

University of Maryland Career Center

WHAT CAN I DO WITH A GEOGRAPHY MAJOR? Career Information Packet

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1. What is Geography?

While the word geography is derived from Greek and literally means "to write about the earth," the subject of geography is much more than describing "foreign" places or memorizing the names of capitals and countries. Geography is an all-encompassing discipline that seeks to understand the world - its human and physical features - through an understanding of place and location. 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.

2. The Geography Program at Maryland

College of Behavioral and Social Sciences (BSOS)

Undergraduate Studies: 2181 LeFrak Hall, (301) 405-4050, Fax: (301) 314-9299

Undergraduate Advising: 2108 LeFrak Hall, (301) 405-4073

E-mail: geog-advise@umail.umd.edu

Website: www.geog.umd.edu

The University of Maryland, College Park campus has over 150 Geography majors and many more students taking Geography courses. Many faculty members are international leaders in the field of Geography, and on-going research projects in the department offer undergraduate students important opportunities. The Geography Department at Maryland offers two degrees in Geography, which are described in more detail in sections 3 and 4:

1. Geography
2. Geographic Information Systems (GIS) and Computer Cartography

Students also have the option of double-majoring (120 credit requirement) and double-degreeing (150 credit requirement). Many students double major in Geography and GIS/Computer Cartography, although combinations with other majors, such as Business, Computer Science, Economics, Sociology, History, Anthropology and Education, are also common. There are also two areas of concentration in the Environmental Science and

Policy program that are supported by the Geography Department; Land Use and Environmental Mapping and Data Management.

The department maintains an advising office staffed by the Director of the Undergraduate Studies, Dr. Joseph Cirrincione (jc59@umail.umd.edu) and graduate student advisors. The advising office staff can help you decide if one the majors in Geography is right for you, and can give advice and requirements for double-majoring or double-degreeing. They also advise Geography majors every semester regarding coursework requirements and career opportunities. Students can also get information about the Geography internship program, through which students can explore career opportunities, gain valuable real world experience, and develop potential career contacts. The advising office is open for walk-in advising five days a week during the regular semester. Call for specific hours and for Summer and Winter term hours.

The Geography department also has an honors program. Students admitted to the honors program engage in independent research under the guidance of an individual faculty member. Students are eligible upon completion of 30 hours of geography courses including the core geography courses. Honors students register for GEOG 396 and GEOG 397, which will substitute six hours of honors research for six hours of formal course work. The result of student research is an undergraduate thesis.

There is a chapter of Gamma Theta Upsilon, the National Geography Honor Fraternity, on campus. This group provides a social nucleus for geography majors by holding regular meetings, inviting speakers, planning career days, field trips, parties and fund-raising activities. The fraternity uses 1120 LeFrak Hall as its base of operation, and members of GTU also work as peer advisors.

3. Majoring in Geography

In order to major in geography at University of Maryland, College Park a student must complete a minimum of 35 semester hours. Of these, 8 semester hours of primary course work in physical and human geography are required, along with 3 semester hours of quantitative methods, plus 9 semester hours of gateway courses with one course each in physical geography, human geography, and geographic techniques. The remaining 15 hours are to be selected from upper level systematic geography electives reflecting the student's areas of interest or specialization. In addition, 15 semester hours of course work outside of the department are required. These hours can be taken either in one department or in an area of concentration.

Areas of Specialization: Majors in geography are required to select 15 semester hours of upper level systematic geography courses. The selection of courses is determined by the student's area of interest and career goals, and constitutes their Area of Specialization. Students are encouraged to use the resources of various career centers, and the department advisors, to develop a program providing the type of training and skill development in line with their interest and career goals. The selection of supporting courses provides additional opportunity for students to enhance their training in an Area of Specialization. The following areas are indicative of the major grouping of courses offered by the Geography Department and are examples of possible areas of specialization.

- Human Dimensions of Global Change
- Physical Geography and Environmental Management
- Environmental Analysis

- Urban Geography and Regional Development
- Human Geography

4. Majoring in GIS and Computer Cartography

The GIS and Computer Cartography major also consists of 35 credit hours of coursework within the Geography department. Eight semester hours consist of primary course work, plus 6 credits of gateway courses with one course in each human and physical geography. Students must take 6 additional credit hours of upper level non-technical courses. The remaining 15 credit hours are to be chosen from the upper level technique courses in GIS, Remote Sensing and Computer Cartography. In addition to the coursework in the Geography department, an additional 15 semester hours is to be completed outside the department from the Mathematics, Computer Science, Physics, Biology, or Meteorology departments. Check with the Geography advisors for a list of approved supporting area courses.

