

DENDROLOGY

FOR 241B (CRN: 11776) 3 Credits

Winter 2019

Instructor: Dr. Rebecca Franklin
Office: Cascades Hall 207
Office hours: Wednesday 1:00 – 3:30 pm
Thursday 1:00 – 3:30 pm
(or by appointment)
Email: rfranklin@cocc.edu
Phone: 541-330-4378

Lecture: Tuesday + Thursday
Time: 8:30 – 9:50 am
Location: CAS 201
Final: Thursday, March 21st, 2019
8:00 – 10:00 am
CAS 201

Required texts: Textbook of Dendrology. Hardin, Leopold, Whiter. Ninth Edition. McGraw Hill.
ISBN: 0-07-366171-6

Optional texts: Manual of Oregon Trees & Shrubs. Jensen, Randall, Keniston + Bever. Tenth Edition
(Read pp 1-36 for 1st week)

Botany Coloring Book. Young. ISBN 9780064603027 (text is used in FOR 240A Forest Ecology)

Western Trees: Peterson Field Guides. G. + O. Petrides. National Audubon Society
ISBN: 0-395-90454-4 (you can read pp 1-17 for first class)

Course description: Covers identification, classification and distribution of plant communities (tree, shrub, forb and grass) found within Oregon and major North American plant communities. This class covers in lecture format the structure and function of the primary organs and tissues that comprise woody plants. This course is the classroom complement to FOR 241A (Field Dendrology). 241A and 241B need not be taken in any specific order.

Grade Structure:	<u>Item:</u>	<u>Quantity:</u>	<u>Points Ea.:</u>	<u>Total:</u>
	Collegiality/Participation	1	50	50
	Online Homework	9	10	80 (← lowest HW dropped)
	Group Presentation	1	40	40
	Section quizzes:	6	20	120
	In class activities	~4-6	15	60-75
	Personal Projects	3	20	60
	Final	1	100	100
	TOTAL POINTS			510-525 points

Grading:	<u>Grade</u>	<u>% of total pts:</u>	<u>Grade</u>	<u>% of total pts:</u>
	A	92 – 100	C+	77 – 78
	A-	89 – 91	C	70 – 76
	B+	87 – 88	D	60 – 69
	B	81 – 86	F	0 – 59
	B-	79 – 80		

Instructional Outcomes:

1. The student will use appropriate terminology to describe leaf and plant parts.
2. The student will be able to describe the different forested regions of the U.S.
3. The student will be able to list the major tree species of each forest region.
4. The student will be able to describe the major vegetation types of Oregon.
5. The student will be able to describe the biological classification system.
6. The student will be able to gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.
7. The student will be able to apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner.
8. The student will be able to assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Instructional Methods:

This course will be taught using a variety of methods including: lecture, class discussions, multi-media presentations, in-class activities, and written assignments.

HOMEWORK and CLASS ASSIGNMENTS

1. Online Homework:

An online homework is due before class each Tuesday. These will be worksheets or questions that will prepare you for the topics we discuss in class each week. Doing these will help you understand the concepts and will give you practice identifying terminology, plant parts, and species names.

2. Personal Project Assignments

Projects may entail collecting information or data as described in class and/or on Blackboard and then presenting that information in a brief, concise, but thorough report (or fill-in form, depending on the assignment) that gives the reader (me) a clear understanding of what you accomplished and learned.

Homework is generally due 1 - 2 weeks after it is assigned (due dates are indicated on your class schedule). **Late homework:** only one HW can be made up with PRIOR APPROVAL for half credit. If you do not notify me (or leave a message on my phone) you cannot do the makeup.

- HW assignments are due at the beginning of class on the dates indicated on the class schedule.
- Deductions: -10% for emailing without prior approval

3. In-class Activities:

Over the course of this class, we will break into groups to complete activities focused on the topic of the day. These activities will be brief and lower-stakes than your homework assignments and will give you a chance to review the information from lecture with your fellow classmates.

4. In-class Questions:

I will ask questions in class you should be able to answer from the reading or previous lectures. This goes towards your collegiality and participation points. **Stay up on your readings each day!** I will call on students from a class list. These questions may show up on quizzes or tests, so keep your answers to these questions with your class notes and use them for studying later.

