

BIO 313: BOTANY

Instructor: Dr. Kerry Byrne

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Lecture: MW 2 -2:50 pm in DOW E255

Office: DOW 205

Office Hours: T 12-2pm, F 1-5 pm, or by apt.

Lab: MW 3 – 5:50 pm in DOW E255

Course Synopsis and Objectives: In BIO 313, we study the native and naturalized species of Southern Oregon and Northern California. In general, lectures will emphasize the identification, important characters, classification, and phylogeny of common families and genera of vascular plants, as well as some special topics related to plant ecology. The laboratories and field trips will allow students to dissect plants and examine their differences. Upon Completion of the course students should be able to:

- Identify floral and plant structures and their various forms
- Understand basic floral terminology
- Describe key features of common plant families
- Utilize keys to identify plants
- Describe key features of lichens and identify several lichens by sight
- Identify many common families and genera by sight
- Collect and preserve plant specimens.
- Explain basic ecology of specific ecosystems in the region

An additional note about the course: This is not your typical course, since you learn by doing in botany. Instead of considering the course a separate lecture and lab section, I urge you to think of them as one combined course from 2-6 pm. We will often spend our Wednesdays on local field trips. These field trips will leave promptly from campus at 2 pm. We will always try to return by 6 pm to campus.

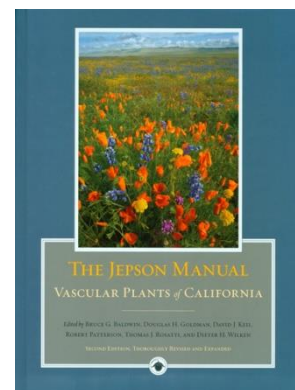
Required text:

1. Baldwin, B.G., D.H. Goldman, D.J. Kell, R. Patterson, T.J. Rosatti, and D.H. Wilken. *The Jepson Manual: vascular plants of California*. Second Edition. The University of California Press: Berkeley, CA, 2012.

You must purchase the second edition- the first edition will not work. Each student must have their own copy of the text for weekly quizzes and field work.

Additional suggested text:

2. Harris, J.G. and Woolf-Harris, M. *Plant Identification Terminology: an Illustrated Glossary*. Second edition Spring Lake Publishing: Spring Lake, Utah 2001



Required weekend field trip: In addition to local field trips during class/lab time, there is a required weekend field trip **Saturday – Sunday May 14 – 15** with stops in Southern Oregon in unique fen and serpentine plant communities, and on the Northern California coast with stops at coastal grasslands and redwood forests. This field trip is required to complete the course, and no substitutes will be made.

Student Assessment: two lecture examinations (a midterm and final) will cover all aspects of the course (lectures, laboratories, and field trips) and will be in the form of multiple choice, matching, completion, diagrams, or short essay. *Bring a blue scantron for the lecture midterm and final examination.* The lab quizzes and final will include keying unknown plants, sight recognition of select taxa, and identification of plant structures. There are seven lab quizzes, and your lowest score will be dropped. There are no make-up quizzes and the coverage is cumulative. Opportunities for extra credit will be available on the required course field trip, and potentially on additional “optional” day trips. Course grades at Oregon Tech follow a “whole grade” structure:

A = 100-90%, B = 89-80%, C= 79-70%, D = 69-60%, F < 60%. Student performance will be assessed using the following criteria:

Component	% of grade
Lecture	35
Midterm	15
Final	20
Lab	65
Lab Quizzes (x 7, drop the lowest)	25
Lab Assignments	5
Lab Final	20
Plant Collection	15

General Details

Make up exams or deadline extensions are issued only for university-excused absences. There are no early exams or extra credit. Late assignments are penalized 20% per day overdue.

Policy on contesting grades: I like to consider my classroom a democratic monarchy. I am the first to admit that I am not perfect- I may grade something incorrectly, or there may be more than one right answer that I have not thought of. Thus, I encourage you to contest your grade if you feel your answer falls into one of those categories. If you feel your answer was graded incorrectly on a test, quiz, or other assignment, you have **one week** after the test is returned to contest. You must return your original assignment with a typed statement of why you think your answer is correct and why we should consider it for regrading.

Student success center: <http://www.oit.edu/current-students/student-support>

The Student Success Center provides a wide range of student support services including Testing Services which promotes academic success by working with faculty by providing testing services for any of the OIT academic courses as well as specialized testing services such as those needed for accommodations for students with disabilities, in-class test proctoring, and a computer lab, and Career Services which offers career advising, resume writing, job interviewing workshops, job search assistance, career fairs, and job listings.

