

## **BI 448/548 FIELD BOTANY**

**Summer 2021 'Remote'**



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**Live Sessions:** MTWR 9:00 - 11:20. <https://uoregon.zoom.us/j/95700369076>

### **COURSE GOALS**

Learn to make accurate and precise observations and measurements of biological specimens and systems.

Recognize patterns of biodiversity.  
Gain confidence identifying organisms.

### **COURSE OBJECTIVES**

Through lectures, laboratories, field trips, and scholarship you will learn:

1. How to describe and classify plant diversity
2. Identification of plants using dichotomous keys
3. Recognition of common angiosperm and gymnosperm families
4. Recognition of local flora
5. Field sampling methodologies
6. Collecting and preparing botanical specimens
7. Plant ecology

### **COURSE FORMAT**

There will be lots of self-directed, guided exploration, there will be opportunities for live whole-course interactions, there will be opportunities for one-on-one help sessions, I will do my best to facilitate study groups and lab-partners. You will go outside (safety permitting – given that we are not all in the same geographical location, it may not be safe for everyone to go outside to look at plants, please use common sense and good judgement, and put your and your community's safety first. Let me know

ASAP if this will be a challenge for you and I will work with you to come up with alternative assignments), you will look at plants, you will draw plants, you will learn a new vocabulary.

I will offer an interactive Zoom session most days (Monday – Thursday) that will be recorded and available on-demand (for those that cannot attend). These will include lectures, introductions to the activities, group discussions, Q&A sessions, and more!

### **Note on the Context of this Course (COVID-19)**

Welcome to Field Botany! I am so glad that you are interested in this class. It is one of my favorite classes to teach, and one of the main reasons that I went into teaching as a profession. I never thought that I would have to do it online, but we actually had a pretty good time last summer, so I am optimistic.

I want to acknowledge that we are all experiencing things outside the bounds of normalcy and that each of us are being stressed in ways that we have not entirely anticipated. This impacts our learning communities as much as any other aspect of our lives. I urge us all to remember that we did not sign up for this. Not for the sickness, not for the quarantine, not for being forced into taking online classes. We will get through this though, by prioritizing each other as human beings, by prioritizing simple solutions that work for the most people, and by sharing resources and communicating clearly. We will remain flexible and adjust to the situation as needed. **Everyone needs support and understanding** in this unprecedented moment.

I want you to know that **I stand in firm solidarity with those that are demanding social justice**. I realize that the events of the last year are impacting each of you in unique ways, some of which may be difficult for others to understand. I am doing my best to encourage inclusivity and understanding around the unique issues faced by our black students and other students of color, and **I encourage all of us to extend an extra measure of kindness and care to each other** as we collectively seek a more unified community.

In light of everything, I want you to know that I am open to working with you on a range of accommodations to help you feel successful in our class. Please **contact me early with any anticipated issues**, it will be easier for me to help you if it does not become a last-minute emergency.

The good news is that at this point most of us have some experience with ‘remote’ courses, and now we know what we are signing up for. I plan on encouraging active collaboration and discussion in this course, and encourage everyone, as much as possible, to attend the remote meeting sessions on Zoom. We will work on projects in small groups and discuss material as a class. It is my understanding that even when this pandemic is ‘over,’ the nature of work may be changed forever. As someone that has led international, multi-institution, research endeavors, I can appreciate how some of the remote collaboration skills that we are developing together could be very useful in a variety of post-pandemic applications.

This course usually meets for two, 4-hour-long workshops, and one 10-hour field trip EACH WEEK. Obviously this is difficult to emulate. I have opted to go for the shorter, but more frequent sessions because I am quite sure that no one will want to spend ten hours on Zoom! I want you to know that you will be expected to put in significant time to succeed. This class usually has 18 hours of face-to-face contact per week. I suspect that you will do well to budget **AT LEAST 20 HOURS PER WEEK** for this class, in order to succeed and thrive.

I intend to facilitate a learning experience that will be of value to you in a post-pandemic world. I truly believe that the awareness and the skills that we will develop together this term will go a long way toward **promoting a more sustainable and resilient world**, whatever the future holds.

*“If there’s any good to come of it, I’m trying to think of it as a reminder that despite our illusions of human exceptionalism, natural processes are still in charge, and (of) the importance of our collective responsibilities toward one another.”*

- Robin Kimmerer on the COVID-19 pandemic

## COURSE MATERIALS

Textbooks a may be purchased through [UODuckStore.com](http://UODuckStore.com); print materials will be shipped free to UO students.

### REQUIRED BOOKS & SUPPLIES:

Franklin J.F. & C.T. Dyrness. 1988. Natural Vegetation of Oregon and Washington. OSU Press. Corvallis, OR. (**PDF available on Canvas**).

