

GEOGRAPHY, B.S.

Begin Campus: Any Penn State Campus

End Campus: University Park

Degree Requirements

For the Bachelor of Science degree in Geography, a minimum of 120 credits is required:

Requirement	Credits
General Education	45
Electives	9
Requirements for the Major	75

9 of the 45 credits for General Education are included in the Requirements for the Major. This includes: 6 credits of GQ courses; 3 credits of GWS courses.

Requirements for the Major

To graduate, a student enrolled in the major must earn a grade of C or better in each course designated by the major as a C-required course, as specified by Senate Policy 82-44 (<http://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#82-44>).

Code	Title	Credits
Prescribed Courses		
<i>Prescribed Courses: Require a grade of C or better</i>		
EMSC 100S	Earth and Mineral Sciences First-Year Seminar	3
GEOG 210	Geographic Perspectives on Environmental Systems Science	3
GEOG 220	Perspectives on Human Geography	3
GEOG 230	Geographic Perspectives on Environment, Society and Sustainability	3
GEOG 260	Geographic Information in a Changing World: Introduction to GIScience	3
GEOG 301	Thinking Geographically	3
GEOG 364	Spatial Analysis	3
GEOG 390	Professional Development Seminar in Geography	1
GEOG 464	Advanced Spatial Analysis	3
STAT 200	Elementary Statistics	4
Additional Courses		
<i>Additional Courses: Require a grade of C or better</i>		
Calculus:		
Select one of the following:		4
MATH 83	Technical Calculus	
MATH 110	Techniques of Calculus I	
MATH 140	Calculus With Analytic Geometry I	
Engaged Scholarship:		
Select 3 credits from the following:		3
GEOG 493	Service Learning (1-3 credits)	
GEOG 494	Research Project in Geography (1-3 credits)	
GEOG 494H	Research Project in Geography (1-3 credits)	
GEOG 495	Internship (1-3 credits)	
GEOG 495B	Geography Teaching Internship (1-3 credits)	

GEOG 495G	Giscience Internship (1-3 credits)	
GEOG 499	Foreign Studies (1-3 credits)	
Geographic Information Science Skills:		
Select 6 credits from the following:		6
GEOG 361	Cartography–Maps and Map Construction	
GEOG 362	Image Analysis	
GEOG 363	Geographic Information Systems	
GEOG 365	Introduction to GIS Programming	
300-level geography:		
Select 9 credits, not including courses taken above:		9
GEOG 308	Research and Qualitative Inquiry in Geography	
GEOG 310	Introduction to Global Climatic Systems	
GEOG 310W	Introduction to Global Climatic Systems	
GEOG 314	Biogeography and Global Ecology	
GEOG 315	Landforms and Geomorphic Systems in the Anthropocene	
GEOG 320	Urban Geography: A Global Perspective	
GEOG 324	Place, Space and Culture	
GEOG 326	Geographic Perspectives on Economic Systems	
GEOG 328	War, Peace, and Diplomacy: Understanding Contemporary Geopolitics	
GEOG 330N	Political Ecology	
GEOG 333	Human Dimensions of Natural Hazards	
400-level geography:		
Select 12 credits, not including courses taken above:		12
GEOG 410	Climatic Change and Variability	
GEOG 411	Forest Geography	
GEOG 411W	Forest Geography	
GEOG 412W	Climatic Change and Variability	
GEOG 414	Principles and Applications in Landscape Ecology	
GEOG 420Y	Comparative Urbanism	
GEOG 421	Population Geography	
GEOG 422W	Globalization, Migration, and Displacement	
GEOG 424	Geography of the Global Economy	
GEOG 424W	Geography of the Global Economy	
GEOG 425	Geography of Race, Class, and Poverty in America	
GEOG 426W	Gendered Worlds	
GEOG 428W	Political Geography	
GEOG 430	Human Use of Environment	
GEOG 431	Geography of Water Resources	
GEOG 432	Energy Policy	
GEOG 433	Geographies of Justice	
GEOG 434	Politics of the Environment	
GEOG 436	Ecology, Economy, and Society	
GEOG 438W	Human Dimensions of Global Warming	
GEOG 439	Property and the Global Environment	
GEOG 444	African Resources and Development	
GEOG 461W	Dynamic Cartographic Representation	
GEOG 462	Advanced Observation of Earth and Its Environment	
GEOG 463	Geospatial Information Management	
GEOG 465	Advanced Geographic Information Systems Modeling	

