

# Forestry - FORY

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## Courses

- FORY 3010 FOREST SOILS (3)** LEC. 2. LAB. 3. Pr. CHEM 1010 or CHEM 1030. Overview of forest soil composition, formation, biota, classification, chemistry, ecology, and management.
- FORY 3020 FOREST BIOLOGY (3)** LEC. 1. LAB. 3. Field exposure to important principles of forest biology and some examples of their applications to forest resources; identification of major tree species and critical analysis of forest stand structure. Summer.
- FORY 3050 FIELD MENSURATION (4)** LEC. 1. LAB. 3. Basic concepts and procedures for measuring trees, stands and other forest resources; units of measure, log rules, volume tables, condition class mapping and timber estimation. Summer.
- FORY 3060 INTRODUCTION TO FOREST MANAGEMENT STRATEGIES (1)** LEC. 1. LAB. 3. Biological, social, and economic principles underlying forest management strategies, the diversity of forestry enterprises, and the complexities facing forest managers. Summer.
- FORY 3100 DENDROLOGY (3)** LEC. 2. LAB. 3. Pr. (BIOL 1030 or BIOL 1037) or FORY 3020. Taxonomy and identification of important forest trees of the U.S., including cover types of forest regions.
- FORY 3180 FOREST RESOURCE SAMPLING (3)** LEC. 2. LAB. 3. Pr. FORY 3050. Theoretical and empirical estimates of tree and log volumes, tree taper, and yield tables. Sampling design and analysis to estimate current conditions of timber stands.
- FORY 3200 FOREST TREE PHYSIOLOGY (3)** LEC. 3. Pr. FORY 3020. Relationship between cultural, environmental and genetic factors that affect metabolism and growth of individual trees.
- FORY 3500 FORESTRY FOR SMALL WOODLAND OWNERS (3)** LEC. 3. An appreciation of forest trees and the environment, the environmental functions of trees, and the economic potential of a balanced land-use plan.
- FORY 4190 FOREST BIOMETRICS (3)** LEC. 2. LAB. 3. Pr. FORY 3180. Factors affecting and mathematical principles of tree-volume and stand growth.
- FORY 4230 FOREST ECOLOGY (3)** LEC. 3. Pr. BIOL 1030 or BIOL 1037. Forests as functional systems, the biotic and abiotic environment, temporal changes in ecosystem structure and function, application of ecological information.
- FORY 4260 LONGLEAF PINE: HISTORY, ECOLOGY, MANAGEMENT, AND RESTORATION (2)** LEC. 2. History of forestry in the south, focusing on the longleaf pine ecosystem. Also, information on species that are part of the longleaf ecosystem, comparisons with other southern pines, and management and restoration techniques.
- FORY 4450 FOREST SECTOR ECONOMICS (3)** LEC. 3. Pr. FORY 5400. Status, trend, employment and other fundamentals of forest industry. Timber supply and demand, forest products supply and demand, technological change, international trade.
- FORY 4820 FORESTRY IN THE PRIVATE SECTOR (2)** SEM. 4. Management systems and practices used in wood purchasing, timber harvesting and timberland management including public relations, forest sustainability, certification and personal business skills.
- FORY 4830 INDUSTRIAL WOOD PROCUREMENT PRACTICUM (1)** PRA. 2. SU. Pr. FORY 3050. Strategies, field and office procedures involved in purchasing wood for an industrial forestry firm. Taught as a weekend field exercise at Solon Dixon Forest Education Center. Course may be repeated for a maximum of 2 credit hours.
- FORY 4930 DIRECTED STUDY (1-3)** AAB/IND. Departmental approval. Fall, Spring, and Summer. Course may be repeated for a maximum of 6 credit hours.
- FORY 4967 HONORS SPECIAL PROBLEMS (1-3)** IND. Pr. Honors College. Departmental approval. Topics of an undergraduate nature pertinent to Forestry. Course may be repeated for a maximum of 3 credit hours.
- FORY 4970 SPECIAL TOPICS (1-4)** AAB/LEC. Course may be repeated for a maximum of 8 credit hours.
- FORY 4980 SENIOR CAPSTONE PROJECT (1-4)** LAB. 1-4. Pr. FORY 5230 and FORY 5410. Integrated study of Forest Resource Management using a case-study approach through development of a comprehensive plan related to the declared emphasis. Spring. Course may be repeated for a maximum of 4 credit hours.

