

Lassen Community College Course Outline

FOR 2 Forest Ecology

3.0 Units

I. Catalog Description

This course examines basic ecological principles applied to forest management, exploring the theory and practice of ecology and conservation of local forest ecosystems. Students examine past and current theoretical advances and use case studies to evaluate the impacts of natural and human disturbance on forested ecosystems. The course covers diverse topics including: Forest restoration, global climate change; individual and population growth; forest succession; invasive species; biodiversity; and forest classification/descriptions. 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

51 Hours Lecture, 102 Expected Outside Class Hours, 153 Total Student Learning Hours Scheduled: Fall

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 physical, chemical, and biological characteristics of forests and other wildland ecosystems.
2. Explain the ecological, hydrological, social, political and economic structure and processes related to forest ecosystems.
3. Describe forest ecosystems effectively in oral and written formats

B. Course Objectives

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

1. Identify and describe the physical, chemical, and biological characteristics of forests and other wildland ecosystems.
2. Explain the ecological, hydrological, social, political and economic structure and processes related to forest ecosystems.
3. Describe forest ecosystems effectively in oral and written formats

IV. Course Content

- A. Introduction to Forest Ecology
 - 1. Definition & Terms
 - 2. History of Ecology
- B. Forest Ecosystems
 - 1. Structure and function
 - 2. Classifications
 - 3. Biological diversity of forests
 - 4. Conservation
- C. Forest Productivity
 - 1. Functional Diversity
 - 2. Human and ecological interactions
 - 3. Impacts on ecosystem health
 - 4. Application of functional ecology
- D. Biochemical cycling
 - 1. Light
 - 2. Temperature
 - 3. Water
- E. Ecological Issues pertaining to sustainable forest management
 - 1. Invasive species/Disturbances
 - 2. Solar Radiation
 - 3. Temperature
 - 4. Water
 - 5. Wind
 - 6. Fire
 - 7. Community ecology

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 forest ecology 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 presentations of the course topics.

VIII. Representative Texts and Supplies

Wiley Publications, Dan Brinkley; *Forest Ecology: An Evidence Based Approach*
1st edition (2021) ISBN 9781119703204

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: