

BOT 2710: Practical Plant Taxonomy

Fall, 2023

Course Syllabus and Information

Class Location & Time:

Lecture: Tuesday & Thursday 2nd period (8:30-9:20 AM), Bartram 211

Laboratory: 4 sections (Thurs. per. 6-8; Thurs. per. 10-12; Fri. per. 2-4; Fri. per. 6-8);
Rofls 105

Instructors: Drs. Doug Soltis & Pam Soltis, 301 Dickinson Hall; 273-1963 & 273-1964;
E-mail addresses: dsoltis@ufl.edu & psoltis@flmnh.ufl.edu

Office Hours: by appointment

Teaching Assistants: *Jose Esteban Jimenez Vargas* (jimenezvargas.je@ufl.edu); *Thomas Murphy* (tmurphy1@ufl.edu)

Herbarium: 379 Dickinson Hall. Herbarium library has useful books on plant systematics and identification and is open from 9:00 AM - 5:00 pm (closed during lunch). Request admittance at Front Desk of Dickinson.

Course Website: Course materials and related information will be posted on the course E-Learning (Canvas) website at <http://elearning.ufl.edu/>. You are responsible for all announcements made in class and/or posted on the course website for this course. Log in with your gatorlink userID and password.

- Textbooks:** (1) Judd et al. (2015) *Plant Systematics: A phylogenetic approach, Fourth Edition*. Sinauer Associates; Third Edition is also fine.
- (2) Laboratory Manual, available as a pdf on course website.
- (3) **Optional:** Castner, J. 2004. *Photographic Atlas of Botany*. (can also be obtained through lab, usually more cheaply)
- (4) **Optional:** Harris, J. G. and M. W. Harris. 2001. *Plant Identification Terminology: An Illustrated Glossary*. Spring Lake Publ.

The textbook for this course, *Plant Systematics: A Phylogenetic Approach*, is available as a short-term loan to check out for two hours at a time at the Marston Science Library. Please visit the service desk and ask for the course reserve item for BOT2710C.

Required equipment: Two dissecting needles, single-edged razor blades, forceps.
A 10X hand lens is optional.

Grading: Grade based on total of 600 points:

- 2 tests (100 points each)
- 10 lab quizzes (10 points each)
- lab notebook (50 points; due weekly)
- lab practical (50 points)
- final exam (100 points)
- 2 assignments (50 points each; details to come later)
- optional extra credit projects (*keying* - 15 points; *plant collection* - 15 points, based on a collection of 15 plants, pressed, dried, and identified, with labels, due on Monday of final exam week; see Appendix 2 of text for details of how to identify plants and prepare a herbarium specimen; *movie nights*; *other opportunities*)

All test questions come from information presented in lecture and lab, but READ YOUR BOOKS for context and further information.

Grading Scale:	90% or above	A, A-
	80-89%	B+, B, B-
	70-79%	C+, C, C-
	60-69%	D+, D
	59% & below	E, failing

Letter grades will be assigned following assessment of the distribution of scores, so these values are approximate.

Note that a C- will not be a qualifying grade for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). A C- average is equivalent to a GPA of 1.67, and it therefore does not satisfy this graduation requirement. For more information on grades and grading policies, please visit:

<http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>.

UF Counseling Services:

- Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:
 - UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, psychological and psychiatric services.
 - Career Resource Center, Reitz Union, 392-1601, career and job search services.
- Many students experience test anxiety and other stress related problems. “A Self Help Guide for Students” is available through the Counseling Center (301 Peabody Hall, 392-1575) and at their web site: <http://www.counsel.ufl.edu/>.

Honesty Policy:

- All students registered at the University of Florida have agreed to comply with the following statement: “I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University.”
- In addition, on all work submitted for credit the following pledge is either required or implied: “*On my honor I have neither given nor received unauthorized aid in doing this assignment.*”

- If you witness any instances of academic dishonesty in this class, please notify the instructor or contact the Student Honor Court (392-1631) or Cheating Hotline (392-6999). For additional information on Academic Honesty, please refer to the University of Florida Academic Honesty Guidelines at: <http://www.dso.ufl.edu/judicial/procedures/academicguide.html>.

Accommodation for Students with Disabilities:

- Students who will require a classroom accommodation for a disability must contact the Dean of Students Office of Disability Resources, in Peabody 202 (phone: 352-392-1261). Please see the University of Florida Disability Resources website for more information at: <http://www.dso.ufl.edu/drp/services/>.
- It is the policy of the University of Florida that the student, not the instructor, is responsible for arranging accommodations when needed. After notification, the Dean of Students Office of Disability Resources will work with the instructor to accommodate the student.

Outline of Topics

<i>Date</i>	<i>Topic</i>
August 24	Introduction to systematics (Ch. 1)
Lab 1	Intro to lab; Field techniques; tools of plant identification; keys, floras, monographs; trip to McCarty Woods; Boltaceae; phylogeny reconstruction; keys, floras, monographs (Appendix 2; Lab 1 and pp 8-10 of lab manual)
August 29	Nomenclature; principles of systematics; phylogenetics (Ch. 2, 3; Appendix 1)
August 31	Principles of systematics, phylogenetics continued (Ch. 2)
Lab 2	Herbarium tour (pp 8-10 of lab book, from Lab 2); Herbarium databases; Intro to georeferencing and use of georeferenced collection data
September 5	Molecular systematics (Ch. 5)
September 7	Species and speciation; hybridization and polyploidy (Ch. 6)
Lab 3	Ecological niche modeling; Molecular sequence alignment & phylogeny reconstruction
September 12	Introduction to the green plants (Viridiplantae) (Ch. 7)
September 14	Embryophytes, vascular plants, and seed plants: overview (Ch. 7)
Lab 4	Vegetative characters (Ch. 4; Lab 2 of lab book); Alternation of generations; Intro to embryophyte clades; One Tree One Planet app
September 19	Lycophytes (Ch. 8)
September 21	Ferns (Ch. 8)
Lab 5	Lycophytes, ferns; use and construction of keys (Lab 5 of lab book)
September 26	Gymnosperms: cycads, <i>Ginkgo</i> , Gnetales (Ch. 8)
September 28	Gymnosperms: conifers (Ch. 8)
Lab 6	Gymnosperms; key practice (Ch. 8; Lab 6 of lab book)
October 3	Angiosperms: overview and basal lineages (Ch. 9, appropriate sections)
October 5	Test 1 (through gymnosperms)
	NO LAB: HOMECOMING
October 10	<i>First Flower</i>
October 12	WeDigBio
Lab 7	Floral characters (Ch. 4, Lab 3 of lab book); Fruit characters (Ch. 4, Lab 4 of lab book); Basal angiosperms; WeDigBio
October 17	Angiosperms: magnoliids (throughout rest of semester: read corresponding sections from Ch. 9)
October 19	Eudicot angiosperms: Overview; Ranunculales, Saxifragales
Lab 8	Magnoliids, Ranunculales, Saxifragales

October 24 Eudicot angiosperms (rosids): Malpighiales, Cucurbitales

October 26 Eudicot angiosperms (rosids): Rosales, Fabales

Lab 9 Malpighiales, Cucurbitales, Rosales, Fabales

October 31 Eudicot angiosperms (rosids): Fagales, Myrtales, Brassicales

November 2 Eudicot angiosperms (rosids): Malvales, Sapindales

Lab 10 Fagales, Myrtales, Brassicales, Malvales, Sapindales

November 7 Eudicot angiosperms: Santalales, Caryophyllales

November 9 **Test 2** (through rosids)

NO LAB; HOLIDAY

November 14 Eudicot angiosperms (asterids): Cornales, Ericales, Solanales

November 16 Eudicot angiosperms (asterids): Gentianales, Lamiales, Apiales

Lab 11 Santalales, Caryophyllales, Cornales, Ericales, Solanales, Gentianales, Lamiales, Apiales

November 21 Eudicot angiosperms (asterids): Asterales

November 23 Thanksgiving

NO LAB; THANKSGIVING

November 28 Eudicot angiosperms (asterids): monocots

November 30 Angiosperms: monocots

Lab 12 Asterales, monocots

December 5 Angiosperms: monocots

FINAL EXAM: Friday, Dec. 15, 10:00 am -12:00 pm, place to be announced

LAB WEBSITE: e-learning; <http://elearning.ufl.edu/>

Log in with your gatorlink userID and password