

# GEOLOGICAL, ENVIRONMENTAL, AND PLANETARY SCIENCES

## College of Computer, Mathematical & Natural Sciences

1120 Geology Building  
Phone: 301-405-4082  
<http://geol.umd.edu>

The mission of the Department of Geological, Environmental, and Planetary Sciences is to provide high-quality undergraduate and graduate education; to achieve excellence in research; and, through outreach and service, to benefit society by effectively transmitting the products of research in geosciences.

## PROGRAMS

### Major

- Geology Major (<https://academiccatalog.umd.edu/undergraduate/colleges-schools/computer-mathematical-natural-sciences/geological-environmental-planetary-sciences/geology-major/>)

### Minors

- Chesapeake Bay: Watersheds and Water Resources Minor (GEPS) (<https://academiccatalog.umd.edu/undergraduate/colleges-schools/computer-mathematical-natural-sciences/geological-environmental-planetary-sciences/chesapeake-bay-watersheds-water-resources-minor/>)
- Earth History Minor (<https://academiccatalog.umd.edu/undergraduate/colleges-schools/computer-mathematical-natural-sciences/geological-environmental-planetary-sciences/earth-history-minor/>)
- Earth Material Properties Minor (<https://academiccatalog.umd.edu/undergraduate/colleges-schools/computer-mathematical-natural-sciences/geological-environmental-planetary-sciences/earth-material-properties-minor/>)
- Geochemistry Minor (<https://academiccatalog.umd.edu/undergraduate/colleges-schools/computer-mathematical-natural-sciences/geological-environmental-planetary-sciences/geochemistry-minor/>)
- Geophysics Minor (<https://academiccatalog.umd.edu/undergraduate/colleges-schools/computer-mathematical-natural-sciences/geological-environmental-planetary-sciences/geophysics-minor/>)
- Hydrology Minor (<https://academiccatalog.umd.edu/undergraduate/colleges-schools/computer-mathematical-natural-sciences/geological-environmental-planetary-sciences/hydrology-minor/>)
- Paleobiology Minor (GEPS) (<https://academiccatalog.umd.edu/undergraduate/colleges-schools/computer-mathematical-natural-sciences/geological-environmental-planetary-sciences/paleobiology-minor/>)
- Planetary Sciences Minor (GEPS) (<https://academiccatalog.umd.edu/undergraduate/colleges-schools/computer-mathematical-natural-sciences/geological-environmental-planetary-sciences/planetary-sciences-minor/>)

- Surficial Geology Minor (<https://academiccatalog.umd.edu/undergraduate/colleges-schools/computer-mathematical-natural-sciences/geological-environmental-planetary-sciences/surficial-geology-minor/>)

## ADVISING

Geological, Environmental, and Planetary Sciences majors in all tracks are required to receive mandatory semesterly advising prior to registration. Advising is performed by the Director of Undergraduate Studies or their designated faculty assistants. The Undergraduate Director routinely notifies majors of how to contact their advisors prior to semesterly advising. All advising inquiries should be directed to the Undergraduate Director.

Specific instructions for scheduling an advising appointment can be accessed through the departmental web page. These instructions apply to any meeting requests by majors, minors, and all interested students seeking information on a Department of Geological, Environmental, and Planetary Sciences program.

## OPPORTUNITIES

### Undergraduate Research Experiences

The Professional and Geophysics tracks of the Geological, Environmental, and Planetary Sciences major require students to complete a two-semester, six credit senior research thesis (GEOL393 and GEOL394), involving independent original geosciences research under the mentorship of a member of the faculty. Senior thesis students give presentations of proposals, progress, and final results to the entire department.

### Combined BS/MS in Geology

The Combined B.S./M.S. program is designed to permit a superior student to earn both the Bachelor's and the Master's degrees in as few as five years of study. Although designed to provide an integrated experience of undergraduate and graduate work, the combined B.S./M.S. program is not a course of study separate and distinct from the traditional B.S. and M.S. Students in the combined B.S./M.S. program will, at any given time, be either undergraduate or graduate students. The program provides the opportunity for a superior student to telescope these degrees by taking up to nine graduate credits (600-level or higher) while still an undergraduate and counting them toward both degrees. A grade of "B" or better must be earned in each of these courses. Under optimal circumstances, one might complete both degrees in five years. Actual completion time will vary depending on one's individual circumstances. The master's thesis may be a continuation of work begun as part of the undergraduate senior thesis.

