

GEOSCIENCES, B.A.

Begin Campus: Any Penn State Campus

End Campus: University Park

Degree Requirements

For the Bachelor of Arts degree in Geosciences, a minimum of 120 credits is required:

Requirement	Credits
General Education	45
Bachelor of Arts Degree Requirements	24
Requirements for the Major	72

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

3 of the 24 credits for Bachelor of Arts Degree Requirements are included in the Requirements for the Major, General Education, or Electives and 0-12 credits are included in Electives if world language proficiency is demonstrated by examination.

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
Prescribed Courses		
EMSC 100S	Earth and Mineral Sciences First-Year Seminar ¹	3
<i>Prescribed Courses: Require a grade of C or better</i>		
GEOSC 1	Physical Geology ²	3
GEOSC 201	Earth Materials	4
Additional Courses		
ENGL 15	Rhetoric and Composition	3
or ENGL 30H	Honors Rhetoric and Composition	
MATH 140	Calculus With Analytic Geometry I	4
or MATH 110	Techniques of Calculus I	
Select one of the following:		4
GEOSC 202	Chemical Processes in Geology	
GEOSC 203	Physical Processes in Geology	
GEOSC 204	Geobiology	
Select 2 of the following 3 sequences for 8 credits each and a third sequence for 4 credits:		20
BIOL 110 & BIOL 220W	Biology: Basic Concepts and Biodiversity and Biology: Populations and Communities	
CHEM 110 & CHEM 111 & CHEM 112 & CHEM 113	Chemical Principles I and Experimental Chemistry I and Chemical Principles II and Experimental Chemistry II	
PHYS 250 & PHYS 251	Introductory Physics I and Introductory Physics II ³	

Select 2-4 credits of advanced mathematics in consultation with an adviser ⁴

Select 6 credits from 300- and 400-level GEOSC courses 6

Select 3 credits of appropriate field/laboratory experience in consultation with adviser 3

Select 3 credits of writing-intensive courses from within Earth and Mineral Sciences to include, but not limited to the following: 3

GEOG 310 Introduction to Global Climatic Systems

GEOG 412

GEOSC 402Y Natural Disasters

GEOSC 470W Introduction to Field Geology

METEO 471

Additional Courses: Require a grade of C or better

GEOSC 310 Earth History 3-4
or GEOSC 320 Geology of Climate Change

Supporting Courses and Related Areas

Select 11-14 credits in consultation with adviser (students may apply 1-4 6 credits of ROTC)

¹ The following substitutions are allowed for students attending campuses where the indicated course is not offered: CAS 100 or ENGL 202C can be substituted for EMSC 100S.

² If GEOSC 1 is not available, GEOSC 20 may be substituted.

³ PHYS 211, PHYS 212, PHYS 213, PHYS 214 may substitute for up to 8 credits in Physics for students with MATH 140, MATH 141.

⁴ List includes:

- MATH 111
- MATH 141
- STAT 200
- STAT 250

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.

B.A. Degree Requirements

World Language (0-12 credits): Student must attain 12th credit level of proficiency in one world language in addition to English. This proficiency must be demonstrated by either examination or course work. See the Placement Policy for Penn State World Language Courses ([https://](https://bulletins.psu.edu/undergraduate/general-information/academic-information/advising-planning-degree-program/course-placements/placement-policy-world-language-courses/)

[bulletins.psu.edu/undergraduate/general-information/academic-information/advising-planning-degree-program/course-placements/](https://bulletins.psu.edu/undergraduate/general-information/academic-information/advising-planning-degree-program/course-placements/placement-policy-world-language-courses/) placement-policy-world-language-courses/).

B.A. Fields (9 credits): Humanities, Social and Behavioral Sciences, Arts, World Languages, Natural Sciences, Quantification (may not be taken in the area of the student's primary major; world language credits in this category must be in a second world language in addition to English or beyond the 12th credit level of proficiency in the first language). Credits must be selected from the list of approved courses.

World Cultures (0-3 credits): Select 3 credits from approved list. Students may count courses in this category in order to meet other major, minor, elective, or General Education requirements, except for the University Cultural Diversity (US/IL) requirement.