

Miami University Department of Geology

Majors Information

Majors Offered:

Bachelor of Arts
Bachelor of Science
B.A. or B.S. with teacher licensure in earth science

Core Requirements (29 hours)

1. Any introductory 100 level (3 hrs) lecture course*
2. GLG 115.L (1 hr)
3. GLG 201 Mineralogy (4 hrs)
4. GLG 211 Chemistry of Earth Systems (3 hrs)
5. GLG 301 Sedimentology and Stratigraphy (4 hrs)
6. GLG 322 Structural Geology (4 hrs)
7. GLG 357 Igneous and Metamorphic Petrology (4 hrs)
8. GLG 411 Field Geology (6 hrs; capstone course)

Emphasis Requirements (complete an emphasis)

Environmental Emphasis (10 hours)

GLG 401 Global Climate Change (4 hrs)
GLG 402 Geomicrobiology (3 hrs)
GLG 408 Introduction to Hydrology (4 hrs)
GLG 428 Groundwater Flow Modeling (4 hrs)
GLG 430 Mineral/Water Geochemistry (3 hrs)
GLG 454 Geomorphology (4 hrs)
GLG 491 Geochemistry of Natural Waters (3 hrs)
GLG 496 Isotopes in Environmental Processes (3 hrs)

Solid Earth Emphasis (11 hours)

GLG 416 Carbonate Depositional Systems (5 hrs)
GLG 427 Isotope Geology (3 hrs)
GLG 432 Clays and Clay Mineralogy (3 hrs)
GLG 450 Basin Analysis (3 hrs)
GLG 454 Geomorphology (4 hrs)
GLG 492 Global Tectonics (4 hrs)

Related Hours Requirements (minimum 20 hours)

Chemistry:

CHM 137, 144 College Chemistry/College Chemistry Lab (4, 2) or
CHM 141, 144 College Chemistry/College Chemistry Lab (3, 2)

Math:

MTH 151 or 153 Calculus I (5, 4)

Physics:

PHY 171 College Physics (3) and PHY 183 General Physics Lab (1) or
PHY 181 Physical World (4) and PHY 183 General Physics Lab (1)

B.S. Additional Requirements

1. one additional 400 level course (3 hrs)
2. research project: (a) GLG 477, 498 or equivalent for 3 hours; public presentation of research
3. second "terms" of Chemistry, Math or Statistics and Physics

Senior Thesis

The senior thesis (GLG 498) is designed for the outstanding student and requires undertaking an original research project. It is conducted under the close supervision of a faculty member and is required of all students seeking to graduate with Departmental Honors. If you wish to register for a Senior Thesis, talk with your Departmental Advisor and the faculty member with whom you would like to work.

Teacher Licensure

Students who wish to combine teacher licensure with an Arts and Science major must observe the rules, procedures and restrictions pertaining to admission to a licensure cohort as outlined in the School of Education and Allied Professions chapter. For information contact the Office of Student Services in the School of Education and Allied Professions, 200 McGuffey Hall (513-529-6418).

*Only 100 level courses are offered each term. Some courses are offered every other year. Some courses are only offered in the summer.

For additional questions or concerns, contact either Dr. Jonathan Levy, via e-mail at levyj@muohio.edu, by phone at 513-529-1947 or Dr. William K. Hart via e-mail at hartwk@muohio.edu, by phone at 513-529-3216.