Earth Sciences (MS)

The Department of Earth Sciences offers programs of graduate study leading to master of science (MS) and doctor of philosophy (PhD) degrees with opportunity for research in a wide variety of specialty fields. Course work is designed to meet individual needs, and students may pursue independent research in geobiology, geochemistry, geodesy, geomechanics, geomorphology, geophysics, mineralogy, petrology, volcanology, paleontology, stratigraphy, sedimentary petrology, structural geology, and ore deposit geology. The master's degree program requires two years or more for completion.

Graduate study in earth sciences is offered in five broad areas:

1. volcanology-petrology-geochemistry
2. stratigraphy–surface processes
3. paleontology-paleopedology-geobiology
4. structural geology–geophysics
5. economic geology (mineral deposits)

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate proficiency with modern quantitative tools that are used in the Earth sciences.
- When confronted with real-world Earth science problems, develop and test hypotheses in a systematic way while stating caveats and assumptions.
- Show familiarity with scientific understanding of topics that tie directly to their thesis research, as reflected by the current refereed literature.
- Organize and present their scientific results both in concise, well-reasoned technical writing and in front of scientific audiences at major conferences.
- Demonstrate understanding of ethical issues and responsibilities associated with working in a diverse, global community of scientists.

Earth Sciences Major

Code	Title	Credits
500 or 600 level [1]		24
600-699 level [2]		9
Thesis [3]		9
Remaining Credits [4]		3
Total Credits		**45**

At least 30 credit hours in residence, in the major

1. *A minimum of 15 credits must be taken graded; the remainder may be taken graded or pass/no pass.* Up to 15 credits may be taken in courses offered outside the department (with advisor approval)
2. May be taken graded or pass/no pass, but only graded courses can apply toward the 24 credits above.
3. ERTH 503. At least 3 thesis credits must be taken in the final term.
4. Can include research, readings, and seminars. Students are expected to register for and attend the department seminar and graduate student seminar (607) each term.