Geography

Degrees Offered

- Master of Arts
- Doctor of Philosophy

Nature of the Program

Geography is a diverse and innovative field of study that bridges humanities, social sciences and natural sciences. Geographers engage with the most pressing issues of our time, including global environmental change, social inequality and transformations of our economy, politics, ecology and culture in the shifting terrain of the 21st century. Our geographers are trained in cutting-edge approaches to understand and make a difference in our rapidly changing world.

West Virginia University offers master’s and doctoral degrees in geography. Our graduate program has a large faculty with expertise in the sub-disciplines of human geography, environmental geography, sustainability, and geographic information science. Using qualitative and quantitative research methods, our faculty research in South American, Central America, Mexico, and the Caribbean (“Latin America), sub-Saharan Africa, North Africa and Southwest Asia (“the Middle East”), and the U.S., including Appalachia.

Our interdisciplinary learning environment featuring state-of-the-art computing and spatial analysis facilities offers students the chance to develop innovative research projects and learn valuable skills to help solve some of the major challenges facing our world today.

The Graduate Program in Geography has been designated a program of excellence by the West Virginia University Board of Governors since 1998. This award is given to superlative degree programs in recognition of their contribution to higher education in West Virginia and national recognition.

Research

Students who are interested in pursuing research in an area other than these may do so provided the research area matches the interest of a faculty member in the department who agrees to supervise the student’s program. The Graduate Program in Geography at WVU has strong links with the University’s Regional Research Institute, the State GIS Technical Center, the Geology Program, the Water Research Institute, the International Studies Program, the West Virginia Geological and Economic Survey, the Center for Women’s and Gender Studies, and the Center for Resilient Communities.

Computing Facilities

The Geography program has extensive computing facilities housed in Brooks Hall, a modern 98,000 square foot building dedicated exclusively to geography and geology. Brooks Hall has five computer laboratories dedicated to teaching and research. The department has ESRI ArcGIS, ERDAS Imagine, and ENVI site licenses. In addition, the faculty teach several programming languages for GIS and data science including R, Python, and Bash. Faculty engaged in qualitative data analysis teach using tools including Nvivo and Atlas.ti. The department’s geovisualization research group operates an immersive four-wall 3-D display environment or CAVE. The remote sensing program operates an ASD full-range portable spectroradiometer.

FACULTY

CHAIR

- Brent McCusker - Ph.D. (Michigan State University)

ASSOCIATE CHAIR

- Jaime Toro - Ph.D. (Stanford University)

PROFESSORS

- Kathleen Benison - Ph.D. (The University of Kansas)
  Regular Graduate Faculty, Sedimentary Geology - Planetary Geology
- Dengliang Gao - Ph.D. (Duke University)
  Regular Graduate Faculty, Exploration Geophysics, Petroleum and Structural Geology
- Amy Hessl - Ph.D. (University of Arizona)
  Regular Graduate Faculty, Biogeography, Forest Ecosystems, Climate Variability
- Brent McCusker - Ph.D. (Michigan State University)
  Regular Graduate Faculty, Land Use Change, Africa, Policy Making
- Shikha Sharma - Ph.D. (University of Lucknow)
  Regular Graduate Faculty, Isotope Geochemistry
- Jaime Toro - Ph.D. (Stanford University)
  Regular Graduate Faculty, Structure and Tectonics
• Dorothy Vesper - Ph.D. (Pennsylvania State University)
  Regular Graduate Faculty, Aqueous Geochemistry, Hydrogeology

ASSOCIATE PROFESSOR
• Jamison Conley - Ph.D. (Pennsylvania State University)
  Regular Graduate Faculty, Spatial Analysis, Geocomputation, Health Geography
• Karen Culcasi - Ph.D. (Syracuse University)
  Regular Graduate Faculty, Geopolitics, Identity, Middle East
• Cynthia Gorman - Ph.D. (Rutgers University)
  Regular Graduate Faculty, Gender, Migration, Human Rights, Refugee Communities
• James Lamsdell - Ph.D. (The University of Kansas)
  Regular Graduate Faculty, Paleobiology, Arthropods, Macroevolution, Heterochrony, Paleoecology, Phylogenetics
• Joseph Lebold - Ph.D. (West Virginia University)
  Regular Graduate Faculty, Paleoecology, Paleontology, Regional Geology
• Brenden McNeil - Ph.D. (Syracuse University)
  Regular Graduate Faculty, GIS, Environmental modeling, Forest Ecosystem Services
• Maria Alejandra Perez - Ph.D. (University of Michigan)
  Regular Graduate Faculty, Cultural Geography, Science & Technology Studies, Speleology, Latin America and the Caribbean
• Amy Weislogel - Ph.D. (Stanford University)
  Regular Graduate Faculty, Sedimentology
• Bradley Wilson - Ph.D. (Rutgers University)
  Regular Graduate Faculty, Social Movements, Local/Global Food Systems, Food Justice

