degrees.

Many geographers have job titles that describe their specialization, such as cartographer, map analyst, or regional planner. Others have titles such as photo-intelligence specialist or climatological analyst, community or environmental planner, or market or business analyst. Recent graduates, for example, work as a troubleshooter for the U.S. Census Bureau, a GIS specialist for a city utility company, a planner in a city planning department, a director of a land trust, a teacher at a charter high school, a manager at a commercial bank, and an analyst in a state conservation agency.

COLLEGE OF NATURAL SCIENCES

The College of Natural Sciences unites the life, environmental, computational, and physical sciences on campus. Students take advantage of a range of inquiry-based classroom and laboratory experiences, hands-on undergraduate research opportunities, multidisciplinary and cross-departmental education and research initiatives, and a variety of science student organizations. In addition, they are encouraged to develop strong written and oral communication skills, as well as leadership and problem-solving abilities.

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