

ENVS 325 **LANDSCAPE ECOLOGY (2)** *Prerequisites: BIOL 111/111L-112/112L or ENVS 101/101L-102/102L, or permission of instructor.* Three hours lecture and three hours laboratory. One-half semester modular course paired with another related half-semester modular course. This course examines the mechanisms underlying large-scale ecological processes and their changes across space and time. The relationships among landscape structure, resource distributions, and populations are studied with an emphasis at the ecosystem level.

ENVS 331 **PRINCIPLES OF HYDROLOGY (4)** *Prerequisites: MATH 103, CHEM 104-105, or permission of instructor.* Three hours lecture and three hours laboratory. This course is a study of the principles and theory of surface water and groundwater flow, chemistry, and quality; understanding and determination of water budget, hydrologic cycle, and Darcy's law; social, political, and economic issues related to hydro-logical systems.

ENVS 333 **PHYSICAL OCEANOGRAPHY (4)** *Prerequisites: BIOL 111/111L-112/112L or ENVS 101/101L-102/102L, or permission of instructor.* Three hours lecture and three hours laboratory. This course focuses on ways in which oceans function and ocean interact with earth systems. Consideration is given to ocean currents and vertical mixing, water chemistry, heat and energy transfer, sea floor geology, and coastal processes.

ENVS 336 **PHYSICAL GEOLOGY (4)** *Prerequisites: BIOL 111/111L-112/112L or ENVS 101/101L-102/102L, or permission of instructor.* Three hours lecture and three hours laboratory. This course is a study of the earth's structure, composition, surface features and processes, rocks, minerals, mountain building, volcanoes, earthquakes, and the weathering and erosional effects of wind, water, and ice.

ENVS 337 **HISTORICAL GEOLOGY (4)** *Prerequisites: BIOL 111/111L-112/112L or ENVS 101/101L-102/102L, or permission of instructor.* Three hours lecture and three hours laboratory. This course looks through the earth's past through the record hidden in the rocks and the fossils contained within and includes a study of the development of life on earth as well as the climate and geologic changes of the earth's surface from the Precambrian until the present.

ENVS 338 **ENVIRONMENTAL GEOLOGY (4)** Three hours lecture and three hours laboratory. This course is a systematic study of processes that operate at or near earth's surface and influence the development, preservation, and destruction of natural environments. Topics covered include the influence of fluvial, atmospheric, mass-wasting, glacial, volcanic and tectonic systems on the environment. Mitigation strategies to prevent environmental degradation will also be discussed.

ENVS 340 **REMOTE SENSING (2)** *Prerequisites: BIOL 111/111L-112/112L or ENVS 101/101L-102/102L, or permission of instructor.* Three hours lecture and three hours laboratory. One-half semester modular course paired with another, related half-semester modular course. Fundamental principles of remote sensing from satellites and other sources for environmental science are examined in this course.

ENVS 345 **METEOROLOGY (2)** *Prerequisites: BIOL 111/111L-112/112L or ENVS 101/101L-102/102L, or permission of instructor.* Three hours lecture and three hours laboratory. One-half semester modular course paired with another related half-semester modular course. This study of the earth's atmosphere and all of its associated characteristics is designed for environmental scientists.

ENVS 375 **FRESHWATER ECOLOGY (4)** *Prerequisites: BIOL 111/111L-112/112L or ENVS 101/101L-102/102L.* Three hours lecture and three hours laboratory. This course focuses on the physical, chemical, and biological properties of the freshwater environment. A special emphasis will be placed on studying anthropogenic impacts on aquatic habitats and their organisms.

ENVS 377 **STUDY ABROAD (3)** This course provides students with the opportunity to study principles of environmental science in foreign settings.

ENVS 380 **GEOGRAPHIC INFORMATION SYSTEMS (GIS) (4)** *Prerequisite: Junior/ senior standing.* Three hours lecture and three hours laboratory. This course introduces

students to the theory and practice of Geographic Information Systems (GIS) and prepares them for its use across numerous fields of study. Geographic Information Systems (GIS) is specially designed hardware and software for the analysis and display of spatially explicit data. With intelligent digital maps, such systems allow users to store, query, and retrieve information based on desired parameters.

ENVS 397 INDEPENDENT STUDY IN ENVIRONMENTAL SCIENCE (1-3) *Prerequisites: Approval of faculty sponsor and school dean; junior or senior standing.* This course provides students the opportunity to pursue individual study of topics not covered in other available courses. The area for investigation is developed in consultation with a faculty sponsor and credit is dependent on the nature of the work. May be repeated for no more than six credits.

ENVS 398 SPECIAL TOPICS IN ENVIRONMENTAL SCIENCE (1-4) **[credit depends on topic]** *Prerequisite: A background of work in the discipline or prior consent of instructor.* This course will focus on an aspect of the discipline not otherwise covered by the regularly offered courses. The topic will vary according to professor and term; consequently, more than one may be taken by a student during his/her matriculation.

ENVS 399 INTERNSHIP IN ENVIRONMENTAL SCIENCE (1-12) *Prerequisites: Juniors or seniors with a 2.25 minimum QPA; approval of written proposal by internship coordinator, and supervising faculty prior to registration.* This internship is offered to qualified students allowing them to gain personal and practical experience in various areas of environmental science. Internships include but are not limited to working in environmental laboratories, natural resources conservation, restoration of natural areas, and help with research projects conducted by senior scientists and engineers.

ENVS 428 INDIVIDUAL RESEARCH IN ENVIRONMENTAL SCIENCE (1-6) *Prerequisites: Junior or senior standing; consent of supervising instructor.* This independent opportunity to conduct a field, laboratory, or literary study project culminates in a formal paper and/or presentation as directed by the supervising instructor. Credit is dependent on the nature of the work but may not exceed three credit hours per semester.

ENVS 490 ENVIRONMENTAL SCIENCE SEMINAR (1) *Prerequisite: At least forty hours from the environmental science major curriculum.* This seminar course provides an opportunity for students to study a range of biological questions presented by outside speakers. Additionally, student communication skills are assessed through oral presentations on internships or individual research projects, as well as other topics. Intended as a capstone course.