GEOG 467	Applied Cartographic Design
GEOG 481	Topographic Mapping with Lidar
GEOG 485	GIS Programming and Software Development
GEOG 493	Service Learning (1-3 credits)
GEOG 494	Research Project in Geography (1-3 credits)
GEOG 494H	Research Project in Geography (1-3 credits)
GEOG 495	Internship (1-3 credits)
GEOG 495B	Geography Teaching Internship (1-3 credits)
GEOG 495G	Giscience Internship (1-3 credits)
GEOG 496	Independent Studies (1-3 credits)
GEOG 497	Special Topics
GEOG 498	Special Topics
GEOG 499	Foreign Studies (1-6 credits)

Supporting Courses and Related Areas

Select 12 credits in geography or related areas (not used above) in consultation with adviser. 12

General Education

Connecting career and curiosity, the General Education curriculum provides the opportunity for students to acquire transferable skills necessary to be successful in the future and to thrive while living in interconnected contexts. General Education aids students in developing intellectual curiosity, a strengthened ability to think, and a deeper sense of aesthetic appreciation. These are requirements for all baccalaureate students and are often partially incorporated into the requirements of a program. For additional information, see the General Education Requirements (<https://bulletins.psu.edu/undergraduate/general-education/baccalaureate-degree-general-education-program/>) section of the Bulletin and consult your academic adviser.

The keystone symbol appears next to the title of any course that is designated as a General Education course. Program requirements may also satisfy General Education requirements and vary for each program.

Foundations (grade of C or better is required.)

- **Quantification (GQ):** 6 credits
- **Writing and Speaking (GWS):** 9 credits

Knowledge Domains

- **Arts (GA):** 6 credits
- **Health and Wellness (GHW):** 3 credits
- **Humanities (GH):** 6 credits
- **Social and Behavioral Sciences (GS):** 6 credits
- **Natural Sciences (GN):** 9 credits

Integrative Studies (may also complete a Knowledge Domain requirement)

- **Inter-Domain or Approved Linked Courses:** 6 credits

University Degree Requirements**First Year Engagement**

All students enrolled in a college or the Division of Undergraduate Studies at University Park, and the World Campus are required to take 1 to 3 credits of the First-Year Seminar, as specified by their college First-Year Engagement Plan.

Other Penn State colleges and campuses may require the First-Year Seminar; colleges and campuses that do not require a First-Year Seminar provide students with a first-year engagement experience.

First-year baccalaureate students entering Penn State should consult their academic adviser for these requirements.

Cultures Requirement

6 credits are required and may satisfy other requirements

- United States Cultures: 3 credits
- International Cultures: 3 credits

Writing Across the Curriculum

3 credits required from the college of graduation and likely prescribed as part of major requirements.

Total Minimum Credits

A minimum of 120 degree credits must be earned for a baccalaureate degree. The requirements for some programs may exceed 120 credits. Students should consult with their college or department adviser for information on specific credit requirements.

Quality of Work

Candidates must complete the degree requirements for their major and earn at least a 2.00 grade-point average for all courses completed within their degree program.

Limitations on Source and Time for Credit Acquisition

The college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. Credit used toward degree programs may need to be earned from a particular source or within time constraints (see Senate Policy 83-80 (<http://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#83-80>)). For more information, check the Suggested Academic Plan for your intended program.