Careers: Geographical Sciences

The University of Maryland Geographical Sciences major graduates have been successful in many different fields post-graduation. Review additional resources at BSOS’s Your Career.

Using information from the University of Maryland graduation survey, we have compiled information about GEOG majors, such as where they work or go to graduate school post-graduation. Check out the topics below to learn more about planning for your career!

**Topics/Quick Links**

- Career Areas for GEOG Majors
- Explore Career Titles
- Career Planning Links
- Gain Experience
- Identify Skills Developed
- Job & Internship Search Links
- Employers of GEOG Graduates
- Connect & Grow Your Network
Related Career Areas for GEOG Majors

Geographical Sciences majors work in many different areas including physical, environmental, economic, and human and cultural geography, as well as geotechniques and urban planning.

Review *What Do Geographers Do*, by AAG, *What Can I do as a Geographer?*, or *Career Brochure*, by ASPRS for an overview some more careers fields, including sub-career fields.

*Sample of related career titles*

<table>
<thead>
<tr>
<th>Analyst</th>
<th>International Development Specialist</th>
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<tbody>
<tr>
<td>Business and System Integration Consultant</td>
<td>IT Specialist/Web Admin</td>
</tr>
<tr>
<td>Cartographic Technician</td>
<td>Land Consultant</td>
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<tr>
<td>Climate Change Analyst</td>
<td>Landscape Architect</td>
</tr>
<tr>
<td>Community Developer</td>
<td>Law Enforcement Analyst</td>
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<tr>
<td>Community Resource Specialist</td>
<td>Lobbyist</td>
</tr>
<tr>
<td>Consultant</td>
<td>Map Specialist/Technician</td>
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<tr>
<td>Contractual GIS Analyst</td>
<td>Mapping Specialist</td>
</tr>
<tr>
<td>Data Engineer</td>
<td>Marine GIS Technician</td>
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<tr>
<td>Demographer</td>
<td>Market Researcher</td>
</tr>
<tr>
<td>Disaster Services Operations GIS Intern</td>
<td>Oceanographer</td>
</tr>
<tr>
<td>Ecological Risk Assessor</td>
<td>Outdoor Education Teacher</td>
</tr>
<tr>
<td>Emergency Management Specialist</td>
<td>Park Naturalist</td>
</tr>
<tr>
<td>Environmental Affairs Specialist</td>
<td>Park Ranger</td>
</tr>
<tr>
<td>Field Interviewer</td>
<td>Photogrammetrist</td>
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<tr>
<td>Field Surveyor Technician</td>
<td>Program Associate</td>
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<tr>
<td>Forest Fire Inspector</td>
<td>Real Estate Appraiser</td>
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<tr>
<td>Geographic Data Processor</td>
<td>Research Assistant</td>
</tr>
<tr>
<td>Geo-Information Analyst</td>
<td>Seismologist</td>
</tr>
<tr>
<td>Geointelligence Specialist</td>
<td>Social and Plant Specialist</td>
</tr>
<tr>
<td>Geological Data Technicians</td>
<td>Software Developer</td>
</tr>
<tr>
<td>Geological Technician (Drafter)</td>
<td>Soil Conservation Technician</td>
</tr>
<tr>
<td>Geospatial Analyst</td>
<td>Substitute Teacher</td>
</tr>
<tr>
<td>GIS Analyst/Specialist/Technician</td>
<td>Surveyor</td>
</tr>
<tr>
<td>GIS Cartographer</td>
<td>Technical Publications Writer</td>
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<tr>
<td>GIS Developer</td>
<td>Transportation Planner</td>
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<tr>
<td>GIS Research and Technology Analyst</td>
<td>Travel Agent</td>
</tr>
<tr>
<td>Hazardous Waste Management Analyst</td>
<td>Urban Planner Assistant</td>
</tr>
<tr>
<td>Hazards Analyst</td>
<td>Water Resource</td>
</tr>
<tr>
<td>Historic Preservationist</td>
<td>Web Developer</td>
</tr>
</tbody>
</table>

*And many more*

*Reported by University of Maryland Geographical Sciences graduates. Obtained by the University Career Center & The President’s Promise Graduation Survey.*
Some career paths require an advanced degree. Start researching your career path of interest to identify the educational requirements. The list below includes a sample of programs that geography undergraduate majors may pursue, as well as their career titles and employers.