Gilkey, H. and L. Dennis. 2001. Handbook of Northwestern Plants Revised Edition. OSU Press. ISBN 978-0870714900

Rost, T.L., M.G. Barbour, C.R. Stocking, T.M. Murphy. 2015. Plant Biology. Free Access Edition. (**PDF Available on Canvas**).

**“Botany Kit”**: 10X hand lens, probe, forceps, retractable razor knife, metric ruler, drawing paper and pencils/pens, ziploc bags (qt.& gal.) for keeping things dry and for collecting samples, a Rite-in-the-Rain notebook and pencils (pen is not water resistant!). Newspaper and cardboard for drying plant specimens.

### REQUIRED TECHNOLOGY

It is expected that you will have access to a computing device that will allow you regular access and use of the following technologies. *If you face Internet access challenges: computer labs are open for students at the Eugene campus. Some companies are offering free access during this challenging time. To learn more about options visit Information Services' [web page on going remote](#).*

**Access to Canvas.** We will be using Canvas daily for content delivery, communication and assessment. If you have questions or concerns about accessing and using Canvas, visit the [Canvas support page](#). Canvas and Technology Support also is available by phone or live chat: 6 a.m.–12 a.m. 541-346-4357 [livehelp.uoregon.edu](http://livehelp.uoregon.edu)

**Access to Zoom.** We will have three live Zoom sessions each week. It will be very useful for you to learn how to navigate this technology. Please plan to either have your video turned on when you join Zoom, or post a photo as an avatar.

**An iNaturalist account and a camera** (phone ok). You will be responsible for contributing 20 observations to our course project.

**Join our Slack workspace** to facilitate real-time and asynchronous communication and collaboration. Slack was designed for business communications, not FERPA compliance, communication about sensitive student information, including grades, should take place on another platform.

**Google Docs** may be used for collaboration.

**A Camera** (phone ok) or a scanner to submit drawings.

### RECOMMENDED (but optional) RESOURCES:

Harris, J.G. and M.W. Harris. 2001. Plant Identification Terminology: An Illustrated Glossary. 2nd Ed. Spring Lake Publishing. ISBN 978-0964022164

Pojar, A. and J. MacKinnon. 2004. Plants of the Pacific Northwest Coast. Revised Edition. Lone Pine Publishing. ISBN 978-1551050409

Jensen, E. 2010. Trees to know in Oregon. OSU Extension, Corvallis, OR.

Elpel, T.J. 2013. Botany in a Day. HOPS Press. ISBN 978-1892784353

Wildflower Search. Oregon Wildflower Search v.7.7. Updated Aug 21, 2019. (Free) <https://wildflowersearch.org/search?page=Apps>

High Country Apps. Oregon Wildflowers v.9.02. Updated May 27, 2020. (\$9.99) <http://www.highcountryapps.com/OregonWildflowers.aspx>

**ASSESSMENTS\***

<b>Assessment</b>	<b>#</b>	<b>Each</b>	<b>Total</b>
Pre-course Survey	1	5	5
Daily Reading Quizzes	15	5	75
Labs	14	15	210
Discussion Posts	4	15	60
Midterm Practical	1	100	100
Midterm Exam	1	100	100
Plant Collections	10	20	200
Field Notebooks	10	4	40
Final Practical	1	100	100
Final Exam	1	100	100
Final Reflection	1	10	10
<b>TOTAL</b>			<b>1000</b>

**\*Graduate students** must also complete an additional independent project in order to receive 500-level credit. This will be based on a discussion about your research themes and goals that will take place within the first week of the term. ***Please contact me to arrange a meeting.***

***Due dates on assignments are meant to keep you on track. I recommend following them as much as possible, but I will accept all work for each week up through the end of the day on Sundays.***

**Pre-Course Survey**

This short survey is designed for me to get to know a little bit about you, your background, and any special opportunities or potential challenges that your unique situation may present during this course.

**DRQs**

**Daily Reading Quizzes** are intended to keep you up-to-date and on track with the course materials. All readings are included on the Course Schedule. These quizzes will be untimed. You are welcome to discuss your ideas with other students, but you should do your own work and not simply get answers from other students.

**Labs**

There will be ~4 lab activities each week. They will be based on the material in the readings and lectures. You can work on these at your own pace on your own time. I will always post them before our regularly scheduled lab meetings and you will have until that night to submit your work. Work will be accepted until the end of the week.

**Discussion Posts**

You will be required to post to a course-wide discussion board at four specific points in the term. You will also be required to respond to someone else's post (for all four discussions). This will hopefully lead to the kind of intellectual interactions that would normally take place in a physical classroom.

