

Systematic Fruit and Seed Morphology

Bot 4935 (undergrad); Bot 6935 (grad)

Instructor: Steven Manchester steven@flmnh.ufl.edu

Credits: 2

Where, When: Face-to-face class will be held in CSE-A 101, Monday, Wednesday 8:30-9:20; Spring 2021

Goals: The purposes of this course are to gain experience in the recognition and identification of various plant families and genera by their fruit and seed characters, examine the morphological patterns established in different clades of flowering plants, and the consider the extent of convergence in the morphology of unrelated groups. At the same time, we will consider the evolutionary and ecological significance of different dispersal adaptations reflected in fruit and seed morphology. Both extant and fossil fruits and seeds representing a wide range of angiosperm families will be included.

Grading: Midterm and Final Exam (open book), term project required for grad students.

Course Format: Meets 2 hours per week. Combination of lectures, reading and observation of demonstration images and specimens in class. Discussion of relevant literature.

Tentative Schedule

<u>Week</u>	<u>Topic</u>
1	Introduction; Morphology and anatomy of fruits and seeds; functional morphology; ecological associations; Gymnosperm seeds
2	Anita grade Angiosperms I Amborella, Nymphaeales Anita grade Angiosperms II Austrobaileyales, Chloranthales
3	Magnoliids I. Canellales, Piperales, Laurales Magnoliids II. Magnoliales; seed dormancy types
4	Monocots I Monocots II
5	Monocots III
	Midterm exam
	Ceratophyllum, Ranunculales; Major fossil fruit and seed floras of the world and important literature
6	Eudicots: Sabiaceae, Proteaceae, Platanaceae, Trochodendrales, Buxales, Gunnerales, Dilleniaceae
7	Saxifragales, Vitaceae; Seed dispersal biology and ecology Fabids
8	Malvids; convergence in wind-dispersed fruits & seeds Asterids
9	Lamiids; oral presentations Campanulids, Review
10	Overview; oral presentations
	Final exam