

BOT 2710: Practical Plant Taxonomy

Fall, 2021

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: *Maria Beatriz de Souza Cortez* (mariacortez@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.

COVID-19

In response to COVID-19, the following practices are in place to maintain your learning environment, to enhance the safety of our in-classroom interactions, and to further the health and safety of ourselves, our neighbors, and our loved ones.

- If you are not vaccinated, get vaccinated. Vaccines are readily available at no cost and have been demonstrated to be safe and effective against the COVID-19 virus. Visit this link for details on where to get your shot, including options that do not require an appointment: <https://coronavirus.ufhealth.org/vaccinations/vaccine-availability/>. Students who receive the first dose of the vaccine somewhere off-campus and/or outside of Gainesville can still receive their second dose on campus.
- You are expected to wear approved face coverings at all times during class and within buildings even if you are vaccinated. Please continue to follow healthy habits, including best practices like frequent hand washing. Following these practices is our responsibility as Gators.
 - Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.
 - Hand sanitizing stations will be located in every classroom.
- If you sick, stay home and self-quarantine. Please visit the UF Health Screen, Test & Protect website about next steps, retake the questionnaire and schedule your test for no sooner than 24 hours after your symptoms began. Please call your primary care provider if you are ill and need immediate care or the UF Student Health Care Center at 352-392-1161 (or email covid@shcc.ufl.edu) to be evaluated for testing and to receive further instructions about returning to campus. UF Health Screen, Test & Protect offers guidance when you are sick, have been exposed to someone who has tested positive or have tested positive yourself. Visit the [UF Health Screen, Test & Protect website](#) for more information.
 - Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work.

- If you are withheld from campus by the Department of Health through Screen, Test & Protect you are not permitted to use any on campus facilities. Students attempting to attend campus activities when withheld from campus will be referred to the Dean of Students Office.
- Continue to regularly visit coronavirus.UFHealth.org and coronavirus.ufl.edu for up-to-date information about COVID-19 and vaccination.

Outline of Topics

<i>Date</i>	<i>Topic</i>
August 24	Introduction to systematics (Ch. 1)
August 26	Nomenclature; principles of systematics; phylogenetics (Ch. 2, 3; Appendix 1)
Lab 1	Intro to lab; Field techniques; tools of plant identification; keying; Boltaceae; phylogeny reconstruction; keys, floras, monographs (Appendix 2; Lab 1 and pp 8-10 of lab manual); phylogeny databases
August 31	Principles of systematics, phylogenetics continued (Ch. 2)
September 2	Molecular systematics (Ch. 5)
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 7	Species and speciation; hybridization and polyploidy (Ch. 6)
September 9	Introduction to the green plants (Viridiplantae) (Ch. 7)
Lab 3	Ecological niche modeling; Molecular sequence alignment & phylogeny reconstruction
September 14	Embryophytes, vascular plants, and seed plants: overview (Ch. 7)
September 16	Lycophytes (Ch. 8)
Lab 4	Vegetative characters (Ch. 4; Lab 2 of lab book); Alternation of generations; Intro to embryophyte clades; One Tree One Planet app
September 21	Ferns (Ch. 8)
September 23	Gymnosperms: cycads, <i>Ginkgo</i> , Gnetales (Ch. 8)
Lab 5	Lycophytes, ferns; use and construction of keys (Lab 5 of lab book)
September 28	Gymnosperms: conifers (Ch. 8)
September 30	Angiosperms: overview and basal lineages (Ch. 9, appropriate sections)
Lab 6	Gymnosperms; key practice (Ch. 8; Lab 6 of lab book)
October 5	Test 1 (through gymnosperms)
October 7	<i>First Flower</i>
	NO LAB: HOMECOMING
October 12	Angiosperms: magnoliids (throughout rest of semester: read corresponding sections from Ch. 9)
October 14	WeDigBio International Transcription Event
Lab 7	Floral characters (Ch. 4, Lab 3 of lab book); Fruit characters (Ch. 4, Lab 4 of lab book)
October 19	Eudicot angiosperms: Overview; Ranunculales, Saxifragales
October 21	Eudicot angiosperms (rosids): Malpighiales, Cucurbitales
Lab 8	Basal angiosperms, magnoliids, Ranunculales, Saxifragales, Malpighiales, Cucurbitales

October 26 Eudicot angiosperms (rosids): Rosales, Fabales
October 28 Eudicot angiosperms (rosids): Fagales, Myrtales, Brassicales
Lab 9 Rosales, Fabales, Fagales, Myrtales, Brassicales

November 2 Eudicot angiosperms (rosids): Malvales, Sapindales
November 4 **Test 2** (through rosids)
Lab 10 Malvales, Sapindales

November 9 Eudicot angiosperms: Santalales, Caryophyllales
November 11 Holiday

NO LAB; HOLIDAY

November 16 Eudicot angiosperms (asterids): Cornales, Ericales, Solanales,
November 18 Eudicot angiosperms (asterids): Gentianales, Lamiales, Apiales
Lab 11 Santalales, Caryophyllales, Cornales, Ericales Solanales, Gentianales, Lamiales,
Apiales

November 23 Eudicot angiosperms (asterids): Asterales
November 25 Thanksgiving

NO LAB; THANKSGIVING

November 30 Angiosperms: monocots
December 2 Angiosperms: monocots
Lab 12 Asterales, monocots

December 7 Angiosperms: monocots

FINAL EXAM: Wednesday, Dec. 11, 3:00-5:00, place to be announced

LAB WEBSITE: e-learning; <http://elearning.ufl.edu/>
Log in with your gatorlink userID and password