**Practicals**

The mid-term (due 7/4) and final (7/17) practicals will ask you to describe morphological features, identify plant species, or recognize plant families, based on images provided. Thoughtful completion of the lab activities and studying the lecture material will prepare you for these exams. You are expected to do your own work. You will have limited time to complete them once you start. Points will be deducted for misspelling.

**Exams**

Both the midterm (due 7/4) and the final (due 7/17) exams will be standard written exams, with a range of multiple choice, matching, true/false, fill-in-the-blank, and short answer questions. They will cover subjects and vocabulary presented in lecture or lab, whether that material is in the textbook or not. Furthermore, you are expected to know what is in the assigned reading, even if we don't cover that material in lab or lecture. Exams will be taken as 'Quizzes' on Canvas and will be timed. You are expected to do your own work.

**Plant Collections**

As a way to get you out and identifying plants on your own, you will be responsible for making plant collections. Each student will be responsible for submitting (images of) ten dried, mounted and labelled specimens at the end of the term. These should all be correctly identified. Photos of the plant, in-situ, as well as of the dried specimen will be posted to the iNaturalist citizen science platform. Further details will be available in the Assignments section of Canvas.

**Field Notebooks**

You will be expected to keep a field notebook as you make and document your collections. Images of your field notes will be uploaded to Canvas. Further details will be available in the Assignments section of Canvas.

**Final Reflection**

This will be a short reflective survey on your experience in this course. You will be graded on thoughtfulness and completion, not content.

**SCHEDULE**

<b>WEEK</b>	<b>DATE</b>	<b>TOPIC</b>	<b>READING</b>	<b>Assignments</b>
<b>1</b>	6/21	Introduction to Field Botany & Plant Taxonomy	Rost Ch. 1 & 18	Pre-Course Survey; DRQ 1; Discussion Post 1
<b>1</b>	6/22	Dichotomous keys ( <b>Lab 1</b> )	Harrington 1985; Gilkey pp.1-6	DRQ 2
<b>1</b>	6/23	Making plant collections ( <b>Lab 2</b> )	'The use and methods of making an herbarium specimen'; 'MOBOT Field handbook'	DRQ 3
<b>1</b>	6/24	Vegetation sampling methods ( <b>Lab 3</b> )	Clarke 2009	DRQ 4
<b>2</b>	6/28	Ferns ( <b>Lab 4</b> )	Rost Ch.23	DRQ 5

2	6/29	Conifers ( <b>Lab 5</b> )	Rost Ch.24; Waring 1982; Gilkey pp.37,44	DRQ 6
2	6/30	Angiosperms ( <b>Lab 6</b> )	Rost Ch.25	DRQ 7
2	7/1	Plant Families (Liliaceae, Iridaceae, Orchidaceae, Ranunculaceae, Saxifragaceae, Rosaceae, Fabaceae, Apiaceae, Ericaceae, Boraginaceae, Lamiaceae, Scrophulariaceae, Asteraceae) ( <b>Lab 7</b> )	Gilkey pp. 65,80,83, 144,189,205,223, 283,299,338,345,356,399; Kelch 2002; Olmstead 2002.	DRQ 8; Discussion Post 2; Mid-term Exam and Practical.
3	7/5	<b>NO CLASS</b>	<b>Independence Day</b>	
3	7/6	Pacific Northwest Plant Ecology ( <b>Lab 8</b> )	Rost Ch. 26 & Ch. 27; Franklin Ch. 1, pp. 38-43, Ch. 3, pp. 53-58	DRQ 9
3	7/7	Coast ( <b>Lab 9</b> )	Franklin pp. 58-63 pp. 291-300	DRQ 10
3	7/8	Coast Range ( <b>Lab 10</b> )	Franklin pp. 70-88 ( <i>Tsuga heterophylla</i> zone)	DRQ 11; Discussion Post 3
4	7/13	Willamette Valley ( <b>Lab 11</b> )	Franklin Ch. 5	DRQ 12
4	7/14	West Cascades ( <b>Lab 12</b> )	Franklin pp. 70-88 ( <i>Tsuga heterophylla</i> zone), 93-101( <i>Abies amabilis</i> zone)	DRQ 13
4	7/15	High Cascades ( <b>Lab 13</b> )	Franklin pp. 101-109 ( <i>Tsuga mertensiana</i> zone), 248-250, 269-270	DRQ 14
4	7/16	East of the Cascades ( <b>Lab 14</b> )	Franklin pp. 160-185, 234-239	DRQ 15; Discussion Post 4; Final Reflection; Final Exam and Practical.

