



COLLEGE OF NATURAL SCIENCES, FORESTRY, AND AGRICULTURE

Earth and Climate Sciences

WHY STUDY EARTH AND CLIMATE SCIENCES AT THE UNIVERSITY OF MAINE?

The School of Earth and Climate Sciences is ranked by the National Science Foundation as one of the country's top 50 geoscience departments. This designation recognizes the national and international standing of its faculty and their research programs. The high level of cutting edge research at the School of Earth and Climate Sciences means that undergraduate students have the opportunity to study and work with professors who are at the forefront of their respective fields. Additionally, the school is closely associated with the Climate Change Institute, an internationally recognized research organization established over 45 years ago.

WHAT CAN I DO WITH A DEGREE IN EARTH AND CLIMATE SCIENCES?

Students completing a bachelor's degree in our program are prepared for technical positions in business, governmental agencies or other organizations. Students are equally well prepared to pursue graduate studies in a wide range of disciplines that require skills and knowledge in Earth and Climate sciences. Recent bachelor's (B.S. and B.A.) graduates work for mineral and petroleum companies, environmental consulting firms, and state agencies. Students with master's (M.S.) and doctoral (Ph.D.) degrees hold positions in business, state and federal agencies, environmental advocacy groups, and universities and colleges.

OUR UNDERGRADUATE PROGRAM

Our undergraduate program is developed around a core curriculum designed to give students a solid academic foundation and is complemented by a range of elective courses that gives students flexibility to explore a range of topics or focus on a particular area. Students participate in lecture and lab classes and field trips throughout their UMaine experience.

Our undergraduate degrees:

B.A., Earth Sciences: This degree provides students with a basic foundation in Earth

sciences and the opportunity to explore widely or focus their studies. The university requires students to complete 72 credits outside their declared major. Students can experience a wide range of topics or investigate a second academic area in more detail.

B.S., Earth Sciences, Earth Sciences concentration: Students complete a series of core requirements and ancillary courses that provide a strong scientific foundation. Elective courses are drawn from within the school to create a broad or focused program of study. Areas of study include mineralogy and petrology, natural resources, stratigraphy and sedimentology, structural geology and tectonics, environmental geology, hydrogeology, surficial processes and coastal geology.

B.S., Earth Sciences, Climate Sciences concentration: The climate science concentration is designed to provide students with an understanding of the science of climate change. Students complete a group of core courses and ancillary sciences and mathematics that provide a strong foundation for study of past, present, and future climate change. Electives are selected from a list of courses that represent the major subdisciplines within the realm of climate sciences.

The School of Earth and Climate Sciences cooperates with the the Ecology and Environmental Sciences program to offer an Earth and Environmental Sciences concentration within the EES bachelors of science program. This program combines earth and climate science courses with the EES core requirements.

OUR GRADUATE PROGRAM

The School of Earth and Climate Sciences has a vibrant graduate program that awards both master's (M.S.) and doctoral (Ph.D.) degrees. All of our graduate students have the opportunity to work with nationally- and

UMaine's ADVANTAGE

- Opportunities to work on Earth and climate science research in exciting locations
- High-quality preparation for professional or academic pursuits after graduation
- Modern building providing a comfortable atmosphere for study
- State-of-the-art research facilities available for student projects
- Classes taught by internationally recognized faculty members
- Hands-on experience through field trips, internships, and research projects with faculty and graduate students

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Connect with us:
umaine.edu/socialnetwork

ABOUT UMAINE

The University of Maine, founded in Orono in 1865, is the state's premier public university. It is among the most comprehensive higher education institutions in the Northeast and attracts students from across the U.S. and more than 60 countries. It currently enrolls more than 11,000 total undergraduate and graduate students. UMaine students directly participate in groundbreaking research working with world-class scholars. The University of Maine offers doctoral degrees in 30 fields, representing the humanities, sciences, engineering and education; master's degrees in 85 disciplines; 90 undergraduate majors and academic programs; and one of the oldest and most prestigious honors programs in the U.S. The university promotes environmental stewardship on its campus, with substantial efforts aimed at conserving energy, recycling and adhering to green building standards in new construction. For more information about UMaine, visit umaine.edu.

explore

*Bachelor of Science in
Earth Sciences*

*Concentrations in
Earth Sciences and Climate Sciences*

*Bachelor of Arts in
Earth Sciences*

*Minor in
Earth Sciences*

*Master of Science in
Earth and Climate Sciences*

*Ph.D. in
Earth and Climate Sciences*



internationally-recognized specialists in their field. Students regularly present the results of their work at national and international meetings and publish their findings in high profile scientific journals. The School of Earth and Climate Sciences, in combination with the Climate Change Institute, offers state-of-the-art laboratories and facilities to pursue research projects typically funded by the National Science Foundation, NASA, NOAA and other major federal and private organizations. Our graduate students pursue a wide range of topics including tectonics and geodynamics, structural geology and petrology, glaciology and glacial geology, paleoclimatology, watershed geomorphology, hydrogeology, environmental geochemistry, and marine/coastal geology. Most of our graduate students are fully funded by research assistantships, teaching assistantships or fellowships.

OUR FACULTY

Our faculty is composed of active researchers with a commitment to undergraduate and graduate education. These individuals have national and international reputations for excellence, and frequently participate in work with colleagues from agencies and universities around the world. What does this mean for students? It means that faculty members are actively engaged in material presented in classes, and share the most up-to-date ideas and techniques with their students. Faculty members in the School of Earth and Climate Sciences work in a broad range of topics: structural geology and tectonics, mineralogy and petrology, hydrogeology and surface water, climate change, glaciology, surficial geology, landform evolution, coastal geology, sea-level change, low-temperature geochemistry, environmental geology and geoarchaeology.

OPPORTUNITIES TO EXCEL

Our school's link between research and education provides outstanding opportunities for students to participate in ongoing projects as field or laboratory assistants. Research projects have included collecting samples in Greenland and Antarctica, geophysical research on Alaskan glaciers and Peruvian archaeological sites, geological fieldwork in Canada, investigations of New England salt marshes, and many others. Honors College students can choose to work with the school's faculty to develop and complete an honors thesis. B.S. and B.A. students may also choose to complete a senior thesis. Internships with the Maine Geological Survey, environmental geoscience firms and other organizations allow our students to gain important professional experience. All students have the opportunity to attend regional professional meetings and field excursions.

The School of Earth and Climate Sciences occupies one of the newest buildings on campus, and has labs and equipment that are available for student use. These include analytical facilities (scanning electron microscope, electron microprobe, optical microscopy, X-ray diffraction), rock and mineral preparation labs, a sedimentology lab, analog and computer-modeling labs, near surface geophysics equipment (side-scan sonar, seismic reflection profiler, ground-penetrating radar), stable isotope laboratory, a computer cluster for student use, and much more.

HOW DO I APPLY?

Visit umaine.edu for an application, as well as information about academics and life at UMaine.