Natural Resources and Ecosystem Conservation

Concentration in Environmental Science (BS)
College of Arts & Sciences | University of Alabama

The Environmental Science Program is an interdisciplinary curriculum leading to the BS degree with an optional concentration in **Natural Resources and Ecosystem Conservation (NREC)**. The NREC concentration is designed to allow students specifically interested in natural resources conservation to follow a more narrowly focused curriculum. This curriculum includes a structured general education course framework, with emphasis on ethics and communication courses necessary for natural resource managers. Upper-level curriculum includes a variety of management, ecology, and techniques courses. Students may choose upper-level elective classes based on specific interests in natural resources management. The curriculum includes courses that have field and lab components and students have the option to earn credit through internships, research experiences, and field courses. Potential careers after graduation include positions such as Hydrologist, Land Manager, Forester, Planner, Consultant, Land Steward, Conservation Director, Arborist, Ecologist, Environmental Analyst, Ranger, Estate Manager, Environmental Inspector, Silviculturist, Environmental Coordinator, Recycling and Green Wastes Coordinator, Natural Resources Specialist, and Outdoor Educator, among others.

Contact: Justin Hart, Director | hart013@ua.edu | (205) 348-5047 | 118 Biology Building

Curriculum for the NREC concentration in Environmental Science

Required General Education courses

English Composition 1 (EN101)
English Composition 2 (EN 102)
Technical Writing (EN 319)
Public Speaking (COM 123)
Principles of Microeconomics (EC 110)
Chemistry 1 (CH 101 or CH 117)
Chemistry 2 (CH 102 or CH 118)
Intro to Biology 1 (BSC 114:115 or BSC 118)
Intro to Biology 2 (BSC 116:117 or BSC 120)
Microcomputer Applications (CS 102)
Calculus 1 (MATH 125)

Elective General Education courses

Social or Behavioral Science (choose 2)
Intro to Anthropology (ANT 101)
Principles of Human Communication (COM 101)
Interpersonal Communication (COM 220)
Principles of Macroeconomics (EC 111)
People, Places, & Environment (GY 110)
Intro to Psychology (PY 101)
Intro to Sociology (SOC 101)

Statistics Course (choose 1)
Statistical Data Analysis (ST 260)
Psychology Statistics (PY 211)

Fine Arts Course
Literature or History sequence
Literature or History course, opposite of sequence

Required NREC courses

Map and Air Photo Interpretation (GY 204)
Natural Resource and Environmental Planning (GY 339)
Ecology and Evolution (BSC 385)
Introduction to Ethics (PHL 292)
Atmospheric Processes (GY 101)
Earth Surface Processes (GY 102) **or** Dynamic Earth (GEO 101)
Sustainable Earth (GEO 105)

Elective NREC courses

Geographic Course (choose 1)
Remote Sensing 1 (GY 420)
Intro to GIS (GY 430)

General Management and Planning (choose 1)
Environmental Decision Making (GY 452)
Environment and Society (GY 453)
Environmental Management (GY 460)
Land Use Regulations (GY 441)

Thematic Management and Planning (choose 2)
Conservation Biology (BSC 482)
Watershed Management Plan Development (GY 385)
Endangered Species (GY 415)
Soil and Groundwater Restoration (GEO 410)
Eastern Forest Communities and Silvics (GY 492)
Forest History and Restoration (GY 409)
Forest Ecosystem Management: Silviculture (GY 496)

Measurements Course (choose 1)
Environmental Modeling (BSC 417)
Ecosystem Services (GY 463)
Forest Measurement and Analysis (GY 494)

Ecological Processes (choose 2)
Dendrology (BSC 314)
Freshwater Studies (BSC 320)
Tropical Plant Diversity (BSC 325)
Plant Biology (BSC 360)
Vertebrate Zoology (BSC 373)
Invertebrate Zoology (BSC 376)
Limnology (BSC 412)
Wetland Ecology (BSC 415)
Biology of Fishes (BSC 428)
Plant Systematics (BSC 434)
Animal Behavior (BSC 448)
Microbial Ecology (BSC 456)
Plant Physiology (BSC 471)
Mycology (BSC 472)
General Entomology (BSC 475)
Aquatic Insects (BSC 476)
Plant Ecology (BSC 480)
Stream Ecology (BSC 490)
Forest Ecology & Vegetation Analysis (GY 489)
Plant Geography (GY 493)

Earth Surface Processes (choose 1)
Soil Science (GY 472)
River Hydrology (GY 485)
Watershed Dynamics (GY 486)
Fluvial Geomorphology (GY 491)
Coastal Geomorphology (GY 495)
Hydrogeology (GEO 306)
Geomorphology (GEO 363)
Physical Geography of the Southeast (GY 404)
Natural Hazards (GY

Upper-level Writing Course (choose 1 if not already met)
Landscapes of the South (NEW 407)
American Environmental Thought (NEW 416)
Public Leadership (NEW 436)
Environmental Ethics (NEW 442)
Environmental Sociology (SOC 444)

For more information on the NREC concentration, see the Environmental Science Program website (geography.ua.edu).
For more information on course numbers and credit, see the official course catalog (courseleaf.ua.edu/artssciences/environmentalscience)