### ON (OR OFF) CAMPUS RESOURCES

#### **Accessible Education Center (AEC)**

The University of Oregon is working to create inclusive learning environments. If there are aspects of the instruction or design of this course that result in barriers to your participation, please notify us as soon as possible. You are also encouraged to contact the [Accessible Education Center](#). If you are not a student with a documented disability, but you would like for us to know about class issues that will impact your ability to learn, contact us so that we can strategize how you can get the most out of this course.

In order to promote social distancing to limit the spread of COVID-19, the Accessible Education Center is currently operating remotely. They are available Monday-Friday 8am-5pm by calling (541) 346-1155 or emailing [uoaec@uoregon.edu](mailto:uoaec@uoregon.edu). Appointments can be made by calling, emailing, or completing our [online scheduling form](#).

Appointments are available by **phone or by computer/smartphone using Microsoft Teams**. **Teams is free to the UO community**. For more information, please visit the [UO Teams Download Instructions](#). **Support will also be available through email and a text-based chat window.**

### **Center for Multicultural Academic Excellence (CMAE)**

Promoting student retention and persistence for historically underrepresented and underserved populations. Programs and services that support retention, academic excellence, and success at the UO and beyond. Committed to all students, including undocumented and tuition equity students.

[cmae@uoregon.edu](mailto:cmae@uoregon.edu).

All CMAE advising services will be offered remotely. If you are feeling uncertain or unsure regarding spring term, please connect with us, we are still here providing you support. **To schedule an appointment**, log into Navigate with your Duck ID: <http://uo.campus.eab.com> or call the front desk at 541-346-3479. You can also access the CMAE Advising Helpdesk live Chat Monday-Friday from 10am-12pm & 1pm-4pm.

### **Counseling Center**

The Counseling Center provides students with confidential consultation 24 hours a day, 7 days a week. Their number is 346-3227. Students often believe that their issues are not “severe” enough for them to call, but at the Counseling Center, no problem is too small. <https://counseling.uoregon.edu/>.

If you’re unable or don’t wish to come to the Counseling Center in person, help is still available. Our after-hours support/crisis line is open to all students, wherever you are located. Call 541-346-3227 when the Counseling Center is closed to speak to a therapist. Counseling Center staff can help you figure out how to find mental health services in your area. Call 541-346-3227 during business hours to schedule a consultation with a case manager. We are working to provide telemental health (video) sessions to students physically located in Oregon and California soon. Updates will be posted to [this website](#) when available, or call for more information.

## **COURSE POLICIES**

### **Academic Integrity**

All students are expected to complete assignments in a manner consistent with academic integrity. Students must produce their own work and properly acknowledge and document all sources. Students can find more complete information about the University of Oregon’s Policy on Academic Dishonesty in the [student conduct code](#) (located at [dos.uoregon.edu/conduct](http://dos.uoregon.edu/conduct)).

### **Inclusiveness**

Open inquiry, freedom of expression, and respect for difference are fundamental to a comprehensive and dynamic education. We are committed to upholding these ideals by encouraging the exploration, engagement, and expression of divergent perspectives and diverse identities.

### **Communication**

In general, our class will communicate through our Canvas site. Announcements and emails are archived there and automatically forwarded to your UO email, and can even reach you by text. Check and adjust your settings under Account > Notifications. I will have a running Discussion forum on our Canvas site called “Question Board” for the entire group to ask and answer.

I will try to make myself as available as possible for questions related to course material. However, I ask that you pose questions to fellow students first, you can do this through Canvas. If it pertains to course administration, **double-check the syllabus and Canvas**. If you email after regular business hours you may not hear back from me until the next day. ***Please include “BI 448 (BI 548)” in the subject line of all emails.***

**Prohibited Discrimination and Harassment**

UO is committed to providing an environment free of all forms of prohibited discrimination and harassment, including sex or gender based violence. As an instructor, one of my responsibilities is to help create a safe learning environment for my students and for the campus as a whole. Students experiencing any form of prohibited discrimination or harassment may seek further information on [safe.uoregon.edu](http://safe.uoregon.edu), [respect.uoregon.edu](http://respect.uoregon.edu), [titleix.uoregon.edu](http://titleix.uoregon.edu), or [aaeo.uoregon.edu](http://aaeo.uoregon.edu) or contact the Title IX office (541-346-8136), Office of Civil Rights Compliance office (541-346-3123), or Dean of Students offices (541-346-3216), or call the 24-7 hotline 541-346-SAFE for help.

“Without the name, any flower is still more or less a stranger to you. The name betrays its family, its relationship to other flowers, and gives the mind something tangible to grasp.”

*- John Burroughs*