

ADVANCED PLANT ECOLOGY COURSE INFORMATION**INSTRUCTOR**

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REACHING THE INSTRUCTOR

Office: Rm. 169, Science D

Office Hours: Wednesday 2:00-4:00; Friday 10:00-11:00; or by appointment.

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TEXTBOOKS AND READINGS

We will not use a textbook. Instead, readings will be held on reserve in the library. Several of these readings are chapters in textbooks, while others are journal articles.

COURSE GOALS

There are four main goals of this course:

1. Learn advanced concepts about how plants interact with their environment and other plants.
2. Learn advanced concepts about the potential explanations for the patterns of plants we see in nature.
3. Develop the skills to analyze and critique science.
4. Develop the skills to express ideas both orally and in writing.

GRADING

Grades will be based on exams, quizzes, writing assignments, and participation. All exams and quizzes are cumulative, in that ideas and topics developed since the beginning of the course are always testable.

Class participation will be partly based on your ability to be in class on-time. Consistently coming late will hurt your participation score.

Writing skills are essential in science, and in most every other discipline. You will be expected to work on developing your scientific writing skills during the class. Improvement and effort are as important as the quality of your work.

Final grades will be based on the traditional scheme of $\geq 90\% = A$, $\geq 80\% = B$, etc... I will consider individual cases for students with scores near boundaries.

POINTS:

Exam I	100 pts
Exam II	100
Final Exam	150
Synthesis paper:	
• 1-page synthesis idea	15
• Initial literature search	15
• Outline	20
• Draft paper	25
• Editing student paper	25
• Full paper	100
Discussions (2)	2 x 40 (80)
Plant accounts (8)	8 x 15 (120)
Modeling exercise	50
Quizzes, homework, etc...	?
Class Participation	<u>50</u>
TOTAL:	850+ pts

FIELD TRIPS

There will be two field trips (one 4-day trip and one 3-day trip). These field excursions, besides being fun (!), are mandatory for participation in Advanced Plant Ecology.

Trip 1: Sept. 20-23

Trip 2: Oct. 19-21

Field trips will include driving to various sites in northern California and southern Oregon, camping near the vehicle, hiking into various vegetation types, and conducting field exercises in plant ecology. We will be sleeping outside and you will be required to provide your own appropriate gear. Hazards such as heat, cold, sun, and poison oak will probably be encountered.

MISCELLANEOUS

MISSED EXAMS: If you need to take one of the exams on a different date, you must talk with me at least two weeks beforehand. Missed exams cannot be made up, other than in the case of emergencies.

MISSED QUIZZES: Same as for missed exams.

LATE ASSIGNMENTS: Assignments turned in late will be marked down 15% each day they are late. If you have circumstances which warrant a different due date, you must discuss this with me at least a week in advance.

CHEATING: If you cheat or plagiarize, you will lose all points for that exam or assignment, and the incident will be reported to the University.

EXAMPLE SYLLABUS

<u>DATE</u>	<u>ADVANCED PLANT ECOLOGY SCHEDULE</u>	<u>DUE</u>
Aug. 28	<i>Lecture:</i> Introduction	
Aug. 29	<i>Lecture:</i> Evolutionary ecology of plants	
Aug. 30	<i>Lecture:</i> Evolutionary ecology of plants	
Sept. 4	<i>Lecture:</i> Writing and reviewing a synthesis paper	
Sept. 5	Plant accounts presentations & <u>Discussion</u> of primary literature	2 Plant accounts
Sept. 6	<i>Lecture:</i> Rarity and extinctions	Synthesis idea
Sept. 11	<i>Lecture:</i> Conservation and small populations	
Sept. 12	Plant accounts presentations & <u>Discussion</u> of primary literature	2 Plant accounts
Sept. 13	<i>Lecture:</i> Population-landscape relationships	
Sept. 18	<u>Discussion</u> of primary literature – population-landscape issues	
Sept. 19	Prepping for the northern trip	
Sept. 20	Field trip (20 th -23 rd); we leave on Thursday morning.	
Sept. 25	<i>Lecture:</i> The role of matrix in managed landscapes	
Sept. 26	<u>Discussion</u> of student synthesis papers	Synthesis literature
Sept. 27	<u>Discussion</u> of primary literature – matrix in landscapes	
Oct. 2	<i>Lecture:</i> Invasive plants & plant pathogens	
Oct. 3	Plant accounts presentations & <u>Discussion</u> of primary literature	2 Plant accounts
Oct. 4	<i>Lecture:</i> Invasive plants & plant pathogens	
Oct. 9	EXAM I	EXAM I
Oct. 10	Plant accounts presentations & <u>Discussion</u> of primary literature	2 Plant accounts
Oct. 11	TBA	
Oct. 16	<u>Discussion</u> of primary literature – southern trip	
Oct. 17	<i>Lecture:</i> Modeling populations & Prepping for the southern trip	Synthesis outline
Oct. 18	Prepping for the southern trip; Field trip (19 th -21 st); leave Fri. am.	
Oct. 23	<i>Lecture:</i> Population viability analysis	
Oct. 24	<u>Discussion</u> of primary literature – modeling papers	
Oct. 25	<i>Lecture:</i> Stochasticity	
Oct. 30	TBA	
Oct. 31	Computer lab: Modeling exercise	
Nov. 1	<i>Lecture:</i> Empirical measures of stochasticity	
Nov. 6	<u>Discussion</u> of primary literature – modeling papers	
Nov. 7	Computer lab: Modeling exercise	
Nov. 8	TBA	Synthesis draft
Nov. 13	<i>Lecture:</i> Agroecology	
Nov. 14	EXAM II	EXAM II
Nov. 15	<i>Lecture:</i> Fire ecology	Model exercise (16 th)
Nov. 20/21/22	THANKSGIVING	
Nov. 27	<i>Lecture:</i> Fire ecology	
Nov. 28	Guest: Leonel Arguello; fire in Redwood National Park	
Nov. 29	<u>Discussion</u> of primary literature – fire ecology	Synthesis editing
Dec. 4	<i>Lecture:</i> vegetation science	
Dec. 5	Individual meetings about synthesis papers	
Dec. 6	Guest: John Sawyer (possible); Discussion of vegetation science	
Dec. 11	<i>Lecture:</i> TBA	
Dec. 12	Individual meetings about synthesis papers	
Dec. 13	<i>Lecture:</i> TBA	Full synthesis