# 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:  

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education</td>
<td>45</td>
</tr>
<tr>
<td>Electives</td>
<td>9</td>
</tr>
<tr>
<td>Requirements for the Major</td>
<td>75</td>
</tr>
</tbody>
</table>

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).

## Prescribed Courses: Require a grade of C or better

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMSC 100S</td>
<td>Earth and Mineral Sciences First-Year Seminar</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 210</td>
<td>Geographic Perspectives on Environmental Systems Science</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 220</td>
<td>Perspectives on Human Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 230</td>
<td>Geographic Perspectives on Environment, Society and Sustainability</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 260</td>
<td>Geographic Information in a Changing World: Introduction to GIScience</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 301</td>
<td>Thinking Geographically</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 364</td>
<td>Spatial Analysis</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 390</td>
<td>Professional Development Seminar in Geography</td>
<td>1</td>
</tr>
<tr>
<td>GEOG 464</td>
<td>Advanced Spatial Analysis</td>
<td>3</td>
</tr>
<tr>
<td>STAT 200</td>
<td>Elementary Statistics</td>
<td>4</td>
</tr>
</tbody>
</table>

## Additional Courses: Require a grade of C or better

### Calculus:

Select one of the following:  

- 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:  

- GEG 493  
  - Service Learning (1-3 credits)  
- GEG 494  
  - Research Project in Geography (1-3 credits)  
- GEG 494H  
  - Research Project in Geography (1-3 credits)  
- GEG 495  
  - Internship (1-3 credits)  
- GEG 495B  
  - Geography Teaching Internship (1-3 credits)

### Geographic Information Science Skills:

Select 6 credits from the following:  

- GEG 361  
  - Cartography–Maps and Map Construction  
- GEG 362  
  - Image Analysis  
- GEG 363  
  - Geographic Information Systems  
- GEG 365  
  - Introduction to GIS Programming

### 300-level geography:

Select 9 credits, not including courses taken above:  

- GEG 308  
  - Research and Qualitative Inquiry in Geography  
- GEG 310  
  - Introduction to Global Climatic Systems  
- GEG 310W  
  - Introduction to Global Climatic Systems  
- GEG 314  
  - Biogeography and Global Ecology  
- GEG 315  
  - Landforms and Geomorphic Systems in the Anthropocene  
- GEG 320  
  - Urban Geography: A Global Perspective  
- GEG 324  
  - Place, Space and Culture  
- GEG 326  
  - Geographic Perspectives on Economic Systems  
- GEG 328  
  - War, Peace, and Diplomacy: Understanding Contemporary Geopolitics

### 400-level geography:

Select 12 credits, not including courses taken above:  

- GEG 410  
  - Climatic Change and Variability  
- GEG 411  
  - Forest Geography  
- GEG 411W  
  - Forest Geography  
- GEG 412W  
  - Climatic Change and Variability  
- GEG 414  
  - Principles and Applications in Landscape Ecology  
- GEG 420Y  
  - Comparative Urbanism  
- GEG 421  
  - Population Geography  
- GEG 422W  
  - Globalization, Migration, and Displacement  
- GEG 424  
  - Geography of the Global Economy  
- GEG 424W  
  - Geography of the Global Economy  
- GEG 425  
  - Geography of Race, Class, and Poverty in America  
- GEG 426W  
  - Gendered Worlds  
- GEG 428W  
  - Political Geography  
- GEG 430  
  - Human Use of Environment  
- GEG 431  
  - Geography of Water Resources  
- GEG 432  
  - Energy Policy  
- GEG 433  
  - Geographies of Justice  
- GEG 434  
  - Politics of the Environment  
- GEG 436  
  - Ecology, Economy, and Society  
- GEG 438W  
  - Human Dimensions of Global Warming  
- GEG 439  
  - Property and the Global Environment  
- GEG 444  
  - African Resources and Development  
- GEG 461W  
  - Dynamic Cartographic Representation  
- GEG 462  
  - Advanced Observation of Earth and Its Environment  
- GEG 463  
  - Geospatial Information Management  
- GEG 465  
  - Advanced Geographic Information Systems Modeling

## Foreign Studies (1-3 credits)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 495G</td>
<td>GIScience Internship</td>
<td>1-3</td>
</tr>
<tr>
<td>GEOG 499</td>
<td>Foreign Studies</td>
<td>1-3</td>
</tr>
</tbody>
</table>
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.

---

**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.