ASSISTANT PROFESSOR
• Vikas Agrawal - Ph.D. (West Virginia University)
  Associate Graduate Faculty, Chemical Hygiene Officer, Isotopic and Biogeochemical Characterization of Geological Materials, Energy and Environment
• Michael Harman - Ph.D. (West Virginia University)
  3D visualization, modeling complex landforms and processes, GIS
• Aaron Maxwell - Ph.D. (West Virginia University)
  Regular Graduate Faculty, Geospatial Instruction, Remote Sensing, Image Analysis, Spatial Modeling
• Charles Shobe - Ph.D. (University of Colorado - Boulder)
  Regular Graduate Faculty, Geomorphology, Earth Surface Processes, Landscape Evolution, Rivers, Source-to-Sink, Numerical Modeling

PROFESSOR EMERITI
• Robert Behling - Ph.D. (The Ohio State University)
• Timothy Carr - Ph.D. (University of Wisconsin - Madison)
• Joe Donovan - Ph.D. (Pennsylvania State University)
• Greg Elmes - Ph.D. (Pennsylvania State University)
• Trevor Harris - Ph.D. (University of Hull)
• Thomas Kammer - Ph.D. (Indiana University)
• Steven Kite - Ph.D. (University of Wisconsin)
• Kenneth C. Martis - Ph.D. (Michigan University)
• Henry Rauch - Ph.D. (Pennsylvania State University)
• Robert C. Shumaker - Ph.D. (Cornell University)
• Richard Smosna - Ph.D. (University of Illinois)
• Timothy Warner - Ph.D. (Purdue University)
• Thomas Wilson - Ph.D. (West Virginia University)

Admissions
The Geography program admits students to either the M.A. or the Ph.D. program. GRE scores are not required for admission to any of these programs.

M.A. IN GEOGRAPHY
All applicants are strongly encouraged to contact potential faculty advisors prior to submitting their application. Prospective students who establish these connections typically have much stronger applications. All M.A. applicants are all required to name potential advisor(s) in their statement and application.
In addition to the university’s general admission requirements (http://catalog.wvu.edu/graduate/graduateeducationatwestvirginiauniversity/#classificationstext), applicants to the M.A. program in must have a bachelor’s degree in geography or a related field with an overall GPA of at least a 3.0.

**PH.D. IN GEOGRAPHY**

All applicants are strongly encouraged to contact potential faculty advisors prior to submitting their application. Prospective students who establish these connections typically have much stronger applications. All Ph.D. applicants are all required to name potential advisor(s) in their statement and application.

In addition to the university’s general admission requirements (http://catalog.wvu.edu/graduate/graduateeducationatwestvirginiauniversity/#classificationstext), applicants to the Ph.D. program must hold an M.A. or M.S. degree in geography or a related field with an overall GPA of at least 3.0 in their previous graduate work. Students with degrees in other non-geography disciplines are encouraged to apply but may be asked to make up deficiencies in geography during their first year in the program.

**List of Admission Requirements for both programs:**

- See the steps to apply for admissions and access the application here (https://graduateadmissions.wvu.edu/how-to-apply/).
- A two-page statement of purpose describing the applicant’s interest in geography, career intentions, and the name of potential advisor(s) in the department.
- Letters of recommendation from people who are familiar with the applicant’s preparation for graduate study (two for the M.A., three for the Ph.D).

**International Applicants:**

- See the steps to apply for admissions and access the application here (https://graduateadmissions.wvu.edu/how-to-apply/).
- International applicants should view additional requirements here (http://catalog.wvu.edu/graduate/graduateeducationatwestvirginiauniversity/#internationaltext) and here (https://graduateadmissions.wvu.edu/information-for/international-students/).
- Language proficiency is required in order to hold a graduate teaching assistantship. See here (https://elli.wvu.edu/testing-resources/english-proficiency-gtas/).

**Application Deadlines:**

- The Geography program admits students for the Fall and Spring semester semesters.
- The priority review deadline for all application materials for fall admission is January 15th.
- The priority review deadline for all application materials for Spring admission is August 15th.
- Completed applications for admission may be considered after the January 15th deadline on a space-available basis.
- Exceptional applicants may be nominated by the Geography Program for competitive University Fellowships. Qualified applicants will be notified if they are nominated. More information on WVU fellowships can be found here (https://graduateeducation.wvu.edu/finances/fellowships/).

**Assistantships**

All applicants will be considered for financial support in the form of graduate teaching assistantships (GTAs) and Graduate Research Assistantships (GRAs). Graduate research assistantships are sometimes available through funded faculty member research. Students who qualify for available research assistantships will be contacted by the relevant faculty member with details. Certain application requirements may be waived based on a preliminary review of an application by the program.

For more information, please contact GradGeography@mail.wvu.edu.

Certain application requirements may be waived based on a preliminary review of an application by the program.

**ADMISSION REQUIREMENTS 2024-2025**

The Admission Requirements above will be the same for the 2024-2025 Academic Year.