5. Marketable Skills From a Geography or GIS/Cartography Degree

Geographers study the linkages between human activity and natural systems. Geographers were, in fact, among the first scientists to sound the alarm that human-induced changes to the environment were beginning to threaten the balance of life itself. They are active in the study of global warming, desertification, deforestation, loss of biodiversity, groundwater pollution, and flooding. All of these issues represent problems that occur at the intersection of human and physical systems. Many geographers develop skills in cartography, geographic information systems (GIS) or remote sensing; these technologies are especially well suited to approach some of the difficult problems mentioned above.

Most geographers do research or teaching for colleges or universities- work that requires an advanced degree. Since geography embraces both natural and social sciences, an undergraduate degree in geography may be followed by graduate study in such diverse fields as geophysics, botany, or agricultural economics, or by entry into law, business, or medical school. Below is a short list of marketable skills that you may develop with a major in Geography or GIS/Computer Cartography:

- Reading and interpreting maps, charts, and aerial photographs
- Spread of biological phenomena, such as insect infestations; weather patterns; or evidence of air pollution
- Applying remote sensing techniques for earth observation
- Representing facts graphically; designing and constructing easy-to-grasp, eye-catching charts, maps, and three-dimensional models to various scales
- Analyzing sites for the presence of resources
- Advising on sources of raw materials, routes and transportation methods for moving goods, and possible worldwide markets
- Evaluating the impact of global warming on agricultural systems
- Supplying information on possible effects of changes in the environment for preparation of environmental-impact statements

- Understanding and expressing complex technical or scientific information and integrating diverse facts from different disciplines
- Using advanced mathematics, computer science, and statistics to solve problems
- Listening to people's needs and translating them into realistic proposals for action

6. Internships, Jobs and Websites of Interest for Geography and GIS/Computer Cartography Majors

Internship Opportunities:

National Geographic Society

<http://www.nationalgeographic.com/infocentral/fact/ngsint.html#geography>

United States Department of State

<http://www.state.gov/www/careers/rstudprogindex.html>

United States Census Bureau

<http://www.census.gov/hrd/www/vacancy/3pgother.htm>

National Imagery and Mapping Agency (NIMA)

<http://www.nima.mil>

Defense Intelligence Agency (DIA)

<http://www.dia.mil/Site5/Employment/summer.html>

Population Reference Bureau

<http://www.prb.org/inside/jobinfo.htm>

National Security Agency (NSA)

<http://www.nsa.gov/programs/employ/index.html>

United States Geological Survey (USGS)

<http://www.usgs.gov/student/>

United States Environmental Protection Agency (EPA)

<http://www.epa.gov/epapages/epahome/intern.htm>

National Science Foundation (NSF)

<http://www.nsf.gov/home/chart/student.htm>

United States Department of Agriculture (USDA)

<http://www.usda.gov/da/employ/intern.htm>

Other Government Agencies

<http://www.students.gov>

Washington, D.C. Internships

<http://dc.about.com/citiestowns/midlanticus/dc/library/weekly/aa022800a.htm>

Potential Job Sources/Websites of Interest for Geography/GIS Majors¹

E Jobs: Environmental Jobs and Careers (<http://www.ejobs.org>)

Association of American Geographers Job Listings (<http://www.aag.org>)

GIS Jobs Clearinghouse (<http://www.gjc.org>)

Geosearch (<http://www.geosearch.com>)

GeoWeb Interactive (<http://www.ggrweb.com>)

GEOWorld (<http://www.geoplace.com>)

USGS Employment Website (<http://www.usgs.gov/ohr/>)

About.Com Geography Resources (<http://www.geography.about.com>)

National Geographic Society (<http://nationalgeographic.com>)

¹ From the University of Maryland-College Park, Geography Dept. website (<http://www.geog.umd.edu>)

Organizations frequently Seeking Geography Majors at UM

- 3DI, LLC Company
- Appalachian Regional Commission
- Association of American Geographers
- Autometric
- Bureau of Census
- CALTRAN (California Transportation)
- Dewberry and Davis
- Eagan McAllister Associates
- EarthData International
- EarthSat
- Enterprise Information Solutions
- ESRI-DC Professional Services
- FEMA (Federal Emergency Management Agency)
- Geography Information Management
- Greenhorne and O'Mara
- Lockheed Martin
- Michael Baker Jr. Inc.
- National Archives and Records Administration
- National Capital Planning Commission
- National Imagery and Mapping Agency (NIMA)
- Onsite
- PBS&J
- Space Imaging
- Spatial Systems
- VARGIS LLC

The Career Center's Program Director for the BSOS College is Pamela Allen. Her normal hours of walk-in assistance are Wednesdays from 1 to 3. Individual appointments can be made after an initial walk-in with any of the Career Center staff. Regular walk-in hours are Monday through Friday, 11 a.m. to 3 p.m.

For More Information Contact:

Pamela Allen
Program Director
Career Center
University of Maryland
3100 Hornbake Library, South Wing
301-314-7225
pallen@ds9.umd.edu
www.careercenter.umd.edu