

Discipline: Agriculture	Sub-discipline: Forestry/Natural Resources
General Course Title: Forest Protection	Min. Units: 3 Semester
Proposed Suffix: L	
<p>Course Description: This course will discuss the biotic and abiotic stress factors that influence forest resource values. Direct and indirect management practices in addition to Silvicultural principles that maintain and enhance biotic balance, biological diversity, and ecosystem health and productivity. Laboratory required.</p>	
Required Prerequisites or Co-Requisites ¹	
Advisories/Recommended Preparation ²	
<p>Course Objectives: <i>At the conclusion of this course, the student should be able to:</i></p> <ul style="list-style-type: none"> • Understand the concept of forest health, and the role of forest protection in forest management. • Recognize and distinguish some of the symptoms of forest health problems, including fire, diseases, insects, weather, and animals. • Comprehend the basic principles of forest stand dynamics and disturbance as they relate to forest protection. • Understand the basic elements of fire ecology, behavior, effects, and management. • Understand the basics of forest pathology and disease management, and be familiar with the primary diseases affecting western forests. • Understand the basics of forest entomology and insect pest management, and be familiar with the primary insects affecting western forests. • Understand the effects of wind, snow, ice, and other kinds of extreme weather on forests. • Be familiar with common animal damage agents, and animal damage management. 	
<p>Course Content:</p> <ol style="list-style-type: none"> 1. Forest Health and Disturbance Ecology (2 weeks) <ul style="list-style-type: none"> Concepts and Definitions of Forest Health Ecological Principles Stand Development and Dynamics Forest Disturbance Agents 2. Fire (4 weeks) <ul style="list-style-type: none"> Fire Behavior Principles Model Simulation Fuel Properties and Assessment Fire Prevention Crown Fires 3. Wind Damage and Abiotic Injury (1 week) 	
<p>Forest Protection (Content Continued)</p>	

¹ Prerequisite or co-requisite course need to be validated at the CCC level in accordance with Title 5 regulations; co-requisites for CCCs are the linked courses that must be taken at the same time as the primary or target course.

² Advisories or recommended preparation will not require validation but are recommendations to be considered by the student prior to enrolling.

- 4. Diseases (4 weeks)
 - Diagnostics
 - Root Diseases
 - Stem Decays
 - Foliar Diseases, Rusts and Cankers
 - Parasitic Plants
 - Nursery Management Issues

- 5. Animals (1 week)
 - Browsers
 - Girdlers
 - Clippers
 - Animal Damage Management

- 6. Insects (3 weeks)
 - Insect Ecology
 - Bark Beetles and Stem Borers
 - Defoliators
 - Tip Feeders
 - Integrated Pest Management

Laboratory Activities: Individual Laboratory Activities are designed to support course objectives.

Methods of Evaluation: Lecture Comprehensive Quizzes and Exams Written Critical Thinking Scenarios Problem Analysis and Solution Research and Term Papers	Methods of Evaluation: Laboratory Laboratory Skill Validation by Observation Laboratory Reports Laboratory Research Projects and Reports Laboratory Skill Practicum Exams
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Typical Textbooks, Manuals, or Other Support Materials
Forest Health and Protection. Edmonds, R.L., J.K. Agee, R. I. Gara. 2005. Waveland Pr Inc. ISBN: 1577663969
Forest protection. Hawley, R. C. 1948. J. Wiley; 2nd edition.
Handbook of forest protection. Krygier, J. T. 1961. O.S.U. Cooperative Association.

FDRG Lead Signature: _____ Date: _____

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