VOCABULARY and TERMINOLOGY:

A. Dendrology concepts and vocabulary words

The following is a list of vocabulary words to study and know for lab and lecture. You will see these words on your XC questions, quizzes, midterm, and final exams!

angiosperm	extrinsic variation	intraspecific	plasticity
biome	genotype	intrinsic variation	province
community	gymnosperm	native	rain shadow
clone	hybrid	natural range	succession
dimorphic	indicator species	nomenclature	vascular plant
exotic	interspecific	phenotype	

B. Plant Characteristics Terminology:

Acicular	Decussate	Lobed	Revolute
Acuminate	Dehiscent	Monoecious	Scale-like
Alternate	Deltoid	Node	Sepals (calyx)
Annual	Dioecious	Opposite	Serrate
Arcuate	Doubly serrate	Ovate	Simple
Aril	Elliptical	Palmate	Simple
Awl-like	Entire	Peduncle	Spike
Biennial	Evergreen	Perennial	Spinose
Blade	Glandular	Perfect	Spiral
Bud (terminal vs. lateral)	Glaucous	Persistent	Spur shoot
Catkin or ament	Head	Petals (corolla)	Stamans
Complete	Herbaceous	Petiole	Staminate
Compound	Imperfect	Pinnate	Stellate
Compound	Incomplete	Pistil	Stipule
Cone	Indehiscent	Pistillate	Stomatal bloom
Cordate	Internode	Pith	Tolerant/Intolerant
Cyme	Involucre	Pubescent	Tomentose
Deciduous	Lanceolate	Raceme	Whorled
	Linear		Woody

PREPAREDNESS AND POLICIES → Read this thoroughly!

- 1. We may venture outdoors** – I will let you know if and when days these will be. You should be adequately dressed for the conditions, and having any required equipment indicated by the instructor. **Cold, wet, snowy weather may occur throughout the ENTIRE duration of this class –be prepared!**
- 2. Attendance and missing labs and quizzes:** Effective learning in this course is heavily dependent on your presence in class. You are expected to attend both lab and lecture. Excessive absenteeism WILL affect your grade. If you miss class, it is your responsibility to notify me in person or by phone message and to make arrangements to make up lab work or assignments missed due to an absence (in some cases of emergency this may not be possible). If you are going to miss an exam I need to know about it in advance even if it is the day of the exam. Leave a message! Important because **there will be NO MAKE UP EXAMS without prior notice!**
- 3. Final Exam:** The date, time and location of your final exam is printed here in the syllabus. You will be made aware of this information on the first day of class, which gives you 2 ½ months advance notice as to when and where the final will be taking place. Exam time is not something that is subject to negotiation to fit student's convenience or personal plans. Exam times will be changed only for serious and compelling reasons, by petition and consent of instructor and department chair. **NOTE: seasonal jobs which begin before the end of finals week, or specialized training provided by agencies which occurs during finals week, does not constitute a serious and compelling reason. Discuss these conditions with your employer prior to accepting a job or agreeing to attend training.**
- 4. Learning Environment Behavior: Sexual harassment** in any form is not tolerated by COCC – refer to the posting on the Ponderosa bulletin board for definitions and assistance with sexual harassment complaints. **Professionalism:** students are expected to behave professionally at all times during class, extending all courtesies and considerations expected in a public forum. Breaches of professional conduct will affect your grade. This includes the use of vulgar language, any form of harassment or disruption of classmates, and the use of **cell phones** in the classroom. Failure to prevent your cell phone from ringing, vibrating, beeping, or otherwise disrupting the class will affect your professionalism grade. **First offense:** warning. **Second offense:** loss of points. **Third offense:** loss of full letter grade, or removal from the course. If you have questions regarding this policy or would like further clarification, please do not hesitate to see me.
- 5. Tobacco use: Tobacco use of any kind** is not permitted in COCC buildings, in the vans, or during field labs. If you cannot refrain from smoking or chewing during class, you will be asked to leave. **Violations of the tobacco policy will be treated under the professionalism policy spelled out above.**
- 6. ADA Statement:** Students with documented disabilities who may need accommodations, who have any emergency medical information the instructor should know of, or who need special arrangements in the event of evacuation, should make an appointment with the instructor as early as possible, no later than the first week of the term. Students any also wish to contact the COCC Disabilities Services Office in Boyle Education Center, Anne Walker awalker@cocc.edu, 541- 383-7743.
- 7. Insurance Statement:** Students are not covered by medical insurance while on campus or involved in college classes and activities. Students are responsible for their own medical and dental insurance coverage. Information on student insurance coverage can be obtained at the student health center in Grandview or at the cashier in the Boyle Education Center. If you have specific questions or concerns regarding student insurance coverage you should discuss them with the Instructor.
- 8. Plagiarism Statement:** All students are expected to practice the highest standards of academic honesty. Cheating on assignments, quizzes or exams or plagiarizing other people's work is unacceptable and may lead to a failing grade. Plagiarism is using, borrowing or stealing someone else's words or ideas without giving appropriate credit to the original author. This includes copying definitions and sentences from textbooks, other student's papers, the Internet or any other source. Students are expected to complete all assignments independently, unless it is a designated group project.
- 9. Physical Contact:** Due to the nature of this course, students are advised that physical contact between the instructor and student, or student to student may occur during class and lab. If you have concerns about these requirements, you are encouraged to discuss these with the instructor prior to the next class session to determine if appropriate alternative assignments exist. If you do not think you will be able to participate to the extent required by the course, you are encouraged to drop the course within the appropriate deadlines in order to obtain a refund.
- 10. Civil Rights:** COCC is an affirmative action, equal opportunity institution. Beth Wickham bwickham@cocc.edu 383-7290.

