

GEOLOGY (M.A.)

The Master of Arts in geology is designed to provide the students with special training in the environmental aspects of this discipline in keeping with the urban setting of Wayne State University. Students receiving the degree of Master of Arts in geology will be especially prepared to work in a capacity that deals with or provides solutions to environmental problems in which an intimate relationship between the environment and earth science is an important factor.

Admission Requirements

Admission to this program is contingent upon admission to the Graduate School (<http://bulletins.wayne.edu/graduate/general-information/admission/>). Additionally, candidates are required to have an undergraduate major in geology, or a strong background in geology supported by courses in related sciences, and a grade point average of at least 3.0 in the major. Prerequisite study should include many of the following courses: mineralogy, petrology, sedimentation, geomorphology, environmental geochemistry, structural geology; plus a course in any two of the following fields: paleontology, stratigraphy, geological site assessment, geostatistics, and geophysics.

Two semesters of calculus, a year of chemistry and a year of physics are also necessary. Deficiencies in prerequisites may be made up concurrently with graduate work.

The verbal and quantitative parts of the Graduate Record Examination are required for admission to the graduate program, and the applicant must file three personal letters of recommendation and a personal statement describing goals and motivations for pursuing an M.S. Geology degree before acceptance.

Students transferring from other fields should make an appointment with the Graduate Officer or the Department Chairperson who will review the applicant's background and make recommendations regarding the graduate program.

The Master of Arts in geology is offered as Plan B (essay) or Plan C (coursework). Both options require 32 credits.

Plan B - Master's Essay

Code	Title	Credits
Students must select 28 credits from following courses:		28
ESG 5000	Geological Site Assessment	
ESG 5120	Environmental Geochemistry	
ESG 5150	Soils and Soil Pollution	
ESG 5210	Environmental and Applied Geophysics	
ESG 5360	Hydrology of Natural and Urban Environments	
ESG 5420	Mathematical Methods in Earth Science	
ESG 5450	Hydrogeology	
ESG 5510	Environmental Fate and Transport of Pollutants	
ESG 5650	Applied Geologic Mapping	
ESG 6400	Isotopes: Applications in Geological and Environmental Sciences	
GEL 6500	Earth Resources and the Environment	
ESG 7999	Master's Essay Direction	4
Total Credits		32

Plan C - Coursework

Code	Title	Credits
Students must select 32 credits from following courses:		32
ESG 5000	Geological Site Assessment	
ESG 5120	Environmental Geochemistry	
ESG 5150	Soils and Soil Pollution	
ESG 5210	Environmental and Applied Geophysics	
ESG 5360	Hydrology of Natural and Urban Environments	
ESG 5420	Mathematical Methods in Earth Science	
ESG 5450	Hydrogeology	
ESG 5510	Environmental Fate and Transport of Pollutants	
ESG 5650	Applied Geologic Mapping	
ESG 6400	Isotopes: Applications in Geological and Environmental Sciences	
GEL 6500	Earth Resources and the Environment	
Total Credits		32

Students can only take up to a maximum of 8 credits out of the required 32 credits outside the Geology Department and a maximum of 4 Geology credits are allowed as ESG 7990 Directed Study. If additional credits are required, then, courses may be selected from other graduate courses in chemical and/or civil engineering, or graduate courses in chemistry or physics. Graduate courses in disciplines other than geology require the approval of the thesis advisor and the graduate committee. All course work must be completed in accordance with the regulations of the Graduate School (<http://bulletins.wayne.edu/graduate/general-information/academic-regulations/>) and the College of Liberal Arts and Sciences (<http://bulletins.wayne.edu/graduate/college-liberal-arts-sciences/academic-regulations/>).

The graduate program may be modified by the Geology Department to conform to the needs of individual candidates.

Candidacy for the Master's degree is established by submitting an acceptable Plan of Work to the Graduate Officer of the College of Liberal Arts and Sciences. This plan must be submitted and approved by the College by the time twelve graduate credits have been earned. For Plan-B, the student will choose one faculty member as advisor in the department for writing the research paper.