FOREST TECHNOLOGY (FORT)

# Course numbers with the # symbol included (e.g. #400) have not been taught in the last 3 years.

**FORT #466 - Forest Surveying and Mapping**
- **Credits:** 0 or 4
- Provides instruction and experience in running cruise lines and in the survey and identification of rural property lines. The focus is on field surveying techniques and problem solving of special importance to foresters. Use of magnetic survey data in rural property measurement. Skill and efficiency is developed in analyzing field survey data, plotting, lettering and finishing topographic and planimetric maps, and road plans, both manually and by Computer Assisted Drafting using multiple software applications.
- **Equivalent(s):** FORT 266
- **Grade Mode:** Letter Grading
- Special Fee: Yes

**FORT 470 - Applied Silviculture**
- **Credits:** 0 or 4
- Silvicultural practices in the U.S. including reforestation systems. Improvement of forest stands employing the basic tending practices of weeding, thinning, and pruning. Marking of stands prior to logging operations. 2 lec/1 4-hr lab.
- **Equivalent(s):** FORT 270
- **Grade Mode:** Letter Grading
- Special Fee: Yes

**FORT 527 - Forest Ecology**
- **Credits:** 4
- Introduces basic and applied ecology of forests, with emphasis on ecosystem processes, including water, energy, and nutrient cycles; biological interactions, including biodiversity and plant-plant, plant-animal, and plant-microbe relationships; and human impacts, including forest management, land-use/land cover-change, and changes in atmospheric chemistry.
- **Equivalent(s):** NR 527
- **Grade Mode:** Letter Grading
- Special Fee: Yes

**FORT 564 - Arboriculture**
- **Credits:** 0 or 3
- Tree selection, care, and maintenance in the urban environment. Includes climbing, safety practices, pruning, hazard tree assessment, and removals. 1 lec/1 4-hr lab.
- **Equivalent(s):** FORT 464
- **Grade Mode:** Letter Grading
- Special Fee: Yes

**FORT #567 - Leadership, Supervision & Safety**
- **Credits:** 2
- Fundamentals of leadership and supervision including effective communication in the workplace and public sector are explored. Project management, personnel training and motivation, plus problem-solving and conflict resolution applied through a practical community service forestry project. Accident prevention, first aid, and CPR instruction also included. 2 lec.
- **Equivalent(s):** FORT 267
- **Grade Mode:** Letter Grading

**FORT 572 - Mensuration**
- **Credits:** 0 or 4
- Field application of forest inventory and timber cruising techniques. Measurement of tree form, volume, quality, and defect. Growth prediction of individual trees and stands. Use of basic statistical methods as a tool in cruising. 2 lec/1 4-hr lab.
- **Equivalent(s):** FORT 272
- **Grade Mode:** Letter Grading
- Special Fee: Yes

**FORT 573 - Management Operation & Analysis**
- **Credits:** 4
- An introduction to the basic concepts of forest land management and the practical approaches to forest management planning and financial decision-making. Topics include a silviculture review; deed research and mapping; management plan preparation; multiple-use sustainable forestry; tree valuation; timber sale appraisal methods; contracting; forest taxation; and long-term cost and return analysis. Students individually prepare a comprehensive forest management plan as a semester project.
- **Equivalent(s):** FORT 273
- **Grade Mode:** Letter Grading
- Special Fee: Yes

**FORT 574 - Industrial Forest Management Tour**
- **Credits:** 1
- Concentrated field experience and intensive observations of industrial, private, and federal forest holdings and facilities; emphasizing forest utilization and management operations as currently practiced in New England. One week of concentrated field study.
- **Grade Mode:** Credit/Fail Grading
- Special Fee: Yes

**FORT 576 - Forest Products and Wood Science**
- **Credits:** 0-4
- Basics of structure and properties of wood as a raw material. Conversion of logs to lumber at Thompson School sawmill. Lumber and log grading and measuring. Studies in processing efficiency, lumber drying, and physical plant operations. Introduction to paper, veneer, and chip products. Marketing of forest products. 2 lec/1 4-hr lab.
- **Equivalent(s):** FORT 476
- **Grade Mode:** Letter Grading
- Special Fee: Yes

**FORT 577 - Forest Harvesting Systems**
- **Credits:** 0 or 4
- A study in harvesting methods and their relation to forest management and silviculture of the state and region. Theory and practice of conventional harvesting systems including hands-on application of techniques with a strong emphasis on protection of the environment and the safety and health of workers. Department permission for non-majors. 2 lec/4-hr lab.
- **Grade Mode:** Letter Grading
- Special Fee: Yes

**FORT 578 - Ecology and Management of Forest Stressors**
- **Credits:** 4
- An introduction to the biology and ecology of forest insects, pathogens, and invasive plants in the context of forest management. Students learn to recognize the signs and symptoms of insect and disease damage in forest trees and products. Students explore the impacts of novel invasions of pests, pathogens, and pernicious plants and evaluate adaptive management strategies. 2 lec/4 hr lab.
- **Equivalent(s):** FORT 278
- **Grade Mode:** Letter Grading
- Special Fee: Yes
FORT 579 - Wildland Fire Ecology and Management
Credits: 4
An exploration of the historical context of wildland fire and how our changing climate and past management practices influence future fire regimes at local and national scales. This course will provide instruction in fire ecology, and prescribed fire theory and methods. Students will learn the basic knowledge of forest fire control and use and will focus on firefighting, the impacts of fire on vegetation, and the use of prescribed fire in forest and wildlife management.
Equivalent(s): FORT 479
Grade Mode: Letter Grading
Special Fee: Yes

FORT 581 - Applied Geospatial Techniques
Credits: 4
Geographic Information Systems (GIS) are integral to natural resource management and these technologies/software have become widespread throughout various fields. Proficiency in fundamental GIS skills is imperative for resource managers. Students will 1) develop an understanding of imagery acquisition and remote sensing systems/technologies; 2) develop skills in identification, interpretation, and mapping of land/vegetation features, including an understanding of map projection; 3) gain experience in GIS software to perform fundamental geoprocessing and mapping techniques.
Equivalent(s): FORT 281
Grade Mode: Letter Grading

FORT 592 - Independent Studies in Forest Technology/Urban Tree Care
Credits: 1-4
Students who have the ability and adequate preparation to work independently may propose a contract to design a course or research project on a topic not available through existing course offerings. The purpose of this research is to explore new areas in the student’s field of study or to pursue course material in greater depth. Work is supervised by an appropriate faculty/staff member and credit varies depending on the proposed project/research. Examples include forest management, forest products, forest protection, wildlife management, or urban tree care.
Repeat Rule: May be repeated for a maximum of 8 credits.
Equivalent(s): FORT 292
Grade Mode: Letter Grading

FORT 597 - Work Experience
Credits: 0
Career-related employment (10 weeks, generally in the summer following freshman year) in a forestry, urban tree care, or other department-approved natural resources area.
Equivalent(s): FORT 297
Grade Mode: Credit/Fail Grading