**FORY 5140 FOREST REGENERATION AND SEEDLING PRODUCTION (3)** LEC. 3. Pr. P/C FORY 4230 or P/C HORT 3220. Principles of forest nursery seedling culture. Evaluation of activities to improve out planting performance. Plantation establishment problems and practices in Southern US.

**FORY 5150 FOREST HEALTH (3)** LEC. 3. Pr. FORY 3020 or BIOL 3060. Importance, taxonomy, identification and integrated pest management strategies of principle disease, insect and abiotic disorders of forest and shade trees from seedlings to maturity and forest products.

**FORY 5151 FOREST HEALTH LABORATORY (1)** LAB. 1. Coreq. FORY 5150. Identification of basic diseases and insects that affect forest health along with identification of their damage; the processes of pathogen infection and symptomology; and the process of wood decay studied in a laboratory and field environment. Credit will not be given for both FORY 5151 and FORY 6151.

**FORY 5230 SILVICULTURE (4)** LEC. 3. LAB. 3. Pr. FORY 4230 or BIOL 5140 or BIOL 3060 or BSEN 3230. Principles and methods of controlling establishment, growth and quality of forest stands. Application of ecological principles to manipulation of forest ecosystems to meet specific objectives.

**FORY 5400 FOREST ECONOMICS (3)** LEC. 2. LAB. 3. Pr. FORY 3180. Marginal analysis, investment theory, resource supply, economics of conservation, and taxation principles applied to forestry. Structure and performance of forest products markets.

**FORY 5410 FOREST MANAGEMENT AND ADMINISTRATION (3)** LEC. 2. LAB. 3. Pr. FORY 5400 and FORY 4190. Quantitative approaches to decision making in Forestry with an emphasis on the interests of large scale firms and agencies.

**FORY 5440 INTERNATIONAL FORESTRY (3)** LEC. 3. Survey global forest location, characteristics, management systems, international forest products trade, current issues, and international forest governance.

**FORY 5460 FOREST FIRE MANAGEMENT (3)** LLB. Pr. FORY 4230 or BIOL 3060. The management of fire, both as a tool and wildfire suppression in the management of forested ecosystems. Emphasis placed on experience, technique and administration.

**FORY 5470 GIS APPLICATIONS IN NATURAL RESOURCES (2)** LEC. 1. LAB. 3. Basic understanding of GIS through discussion of the basic components of a GIS and how GIS are used in forestry applications.

**FORY 5480 GIS DATABASE DESIGN AND ANALYSIS (2)** LEC. 2. Departmental approval. Geographic information system database planning, design, creation, management and analysis using a project oriented approach.

**FORY 5540 ENVIRONMENTAL LAW (3)** LEC. 3. A review of environmental law including common and administrative law, land use, and Federal statues on water, air, toxins and waste. May count either FORY 5540 or FORY 6540.

**FORY 5550 PROPERTY LAW (3)** LEC. 3. Land ownership, transfer and management including trespass, nuisance, adverse possession, easements, concurrent ownership, land use regulations and regulatory takings. May count either FORY 4550 or FORY 5550/6550.

**FORY 5620 FOREST 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 commercial timberland and its place in individual and institutional portfolios. May count either FORY 5620 or FORY 6620.

**FORY 5650 URBAN FORESTRY (3)** LEC. 2. LAB. 3. Pr. FORY 3100 or HORT 3200. Principles and concepts of tree establishment, management and health in an urban environment. Case studies of urban forestry programs are presented.

**FORY 6140 FOREST REGENERATION AND SEEDLING PRODUCTION (3)** LEC. 3. Pr. P/C FORY 4230 or P/C HORT 3220. Principles of forest nursery seedling culture. Evaluation of activities to improve out planting performance. Plantation establishment problems and practices in Southern US.

**FORY 6150 FOREST HEALTH (3)** LEC. 3. Importance, taxonomy, identification and integrated pest management strategies of principle disease, insect and abiotic disorders of forest and shade trees from seedlings to maturity and forest products.

**FORY 6151 FOREST HEALTH LABORATORY (1)** LAB. 1. Coreq. FORY 6150. Identification of basic diseases and insects that affect forest health along with identification of their damage; the processes of pathogen infection and symptomology; and the process of wood decay studied in a laboratory and field environment. Credit will not be given for both FORY 5151 and FORY 6151.

**FORY 6230 SILVICULTURE (4)** LEC. 3. LAB. 3. Pr. FORY 4230 or BIOL 3060 or BIOL 5140 or BIOL 6140 or BSEN 3230. Principles and methods of controlling establishment, growth and quality of forest stands. Application of ecological principles to manipulation of forest ecosystems to meet specific objectives.

**FORY 6400 FOREST ECONOMICS (3)** LEC. 2. LAB. 3. Pr. FORY 3180. Marginal analysis, investment theory, resource supply, economics of conservation, and taxation principles applied to forestry. Structure and performance of forest products markets.

**FORY 6410 FOREST MANAGEMENT AND ADMINISTRATION (3)** LEC. 2. LAB. 3. Pr. (FORY 5400 or FORY 6400) and (FORY 4190). Quantitative approaches to decision making in Forestry with an emphasis on the interests of large scale firms and agencies.

**FORY 6440 INTERNATIONAL FORESTRY (3)** LEC. 30. Survey global forest location, characteristics, management systems, international forest products trade, current issues, and international forest governance.

**FORY 6460 FOREST FIRE MANAGEMENT (3)** LLB. The management of fire, both as a tool and wildfire suppression in the management of forested ecosystems. Emphasis placed on experience, technique and administration.

**FORY 6470 GIS APPLICATIONS IN NATURAL RESOURCES (2)** LEC. 1. LAB. 3. Basic understanding of GIS through discussions of the components of a GIS and how GIS are used in natural resource applications.

**FORY 6480 GIS DATABASE DESIGN AND ANALYSIS (2)** LEC. 2. Departmental approval. Geographic information system database planning, design, creation, management and analysis using a project oriented approach.

**FORY 6540 ENVIRONMENTAL LAW (3)** LEC. 3. A review of environmental law including common and administrative law, land use, and Federal statutes on water, air, toxins and wastes. May count either FORY 5540 or FORY 6540.

**FORY 6550 PROPERTY LAW (3)** LEC. 3. Land ownership, transfer and management including trespass, nuisance, adverse possession, easements, concurrent ownership, land use regulations and regulatory takings. May count either FORY 4550 or FORY 5550/6550.

**FORY 6650 URBAN FORESTRY (3)** LEC. 2. LAB. 3. Pr. FORY 3100 or HORT 3200. Principles and concepts of tree establishment, management and health in an urban environment. Case studies of urban forestry programs are presented.

**FORY 7110 FOREST BIOGEOCHEMISTRY (3)** LEC. 2. LAB. 3. Pr. FORY 6230. Fundamental and applied aspects of forest biogeochemical processes at scales of the individual tree, forest community, and forest ecosystem.

**FORY 7160 ECOSYSTEM RESPONSES TO CHEMICAL CLIMATE CHANGE (3)** LEC. 2. LAB. 3. Plant responses to changes in the chemical climate. Emphasis on sources, effects, methodologies used and ecosystem and global effects.

**FORY 7170 ECOPHYSIOLOGY OF FOREST TREES (3)** LEC. 3. Pr. BIOL 3100 or FORY 3200. Interactions among the environment, silvicultural practices, physiological mechanisms and tree growth. Integration of root, shoot and foliar functions and leaf, tree and stand level processes.

**FORY 7210 ECOSYSTEM ECOLOGY (3)** LEC. 3. Pr. BIOL 3060 or FORY 4230 or BIOL 5140 or BIOL 6140. To create a conceptual model of the terrestrial ecosystem including spatial distributions over time; and the impact of human activity and natural disturbance.

**FORY 7250 ADVANCED ECOSYSTEM MODELING (3)** LEC. 3. Pr. FORY 4230 or BIOL 3060. Exploration of the theory and rationale in modeling the structure and functions of ecological ecosystems.

**FORY 7300 FOREST BUSINESS AND INVESTMENTS SEMINAR (1)** LAB. 1. This course is designed to prepare Forest Business and Investments students with the processes, practices, values, actions, and visions associated with finance and investment in commercial timberland.

**FORY 7320 FOREST GROWTH, SILVICULTURE, AND MANAGEMENT (3)** LEC. 3. Understanding of forest growth and yield, measurements, management practices and methods, and optimization techniques necessary to make management decisions that maximize objectives.

**FORY 7330 ECOLOGY AND SILVICULTURE OF EASTERN HARDWOOD FORESTS (3)** LEC. 2. LAB. 3. Pr. FORY 4230. Silvical characteristics of major hardwood species and community composition, dynamics, site relationships, and silviculture of Southern and Eastern deciduous forests, emphasizing oaks.

**FORY 7350 APPLIED STATISTICS FOR FOREST BUSINESS (3)** LEC. 3. Gain an understanding of applied statistics related to forest business and statistical software to make informed and accurate business and investment decisions.

**FORY 7400 FOREST VALUATION AND ECONOMICS (3)** DSL. Forest valuation and the economic theory of forest resource allocation. Topics covered include forest valuation and appraisal, analysis of consumer behavior, production, market structure and the role of government, economics of forest management and policy, international trade, and financial analysis.

**FORY 7450 FOREST SECTOR ECONOMICS (4)** LEC. 4. Pr. FORY 5400 or FORY 6400. Fundamentals of forest industry, timber supply and demand, forest products supply and demand, technological change, international trade and development, sophisticated forest sector modeling.

**FORY 7460 LAND ECONOMICS (3)** LEC. 3. Evolution of the role of economics in forestry, policy and production analysis methods, non-market valuation, and regional analysis.

**FORY 7510 RESEARCH METHODS (2)** LEC. 1. LAB. 3. Overview of the scientific method and its application in forestry/natural resources research. Evaluation and preparation of project proposals with emphasis on research quality and written communication skills.

**FORY 7620 FOREST FINANCE, ACCOUNTING AND TAXATION (3)** LEC. 3. Course will provide students with an overview of core concepts in finance, accounting and taxation and how these concepts can be specifically applied to various types of forest operations.

**FORY 7650 FOREST OPERATIONS AND WOOD SUPPLY CHAIN MANAGEMENT (3)** DSL. 3. This course will review all the intricacies of the wood supply chain, from the diverse landowner base (private landowners, TIMO's and REIT's and government) to the independent logger to the wood supplier and then the consuming mill.

**FORY 7850 URBAN FORESTRY SEMINAR (1)** SEM. 1. Presentation and discussion of research, scientific papers and issues related to urban forest establishment, care and planning. Credit will not be given for both FORY 7850 and HORT 7850. Fall.

**FORY 7910 PRACTICUM IN COLLEGE TEACHING (1)** PRA. 1. SU. Techniques and practice of collegiate teaching at the level of Graduate Assistant. Students work under direct supervision and tutelage of the instructor. Fall, Spring, and Summer.

**FORY 7930 DIRECTED STUDIES (1-3)** AAB/IND. Course may be repeated for a maximum of 9 credit hours.

**FORY 7950 CFWE SEMINAR (1)** SEM. SU. Participation in the College of Forestry, Wildlife and Environment Seminar Series. Students will learn about research being conducted in various field and by various individuals internal and external to the university. Course may be repeated for a maximum of 3 credit hours.

**FORY 7970 SPECIAL TOPICS (1-4)** IND. Departmental approval. Analysis of a problem in Forestry or wood utilization involving library research, laboratory or field work and a report on the findings. Course may be repeated for a maximum of 12 credit hours.

**FORY 7980 MASTER OF NATURAL RESOURCES PAPER (2)** IND. In-depth study involving library review, data collection and/or data analysis. Departmental Program.

**FORY 7990 RESEARCH AND THESIS (1-15)** MST. Credit to be arranged.

**FORY 8930 DIRECTED STUDIES (1-3)** IND. Course may be repeated for a maximum of 9 credit hours.

**FORY 8970 SPECIAL TOPICS (1-4)** IND. Departmental approval. Analysis of a problem in Forestry or wood utilization involving library research, laboratory or field work and report on the findings. Course may be repeated for a maximum of 12 credit hours.

**FORY 8990 RESEARCH AND DISSERTATION (1-15)** DSR. Credit to be arranged.