

Lassen Community College Course Outline

FOR 4 Forest Health and Protection

1.5 Units

I. Catalog Description

This course introduces the signs, symptoms, and ecological effects of many common forest stresses and disturbances and highlights management strategies to mitigate their impacts to forest ecosystems. Students examine biotic and abiotic ecological disturbance agents. Identification and ecology of important forest insects and diseases of North America, and predisposing factors that increase susceptibility of forests. Management strategies to reduce impacts. This course has been approved for hybrid and online delivery.

Recommended Preparation: Successful completion of ENGL105 or equivalent multiple measures placement.

Transfers to CSU

General Education Area:

CSU GE Area:

C-ID

17 Hours Lecture, 31 Hours Lab, 34 hours Expected Outside Class Hours, 82 Total

Student Learning Hours

Scheduled: Spring

II. Coding Information

Repeatability: Not Repeatable, Take 1 Time

Grading Option: Graded

Credit Type: Credit – Degree Applicable

TOP Code: 0114.00

III. Course Objectives

A. Course Student Learning Outcomes

Upon completion of this course the student will be able to:

1. Identify and describe the Role stresses and disturbances have on forest ecosystem health
2. Signs and symptoms of important stresses and disturbances on forested ecosystems from abiotic (wind drought, frost sunscald, climate change) and biotic (fungi, insects animals) agents.
3. Identify and describe forest management methods used to reduce the impact of stresses and disturbances to forest resources.

B. Course Objectives

Upon completion of this course the student will be able to:

1. Identify and describe the Role stresses and disturbances have on forest ecosystem Health
2. Signs and symptoms of important stresses and disturbances on forested ecosystems from abiotic (wind drought, frost sunscald, climate change) and biotic (fungi, insects animals) agents.
3. Identify and describe forest management methods used to reduce the impact of

stresses and disturbances to forest resources.

IV. Course Content

- A. Introduction to Forest health
 - 1. Definition & Terms
 - 2. History
- B. Abiotic stresses and root disease
 - A. Drought
 - B. Air
 - C. Pollution
 - D. Root Diseases, system decay organisms
 - E. Sudden Oak death, foliar diseases
 - F. Mistletoes and rusts
- C. Insect and Fungal Diseases
 - 1. Bark beetles & management
 - 2. Insect Defoliators
 - 3. Ambrosia Beetles
 - 4. Wood Borers
 - 5. Canker Diseases and Animal Damage

V. Assignments

A. Appropriate Readings

Required reading assignments will be made from the textbook on a regular basis. In addition, journal and articles from outside resources including video, newspapers, magazines, internet, etc. pertaining to course topics will be incorporated in the class lectures and assignments.

B. Writing Assignments

Students will be required to complete short answer written assignments, quizzes and/or submit a research paper on a forestry topic as assigned by the instructor.

C. Expected Outside Assignments

Outside assignments may include take home short answer written assignments, required reading of supplementary literature, term paper(s), and group research and reports.

D. Specific Assignments that Demonstrate Critical Thinking

Critical thinking, writing assignments as listed above. Individual and group

VI. Methods of Evaluation

Traditional Classroom Evaluation

Comprehensive Quizzes and Exams
Written Critical Thinking Scenarios
Problem Analysis and Solution
Research and Term Papers

Online Evaluation

Same as face-to-face instruction including a variety of evaluation methods such as: research papers, asynchronous and synchronous discussions (chat/forum), exercises/assignments, online quizzes and exams, and postings to online website.

Hybrid Evaluation

All quizzes and exams will be administered during the in-person class time. Students will be expected to complete online assignments and activities equivalent to in class assignments and activities for the online portion of the course. Electronic communication, both synchronous and asynchronous (chat/forum) will be evaluated for participation and to maintain effective communication between instructor and students.

VII. Methods of Delivery

Check those delivery methods for which, this course has been separately approved by the Curriculum/Academic Standards Committee.

Traditional Classroom Delivery Correspondence Delivery

Hybrid Delivery Online Delivery

Tradition Classroom Delivery

Methods of instruction may include, but are not limited to: lecture (including guest speakers), PowerPoint, and other media presentations, discussions, scenarios, and group presentations.

Online Delivery

A variety of methods will be used, such as: research papers, asynchronous and synchronous (chat/forum) discussions, online quizzes and exams, posting to online website and email communications using the districts approved learning management system.

Hybrid Delivery

A combination of traditional classroom and online instruction will be utilized. Each semester a minimum of 17 hours, or 1/3 of the lecture hours, will be taught face-to face by the instructor and the remaining hours will be instructed online through the technology platform adopted by the District. Traditional class instruction will consist of exercises/assignments, lectures, visual aids, and practice exercises. Online delivery will consist of exercises/assignments, lecture posts, discussions, adding extra resources and other media sources as appropriate.

VIII. Representative Texts and Supplies

Wood, D.L., T.W. Koerber, R.F. Scharpf, and A.J. Storer. *Pests of the Native California Conifers*. Berkeley: UC Press. (2003) ebook available:
<https://doi-org.ezproxy.humboldt.edu/10.1525/9780520936379>

Forest Health and Protection, Second Edition 2011

[Robert L. Edmonds](#), [James K. Agee](#), [Robert I. Gar](#); Waveland Press inc
ISBN: 978-1-57766-652-3

USDA Publications and Research studies on contemporary Forest Management

Available online and assigned by the instructor

IX. Discipline/s Assignment

Forestry, Biology

X. Course Status

Current Status: Active

Original Approval Date: 02/21/2023

Board Approval: 04/11/2023

Revised By:

Curriculum/Academic Standards Committee Revision Date: