



# Geology

1119 Geology Building

(301) 405-4082

<http://www.geol.umd.edu/undergraduate/ugprogram.php>

College of Computer, Mathematical, & Natural Sciences

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## Key Features of a Geology Major

- Enjoy a close student-faculty interaction, studying in small classes (~10 students in classes beyond the 100-level)
- Explore the great outdoors through field-related projects, field trips, and the required Summer Field Project
- Assist on faculty research projects in locales ranging from the Sierra Nevada in California, northwestern France, Brazil, and western Maine
- Work on internationally-recognized research, using state-of-the-art technology
- Graduate in a discipline in high demand, with employment opportunities in federal and state government, industry, and education
- Major Tracks: Professional, Secondary Education, Geophysics, B.S./M.S.

## Career Options and Salaries with a Geology Major

Geologists are employed by governmental, industrial and academic organizations. Geologists work in exploration for new mineral and hydrocarbon resources, as consultants on engineering and environmental projects, as teachers and researchers in universities, and in many other challenging positions. For many, the attraction of a career in geology is the ability to divide time between work in the field, the laboratory and the office. Although the employment outlook within geology varies with the global economic climate, the long-range outlook is good. This is because our dwindling energy, mineral and water resources, along with increasing concerns about natural hazards and environmental issues, present new challenges for geologists.

In May 2015, the median annual salary for geologists was \$89,700.

Career information taken from <https://www.geol.umd.edu/undergraduate/index.php>.

Salary information taken from *Occupational Outlook Handbook, 2014-15 ed.* (<http://www.bls.gov/ooh/>).

## Advising

If you are considering a major in Geology, you can easily schedule an appointment with an advisor in the Department of Geology to answer any questions you may have.

- Dr. John Merck, Jr., Director of Undergraduate Studies
- 1119 Geology Building
- (301) 405-2808; [jmerck@umd.edu](mailto:jmerck@umd.edu)

For more information visit, <http://www.geol.umd.edu/undergraduate/advising/index.php>.

## Declaring a Geology Major

***Geology is not a Limited Enrollment Program (LEP). If you are interested in a Geology major, you can declare immediately!***

Once you have met with Dr. Merck and created an academic plan, you will receive the Change-of-Major paperwork. Take this packet to the Computer, Mathematical, and Natural Sciences Student Services Office (1300 Symons Hall) and you will be formally accepted into the major.

## Four-Year Plan—General Education

### First Year:

GEOL 100/110	3
GEOL 120 (NS)	1
CHEM 135/136 or 131/132	4
History/Social Sciences (HS)	3
ENGL 101 (AW)	3
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	14 credits

Elective	3
GEOL 102	4
MATH 140 (AR)	4
Humanities (HU)	3
GEOL 322	4
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	18 credits

### Second Year:

GEOL 341	4
MATH 141	4
Supporting Electives	4
Elective	3
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	15 credits

PHYS 141 or PHYS 161/174	4
GEOL 342	4
History/Social Sciences (HS)	3
Humanities (HU)	3
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	14 credits

### Third Year:

Elective	4
GEOL 444 or 445	4
GEOL 423	3
Scholarship in Practice (SP)	3
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	14 credits

GEOL 340	4
GEOL 443	4
Elective	3
Elective	3
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	14 credits

Summer: GEOL 490 (6 credits)

### Fourth Year:

GEOL 393 (OC)	3
Supporting Elective	4
ENGL 39X (PW)	3
Elective	3
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	13 credits

GEOL 394 (SP)	3
GEOL 451	3
GEOL Elective	3
Elective	3
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	12 credits

**TOTAL = 120 credits**

## Four-Year Plan—CORE

### First Year:

GEOL 100/110 or 120/110	4
CHEM 135/136 or 131/132	4
MATH 140	4
HA	3
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	15 credits

GEOL 102	4
MATH 141	4
ENGL 101	3
SB	3
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	14 credits

### Second Year:

GEOL 322	4
PHYS 141	4
HL	3
SB	3
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	14 credits

GEOL 340	4
GEOL 342	4
HO	3
SH	3
	<hr/>
	14 credits

### Third Year:

ENGL 393	3
GEOL 444 or 445	4
GEOL 341	4
Diversity CORE	3
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	14 credits

GEOL 423	3
GEOL 443	4
GEOL 451	3
Elective	3
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	13 credits

Summer: GEOL 490 (6 credits)

### Fourth Year:

GEOL 393	3
GEOL Elective	3-4
Advanced Studies	3
Elective	3
Elective	3
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	15-16 credits

GEOL 394 (Capstone)	3
Elective	3
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	15 credits

**TOTAL = 120 credits**

## Q & A

### ***I've heard that Geology majors have to do some kind of summer research. What's that all about?***

All Geology majors are required to enroll in GEOL 490 and complete 5-6 weeks of field research. The study of geology necessarily involves a component of outdoor activity, and the field research requirement allows you to get involved in ongoing faculty projects or to create your own research project. Opportunities for field research are available throughout the country and in several international locations.

### ***Do I also have to do a Senior Thesis?***

Yes. Geology majors must complete a senior research thesis (GEOL 393-394). The thesis is a two semester linked program (either Fall-Spring or Spring-Fall semesters). The program requires a paper near the end of each semester, two department-wide presentations each semester, and the time (and effort) of actually doing original scientific research. The thesis serves a variety of purposes:

- To have fun
- To work closely with a faculty member on a project both of you find interesting
- To participate in the generation of new ideas and information: this is real science, not the book learning you've been doing
- To develop skills that are invaluable in any career you choose, whether research, industry, business, teaching, or government

For more information visit, <https://www.geol.umd.edu/undergraduate/SeniorThesis.php>

### ***Is it possible to combine Geology with an Education major so that I can teach high school Geology?***

Yes. The "Secondary-Education Track" for Geology leads to a B.S. degree in Geology with special emphasis on course work that helps prepare the student for teaching at the secondary school level. Further coursework and student teaching are required for an education certification. This track also prepares the student for work as a geologist in government or industry, or for further graduate study, although students primarily intending to attend graduate school are advised to choose the Professional Track. Students seeking professional opportunities in secondary education are urged, also, to consult with advisors in the College of Education. Relative to the Professional Geology Track, in the Secondary Education Track, there is a reduction of two upper-level geology requirements, but the addition of two education courses and an option of an Atmospheric and Oceanic Sciences or Astronomy course. Further coursework in education, (including student teaching) will be required in order to obtain Maryland State Teaching Certification. Although geology is by nature interdisciplinary, it is recommended that students consider taking additional courses in astronomy, biology, and the philosophy of science in order to add to their educational breadth.

### ***Can I minor in Geology?***

Yes, you can choose from many different minors within the Geology Department: Earth History, Earth Material Properties, Geochemistry, Geophysics, Hydrology, Planetary Science, and Surficial Geology. For a list of course requirements, please see [https://www.geol.umd.edu/undergraduate/Geology\\_Minors.php](https://www.geol.umd.edu/undergraduate/Geology_Minors.php).