BOT 130, BOT 130-L
Plants in the Hawaiian Environment
4 Credits
TUES / THUR 9:45 am - 12:15 pm

INSTRUCTOR: David Cole
EMAIL: dmcole@hawaii.edu
OFFICE: Imiloa 136
OFFICE HOURS: Thursdays 12:00 – 1:00 pm (or by appointment)
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EFFECTIVE DATE: Spring 2009

WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

Windward Community College is committed to excellence in the liberal arts and career development; we support and challenge individuals to develop skills, fulfill their potential, enrich their lives, and become contributing, culturally aware members of our community.

CATALOG DESCRIPTION

Introduction to the evolution of plant communities and species of Hawaiian ecosystems; ecological interactions; observations, identification and systematics of native and introduced flora. Lecture/laboratory/field trip course. (2 hrs. lect.; 2 hrs. lab.)

Activities Required at Scheduled Times Other than Class Times:

One Saturday morning field trip (replacing two regular lab/class periods)

STUDENT LEARNING OUTCOMES

The student learning outcomes for the course are:

1. Discuss geological history of the Hawaiian Islands and natural history of plants in Hawaii

2. Discuss the arrival, establishment, major evolutionary trends and adaptive radiation of some of the surviving native species

3. Discuss natural and human-mediated changes in the ecosystems, and interaction between native and introduced species of plants

4. Discuss botanical terminology for use in identifying native Hawaiian plants
COURSE CONTENT

Concepts or Topics

• Discuss groups of plants associated with coastal and dry to wet forest habitats in Hawaii; learn about various locations throughout the islands where relicts of these plant communities are still preserved

• Learn about basic plant reproductive anatomy including functions of structures and their adaptive ecological evolution

• Investigate trends in the evolution of plants in Hawaiian ecosystems: involving the role of volcanism, dispersal, plant-animal interactions and variations of rainfall (climate) and topography

• Discuss techniques used to investigate prehistoric Hawaiian plant communities and the role of humans and the organisms they introduced in altering the landscape (in both the past and present-day)

Skills or Competencies

• Gain a general familiarity with the native Hawaiian plant flora

• Given background knowledge of a plant specimen’s origin, growth habit and other defining characteristics, be able to identify its scientific and/or Hawaiian names

• Use basic plant descriptive terminology to differentiate native species & genera

• Be able to identify locations in the Hawaiian Islands where various native plant communities are still relatively intact, and the general characteristics (climate, rainfall) and components (plant species assemblages) of Hawaii’s various vegetation zones

• Understand the mechanisms of seed dispersal in Hawaii and throughout the Pacific and their role in shaping the distribution of endemic vs. indigenous plant species in Hawaii

COURSE TASKS AND GRADING

Class Discussion / Participation / Small Assignments: 20%

Asking questions, participating in class and showing at least a minimal amount of general interest will be worth 10% of your grade for the course. Various other small assignments dealing with the labs and lectures will be worth an additional 10% - some done in class, others takehome.

Field Trips: 20%

You’ll need to hand in a field trip assignment packet for each fieldtrip- most will involve describing the 10 plants discussed on each trip in detail and will need to be typed out. There will be seven trips throughout the semester (including the Saturday trip which counts double). I will provide a van for transportation to every trip (except the first) with space for 10-12 people (1st come, 1st serve). Completing five out of seven of these field trip assignments will be worth 20% of your grade (and you can’t turn them in if you happen to miss a trip). Do all seven assignments
for extra credit. ON ALL ASSIGNMENTS TURNED IN LATE YOU WILL LOSE FIVE PERCENTAGE POINTS PER CLASS MEETING DAY LATE. NO EXCEPTIONS.

Research Report / Presentation: 20%

Each student is expected to write a research paper 4 - 5 typewritten pages in length (double spaced, 12 pt. font) - the research topic should be discussed with me by February 24th. You'll also have to give an 8 - 10 minute presentation of your paper in front of the class at the end of the semester. The report, including bibliography (minimum of five sources), must be submitted to me in order to receive a complete grade for the course. The paper and presentation together will account for 20% of your grade- skip your presentation you lose 10%. You’ll lose one letter grade for each calendar day the paper is late.

Tests: 40%

Two midterms will be worth 10% of your grade (each) and the Final is also worth 10%. In addition, there will be one plant identification test (including two mandatory practice exercises) worth 10% of your grade.

Midterm and final exam make-ups permitted only when there is a legitimate excuse (such as illness or emergency; doctor’s note required). No make-up will be offered on the plant ID test.

REQUIRED TEXTBOOKS


DISABILITIES ACCOMMODATION STATEMENT

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Disability Specialist Counselor to discuss reasonable accommodations that will help you succeed in this class. Ann Lemke can be reached at 235-7448, lemke@hawaii.edu, or you may stop by Hale ʻAkoakoa 213 for more information.