

GEOSCIENCES

Integrated Undergrad-Grad Programs

Integrated B.S. in Geosciences and M.S. in Geosciences

This Integrated Undergraduate/Graduate (IUG) degree program combines the B.S. in Geosciences with the M.S. in Geosciences offered at the following campuses:

Undergraduate Degree

- University Park

Graduate Degree

- University Park

Requirements listed here are in addition to requirements listed in GCAC-210 Integrated Undergraduate-Graduate (IUG) Degree Programs (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-210-integrated-undergraduate-graduate-degree-programs/>).

The Department of Geosciences offers an integrated B.S./MS. Program that is designed to allow academically superior students to obtain both the B.S. and the M.S. degree in Geosciences within 5 years of study. Students who wish to complete the Integrated B.S./M.S. Program in Geosciences must apply for admission to the Graduate School and the Integrated B.S./M.S. program by the end of their junior year

During the first three years, the student follows the course scheduling of one of the options in Geosciences (see the Undergraduate Bulletin (<http://bulletins.psu.edu/undergraduate/>)); however, if a student intends to enter the Integrated B.S./M.S. program, he/she would be encouraged to take, wherever appropriate, upper level classes. By the end of the junior year, the student normally would apply for admission to the program. A decision of acceptance would be made prior to the beginning of the senior year and a M.S. Advising Committee would be appointed. During the senior year, the student would follow the scheduling of the B.S. Geosciences option he/she has selected, with an emphasis on completing 500-level course work wherever appropriate. During the senior year, the student will start work on a thesis designed to meet the departmental requirements of a M.S. thesis. During the fifth year, the student will take courses fulfilling the departmental M.S. degree requirements and complete the M.S. thesis.

Admission Requirements

Applicants apply for admission to the program via the J. Jeffrey and Ann Marie Fox Graduate School application for admission (<https://gradschool.psu.edu/admissions/how-to-apply>). Requirements listed here are in addition to Graduate Council policies listed under GCAC-300 Admissions Policies (<https://gradschool.psu.edu/graduate-education-policies/>).

Students who wish to complete the Integrated B.S./M.S. Program in Geosciences must apply for admission via the Graduate School application for admission (<http://www.gradschool.psu.edu/prospective-students/how-to-apply/>), and must meet all the admission requirements of the Graduate School and the Geosciences graduate program for the Master of Science degree, listed in the Admission Requirements section, by the end of their junior year. Before applying to the Graduate School, students must have completed entrance to their undergraduate major

and have completed no less than 60 credits. Students must be admitted no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. Transfer students must have completed at least 15 credits at Penn State to enroll in an IUG. Three letters of recommendation by faculty members for admission to graduate studies are required. The applications are reviewed by the Admissions Committee of the Geosciences Graduate Program and acted upon by the Associate Head for Graduate Programs.

In consultation with an adviser, students must prepare a plan of study appropriate to this integrated program and must present their plan of study to the head of the graduate program or the appropriate committee overseeing the integrated program prior to being admitted to the program. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program.

Degree Requirements

Students must fulfill all degree requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the Bachelor of Science in Geosciences are listed in the Undergraduate Bulletin (<http://bulletins.psu.edu/undergraduate/>). Degree requirements for the Master of Science in Geosciences degree are listed on the Degree Requirements tab. Students must sequence their courses so all undergraduate degree requirements are fulfilled before taking courses to count solely towards the graduate degree. Students are expected to complete the undergraduate degree requirements within the typical time to degree for the undergraduate major. In the semester in which the undergraduate degree requirements will be completed, IUG students must apply to graduate, and the undergraduate degree should be conferred at the next appropriate Commencement. If students accepted into the IUG program are unable to complete the M.S. degree, they are still eligible to receive their undergraduate degree if all the undergraduate degree requirements have been satisfied.

Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees; a minimum of 50% of the double-counted courses must be at the 500 or 800 level. Independent study courses and credits associated with the culminating experience for the graduate degree cannot be double-counted.

Code	Title	Credits
Courses Eligible to Double Count for Both Degrees		
GEOSC 500	Issues in Geosciences	3
GEOSC 502	Evolution of the Biosphere	3
GEOSC 518		
GEOSC 521	Thermal State of the Earth	2-3
GEOSC 548	Surface Processes	3
GEOSC 558	Multi-channel Seismic Processing and Interpretation	4
GEOSC 561	Mathematical Modeling in the Geosciences	4
GEOSC 572	Field Stratigraphy	1-2