MA Major Code: 1444

PhD Major Code: 1476

For specific information on the following program, please see the link to the right:

- Geography, M.A.

For specific information on the following program, please see the link to the right:

- Geography, Ph.D.
Degree Progress

MASTERS DEGREE:

- **Thesis/Project Proposal Defense**: The thesis/project proposal defense occurs when the advisor and the committee agree that a defendable copy of the proposal is completed, and no later than Oct/Mar 31 of the student's third semester. The defense date must be advertised to the department at least two weeks in advance. Proposal defenses are not normally scheduled between June 15 and August 15. In accordance with College requirements, original signatures are required on the shuttle sheet form specifying the outcome of the defense.

- **Thesis/Project Defense**: The thesis/project defense occurs when the advisor and the committee agree that a defendable copy of the thesis is completed, no later than the end of the student's fourth semester. The defense date must be advertised to the department at least two weeks in advance. Thesis defenses are not normally scheduled between June 15 and August 15. In accordance with College requirements, original signatures are required on the shuttle sheet form specifying the outcome of the defense. Students should work closely with their advisors to establish expectations for length and structure of the thesis.

- **Annual Evaluation**: The academic progress of every graduate student is reviewed each year. Students must submit a self-evaluation signed by their advisor by January 15. The Graduate Committee will conduct its annual review of students in February and communicate with students by March, if needed. Waivers to deadlines, timing requirements, and other rules may be requested from the Graduate Director. Waivers are only given under extraordinary circumstances.

- **Required Deadlines**:

  **Thesis option**

  First year
  
  - First semester: File plan of study
  - Second semester: Form committee

  Second year
  
  - Third semester: Written proposal given to committee by Oct./Mar. 1st and complete oral proposal by Oct./Mar. 31st
  - Fourth semester: Defend thesis by the end of semester

  **Professional option**

  First year
  
  - First semester: File plan of study
  - Second semester: Form committee

  Second year
  
  - Third semester: Professional option must be chosen by Oct./Mar. 1st. Get approval of written plan from the thesis committee and request permission from the graduate committee by the end of semester.
  - Fourth semester: Defend project by the end of semester

DOCTORAL DEGREE:

- **Comprehensive Examinations**: The student is required to pass an oral and three written comprehensive examinations no later than the fourth semester. The student will be examined in two specialty areas and a third area closely related to the proposed dissertation research topic.

- **Dissertation Proposal Defense**: Upon successful completion of the comprehensive examination and no later than the end of the fifth semester, the student will be expected to defend a dissertation research proposal. Dissertation Proposal defenses are not normally scheduled between June 15 and August 15. In accordance with College requirements, original signatures are required on the shuttle sheet form specifying the outcome of the proposal defense.

- **Dissertation Defense**: The dissertation defense occurs when the advisor and the committee agree that a defendable copy of the dissertation is completed. The defense date must be advertised to the department at least two weeks in advance. Dissertation defenses are not normally scheduled between June 15 and August 15. In accordance with College requirements, original signatures are required on the shuttle sheet form specifying the outcome of the defense. Students should work closely with their advisors to establish expectations for length and structure of the dissertation.

- **Annual Evaluation**: The academic progress of every graduate student is reviewed each year. Students must submit a self-evaluation signed by their advisor by January 15. The Graduate Committee will conduct its annual review of students in February and communicate with students by March, if needed. Waivers to deadlines, timing requirements, and other rules may be requested from the Graduate Director. Waivers are only given under extraordinary circumstances.

- **Required Deadlines**:
First year: Course work

• First semester: File plan of study
• Second semester: Form committee

Second year: Course work

• Third semester: Form committee, if not yet completed
• Fourth semester: Oral and Written comprehensive exams

Third year: Defend proposal/Field work/Data collection

• Fifth semester: Defend dissertation proposal by the end of semester
• Sixth and Spring semesters: Collect data/conduct fieldwork as necessary

Fourth year: Dissertation writing

Graduate Certificate in GIS and Spatial Analysis

CERTIFICATE CODE - CG37

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<tr>
<th>Required Courses</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td>ARE 729</td>
<td>Spatial Econometrics</td>
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<tr>
<td>or ECON 729</td>
<td>Spatial Econometrics</td>
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<td>RESM 540</td>
<td>Geospatial Modeling</td>
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<td>RESM 575</td>
<td>Spatial Analysis for Resource Management</td>
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<td>RESM 545</td>
<td>Spatial Hydrology and Watershed Analysis</td>
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<td>GEOG 550</td>
<td>Geographic Information Science</td>
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<td>GEOG 651</td>
<td>Geographic Information Science: Technical Issues</td>
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<td>GEOG 654</td>
<td>Environmental Geographic Information Systems Modeling</td>
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<td>GEOG 655</td>
<td>Remote Sensing Principles</td>
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<td>GEOG 753</td>
<td>Exploratory Spatial Data Analysis</td>
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<td>GEOG 755</td>
<td>Advanced Remote Sensing</td>
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