

Department of Earth Sciences Student Learning Outcomes

SLO1 Knowledge and Understanding *Earth Sciences graduates exhibit knowledge and understanding of the component of the Earth system specific to their discipline.*

Earth Sciences majors graduate as fledgling scientists prepared to embark on their careers with a strong foundational knowledge that allows them to work effectively to address complex issues. For example, Meteorology graduates will be able to list and employ the seven fundamental equations. Environmental Earth and Ocean Science graduates will be able to collect, analyze, and interpret relevant data about geologic, hydrologic, and ocean systems. Earth Sciences Education graduates will demonstrate a broader, knowledge and understanding of the Earth system focusing on geology, meteorology, and oceanography.

SLO2 Evidence-based Scientific Reasoning *Earth Sciences graduates can employ evidence-based scientific reasoning to critically think about problems in the Earth Sciences.*

Earth Sciences majors can employ a process of observation, inquiry, analysis, and synthesis to expand their knowledge and understanding of the Earth system.

SLO3 Tools *Earth Sciences graduates demonstrate skill in the use of tools and the application of technologies appropriate to their discipline.*

Earth Sciences majors can move on to the next phase of their career (e.g. graduate school or employment) with the ability to use fundamental tools of the discipline and to apply contemporary technologies to solve problems. Students will be able to evaluate the scientific problem to determine the tool/technology necessary to solve the problem and then employ that tool/technology effectively. Tools are extensions of self (e.g. geologist's compass) and tend to increase productivity. Technologies are imposed knowledge systems (e.g. the use of software or computer programs to create a map).

SLO4 Oral Communication *Earth Sciences graduates demonstrate effective oral communication skills.*

Earth Sciences majors can effectively communicate their knowledge and understanding of the Earth system in oral presentation format to various audiences including the general public, fellow students, and subject experts.

SLO5 Written Communication *Earth Sciences graduates demonstrate effective written communication skills.*

Earth Sciences majors can effectively communicate their knowledge and understanding of the Earth system in written format to various audiences including the general public, fellow students, and subject experts.