Forestry & Wildlife Sciences - FOWS

Courses

FOWS 1010 INTRODUCTION TO RENEWABLE NATURAL RESOURCES (1) LEC. 1. Introduction to the wealth and breadth of renewable natural resources in the state, region, nation, and world. Speakers cover topics in forestry, wildlife, water, and soil.

FOWS 1020 SCIENCE OF NATURE I (3) LEC. 3. Coreq. FOWS 1021. Introduction to how the natural world is relevant to society. Lectures will focus on connections using the scientific method to assess ecosystems and the effects human use has on them. The course will develop engaged citizens for our planet by helping students to see how science helps identify and solve real natural resources problems.

FOWS 1021 SCIENCE OF NATURE I LABORATORY (1) LAB. 1. Coreq. FOWS 1020. Hands on learning using both laboratory and field exercises to introduce students to how the natural world is relevant to society and its success.

FOWS 1030 SCIENCE OF NATURE II (3) LEC. 3. Pr. FOWS 1020. Coreq. FOWS 1031. In depth exposure for students to think critically about the issues in the natural world, including the history of natural resource use in North America. Students will delve deeper into specific natural resource topics with a focus on the habitats and ecosystems of Alabama including issues on how the natural world is relevant to society.

FOWS 1031 SCIENCE OF NATURE II LABORATORY (1) LAB. 1. Coreq. FOWS 1030. In depth exposure using both laboratory and field exercises to introduce students to how the natural world is relevant to society. As part of the course students will collect real-world data, analyze it, summarize it, and disseminate it for use by the public.

FOWS 1040 CLIMATE SCIENCE I (3) LEC. 3. LAB. 0. Coreq. FOWS 1041. Basics of the Earth’s climate system including atmospheric environment, the energy budget, and biogeochemical cycles. Knowledge of the greenhouse effect, major greenhouse gases (GHG), and their sources and the consequences on Climate Change.

FOWS 1041 CLIMATE SCIENCE I - LABORATORY (1) LEC. 0. LAB. 3. Coreq. FOWS 1040. A field and laboratory course with student exercises designed to introduce students to the basics of Climate Science.

FOWS 1050 CLIMATE SCIENCE II (3) LEC. 3. LAB. 0. Pr. FOWS 1040 and FOWS 1041. Coreq. FOWS 1051. Enhanced examination of the Climate Science and causes of climate change and its impacts on natural and managed ecosystems, natural resources, wildlife, and human health, locally, regionally and internationally.

FOWS 1051 CLIMATE SCIENCE II - LABORATORY (1) LAB. 3. Pr. FOWS 1040 and FOWS 1041. Coreq. FOWS 1050. A field and laboratory course with student exercises designed to bring together concepts discussed and examined in lecture (FOWS 1050) for students to analyze and summarize for decision making.

FOWS 2030 INTRO TO ENVIRON EDUCATION (3) LEC. 3. Students will learn about the historical and theoretical foundations of environmental education while participating in experiential learning exercises.

FOWS 2060 INTRODUCTION TO FORESTED LANDSCAPES (2) LEC. 2. Pr. BIOL 1020 or BIOL 1027. This course will serve as an introduction to forest tree biology, forest types of North America, forest ecology and tree identification. The overall course objective is to introduce students to important concepts in forest ecosystem science and management.

FOWS 3500 FORESTRY, ENVIRONMENT & WILDLIFE LEADERSHIP ACADEMY I (1) LEC. 1. SU. Departmental approval. FEWL Academy I is designed to introduce students to the basic leadership styles that are necessary for critical problem solving in issues related to the management, utilization, and stewardship of natural resources.

FOWS 3510 FORESTRY, ENVIRONMENT & WILDLIFE LEADERSHIP ACADEMY II (1) LEC. 1. SU. Pr. FOWS 3500. Departmental approval. FEWL Academy II is designed to allow students to apply the leadership styles introduced in FOWS 3500 necessary for critical problem solving in issues related to the management, utilization, and stewardship of natural resources.

