Thank you for taking a closer look at the "EOS" department.

In this package you will find:

- An overview of the department
- Information on our Fall and Spring introductory courses
- A visual for how one progresses through the EOS major
- And a general graphic for career opportunities for those with a preparation in Earth and Oceanographic Science and the Geosciences in general.

We look forward to greeting you in April, or when we see you next in the Fall.



EARTH & OCEANOGRAPHIC SCIENCE

Learn skills that will help address some of the most pressing issues of our time and our future

VHY EOS





Develop a portfolio of work that will help you find a fulfilling and rewarding career



Engage in hands-on learning and authentic research across the EOS curriculum







Learn how you can make meaningful contributions to society while completing intellectually stimulating and rewarding courses



Courses with spots reserved for First-Year students for Academic Year 2025-2026

FALL INTRO COURSE EOS 1105 Introducing Earth MWF 9:05 AM - 10:00 AM Labs on M or W afternoons

SPRING INTRO COURSE EOS/ENVS 1505 Oceanograph Schedule announced with Spring classes

EOS 1105 and EOS 1505 fulfill the Inquiry in the Natural Sciences (INS) requirement, count toward the EOS major, and satisfy the Environmental Studies (ENVS) introductory science requirement.





INTRODUCING EARTH

EOS 1105 | FALL 2025 | PROF. JABARI JONES & DR. SARAH BRISSON CLASS MEETS MONDAY, WEDNESDAY, & FRIDAY: 9:05 – 10:00 AM CHOOSE MONDAY OR WEDNESDAY LABS: 1:15-4:15 PM



"I now think of the world in a different way and every time I see rocks or mountains or basically anything I think of geological processes."

"I loved the hands-on aspect of this course, from field labs to touching rocks around the room."

EARTH & OCEANOGRAPHIC SCIENCE 1105

The Earth is a dynamic system that has been shaped in part by geologic processes such as earthquakes, volcanic activity, and mountain building. During classes and weekly indoor and outdoor laboratories, students are introduced to Earth and plate tectonics through accessible field experiences along the Maine coast, rock and mineral specimens, images, and models. Students practice making observations, collecting data, and communicating interpretations, and then synthesize the course curriculum and their laboratory findings.

"I enjoyed the grouporiented aspect of this course because I made friends by working with people during labs, in class, and during office hours."

EOS 1105 | FALL 2024 | PROF. JABARI JONES

Geoscientists study many aspects of Earth systems and work in a variety of positions. "Employment of geoscientists is projected to grow 5% from 2019 to 2029, faster than the average for all occupations. The need for energy, environmental protection, and responsible land and resource management is projected to spur demand for geoscientists in the future... The median annual wage for geoscientists was \$93,580 in May 2020" - \$44.99 per hour.



www.bls.gov

Credit: AGI; data derived from the U.S. Bureau of Labor Statistics, Occupational Employment Statistics

I enjoyed this course! It's the most comprehensive course I've taken at Bowdoin. It involves so many different approaches: lab trips to the field, during which I could get to know classmates better; art in coloring and drawing sketches and maps; studying books and real samples; using technology such as iPads and Google Earth; the incorporation of current events... EOS 1105 fulfills the Inquiry in the Natural Sciences (INS) requirement. It also serves as an intro course for the EOS major, an intro science course for the Environmental Studies coordinate major, and meets the external science course requirement for biology majors.

COURSE GOALS INCLUDE:

Describe processes that influence and connect Earth's systems.

Use evidence to interpret Earth processes in Maine.

Describe and evaluate the role of humans on the Earth system Develop research skills used in studying the Earth.

Collaborate as part of an inclusive learning community.









OCEANOGRAPHY



EOS 1505 | SPRING SEMESTER | PROF COLLIN ROESLER & LAB INSTRUCTOR CATHRYN FIELD

COURSE DESCRIPTION

The Earth's oceans are one Ocean, spanning the globe, covering nearly 70% of the surface, teeming with life, boiling in the deep sea, and frozen in the Polar Regions. The Ocean regulates global climate and global trade, provides sustenance and recreation, impacts weather and economies. In the worst circumstances, it can have devastating impacts on human existence and yet it makes our planet habitable, protects us from ourselves, and is the basis for poetry, art, literature. Seemly vast, the Ocean is fragile and in need of protection and regulation. This course will cover the basic principles of oceanography: the tectonic evolution of the ocean basins; the sedimentary processes covering the ocean floor and recording the story of Earth's climate; chemical properties of seawater that support life; global circulation; waves and tides; marine ecosystems. Weekly laboratories and/or field trips are designed to elucidate specific oceanographic processes covered in class.



STUDENT COMMENTS

"This course makes you truly think about different processes of the Earth and instead of just memorization there is a focus on deeper level thinking and understanding."

"Brilliant! Everyone should take this course."

"The course content was extremely engaging and helped me think in completely new ways, especially in ways of problem solving and broadening how I think about the world."

"I loved the research cruises and putting what we were learning into action!"

COURSE GOALS

Most people experience the Ocean from the perspective of its coastlines and a small fraction of its surface. Perhaps this is the reason our planet is named "*Earth*" rather than "*Oceana*". In this course you will gain an appreciation for the expanse and depth of the Ocean while learning about different disciplines applied to it (biology, chemistry, geology, physics, mathematics). More important is the interdisciplinary context of the natural water world. The course approach is inquiry-based. Rather than listening to lectures on *how the ocean works*, you will engage in learning activities that start with observations and data. You will gain skills in how to begin to take those data apart, describe and interpret patterns, and ultimately synthesize your interpretations into a conceptual understanding based upon first principles. Throughout the semester, you will apply this practice to three research projects to build increasingly-independent skills in observation, analysis and communication using the scientific method.







COURSE RESEARCH PROJECTS

- We know the moon and tides are related. Analyze how daily observations of the moon are connected to local ocean tides.
- Phytoplankton are the Ocean's single-celled photosynthesizers. Conduct laboratory experiments to understand how their growth depends on environmental parameters.
- Participate in research cruises collecting data in order to investigate how the arrival of spring impacts estuaries.

The Department of Earth and Oceanographic Science



What can I do with an EOS degree?

Geoscientists will be crucial in meeting society's future challenges through policies to avoid dangerous levels of climate change, to protect the environment and to ensure the availability of vital resources for all.



https://www.geolsoc.org.uk/Posters