<table>
<thead>
<tr>
<th>Title</th>
<th>Employer</th>
<th>Advanced degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Cycle Research Assistant</td>
<td>NASA Goddard Space Flight Center</td>
<td>Master of Professional Studies, Geospatial Information System</td>
</tr>
<tr>
<td>Center Lead</td>
<td>DEVELOP Program, NASA Goddard</td>
<td>MA, Geographical Sciences</td>
</tr>
<tr>
<td>Deep South Program Director</td>
<td>Latino Commission on AIDS</td>
<td>MA Geography</td>
</tr>
<tr>
<td>Earth Observations Engineer</td>
<td>OmniSystems</td>
<td>Ph.D. Geography</td>
</tr>
<tr>
<td>Faculty Research Assistant</td>
<td>University of Maryland, College Park</td>
<td>MA Geography</td>
</tr>
<tr>
<td>Forest Carbon Markets Research Assistant</td>
<td>Forest Trends Association</td>
<td>MA Geography</td>
</tr>
<tr>
<td>Forest Carbon Markets Research Assistant</td>
<td>Forest Trends/Ecosystem Marketplace</td>
<td>Master of Arts in Geography</td>
</tr>
<tr>
<td>Geographic Information Systems Intern</td>
<td>U.S. Holocaust Memorial</td>
<td>Master of Professional Studies, Geospatial Information System</td>
</tr>
<tr>
<td>Geographic Information Systems Intern</td>
<td>Center for Advance Transportation Technology</td>
<td>Master of Professional Studies, Geospatial Information System</td>
</tr>
<tr>
<td>GIS Intern</td>
<td>Center for Watershed Protection</td>
<td>Master of Professional Studies, Geospatial Information System</td>
</tr>
<tr>
<td>Principal GIS Analyst</td>
<td>City of Alexandria</td>
<td>MA Geography</td>
</tr>
<tr>
<td>Research Assistant</td>
<td>NASA Goddard Space Flight Center</td>
<td>Masters in Geospatial Information Sciences and Remote Sensing</td>
</tr>
<tr>
<td>Research Scientist</td>
<td>Michigan Tech Research Institute</td>
<td>Ph.D. Geography</td>
</tr>
<tr>
<td>Science Policy Officer</td>
<td>University of Maryland Global Land Cover Facility</td>
<td>MA Geography</td>
</tr>
<tr>
<td>Senior Associate Vice Provost</td>
<td>UMBC</td>
<td>Ph.D. Geography</td>
</tr>
<tr>
<td>Senior Image Analyst</td>
<td>Fugro EarthData Inc.</td>
<td>MA Geography</td>
</tr>
</tbody>
</table>

*Source: LinkedIn, UMD Geographical Sciences undergraduate alumni who pursued advance degrees (sample).*

**Graduate School Information**

Most geographers conduct research or teach 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 diverse fields such as geophysics, botany, or agricultural economics, or by entry into law, business, or medical school.

- **Questions to consider** before applying to graduate school (plus a timeline for applying)
- Follow this **timeline** to stay on track with your graduate school application.
- **Tips** for completing the application.
- **Financing tips** for graduate school.
Explore Career Titles

Use the sample job and internship titles (mentioned above) to start exploring career paths. The links below provide a short overview of the positions.

- **Occupational Outlook Handbook**, research 1,000’s of career titles
- **O*NET Online**
- Talk with professionals working in the field through the **Terrapins Connect**.
- **Candid Career**, informational career videos (example to right)
- **Vault Guides**, download 100’s of industry guides (Click the book below to read more. Note- users who are not logged in to UMD Vault Campus when they click below will first be prompted to log in. Use your Careers4Terps account for easiest access.)