FOWS 3800 INTRODUCTION TO THE ROLE OF FORESTS ON HUMAN HEALTH AND LIVELIHOODS IN SOUTH AFRICA AND MA (1) LEC. 1. This course is intended to prepare students for the study abroad trip to South Africa and Madagascar (FOWS 3810). Students will gain knowledge as to cultural practices of South Africa and Madagascar, issues faced by communities and the role forests play in livelihoods and human health. Knowledge and theoretical approaches to various issues to ensure the well-being of people, animals and environment through collaborative multidisciplinary problem solving will be introduced and discussed.

FOWS 3810 ROLE OF FORESTS ON HUMAN HEALTH AND LIVELIHOODS IN SOUTH AFRICA AND MADAGASCAR (4) AAB. 4. Pr. FOWS 3800. This is a study abroad course, students will travel to South Africa and Madagascar to learn about the importance of trees for rural community livelihood and human health. Using the knowledge obtained in the pre-requisite theoretical course (FOWS 3800) students will interact with communities and researchers in South Africa and Madagascar to witness and learn about putting theory into action. Students will witness how issues, discussed in FOWS 3800, are addressed through collaborative, multi-disciplinary problem solving that results in unique approaches to ensure the well-being of people, animals and the environment.

FOWS 3950 UNDERGRADUATE SEMINAR (1) LEC. 1. Students will practice speaking in front of a scientific audience, learn to research topics, and organize presentations for professional audiences, faculty, and other students.

FOWS 4970 SPECIAL TOPICS (1-4) LEC. 1-4. Overview of forest soil composition, formation, biota, classification, chemistry, ecology, and sustainable management. Course may be repeated for a maximum of 8 credit hours.

FOWS 4980 UNDERGRADUATE RESEARCH (1-4) IND. Departmental approval. Directed research in the area of specialty under faculty supervision. Course may be repeated for a maximum of 4 credit hours.

FOWS 5220 LANDSCAPE ECOLOGY (3) LEC. 3. Pr. BIOL 3060 or FORY 4230. Ecological effects and management of heterogeneous spatial pattern on ecosystems over large areas. May count either FOWS 5220 or FOWS 6220.

FOWS 5260 FOREST WETLANDS RESTORATION ECOLOGY (3) LEC. 3. Pr. BIOL 3060 or FORY 4230. History and policy of wetlands destruction and restoration, wetland classification and inventory, techniques for assessing wetland functions, and techniques for forest wetlands restoration.

FOWS 5270 NATURAL RESOURCE POLICY (3) LEC. 3. Departmental approval. Examination of attitudes, philosophies and policies that govern management of the natural resource.

FOWS 5340 INVASION ECOLOGY (3) LEC. 3. The history, ecology, and management issues pertaining to non-native invasive species will be examined and discussed.

FOWS 5450 CONFLICT AND COLLABORATION IN NATURAL RESOURCES MANAGEMENT (3) DSL. Overview of issues, theories, and approaches to conflict management and collaboration in natural resources. Topics include conflict management, collaborative processes, and negotiation; tools and frameworks for analyzing conflict; and evolving management approaches to natural resource conflict.

FOWS 5620 NATURAL RESOURCE FINANCE AND INVESTMENT (3) LEC. 3. Pr. (ECON 2020 or ECON 2023 or ECON 2027). Principles of corporate and real estate finance as applied to natural resources and the place of natural resources in individual and institutional portfolios. May count one of: FORY 6620, FOWS 5620, FOWS 6620.

FOWS 6220 LANDSCAPE ECOLOGY (3) LEC. 3. Ecological effects and management of heterogeneous spatial pattern on ecosystems over large areas. May count either FOWS 5220 or FOWS 6220.

FOWS 6260 FOREST WETLANDS RESTORATION ECOLOGY (3) LEC. 3. This course will cover the history and policy of wetlands destruction and restoration, wetland classification and inventory, techniques for assessing wetland functions, and techniques for forest wetlands restoration.

FOWS 6270 NATURAL RESOURCE POLICY (3) LEC. 3. Departmental approval. Examination of attitudes, philosophies and policies that govern management of the natural resource.

FOWS 6340 INVASION ECOLOGY (3) LEC. 3. The history, ecology, and management issues pertaining to non-native invasive species will be examined and discussed.

FOWS 6450 CONFLICT AND COLLABORATION IN NATURAL RESOURCE MANAGEMENT (3) DSL. 45. Overview of issues, theories, and approaches to conflict management and collaboration in natural resources. Topics include conflict management, collaborative processes, and negotiation; tools and frameworks for analyzing conflict; and evolving management approaches to natural resource conflict.

