



Forestry

Forestry Courses

FORT 5110 Forest Mensuration (3 credits)

This course builds on descriptive statistics introduced in Forest Biometry to explore claims made through inferential statistical tests, specifically understanding the scope and limits of statistical evidence. We will explore and evaluate different models used in forest management: growth and yield projections, log rules for standing timber, stocking charts, and emerging technologies relying on satellite imagery. Prerequisite(s): None.

FORT 5120 Forest Hydrology (3 credits)

This course will explore applications of adaptive silviculture, a forest management approach that applies an understanding of the structure, function, and dynamics of natural forest ecosystems to achieve integrated environmental, economic, and social outcomes. Prerequisite: FORT 5210 or consent of instructor.

FORT 5130 Dendroecology (3 credits)

This course introduces students to dendrochronology; the science of dating and interpreting annual growth rings in trees; with a focus on dendro-ecology. Students will explore how tree rings reveal forest dynamics, disturbance history, and management implications. Through lectures, labs, and hands-on fieldwork at Hobson Memorial Forest, students will learn how to collect and analyze tree-ring data to answer ecological and applied forest management questions. Prerequisite(s): None.

FORT 5140 Forest Health (4 credits)

This course will introduce students to the concepts of forest health and illustrate how forested ecosystems are influenced by the interaction of diseases, insects, and fire, as well as other biotic and abiotic disturbance agents. Emphasis will center on forests of the Great Lakes region. Students will learn the biology and ecology of common forest insects and diseases while also evaluating management strategies to prevent and mitigate their adverse effects. Prerequisite(s): None.

FORT 5150 Forest Issues and Policy (3 credits)

This course will review the socio-cultural movements and events as well as major pieces of legislation that have helped shape the profession of forestry over the past 150 years. Contemporary treatment of issues such as below cost timber sales, managing for endangered species, climate change, and professional certifications will inform some of the conversations on current forest policy. Prerequisite(s): None

FORT 5210 Regional and International Silviculture (3 credits)

This course will examine the varied silvicultural approaches and practices across different regions in the US. Differences in species, growing conditions, and market forces will inform the discussions. Additionally, we will review a range of international forestry issues taking place in southeast Asia, equatorial Africa, and the rainforests of South America. Prerequisite(s): None.

FORT 5220 Adaptive Silviculture (3 credits)

This course will explore applications of adaptive silviculture, a forest management approach that applies an understanding of the structure, function, and dynamics of natural forest ecosystems to achieve integrated environmental, economic, and social outcomes. Prerequisite: FORT 5210 or consent of instructor.

FORT 5230 Integrated Forest Management (3 credits)

This course will focus on negotiating the competing priorities often encountered when managing forests for multiple objectives. Case studies will be examined to provide examples of strategic planning, coordination frameworks, and the analytical concepts, techniques, and skills used in conflict resolution. Students will engage in group discussions to practice communication skills in advocating for various forest management practices from different points of view representing different stakeholder interests. The production of a Forest Management Plan is the primary piece of student work in this course. Prerequisite(s): None.

FORT 5310 Tribal and Community Forestry (3 credits)

With over 40% of Minnesota's forested landscape being privately owned, tribal, community, and individual forest management plays an important role in conserving forested ecosystems, supporting local livelihoods, and maintaining cultural values. This course is designed to develop and refine your understanding of tribal and non-government natural resource management practices. Prerequisite(s): None

FORT 5510 Forest Biometry (4 credits)

Forest Biometry will examine the forest measurement and sampling methods as well as the sampling designs and statistical approaches commonly implemented in forest management. Measurement and sampling methods topics will focus on the techniques used in determining the volume and quality of logs, trees, and stands of trees. Sampling designs and statistical approaches topics will focus on methods of collecting and analyzing forest data for resources management, including specialty forest products, fuels management, and conservation of rare populations. Prerequisite(s) None.

All-University Courses

The course numbers listed below, not always included in the semester class schedule, may be registered for by consent of the advisor, instructor, or department chair, or may be assigned by the department when warranted. Individual registration requires previous arrangement by the student and the completion of any required form or planning outline as well as any prerequisites.

- 1910, 2910, 3910, 4910 DIRECTED INDEPENDENT STUDY
- 1920, 2920, 3920, 4920 DIRECTED GROUP STUDY
- 1930, 2930, 3930, 4930 EXPERIMENTAL COURSE
- 1940, 2940, 3940, 4940 IN-SERVICE COURSE
- 1950, 2950, 3950, 4950 WORKSHOP, INSTITUTE, TOUR
- 1960, 2960, 3960, 4960 SPECIAL PURPOSE INSTRUCTION
- 1970, 2970, 3970, 4970 INTERNSHIP
- 1980, 2980, 3980, 4980 RESEARCH
- 1990, 2990, 3990, 4990 THESIS