

FORESTRY (FOR)

101 Introduction to Forestry

2 credit hours

Offered fall semester. Two hours lecture a week.

Includes the study of the historical development of forestry and forest policy in the United States and its relation to the welfare of the people and the national economy. Private and public forestland management and an introduction to the several fields of forestry will be examined.

103 Tree Climbing

1 credit hour

Offered fall semester. Five hours lecture and thirty hours laboratory a semester. Fee: \$150.00.

This course will teach the skills needed by the urban tree care professional in order to efficiently and safely work within the tree canopies of the urban forest. Professional arborist from the tree care industry will teach specific equipment use, techniques and skills beyond those expected of entry-level employees.

Prerequisite: Consent of instructor.

112 Forestry Software Applications

2 credit hours

Offered spring semester. One hour lecture and three hours laboratory a week. Fee: \$150.00.

One of the most useful technologies in the field of forestry today is the Geographic Information System (GIS). In this course, students will learn how to use ArcGIS software for forestry. The course will include practical applications of GIS for natural resources such as property mapping, geoprocessing, spatial analysis, and more. Upon completion of the course, students will be prepared to analyze spatial data and create visually appealing map documents for use in natural resource management. The course will begin with a brief overview of the use of Microsoft Office Suite and its applications in forestry and GIS.

Prerequisite or Corequisite: Mathematics 102 or 119, or consent of instructor.

120 Land Surveying

3 credit hours

Offered spring semester. Two hours lecture and three hours laboratory a week. Fee: \$150.00.

Lecture and field problems in established procedure of measuring angles, directions and distances to locate and designate property lines, boundaries and elevation differences. Traversing methods, map drafting, computation of land areas and using mapping grade Global Positioning System receivers to collect quality data and make professional maps will be covered.

Corequisite: Mathematics 102 or consent of instructor.

122 Forest Measurements

3 credit hours

Offered spring semester. Two hours lecture and three hours laboratory a week. Fee: \$150.00.

The basics of measuring forest products, grading and scaling techniques, log rules and volume tables; the measurement of the diameter, height, and volume of individual trees and stands. Estimating or "cruising" timber volumes, with emphasis on reliable and consistent field practices.

Prerequisite: Forest Technology 101.

Corequisite: Mathematics 102 or consent of instructor.

221 Forest Products

3 credit hours

Offered fall semester. Two hours lecture and three hours laboratory a week. Fee: \$150.00.

Wood properties and products will be examined extensively, including wood identification and mechanical and physical properties of wood. Products that are made from wood will be studied from the standing tree,

through the various manufacturing processes, to the finished product. Various wood utilization facilities will be visited.

Prerequisite: Forestry 101 or consent of instructor.

222 Advanced Forest Measurements

2 credit hours

Offered fall semester. One hour lecture and three hours laboratory a week. Fee: \$150.00.

This course is an extension of the basic Forest Measurements course. It includes statistical determination of cruising accuracy and the use of aerial photos for forestry purposes. The aerial photos portion will include stereoscopic viewing, identification of natural and man-made features, type mapping, area determination, boundary location, estimates of timber volume, and the use of aerial photos for planning purposes. Collection and analysis of data from a forest will take place in this course and will be used as a component of the management plan preparation for Forest Management (FOR 226). A complete statistical analysis will be completed using these data.

Prerequisite: Forest Technology 112, 120, and 122.

223 Wildlife Management

2 credit hours

Offered fall semester. One hour lecture and three hours laboratory a week. Fee: \$150.00.

Students will learn about the principles of managing the forest to support wildlife populations. Ecological concepts related to wildlife will be discussed as well as different forest management techniques and their impact on wildlife, current issues in wildlife management, and management of public lands for wildlife. This course includes a unit on fisheries management that analyzes freshwater habitat improvement. Additionally, students will be expected to identify common birds of the eastern United States.

Prerequisite: Forest Technology 112 or consent of instructor.

224 Forest Recreation and Human Resource Management

2 credit hours

Offered fall semester. One-hour lecture and one three-hour laboratory a week. Fee: \$150.00.

This course will examine the historical development of forest recreation as an integral consideration of forest management within private industry, state and local governments, and federal land management agencies such as the US Forest Service and the US Park Service. Management practices, that enhance recreational use of the forest, will be studied and implemented. Field trips will be taken to recreational facilities that depend on a natural environment. Additionally, various methods of dealing with the human resource will be examined. Personnel supervision and leadership styles will be presented which will enable the graduate to progress more naturally into a supervisory position.

Prerequisite: Forest Technology 101 or consent of instructor.

