



University Bulletin

Undergraduate Degree Programs

Astrobiology (ABIOL)

ABIOL 570 Astrobiology Field Experience (2) Geological field excursions to sites where the early evolution of life and the environment is revealed and to modern analogues.

ABIOL 570 Astrobiology Field Experience (2)

Astrobiology is a new, multidisciplinary field of science encompassing astronomy, biology, biochemistry, genomics, chemistry, atmospheric chemistry, geochemistry, paleontology, geology, and many other fields of science and technology. Astrobiology includes the study of the origin of life, the connections between the evolution of life and of environments, the potential for life and life's actual distribution in our solar system and beyond, and future of life on Earth and in space. This course is intended to expose students to a variety of rock units (paleosols, sedimentary rocks, glacier deposits, ore deposits, and igneous rocks) formed under a variety of environments during the period between 3 billion years and 400 million years ago in order to give them some ideas about the environments of the early Earth. Students will also be exposed to a variety of geochemical, paleontological, and geological methods to investigate these ancient rocks in order to obtain information about the biological and chemical environments of the early Earth.

The field excursion will be held for about two weeks during the Summer semester. It will be preceded by a short series of seminar-style meetings late in Spring semester to discuss the objectives of the excursion and to outline the major features of the field sites to be examined. Possible sites for the excursion will be selected from the Precambrian rocks in Ontario - Quebec, Canada, Michigan, Minnesota, Wisconsin, New York, Virginia, West Virginia, and Maryland and modern microbial ecosystems in the Bahamas and Green Lake (NY). One to three days will be spent at each of the major sites.

This is a required course for all students in Dual Title Degree Program in Astrobiology, but is open to any graduate student. This will also be a suitable course for undergraduate students, seniors preferred, with the permission of the instructor. There is no prerequisite. Grading will be based on a term paper submitted within one month after the excursion. The term paper will be based on literature review and field observations on a topic selected by each student.

General Education: None

Diversity: None

Bachelor of Arts: None

Effective: Summer 2004

Note : Class size, frequency of offering, and evaluation methods will vary by location and instructor. For these details check the specific course syllabus.

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