

GEOSCIENCE (GEOS)

GEOS 500 INDEPENDENT STUDY OR RESEARCH1-3 Credits

Designed for the graduate student seeking an individual problem in Geoscience. The number of course credits is determined by the topic and the amount of work required.

Add Consent: Instructor Consent

Notes: May be repeated.

Requirements: Permission of instructor, Dean of Graduate Studies, and Academic Vice President.

GEOS 526A MICROSCOPY THEORY1 Credit

Microscopic principles and techniques focusing on the use of microscopes in scientific inquiry and diagnosis. Includes light and optic theory, specimen preparation, image collection and interpretation, and types of research microscopes

Cross-Listed: BIOL536A/GEOS526A

Prerequisites: 12 hours of Biology or Geoscience courses

Dual-listed: GEOS 426A

GEOS 526B INTRODUCTION TO SCIENTIFIC RESEARCH2 Credits

Scientific research methodology, including development of testable hypotheses, research design, data analysis introduction, grant proposal writing and writing research papers.

Cross-Listed: BIOL536B/GEOS526B

Prerequisites: 12 hours of Biology or Geoscience courses

Dual-listed: GEOS 426B

GEOS 530 SPECIAL TOPICS IN GEOSCIENCE1-3 Credits

To meet special needs of Geoscience students.

Notes: May be repeated.

GEOS 531 GEOLOGY OF WATER RESOURCES3 Credits

An introduction to the origin and nature of groundwater, its interaction with surface water, geological methods of groundwater exploration, and factors affecting water supply and quality. Requirements: Field trips.

Dual-listed: GEOS 431

GEOS 534 INTRODUCTION TO OCEANOGRAPHY3 Credits

An earth-system approach to the study of the oceans. Includes discussion of physical and biological phenomena in the oceans; analyzes interactions among the hydrosphere, atmosphere and geosphere, and considers humans as stewards of ocean resources. Field trips may be required.

Dual-listed: GEOS 434

GEOS 535 FIELD EXPERIENCE IN GEOSCIENCE1-3 Credits

Typically a one to three (1-3) week workshop. Field excursions to study major geologic features and provinces in North America or elsewhere.

Dual-listed: GEOS 435

Add Consent: Instructor Consent

GEOS 536 FIELD EXCAVATION AND PROCEDURES1-3 Credits

A summer workshop designed to give the student field experience in the development of paleontological sites.

Dual-listed: GEOS 436

Add Consent: Instructor Consent

GEOS 538 PETROLEUM GEOLOGY3 Credits

The origin, characteristics, occurrence, exploration and development of/ for petroleum. Field trips are required.

Prerequisites: GEOS 231 and GEOS 231L

Dual-listed: GEOS 438

GEOS 539 SEDIMENTOLOGY AND STRATIGRAPHY3 Credits

The origin and characteristics of sedimentary rocks.

Prerequisites: GEOS 231, GEOS 231L, GEOS 234, and GEOS 234L

Co-requisites: GEOS 539L

Dual-listed: GEOS 439

GEOS 539L SEDIMENTOLOGY AND STRATIGRAPHY LABORATORY1 Credit

Laboratory and field studies of sediments and sedimentary rocks.

Prerequisites: GEOS 231, GEOS 231L, GEOS 234, and GEOS 234L

Co-requisites: GEOS 539

GEOS 544 FRESHWATER ECOLOGY2 Credits

Biological, chemical, and physical studies of inland surface waters. Includes both classic Limnology and Ichthyology.

Cross-Listed: BIOL544/GEOS544

Prerequisites: BIOL 336 and BIOL 336L

Co-requisites: BIOL 544L or GEOS 544L

Dual-listed: BIOL 444

Requirements: Field trips required

GEOS 544L FRESHWATER ECOLOGY LABORATORY1 Credit

Laboratory and field experience in biological, chemical, and physical studies of inland surface waters. Includes both classic Limnology and Ichthyology.

Cross-Listed: BIOL544L/GEOS544L

Co-requisites: BIOL 544

GEOS 600 INDEPENDENT STUDY OR RESEARCH1-3 Credits

Research investigations in Geoscience.

Add Consent: Instructor Consent

Requirements: Permission of instructor, Dean of Graduate Studies, and Academic Vice President.

GEOS 622 RESEARCH APPLICATIONS WITH GIS3 Credits

Research and applications of geographic information systems in geological mapping. Problem description and analysis methods will be integrated with teaching of basic GIS skills. Note: Learning communities will be established with students in GEOS 322. Field trips may be required.

GEOS 628 RESEARCH PETROGRAPHY3 Credits

Research and application of petrographic methods to geological problems and integration with undergraduate teaching of rocks and minerals. Note: Learning communities will be established with students in GEOS 338. Field trips may be required.

GEOS 630 TOPICS IN GEOSCIENCE3 Credits

Selected Geoscience topics. Course content will vary to meet the special needs of students. The course may involve classroom and/or field oriented activity. Credit is dependent upon length of course and depth of study. Field trips may be required.

Notes: May be repeated with different topics for up to six (6) course credits.

GEOS 632 ADVANCED STRUCTURE AND TECTONICS3 Credits

Advanced methods and practice of mapping and interpretation of structures in the field. Note: Learning communities will be established with students in GEOS 432. Field trips may be required.

GEOS 635 FIELD PROBLEMS1-3 Credits

Field excursions to study geologic features and their interpretation. Learning communities will be established with students in GEOS 435. Field trips are required.

GEOS 655 SCHOLARLY PROJECT1-3 Credits

For students selecting Plan II, as listed under Program Requirements. Scholarly project pertaining to a field of specialization. Designed in consultation with the student's graduate committee and includes an extensive paper summarizing the project.

Requirements: Must complete three (3) course credits.

GEOS 660 THESIS RESEARCH1-6 Credits

For students selecting Plan I, as listed under Program Requirements. Original investigations in Geoscience leading to the master's thesis.

Requirements: Must complete 3-6 course credits; prior to registration, the proposal must be approved by the student's committee and the Dean of Graduate Studies.