



MASTER COURSE OUTLINE

Prepared By: Christy Welch, Kathleen Duvall

Date: May 2020

COURSE TITLE

Field Botany

GENERAL COURSE INFORMATION

Dept.: BOT

Course Num: 140

(Formerly:)

CIP Code: 26.0307

Intent Code: 11

Program Code: N/A

Credits: 5

Total Contact Hrs Per Qtr.: 77

Lecture Hrs: 33

Lab Hrs: 44

Other Hrs: 0

Distribution Designation: Lab Science LS

COURSE DESCRIPTION (as it will appear in the catalog)

Field botany involves the identification and classification of local plants of the Columbia Basin area. Different biomes are studied with emphasis on the steppe and shrub-steppe vegetation common to this area. Students participate in seven field trips to collect native plants. Following field trips, students identify, press, dry, and mount collected plants in order to assemble a required plant collection. During laboratory sessions students learn to use a taxonomic key to identify and classify collected plants. NOTE: This is a field course with required field trips. Field trips often involve hiking over uneven terrain; students climb up slopes, both on and off trails to collect plant specimens. Any questions concerning these field trips may be directed to the instructor.

PREREQUISITES

None

TEXTBOOK GUIDELINES

Flora of the Pacific Northwest, Hitchcock and Cronquist, Univ. of WA Press, ©1973, 10th printing, 1996. Also required – Plant Identification Terminology, Harris and Harris, Spring Lake Publishing. The text used must have departmental approval.

COURSE LEARNING OUTCOMES

Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills:

1. Distinguish between standard, talus, meadow, aquatic, saline, sand dune, and lithosol vegetative zones.
2. Proficiently use a dichotomous, taxonomic key to identify collected and unknown native plants.
3. Define and use basic vocabulary words relating to the morphology and taxonomy of local, native plants.
4. Appropriately press, mount, and label plants for a plant collection.
5. Identify plants collected during the term from pressed herbarium samples and photographs, naming each plant's scientific name, common name, family, and vegetative zone.
6. Field identify major plant families based on each family's common characteristics.
7. Maintain a complete field collection record specifying when and where plant specimens were collected.
8. Discuss the ethnobotany of the Columbia Basin as well as the history of plant identification in our region.

INSTITUTIONAL OUTCOMES

None

COURSE CONTENT OUTLINE

1. General introduction
 - a. scientific names and taxonomy overview
 - b. descriptive terms of plant structures
 - c. descriptions and identification of vegetative zones
 - d. guidelines for plant collections, plant pressing, herbarium samples – mounting and labeling plants
 - e. maintaining a collection record
2. Field trips – tentative locations of field trips are listed below. Changes may be made at the instructor's discretion.
 - a. Sun Lakes / Lenore Caves area
 - b. North Moses Lake, Sagebrush Flats, Monument Hill
 - c. Ancient Lakes, Quincy
 - d. Columbia National Wildlife Refuge
 - e. Frenchman Coulee
 - f. Jameson Lake area
 - g. surrounding Moses Lake
3. Keying of collected plants
 - a. introduction to a taxonomic key and illustrated glossary
 - b. keying strategies – beginning at the right spot
 - c. keying sunflowers
 - d. keying legumes
 - e. keying grasses
4. Plant family characteristics, historical use of plants in the Columbia Basin, history of plant identification and plant collectors in our region

DEPARTMENTAL GUIDELINES (*optional*)

- The overall course percentage will be based on the following weighted categories:
 - Plant collection worth 40%,
 - Plant identification exams collectively worth 30%,
 - Class/lab work (including assignments, quizzes, and keying test) collectively worth 20%
 - Field trip attendance and participation 10%
- A standard grade scale will be used for this course with a 2.0 grade point corresponding to 70-72%.
- All exams are proctored. When possible, exams are held on campus. Online and hybrid courses may have exams online; they may or may not be proctored.
- Attendance on all field trips is mandatory and is required for credit. Missing one field trip drops a student's grade 2%, missing two field trips drops the student's grade 5%. Students missing more than two field trips will not be given credit for this course. Students must submit completed and signed permission slips/release forms prior to attendance on the first field trip of the quarter in order to participate.
- Lab sessions are an essential part of this class and are required for credit. Points will be deducted from a student's overall point total for missing more than two labs. Students missing more than four lab sessions will not be given credit for this course.
- A plant press will be checked out to each enrolled student and must be returned on or before the last day of class. Not returning the plant press will trigger a hold to be placed on a student's grades and transcripts until the plant press is returned.
- PO5 should be assessed: Students will be able to solve problems by gathering, interpreting, combining and/or applying information from multiple sources.

DIVISION CHAIR APPROVAL

DATE