225 Forest Insects and Diseases

3 credit hours

Offered fall semester. Two hours lecture and three hours laboratory a week. Fee: \$150.00.

A study of common forest insects and diseases; identification of the organisms and the damage that they cause, as well as control measures, are emphasized.

Prerequisite: Biological Science 110 and Forest Technology 101, or consent of instructor.

226 Forest Management

3 credit hours

Offered spring semester. Two hours lecture and three hours laboratory a week. Fee: \$150.00.

This capstone course covers principles of forest management, including inventory, sustained yield, cost of forest management, silvicultural systems, regulation of cut, forest economics, tax strategies and challenges of multiple-use forestry. Students will complete a forest management plan

using data collected and analyzed in the Advanced Forest Measurements course.

Prerequisite: Forest Technology 112, 120, 122, 222, 223, and 229.

227 Forest Fire Control **2 credit hours**
Offered spring semester. One hour lecture and three hours laboratory a week. Fee: \$150.00.

Students will complete the online training necessary to obtain their Red-Card certification for Maryland Type II Wildland Firefighting. This training covers the incident command system, fire suppression, firefighter safety, fire weather, and other topics related to forest fire control. Students will study catastrophic fires in order to understand forest fire control techniques and the evolution of firefighter safety. The course will also examine forest fire history in the United States, fire ecology and the role of fire in forests, prescribed fire, and managing the wildland urban interface.

228 Urban Forestry **3 credit hours**
Offered spring semester. Two hours lecture and three hours laboratory a week. Fee: \$150.00.

A study of trees and tree communities in urban situations including shade, ornamental and street side trees. Tree inventory, valuation, selection, planting, climbing, pruning, maintenance and care and diagnosis of problems will be covered. This course is intended to give additional skills to individuals who are serious about becoming a part of the urban tree care industry as well as those more traditional forestry students. It should provide skills as well as professional credentials that will enhance employment opportunities for students enrolled in the Tree Care Technician Certificate program as well as the Forest Technology Curriculum.

Prerequisite: Forest Technology 101 or consent of instructor.

229 Silviculture **4 credit hours**
Offered fall semester. Two hours lecture and one six-hour laboratory a week. Fee: \$150.00.

Introduction to climatic, soil, and biotic factors affecting the composition and growth of forest stands; development of trees and stands with respect to height, diameter, volume growth, and reproduction; improvement and reproduction of forest stands, employing basic silvicultural practices of weeding and improvement cuttings, thinnings, pruning, reproduction cuttings, and marking of stands prior to logging; principles of artificial establishment of forest plantations, including site evaluation, selection of species, nursery production and management, and seeding and planting methods.

Prerequisite: Forest Technology 101 and Biological Science 214.

250 Harvesting and Primary Manufacturing **3 credit hours**
Offered summer session. Five eight-hour days for four weeks. Fee: \$150.00.

Students will participate in a timber harvesting operation including planning the harvest, methods of harvesting, operation of logging equipment, business methods, and marketing of wood products. Students will gain experience in various primary wood manufacturing methods.

Prerequisite: Forest Technology 112, 120, and 122.

251 Forest Measurement and Surveying Field Practices **4 credit hours**
Offered summer session. Five nine-hour days a week for three weeks. Fee: \$150.00.

This course covers field techniques in surveying and mapping large land ownerships. Emphasis is placed on determining property ownership through deed research, conversation with the land owner and abutters, and the use of various technologies including GPS receivers and GIS maps. Students will apply various field inventory methods, tools and data analysis techniques to compare forest stands.

Prerequisite: Forest Technology 112, 120, and 122.

254 Urban Forestry Internship **2 credit hours**
Offered spring semester. Forty hours a week for four weeks.

This experience is intended to present most of the activities associated with being a professional within the urban tree care industry. The student is expected to fully participate in activities that may include customer relations, contracts and sales, Integrated Pest Management, right-of-way clearing, landscape development, tree pruning, fertilization, maintenance and removal as well as an understanding of the maintenance, management and safety issues involved in the operation of a successful tree care company or department. This position may be undertaken on a volunteer or a for-pay basis and must encompass at least 160 hours of documented work with an approved private tree care company or urban tree care division within state, federal or city government.

Prerequisite: Forest Technology 103 and Biological Science 213.

299 Forest Special Topics **1-4 credit hours**
Study or field project in forestry under the supervision of a staff member. This course is intended for qualified sophomore standing students with special interest in a forestry topic. Any unusual costs, travel, and special supplies, will be borne by the student.

A sophomore status and instructor consent required to take this course.

Prerequisite: Forest Technology 101, sophomore standing, and consent of instructor.