Acceptance into the combined B.S./M.S. normally would occur after the end of the sophomore year. The minimum requirements for acceptance into this program are identical to those for the geology honors program: an overall GPA of at least 3.0 at the end of the sophomore year and a GPA of 3.0 or better in all courses required for the major. Interested eligible students must provide the following material to be considered:

1. At least three letters of recommendation. At least one must be from a prospective graduate advisor, who must outline the applicant's sources of potential funding.
2. An essay or statement of purpose.

3. An interview with the Undergraduate Honors Director and the Graduate Director.

Based on this, students may be provisionally accepted into the program. Students so accepted will be permitted to enroll in appropriate graduate-level courses. The combined B.S./M.S. program allows 9 credits of graduate courses (600-level or above) to be counted towards both the B.S. and M.S. degrees. A grade of "B" or better must be earned in each of these courses. Acceptance is provisional pending satisfaction of the following:

1. Completion of the undergraduate curriculum.
2. A GPA of 3.5 or better in GEOL393 and GEOL394.
3. Maintenance of a 3.0 overall GPA and a GPA of 3.0 or better in all courses required for the major.
4. Successful completion of the General GRE exam, usually taken during the fall term of the senior year.
5. Formal application and admission to the Graduate School. Your application for graduate admission is completely separate from your application to the combined B.S./M.S. Your participation in the combined B.S./M.S. as an undergraduate does not give you priority over other graduate applicants.

Upon enrollment as a graduate student, the participant may designate the graduate courses that should be counted toward both degrees.

## Honors Program

Admission to the Program will be by invitation of the Honors Committee, normally at the end of the sophomore year and normally will be extended to students with an overall GPA of 3.0 or better and a GPA of 3.0 or better in all courses required for the major.

Graduation with Honors normally requires completion of the curriculum, grades of B- and A- or better in GEOL393 and GEOL394 (i.e., grades for one semester must be at least an A-, and the second semester grade cannot fall below a B-), and maintenance of a 3.0 overall GPA and a GPA of 3.0 or better in all courses required for the major. Maintenance of a general GPA and GPA in geology major courses of 3.5 or above and a grade of A in both GEOL393 and GEOL394 will earn the distinction of Graduation with High Honors.

The curriculum for Honors in Geological, Environmental, and Planetary Sciences follows the University Honors Program Track I: Thesis Option with a 15 credit minimum.

1. The requirement for upper division Honors courses will be met by a minimum of 9 hours as follows:
  - a. GEOL497H and
  - b. 6 credit hours from the following:
    - i. a 3 credit hour graduate-level course approved by the Departmental Honors Committee
    - ii. Honors Option project in a three or four credit hour upper-level course from the offerings in the Department OF Geological, Environmental, and Planetary Sciences.
    - iii. no more than one Honors College seminar (3 credit hours) addressing a relevant topic in natural sciences. (Typically, this would include seminars offered by faculty in the College of Computer Mathematical and Natural Sciences). The Honors College seminar must be approved in advance by the departmental honors committee.

The Honors Option Proposal must be approved by the departmental honors committee, the professor teaching the course and the Honors College. A proposal must be approved by the Department and submitted to the Honors College by the 10th day of class in the semester in which the course will be taken and the project completed.

2. The research and thesis requirement will be met by completion of GEOL393 and GEOL394 with grades meeting the criteria outlined above.

## Student Societies and Professional Organizations

Sigma Gamma Epsilon, National Honor Society for Earth Sciences, and the Geology Club.

## Scholarships and Financial Assistance

The Office of Student Financial Aid (OSFA) administers all types of federal, state and institutional financial assistance programs and, in cooperation with other university offices, participates in the awarding of scholarships to deserving students. For information, visit: <http://financialaid.umd.edu>.

## Awards and Recognition

- Washington Gems & Mineral Scholarship
- Green Scholarship in Environmental Science and Policy
- Marc Lipella Memorial Scholarship