

# 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 (<https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/>).

| Code  | Title   | Credits |
|---|---|---------|
| <b>Prescribed Courses</b>                                 |   |         |
| <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       |
| <b>Additional Courses</b>                                 |   |         |
| <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:                  |   |
| GEOG 361  | Cartography–Maps and Map Construction                             |
| GEOG 362  | Remote Sensing and Image Analysis                                 |
| GEOG 363  | Geographic Information Systems                                    |
| GEOG 365  | Intermediate GIS Programming                                      |
| 300-level geography:                                  |   |
| Select 9 credits, not including courses taken above:  |   |
| 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: |   |
| GEOG 410  |   |
| 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   |   |
| GEOG 424  |   |
| 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  | Resource Governance in Africa                                     |
| 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 and Inter-Domain courses do not meet this requirement.)

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

### Breadth in the Knowledge Domains (Inter-Domain courses do not meet this requirement.)

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

### Integrative Studies

- **Inter-Domain Courses (Inter-Domain):** 6 credits

### Exploration

- **GN**, may be completed with Inter-Domain courses: 3 credits
- **GA, GH, GN, GS, Inter-Domain courses.** This may include 3 credits of World Language course work beyond the 12th credit level or the requirements for the student's degree program, whichever is higher: 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 (<https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/>)). For more information, check the Suggested Academic Plan for your intended program.