

EARTH SCIENCES

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I. Courses for First-Years/Possible Majors to Consider

In the department

- ESCI 10000: History of Life
- ESCI 10500: Geology of Natural Hazards
- ESCI 11000: Environmental Geology
- ESCI 11500: Oceanography
- ESCI 12000: Geology of our National Parks

In other departments

- BIOL 11000: Foundations of Biology
- CHEM 11100: Introduction to Chemistry
- CSCI 10000: Scientific Computing
- CSCI 10200: Multimedia Computing
- ENVS 10000: Key Concepts in Environmental Studies
- ENVS 11100: Science, Society and the Environment
- ENVS 19902: Environmental Issues
- MATH 10200: Basic Statistics
- MATH 10700: Calculus with Algebra A
- MATH 11100: Calculus and Analytic Geometry I
- PHYS 10700: Algebra Physics I
- PHYS 11100: Calculus Physics I

II. Advanced Options

Students who have had the equivalent of a 100-level ESCI course may take ESCI 20000: Earth Systems or ESCI 20500: Earth Materials.

Students should take the Chemistry and the Mathematics placement exams.

The Department of Earth Sciences offers two majors in Geology and Environmental Geoscience. Both majors share a set of foundational core courses, followed by a selection of advanced courses that allow students to pursue their interests and goals. The majors have sufficient overlap so that students can start taking classes without immediately choosing between them.

III. Major in Geology

Consists of 13 courses:

- One 100-level ESCI course
- One cognate math, science, or computer science course: BIOL 11100; CHEM 11100; CSCI 10000 or 10200; MATH 10200, 10700, or 11100; PHYS 10700 or 11100

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- ESCI 20000: Earth Systems
- ESCI 20500: Earth Materials
- One evolution and time course: ESCI 21500 or 22000
- One Earth composition course: ESCI 33000 or 33500
- One Earth structure course: ESCI 34000 or 34500
- One surface processes course: ESCI 27000, 27500, 28000, 37000, or 37500
- Two ESCI or cross-listed electives
- Junior Independent Study: ESCI 40100
- Senior Independent Study: ESCI 45100 and 45200

IV. Major in Environmental Geoscience:

Consists of 13 courses:

- One 100-level ESCI course
- ENVS 10000, 11100, or 19902
- ESCI 20000: Earth Systems
- ESCI 20500: Earth Materials
- ESCI 25000: Introduction to Geographic Information Systems (GIS)
- ESCI 28000: Hydrology
- One climate course: ESCI 27000 or 27500
- One surface processes course: ESCI 37000 or 37500
- Two ESCI or cross-listed electives, at least one at the 300-level
- Junior Independent Study: ESCI 40100
- Senior Independent Study: ESCI 45100 and 45200

V. Course Sequence Suggestion for Majors

	Fall	Spring
First Year	ESCI 100-level CHEM 11100 MATH 10700 or 11100	ESCI 20000 CHEM 11200 MATH 10800 or 11200
Sophomore Year	ESCI 20500 ESCI 21500 or 22000 PHYS 11100	ESCI 25000 ESCI 27000, 27500, or 28000 PHYS 11200

VI. Notes about the Majors

- Geology and environmental geoscience majors are encouraged to take 2 semesters of Chemistry, Physics, and Calculus and/or Computer Science. A student who does not get into an introductory ESCI course may want to start with one of these.
- Those with an interest in Earth Sciences are invited to weekly GeoClub meetings, which take place Thursdays at 11 am in Scovel 205.
- Hands-on learning is essential in ESCI courses. Laboratory and classroom components are closely integrated and must be taken concurrently.