Testing services: 541-885-1791

Career services: 541-885-1020

Peer consulting services: <http://www.oit.edu/current-students/student-support/tutoring> Peer Consulting is a **completely free** academic support service available for all students of Oregon Tech. Peer Consultants are typically Oregon Tech students who have taken the same classes you have and have earned a B or better in their areas of expertise. We often have professors and staff that offer their time and assistance in the Center as well. Our goal is to provide assistance in all areas, majors, and courses offered at Oregon Tech. Peer Consulting reinforces what you are learning in your classes, fosters your sense of community and strengthens intercultural communication. Peer Consulting helps empower you to become successful in your academic career and reach your graduation goal. **Office:** LRC 233 **Tel:** 541.851.5236

Disability services: If you have a physical, learning, sensory or psychological disability and require accommodations, please let me know as soon as possible. You will need to register with and, in most cases, provide documentation of your disability to Disability Services. Please contact Erin Ferrara, Coordinator of Disability Services at (541) 851-5227 or erin.ferrara@oit.edu . Disability Services is located in the LRC room 229.

Statement on recording lectures and in-class discussions: Please be advised that this class may be recorded. HOWEVER, if you would like permission to record this class you must speak with the professor prior to making any recordings.

The honor code: cheating and plagiarism are strictly enforced in this course. Students may work together on assignments and projects, but each individual is expected to contribute equally, not rely on the work of others. Students caught cheating will receive a zero on the exam or assignment and be reported to student services. www.plagiarism.org for more info.

Plagiarism means to:

- to steal and pass off (the ideas or words of another) as one's own
- to use (another's production) without crediting the source
- to commit literary theft
- to present as new and original an idea or product derived from an existing source

All of the following are considered plagiarism:

- turning in someone else's work as your own
 - copying words or ideas from someone else without giving credit
 - failing to put a quotation in quotation marks
 - giving incorrect information about the source of a quotation
 - changing words but copying the sentence structure of a source without giving credit
- copying so many words or ideas from a source that it makes up the majority of your work, whether you give credit or not (see our section on "fair use" rules)

Tentative Course Schedule

This is a tentative schedule of topics; it is subject to change due to phenology of plants. Check your OIT email, blackboard or come to class to get updates from your instructor as the quarter progresses. *The quiz, midterm, weekend field trips, and final dates will not change.*

WEEK	DATE	TESTING	TOPICS
1	28-Mar 30-Mar		Introduction to course Plant terminology and plant classification Lab: Vegetative and Reproductive Morphology (No families covered)
2	4-Apr 6-Apr	Quiz 1	Plant terminology II, Introduction to Jepson Manual & introduction to gymnosperms Lab: Gymnosperms
3	11-Apr 13-Apr	Quiz 2	Introduction to lichens Field trip: lichen identification, location TBD
4	18-Apr 20-Apr	Quiz 3	Introduction to floral formulas; plant families TBD Field trip: on campus plant identification & collection
5	25-Apr 27-Apr	Quiz 4	Plant families TBD Field trip: Link River Trail & Moore Park
6	2-May 4-May	Quiz 5 Midterm	Plant families TBD
7	9-May 11-May 14 - 15 May	Quiz 6	Plant families: TBD; field trip planning No lab or field trip today- time to prepare for field trip Overnight weekend field trip
8	16-May 18-May	Quiz 7	Graminoids, with an emphasis on Poaceae, grassland plant communities Field trip: Cascade-Siskiyou National Monument
9	23-May 25-May		Special Status plants & Conservation Biology; free time to key plants and work on plant collections Free time to key plants and work on plant collections
10	30-May		No class: Memorial Day holiday
		Lab Final Plant Collection Due	
	1-Jun		
FINAL	6-Jun	2-4 pm	

List of plant families you will learn in BIO313:

It is my goal to teach you the characteristics of the major vascular plant families of the region. You will be responsible to know the key characteristics of the following families. Additionally, you will be responsible for knowing by sight the identification of select genera (the list of genera will be developed throughout the quarter).

Eudicots

Aizoaceae

Amaranthaceae

Anacardiaceae

Apiaceae

Apocynaceae

Asteraceae

Betulaceae

Boraginaceae

Brassicaceae

Caprifoliaceae

Caryophyllaceae

Chenopodiaceae

Convolvulaceae

Cornaceae

Crassulaceae

Cucurbitaceae

Droseraceae

Ericaceae

Fabaceae

Fagaceae

Geraniaceae

Grossulariaceae

Hypericaceae

Lamiaceae

Lauraceae

Limnanthaceae

Malvaceae

Montiaceae (Portulacaceae)

Onagraceae

Orobanchaceae (formerly part of
Scrophulariaceae- contains *Castilleja*,
Orthocarpus, & *Cordylanthus*)

Eudicots, cont.

Oxalidaceae

Papaveraceae

Phrymaceae (formerly part of

Scrophulariaceae- contains *Mimulus*)

Plantaginaceae (now includes much of

Scrophulariaceae, including *Penstemon*,

Digitalis, *Collinsia*, & still *Plantago*)

Platanaceae

Polemoniaceae

Polygonaceae

Ranunculaceae

Rhamnaceae

Rosaceae

Rubiaceae

Salicaceae

Sapindaceae (Aceraceae)

Saxifragraceae

Violaceae

Vitaceae

Monocots

Alliaceae

Cyperaceae

Iridaceae

Juncaceae

Liliaceae

Orchidaceae

Poaceae

Themidaceae (formerly Liliaceae, sensu
lato)

Typhaceae

Gymnosperms

Cupressaceae

Pinaceae

Taxaceae