BIOL 449/ES 425 – FLOWERING PLANT DIVERSITY

LECTURE OUTLINE SPRING 2019 TWF 9:30 CUNNINGHAM 146

Course Instructor: G. A. Allen office: Cunningham 218b
Lab Instructor: Rande Kanne office: Cunningham 210

Lecture	Date	Lecture
1.	Jan 8	An introduction to flowering plants
2.	Jan 9	Angiosperm structure and variation: Flowers
3.	Jan 11	Flowers (cont'd)
4.	Jan 15	Fruits
5.	Jan 16	Inflorescences; vegetative structures
6.	Jan 18	Vegetative structures (cont'd)
7.	Jan 22	A brief history of angiosperm classifications
8.	Jan 23	Nomenclature
9.	Jan 25	Keys, ID and herbaria
10.	Jan 29	Defining and describing species
11.	Jan 30	The hierarchy of classification: phylogenetic methods
12.	Feb 1	Molecular evidence in plant systematics
13.	Feb 5	Angiosperm groups: overview, ANA lineages, Magnoliids
14.	Feb 6	Monocots I
15.	Feb 8	Monocots II
16.	Feb 12	Monocots III
17.	Feb 13	Guest lecture
18.	Feb 15	Basal Eudicots
	Feb 18-22	**READING BREAK**
	Feb 26	**MIDTERM EXAM**
19.	Feb 27	Superrosids I
20.	Mar 1	Superrosids II
21.	Mar 5	Superrosids III
22.	Mar 6	Guest lecture
23.	Mar 8	Superasterids: Caryophyllales I
24.	Mar 12	Superasterids: Caryophyllales II
25.	Mar 13	Superasterids: Asterids I
26.	Mar 15	Superasterids: Asterids II
27.	Mar 19	Superasterids: Asterids III
28.	Mar 20	Plant reproductive modes and breeding systems
29.	Mar 22	Pollinators and pollination adaptations
30.	Mar 26	Plant polyploidy & hybridization I
31.	Mar 27	Plant polyploidy & hybridization II
32.	Mar 29	Plant biogeography
33.	Apr 2	Guest lecture
34.	Apr 3	Plant conservation
35.	Apr 5	Plant chemistry; course review

LABORATORY

The labs will introduce you to flowering plant diversity (variation in flowers and vegetative structures), the use of keys, and many plant families of this region.

PROJECTS

In addition to regular labs, you will be assigned two field-based lab projects:

1. A collection of **10 properly pressed** and **correctly identified** plant specimens.
2. An illustrated journal of flowering plant observations.

More information will be available in the first lab, and on the **course website**.

TEXTS

Lecture:

No text (references on reserve)

Lab:

C. L. Hitchcock and A. Cronquist. 2018. Flora of the Pacific Northwest, 2nd ed. This is a newly updated edition, with excellent geographic coverage and botanical keys for our area. The 1st edition (1973), though it has outdated nomenclature and lacks some species, is also usable for the lab.

J. G. Harris and M. W. Harris. 1994. Plant Identification Terminology (optional).

Copies of other regional floras will be available for consultation.

GRADING

Lecture:	Midterm Exam I	20%	
	Final Exam	30%	50%
Lab:	Quizzes	15%	
	Final Lab Exam	15%	50%
	Lab Projects 1 & 2	each 10%	

Letter Grade Scale:

A+	≥ 90%
A	85-89%
A-	80-84%
B+	77-79%
B	73-76%
B-	70-72%
C+	65-69%
C	60-64%
D	50-59%
F	< 50%

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