

EARTH SCIENCE - MASTER OF SCIENCE (MS)

Earth Science is a research-oriented department affiliated with a number of research institutes and research centers, including the Cooperative Institute for Research in Environmental Sciences (CIRES), the Institute of Arctic and Alpine Research (INSTAAR), the Laboratory for Atmospheric and Space Physics (LASP), the Museum of Natural History, and the Center for Astrobiology. Related areas of study include geography, astrophysical and planetary sciences, atmospheric and oceanic sciences, chemistry, physics, geophysics, microbiology, ecology and evolutionary biology. The EARTH program also participates in certificate programs in geophysics (<https://www.colorado.edu/geophysics/geophysics-graduate-certificate/>), oceanography (<https://www.colorado.edu/atoc/certificate/>), and a certificate and/or subplan in hydrological sciences (<https://www.colorado.edu/program/hydrosciences/>). Degree programs for incoming graduate students are individually designed according to research efforts of the faculty. It is highly recommended that students locate a faculty member whose research interests most closely match their own.

For additional details, visit the Geological Sciences website (<https://www.colorado.edu/geologicalsciences/academic/graduate-degree-programs/>).

Bachelor's–Accelerated Master's Degree Program

Students may earn this degree as part of the bachelor's–accelerated master's (BAM) degree program, which allows currently enrolled CU Boulder undergraduate students the opportunity to earn a bachelor's and master's degree in a shorter period of time.

For more information, see the Accelerated Master's tab for the associated bachelor's degree(s): Earth Science - Bachelor of Science (BS) (<https://catalog.colorado.edu/undergraduate/colleges-schools/arts-sciences/programs-study/earth-science/earth-science-bachelor-science-bs/#acceleratedmasterstext>).

Requirements

Admission Requirements

Students applying for admission are evaluated holistically, including their undergraduate preparation, personal statement, research interests and letters of recommendation. The Graduate Record Examination (GRE) is not required. Each student acquires a primary advisor and an advisory committee that provides guidance throughout the degree program.

Prerequisites

Program Requirements

Candidates for the master's degree in earth science must complete at least 30 hours of graduate credits either with a thesis (Plan I) or without a thesis (Plan II). The only specifically required classroom courses are EARTH 5101 and EARTH 5102 (1 credit each).

A maximum of 6 credit hours may be completed at the 3000- or 4000-level to count toward the 30 hours. A maximum of 9 graduate-level credits may be transferred from another university. Both types of substitution are at the discretion of the student's principal advisor and the department's Associate Chair for graduate studies.

Students interested in graduate work in earth science should carefully read the detailed information regarding admission, registration and degree requirements on the department's Information for Prospective Graduate Students (<https://www.colorado.edu/geologicalsciences/degree-programs/graduate-program/prospective-graduate-students/>) webpage.

Plan I: Thesis Option

Students must complete a minimum of 4, but no more than 6, credit hours of EARTH 6950 as part of the 30 credit hour requirement.

Plan II: Non-thesis Option

The Department of Earth Science typically does not admit external students into a Plan II (non-thesis) master's program, but currently enrolled Plan I or PhD candidates occasionally transfer into this option, and some CU Bachelors Accelerated Masters students may enter the program through this option. Students must complete 3 credit hours of EARTH 6950 under the supervision of the student's advisory committee, as part of the 30 credit hour requirement.

Learning Outcomes

By the completion of the program, students will be able to:

- Digest, synthesize and critically evaluate the Earth and planetary science literature and the research of others.
- Conduct rigorous scientific research in Earth and planetary science, including adapting plans and navigating challenges where necessary.
- Communicate knowledge and its significance effectively to a variety of audiences.