FOWS 6620 NATURAL RESOURCE FINANCE AND INVESTMENT (3) LEC. 3. Principles of corporate and real estate finance as applied to natural resources and the place of natural resources in individual and institutional portfolios. May count either FORY 5620 or FORY 6620.

FOWS 7150 SPATIAL STATISTICS FOR NATURAL RESOURCES (3) LEC. 3. LAB. 1. Applications of spatial statistics in the natural resources. Three types of spatial data including point pattern data, geostatistical data and lattice (areal) data will be covered to introduce basic concepts, theories and methodology of spatial (spatial-tempo) data analyses and modeling.

FOWS 7200 DISEASE ECOLOGY (3) LEC. 3. Discusses the critical importance of relationships between human and animal diseases and the ecology of vectors, pathogens and the environment.

FOWS 7210 RESTORATION ECOLOGY (3) LEC. 3. Overview of the history, science, ethics, and current practice of restoration ecology to recognize and understand the need for restoration.

FOWS 7220 FOREST HISTORY OF ALABAMA AND THE SOUTHEASTERN UNITED STATES (3) LEC. 3. This course will focus on the natural, human and societal factors that influenced forests and land management in the southeastern United States from the 1700s to present. FOWS 7220 or FOWS 7226.

FOWS 7230 FOREST STAND DYNAMICS (3) LEC. 3. Forest stand dynamics studies the changes in stand structure over time. Examines phases of stand development and how we can help and aid forest, wildlife and restoration management decisions.

FOWS 7240 FIRE ECOLOGY (3) LEC. 3. Examines history of fire management, fire behavior, fuel management and models, ignition techniques, fire suppression techniques, urban interface, smoke management, fire weather, elements of a prescribed burn plan, fire and wildlife, and outreach.

FOWS 7250 LONGLEAF PINE ECOLOGY, MANAGEMENT, AND RESTORATION (3) LEC. 3. Covers the ecology of the once-dominant species, the role fire played in maintaining these ecosystems, management possibilities, conversion to longleaf pine, and an overview of the current restoration efforts.

FOWS 7260 FOREST WETLANDS RESTORATION ECOLOGY (3) DSL. This course will cover the history and policy of wetlands destruction and restoration, wetland classification and inventory, techniques for assessing wetland functions, and techniques for forest wetlands restoration.

FOWS 7270 WETLANDS POLICY (3) LEC. 3. This course will cover historical development of wetland protection and will discuss current U.S. and international wetland policies.

FOWS 7300 CURRENT TOPICS IN ONE HEALTH (1) LEC. 1. The One Health concept refers to connections among health of people, animals and ecosystems and is used as a framework for addressing health related problems. Course explores the concept from the perspective of current and relevant health issues. Course may be repeated for a maximum of 2 credit hours.

FOWS 7400 INTRODUCTION TO PUBLIC HEALTH (3) DSL. 3. This is a survey course intended to provide an introduction to and overview of the wide-ranging field of Public Health.

FOWS 7480 ADVANCED NATURAL RESOURCE POLICY (3) LEC. 3. Pr. FORY 5400 or FORY 6400. Policy process and players, theory and evolution of property rights, public choice theory, land ethics, policy analysis, programs and statutory laws, forest policy in an international context.

FOWS 7500 OUTBREAKS TO PANDEMICS: EMERGING INFECTIOUS DISEASES IN A MODERN WORLD (2) DSL. This course explores modern and historical disease outbreaks, particularly zoonotic emerging infectious diseases. Students will understand key approaches necessary to contain and halt infectious diseases. Students will learn about multisectoral emergency responses to outbreaks and about the strengths and weaknesses of health systems during epidemics.

FOWS 7950 GRADUATE SEMINAR (1) SEM. 1. Students develop ability and confidence in making oral presentations based upon research and provide constructive criticism of their peers' presentations.

FOWS 7970 SPECIAL TOPICS (1-4) IND. Analysis of a problem in the natural resources, forestry, wildlife arena involving lectures, discussions, laboratory for field work. Department approval and agreement with faculty and students. Course may be repeated for a maximum of 12 credit hours.