		Tuesday	Thursday
Wk1 01/08 + 01/10	Prep:	Review Blackboard site, syllabus and schedule	Hardin Ch 2, Jensen p 1-5 Online HW1! due <u>Fri night</u> (this week only)
	Topic:	Course overview and Dendrology in Resource Management	Taxonomy + Nomenclature + Classification
Wk 2 01/15 + 01/17	Prep:	Hardin Ch 2, Ch 3; Jensen p 1-5 HW 2	Hardin Ch 3; Jensen p 1-5
	Topic:	Taxonomy + Nomenclature + Classification	Section 1 Test: Terms, Nomenclature, History Botanical Terminology
Wk 3 01/22 + 01/24	Prep:	Hardin Ch 7: p 67-84, Ch 4 p 38-44. Jensen p 24-26. HW 3	Hardin Ch 7: p 67-84, Ch 4 p 38-44; Jensen p 8-18 Personal Project Assignment #1 (Dendro Resources) Due
	Topic:	Variation: Between + Within Species (Class Activity)	Vegetative Morphology
Wk 4 01/29 + 01/31	Prep:	Hardin Ch 5 HW 4	Hardin Ch 7: p 85-96. Jensen p 19-23.
	Topic:	Vegetative Morphology (Class Activity)	Section 2 Test: Veg. Morph. Reproductive Morphology
Wk 5 02/05 + 02/07	Prep:	Hardin Ch 7: p 85-96. Jensen p 19-23. HW 5	Hardin Ch 8: p 99-209. Jensen 27-28, 39-48. (Petrides "Plates 1-10" + p 18-74.)
	Topic:	→ Alternate meeting location: SCI BLDG 160 ← Reproductive Morphology (Class Activity)	Section 3 Test: Reprod. Morph. Gymnosperms
Wk 6 02/12 + 02/14	Prep:	Hardin Ch 8 p 99-209; (Petrides "Plates 1-10" + p 18-74)	Hardin Ch 8: p 99-209
	Topic:	Gymnosperms	Gymnosperms (Class Activity)
Wk 7 02/19 + 02/21	Prep:	Hardin Ch 9: 243-245; 384-401; 303-305; 311-317; Jensen p 262-268, (Petrides "Plates 11-51"). HW 7	Hardin Ch 9: 384-401; 303-305; 311-317; 359-361; 370-375 Personal Project Assignment #2 (Gymno/Angio Taxa Diagram) Due
	Topic:	Gymnosperms Review	Section 4 Test: Gymnosperms Angiosperms
Wk 8 02/26 + 02/28	Prep:	Hardin Ch 9: 303-305; 311-317; 359-361; 370-375 HW 8	(← same as Tues prep)
	Topic:	Angiosperms	Angiosperms (Class Activity)
Wk 9 03/05 + 03/07	Prep:	Reading on reserve at library: (Hendee et al p) HW 9	Hardin Ch 6; Jensen 269 – 281.
	Topic:	Section 5 Test: Angiosperms US Forest Regions	Forests and Provinces of Oregon Personal Project Assignment #3 (Western Forests) Due
Wk10 03/12 + 03/14	Prep:	Hardin Ch 6; Jensen 269 – 281. HW 10	Review study guide!
	Topic:	Forests and Provinces of Oregon (Class Activity)	Section 6 Test: Vegetation Regions CUMULATIVE FINAL REVIEW
FINALS WEEK		CUMULATIVE FINAL EXAM: Thursday, March 21st, 8:00 – 10:00 am	

"Hardin" = **Textbook of Dendrology**. Hardin, Leopold, Whiter. Ninth Edition. McGraw Hill. (ISBN: 0-07-366171-6)

"Jensen" = **Manual of Oregon Trees & Shrubs**. Jensen, Randall, Keniston + Bever. Tenth Edition

"Petroides" = **Western Trees: Peterson Field Guides**. G. + O. Petrides. National Audubon Society (ISBN: 0-395-90454-4)