Career Planning Links – GEOG Majors

Not sure where to start in planning your post-graduation activities? Start by reviewing these general resources.

- **Are you a Geographer?**
- **Career Planning**, Wise Words from UMD GEOG Alumni
- **Environmental Careers**, provided by UMD Environmental Science and Policy Program
- **Federal positions by major**, mostly undergrad
- **Preparing for a Geography Career**, career tips from American of Association Geography
- **Register for PSYC 123**: The Psychology of Getting Hired – a one-credit, UMD course that introduces students to psychological principles involved in hiring processes

Additional career fields to research and consider:

- **Cultural Resources**
- **Historic Preservation**
- **Cultural Geographer**
- **Emergency Management**
- **Cartography**
- **Geographic Information Systems**
- **Remote Sensing**
- **Teaching** (with a bachelor degree and with a master’s degree)

Develop a Career Action Plan: go.umd.edu/BSOSactionplan
Gain Experience – GEOG Majors

The links below will be a helpful start in locating internship openings.

**Sample opportunities**

- Research Opportunities, advice and links for undergraduate students
- BSOS Engagement Opportunities, offers links on internships, etc.
- National Consortium for the Study of Terrorism and Responses to Terrorism (START), Internships
- Geographical Sciences provides a list of Internships with Short Description
- UMD Center for Advanced Transportation Tech Lab (CATT)
- UMD ENSP Internship: Science
- UMD Careers4Terps, a job and internship database for off-campus positions
- UMD National Scholarships Office, opportunities for undergraduate

The Department of Geographical Sciences offers internship, study abroad, and independent study related information on their website.

Skills Developed as a GEOG Major

Skills lead to jobs. Which skills do you possess? Review the Skills Inventory list to examine soft skills to highlight on your resume and within interviews.

**Sample list of skills developed in class by GEOG majors.**

- 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 worldwide markets
- Evaluating the impact of global warming on agricultural systems
- Supplying information on 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 disciplines
- Using advanced mathematics, computer science, and statistics to solve problems
Job & Internship Search Links for GEOG Major

Applying for an advertised position on a large board is an ineffective job/internship strategy, but it can be helpful in researching what the typical qualifications are for a field or positions. Geographical Sciences majors work in a variety of fields so the list below is only a sample of resources for you to utilize.

- UMD Department of Geographical Sciences provides Employment Opportunity Links
- GIS Career Resources, Jobs and Internships (GIS Lounge)

C4T Careers4Terps- job & internships for Geographical Sciences students

Environmental Conservation
- Conservation job board, profiles the latest jobs in conservation, ecology, forestry, restoration, wildlife, fisheries, marine science, environmental education, land trusts, protected areas, outdoor recreation, ecotourism, and more
- ECOJobs, environmental jobs sorted by state

Federal, State, & Local Government (preparation tips)
- Federal Government Jobs, list of federal government agencies and their hiring websites
- Federal Job Search, search for federal positions by profession or location
- Job wonk, DC Jobs & Internships, DC opportunities listed as global, U.S., business, and society categories
- State and Local Government on the Net, directory provides websites of state agencies, city & county governments
- State of Maryland, position openings in Maryland
- Student jobs, with the federal government

GIS Jobs
- GIS Jobs, list internship, volunteer, and job listings
- My GIS Jobs, search GIS position by location or keyword, including internships

International Development/Sustainability
- DevNetJobs.org, lists international development jobs and consulting opportunities
- Foreign Policy Association, internship positions
- Global Service Corps, program for volunteering abroad
- GreenBiz, list green and sustainability related positions
- Green Dream Jobs, list internships and full time positions that can be filter by over 20 categories
- Intern Abroad, advertised internship in many different countries

Aggregate search engines yield more advertised opportunities because of the algorithm used to search the entire web.
- Indeed.com
- Linkup
- Simplyhired

Learn more about search strategies at go.umd.edu/internsearch.
Employers of GEOG Undergraduates

The sample list below includes employers who have hired UMD Geographical Sciences undergraduates.

- Accenture
- American Red Cross National Headquarters
- Anne Arundel County Public Schools
- Asset Inventory Mapping LLC.
- Boggs Environmental Consultants, Inc.
- BoxTone Mobile Service Management
- Center for Advanced Transportation Technologies, Civil Engineering Department
- Chart House
- Chartwell Country Club
- Department of Inspections and Permits, Anne Arundel County
- DEVELOP Program, NASA Goddard
- Earth Resources Technology, Inc.
- Environmental Systems Research Institute
- Esri
- Forest Trends
- Fugro EarthData, Inc.
- GeoEye
- Greenhorne & O'Mara
- IBI Group
- InfusiveTek
- iMapData
- Maryland National Capital Park and Planning Commission
- Michael Baker Corporation
- MITRE Corporation
- Montgomery County MD Dept of Permitting
- NASA DEVELOP Program – Goddard Space Flight Center
- National Center for Veterans Analysis and Statistics (NCVAS), U.S. Department of Veterans Affairs
- National Council for Geographic Education
- National Oceanic and Atmospheric Administration
- National Park Service
- S.S. Papadopulos and Associates, Inc.
- SAIC
- San Jose Water Company
- Science Systems and Applications, Inc.
- Smithsonian Institution
- Southern California Gas Company
- The MITRE Corporation
- U.S. Agency for International Development
- U.S. Army, G3, Range Control
- U.S. Census Bureau
- U.S. Department of Agriculture
- U.S. Department of Defense
- U.S. Environmental Protection Agency
- U.S. Geological Survey
- UMD Department of Geographical Sciences
- University of Maryland
- Zekiah Technologies

Plus many more…

Connect/Network

Use these sample opportunities to meet professionals in your field of interest to learn about the field, establish new networking contacts, and conduct informational interviews.

Engagement Opportunities (sample)

- Career Shuttles - a half day, group experience to visit an organization of interest
- Employer networking events - attend to meet professionals and gain knowledge of openings
- Intern - make the most of your internship by requesting informational interviews
- Intern for a Day - one day shadowing experience that allows students to forge connections
- Meetup - locate people in your area with similar interests or within your industry of interest
- Online Events Calendar - for the state of Maryland
- Terrapins Connect - connects students with UMD alumni
- UMD University Career Center Event Calendar of employers and panelist visiting campus
Social Media

- Join LinkedIn groups
- Connect with other BSOS alumni in the UMD College of Behavioral and Social Sciences LinkedIn group
- Tips for using LinkedIn to make industry specific connections

Join a Professional Associations

- American Geosciences Institute, nonprofit federation of geoscientific and professional associations that represents more than 250,000 geologists, geophysicists, and other earth scientists
- American Society for Photogrammetry and Remote Sensing (ASPRS), is a scientific association serving more than 7,000 professionals worldwide. Mission is to promote the ethical application of active and passive sensors, the disciplines of photogrammetry, remote sensing, geographic information systems, and other supporting geospatial technologies; to advance the understanding of the geospatial and related sciences
- Association of American Geographer, promotes discussion among its members and with scholars in related fields, in part through the activities of its affinity groups and more than 60 specialty groups. The meetings and activities of our regional divisions provide the opportunity to network with colleagues near you
- Cartography and Geographic Information Society, offers resources and event information
- National Fire Protection Association, review if you are interested in forest fire inspection
- National Society of Professional Surveyors, offers resources and membership is open to all professional surveyors and to persons trained, registered, or interested in the profession of surveying and mapping
- UMD student groups, join on-campus groups to network with others with similar career interests
- American Planning Association, includes information events, education, resources, and jobs in the field of urban planning

Need help starting your career exploration or job search? Schedule a career consultation appointment with the University Career Center & The President’s Promise. Get started mapping your career action plan today!