GEOGRAPHICAL SCIENCES (GEOG)

Graduate Degree Program
College: Behavioral and Social Sciences

Abstract
The Department of Geographical Sciences offers graduate study leading to the five year, combined Bachelor's of Science and Masters of Science in Geographical Sciences degrees.

The specific research specializations represented by the faculty include:

Human Dimensions of Global Change
Coupled Human and Natural Systems. The Department’s ultimate research goal is to advance an integrated understanding of the coupled Earth system including spatially distributed human processes. Our research addresses both fundamental and applied issues in coupled human and natural systems, such as population, socio-economic development, consumption and production, poverty, climate impacts and adaptation, vulnerability and mitigation, as well as the examination of policy options and trade-offs on sustainability. Our scientists investigate both the human socio-economic system and the climate system, and their linkages.

Land Cover, Land Use Change
Land cover and land-use change is a key interface between human and natural systems. Our scientists are world leaders in the remote sensing of land-cover changes. This information is actively combined with human socio-economic data to study past land cover and land use change and to inform advanced modeling of spatially-explicit future scenarios. These methods are actively being used to simultaneously address social, economic, carbon, climate, biodiversity and other aspects of land-use changes. We develop agricultural monitoring systems and look at societal impacts, adaptations and vulnerability to fire, droughts, floods, desertification, and other catastrophic events.

Geospatial Information Sciences and Remote Sensing
Collecting and interpreting geospatial data is central to everything we do as geographers, whether on computers or in the field. From local events to multi-scale processes, our faculty are developing and applying advanced remote sensing capabilities and GI Science that will help us to develop the next generation of GI technologies and understanding of the world’s geography. Our strengths include advanced computer modeling, scientific and geographic visualization, sensor calibration and design, image processing, geocomputing, spatial statistics, and semantic learning.

Carbon, Vegetation Dynamics and Landscape-scale Processes
The department carries out a broad array of research focused on monitoring vegetation dynamics, with a particular focus on mapping and studying human and natural disturbances and their landscape-scale impacts, as well as changes to the earth surface as a result of climate variability. This research involves integration of field-based research with remotely-sensed observations to address key scientific uncertainties. Alterations to the global carbon cycle are changing atmospheric composition and climate with implications for human well-being and a particular focus of our research is on monitoring and modeling the terrestrial carbon cycle with unprecedented sophistication and resolution.

Financial Assistance
Teaching Assistantships, Research Assistantships, and various Fellowships are available. Salary is for 9.5 months per year. Assistants work 20 hours per week. Fellowship recipients have no work assignment. Depending upon resources, the department will provide up to four years of funding, provided the student meets the department’s benchmarks (see the PhD Handbook (https://geog.umd.edu/graduate/phdhandbooks/)). Applications are made on the University Graduate Admission Application and further information about Financial Aid is given in the Application. Note, residents of certain Southern States without equivalent Geography graduate programs may be eligible to receive tuition at the lower, in-state fee rates.

Funding is not available for students in the combined BS/MS program.

Fellowships in Support of Diversity and Inclusion (https://geog.umd.edu/graduate/assistantships/) (optional)

Contact
Rachel Berndtson
Assistant Director of Academic Programs
2181L LeFrak Hall
7251 Preinkert Drive
College Park, MD 20742
Telephone: 301.405.9149
Email: rberndts@umd.edu

Website: http://www.geog.umd.edu

Courses: GEOG

ADMISSIONS

General Requirements
• Statement of Purpose
• Transcript(s)
• TOEFL/IELTS/PTE (international graduate students (https://gradschool.umd.edu/admissions/english-language-proficiency-requirements/))

Program-Specific Requirements
• Letters of Recommendation (3)
• CV/Resume
• Writing Sample (one required, up to two more optional)
• Description of Research/Work Experience
• Publications/Presentations (optional)
• Portfolio PDF Upload (optional)
• Supplementary Application (optional)

The Department offers courses of study leading to the Ph.D. degree and the MPS (masters in professional studies in geospatial information sciences). The MPS program is administered separately and has different admission deadlines and requirements than the Ph.D. program. See the MPS GIS Program (https://geog.umd.edu/landing/Graduate/). The Department no longer offers an M.A. option. The M.S. option is for a closed cohort in the combined Bachelor's/Master's program only. All accepted students applying to the Geographical Sciences (GEOG) program are admitted directly to the Ph.D. program.
Ph.D. Program
The Department admits students to our doctoral program that have already completed a masters degree and exceptionally well qualified students who have only completed a bachelor’s degree. Admitted students are required to either possess or shall develop a strong foundation in the discipline of Geography. Admission to the Ph.D. program is not limited to students with a Geography degree. Those with degrees in related disciplines such as environmental, physical or biological sciences, anthropology, economics, history and social science are encouraged to apply but may be required to undertake additional background study. Some knowledge of data processing and statistics is necessary for all applicants.

Applicants proposed program of study must clearly draw on the research strengths of existing faculty members. All applicants are strongly encouraged to contact individual faculty members (in person, by phone, or by email) to discuss their research interests and to identify potential advisors, as they will need a faculty to sponsor them for admission.

In general, the Department admits between 10-15 students each year into the Ph.D. program. Virtually all students accepted are fully-funded through assistantships and fellowships. While there is no longer a formal M.S. program, a terminal masters degree may be received for qualified students who are unable to complete the Ph.D. program.

Combined BS/MS Program
The Masters of Science degree is only earned through the Department’s combined five year BS/MS program. The combined BS/MS program enables some of the better performing students pursuing an undergraduate Geographical Sciences major to earn both their BS and their MS in five years by counting up to 8 credits of their Geographical Sciences graduate courses towards both degrees, thus significantly reducing both the time and cost of earning both degrees.

Most students apply to the program at the end of their Junior year to begin graduate courses and be part of the program as of their Senior year. Admission into the program is strongly competitive. Students will be admitted with an undergraduate degree in Geographical Sciences, including those with an ENSP concentration in Geographical Sciences. Minimum requirements are: 3.5 GPA overall, three letters of recommendation, and a statement of research.

Applicants’ proposed statement of research must clearly align with the research strengths of existing faculty members. All applicants are strongly encouraged to contact individual faculty members (in person, by phone, or by email) to discuss their research interests and to identify potential advisors, as they will need a faculty member to sponsor them for admission.

In general, the Department admits between 5-10 students each year into the combined BS/MS program. There is no Departmental funding available.

Application Deadlines

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<tr>
<th>Type of Applicant</th>
<th>Fall Deadline</th>
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<tbody>
<tr>
<td>Domestic Applicants</td>
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<tr>
<td>US Citizens and Permanent Residents</td>
<td>December 12, 2024</td>
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<tr>
<td>International Applicants</td>
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