ABOUT DEES

The Department of Earth and Environmental Sciences (DEES) hosts one of the top-rated earth and environmental science programs internationally. Faculty from all over the world bring their expertise and knowledge to our classrooms preparing students to take on the current challenges facing earth and humanity. The program provides an understanding of the natural functioning of our planet and considers the consequences of human interactions with it. It is designed to instill a comprehension of how the complex earth systems work, at a level that will encourage students to think creatively about how to address multidisciplinary environmental problems.

With climate change rapidly reshaping the earth, it has never been a more crucial time to train the next generation of scientists in the earth and environmental science fields. Students will graduate with a degree that readies them to think critically and tackle the problems of Earth’s unpredictable future.

The breadth of material covered in the program provides an excellent background for students to continue on to careers in various fields or graduate school in the earth and environmental sciences. The skills developed in the program can open up many career paths such as law, business, environmental consulting, research, public policy, teaching, and journalism.

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COURSES

Fall 2020
- Dinosaurs & History of Life - UN1001/1401
- Environmental Risks & Disasters - UN1201
- Earth Resources & Sustainable Development - UN1600/GU4600
- Climate System - UN2100
- Solid Earth System - UN2200
- Science for Sustainable Development - UN2330
- Geochemistry for a Habitable Planet - UN3101
- Intro to Atmospheric Science - GU4008
- Global Assessment & Remote Sensing - GU4050
- Intro to Terrestrial Paleoclimate - GU4330
- Isotope Geology I - GU4887
- Earth/Human Interactions - GU4917
- Biological Oceanography - GU4923
- Intro to Physical Oceanography - GU4925
- Intro to Seismology - GU4949

Spring 2021
- Death Valley Field Excursion - UN1010
- Climate System - UN2100
- Solid Earth System - UN2200
- Life System - UN2300
- Field Geology (Italy) - UN3010
- Hydrology - BC3025
- Solid Earth Dynamics - UN3201
- Chemical Geology - GU4009
- Climate Thermo/Energy Transfer - GU4040
- Geodynamics - GU4085
- Intro to Mineralogy - GU4113
- Geophysical Fluid Dynamics - GU4210
- Glaciology - GU4220
- Sedimentary Geology - GU4223
- Sea Level Change - GU4235
- Biogeochemistry - GU4524
- Intro to Atmospheric Chemistry - GU4924
- Chemical Oceanography - GU4926
- Earth's Oceans & Atmosphere - GU4930
- Cenozoic Paleoceanography - GU4937

FIELD TRIPS

The department hosts field trips to bring lessons from the classroom to the outdoors. We have a field-geology course for majors offered annually, typically in Italy or Barbados. We also offer trips to California's Death Valley and other destinations for first and second-year students. Our student-ran undergraduate club also plans various events such as a Central Park Geology trip and overnight camping trips.

MAJORS & CONCENTRATIONS

The Earth Science major provides an in-depth study of the solid and fluid Earth, its history, and ancient and modern geological processes.

The Environmental Science major focuses on the interaction between Earth's physical environment and the biosphere, anthropogenic processes like pollution and global climate change, and environmental remediation.

The concentrations in Earth and Environmental Science are designed to give students deeper knowledge of these fields than that provided by introductory courses.

RESEARCH

The Department of Earth and Environmental Sciences shares staff and facilities with Columbia University's world renowned research institution, the Lamont-Doherty Earth Observatory. Since its founding in 1949, Lamont has been a leader in the earth sciences.

The Department is also affiliated with the NASA Goddard Institute for Space Studies (GISS) and the American Museum of Natural History (AMNH).

Undergraduate students can participate in research alongside professors and graduate students at Lamont, NASA GISS, and AMNH.