

# Syllabus PLS 3223L PLANT PROPAGATION LAB

Spring 2021; Class #20764,17635 Sections 408E,334C

## About your Instructor

*Title:* Erin Alvarez, Lecturer, M.S.

*Call me:* she/her, Erin, Ms. Alvarez, plant nerd

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*Office phone:* 352.294-1582

*Forwards to my cSell for calls but can't receive texts-check Canvas for my cell number and feel free to text, call, or send plant memes*

*Office location:* 2551 Fifield, Zoomoffice 4044988099

*Office Hours:* I'll be in my zoomoffice and available to meet there/by phone with no appointment needed Tuesdays 1-3:00. Other available times available at <http://erinalvarez.as.me>

## Course Objectives -

Upon completion of this course, students will:

1. Demonstrate knowledge of the science of plant propagation including the effects of plant physiological reactions, anatomical structure, and environmental influences on material used in plant propagation.
2. Explain effect of tissue selection, environment, and propagation method on propagule success.
3. Produce viable propagules from seeds and vegetative organs.
4. Apply audience-appropriate vocabulary of plant propagation verbally and in writing.

## Course Description

Methods of propagating by seeds, bulbs, divisions, layering, cuttings, budding, grafting and micropropagation in a hands-on environment.

## Course Organization

-Credits: 1; Prereq: BOT 2010C or BSC 2010; **Coreq: PLS 3223.**

-Lab this semester will be delivered via two sections, a "live" and "online" section. Both sections will:

- access coursework online via the same Canvas site and may combine for group work and other course activities
- have access to our Gainesville campus greenhouse facilities to grow propagules (after training)
- receive propagation kits and plant material to propagate and grow plants off campus at home or another location
- follow the same weekly course schedule at the same pace to keep up with lecture and scaffold labs
- need a way to take photos and/or video and post to Canvas, a reliable internet connection for course work

-The online section (408E) is asynchronous and won't meet regularly as a group at scheduled times

-The live section (334C):

- has time and space reserved each Thursday periods 3-4 (9:35-11:30am) for in-person and online meetings
- will meet live in person during selected class times for hands-on propagation work, in the potting shed and greenhouses (refer to course schedule)
- will be supported by online course material
- will not meet live in person every week; some weeks will be live online for discussions and presentations, some weeks will be asynchronous activities like virtual field trips to complete on your own time outside of our class period

## How to reach me

**Best:** texts, calls, video meetings, chats in Canvas or MS Teams, office hours, appts

**Second best:** Canvas emails

**The rest:** UF email, voicemails (we hates them as much as you do, precious), posts to Canvas discussions (good for general class input, not for a quick reply from me)

**Please no:** emails to my personal non-uf gmail or facebook dm (...how? ...why? no.)

## How to use office hours

Show up or text! If you're confused, I'll help. This is time I set aside on my calendar for you. You can ask questions, get explanations, talk plants, or just stare blankly (2 min stare limit if there's a line).

Lab Information	Class 17635, section 334C	Class 20764 Section 408E
Meeting time	Thursdays per 3-4 (9:35-11:30am)	None scheduled, asynchronous
Meeting location	PSF 4, potting shed, class greenhouse, online	Online, class greenhouse
Class delivery method	Asynchronous + synchronous, live + online	Asynchronous, online
Where you'll grow plants	Campus greenhouses, at home or another location of your choosing	

**Elearning Site (Canvas):** <http://eLearning.ufl.edu>. Logon with your Gatorlink credentials. Weekly readings, links to videos, grades, and the current syllabus can be found on the Canvas site.

**Course Textbook** (*lecture only, useful but not required for lab*):

Davies, Fred T., R.L. Geneve, and S.B. Wilson. 2018. **Hartmann and Kester's Plant Propagation: Principles and Practices. 9<sup>th</sup> Edition.** Pearson Education, Inc., London.

There is no course pack or text for this lab-resource sheets for each topic will be available on Canvas. For lab concepts we will rely on corresponding material from lecture.

**Absences and Make-up Work** –If you miss live discussions or material from class, it is often helpful to talk with another student to cover what you missed. If you have questions after talking with a peer, your TAs and instructor are here to help. It is imperative that you keep up with labs each week and attend live lab meetings, even if a friend or your fellow group members are present. Considering the current environment, all due dates will be Sundays by 11:59pm and are flexible based on student need-**however**, many activities in lab must be completed in sequence and/or on time, students who fall behind are often unable to complete the lab in a single semester. Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies, which may be found at:

<http://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

**Accommodations**

Wherever possible I try to design the course to be accessible for everyone. If I can do anything differently please don't hesitate to talk with me about it-let me know what I can do to make your learning experience more effective! The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation 0001 Reid Hall, 352-392-8565, <https://disability.ufl.edu/>

**Assessments & Grading** - For information on current UF policies for assigning grade points, see <http://catalog.ufl.edu/UGRD/academic-regulations/grades-gradingpolicies/>

**Assignments:**

PLS3223; The course is broken down into 300 possible points.

Lab quizzes (8 @ 10 pts each)	80 pts
Lab practical	45
Individual Propagation Protocol	100
Group Lab report (poster + presentation)	50
Field Trip Report	25
<b>Total</b>	<b>300</b>

- Lab quizzes (*8 @ 10pts each*) *80 points*: Lab quizzes for each topic listed will be available as shown on the course calendar, students will complete individually and resubmit until proficiency in the propagation technique is achieved. You must pass each lab quiz to sit for the lab practical.
- Lab practical *45 points*: The lab practical will be an individual live demonstration of propagation techniques covered in class. We will schedule these during final exam week based on student and instructor availability. To take the practical, you must pass all 8 lab quizzes.
- Individual Propagation Protocol (*3 stages @ 5, 10, 85 pts*) *100 points*: a research- and experiment-based propagation guide on the plant of your choice. Creativity encouraged! More information on Canvas!
- Field Trip report *25 points*: From at least three of our class virtual field trips (or physical/virtual trips to locations of your choice with instructor approval), summarize your experiences and give an assessment of how what you observed compares to what we learned in class this semester.
- Group Lab report (*poster 10pts + presentation 40pts*) *50 points*: Develop a presentation-style poster (examples below) as a group that showcases the work that you have done in lab. Groups may select a topic from lab experiments or a combination of IPP research efforts.
  - **Note:** Lab groups will be assigned at the beginning of the semester, and you will have the opportunity to work in groups most weeks for the duration of the semester. I encourage you to use your lab groups to study, share information and help with propagation procedures. Except where otherwise indicated, lab activities like

experiments, data collection, and lab reports may be completed as group projects-this enables the work of managing and recording your propagation experiment progress to be divided if you desire, but you must keep individual records as well. This will allow groups to pool data for more replications and allow for individual accountability. Communication is key, so stay in touch with your groups. Each group will also have its own area on canvas to allow you to communicate, share work, and receive feedback on assignments.

### **Due dates and Late Submissions**

**Due dates** – All assignments will be due by 5pm on a Friday unless otherwise indicated-due dates will be posted to Canvas. You may always submit earlier that week with no penalty.

**Grace Period-** You will have up to a 48-hour penalty-free grace period to submit assignments after the posted due date. No questions asked, no explanation needed, no maximum number of times. You may not submit an assignment later than 48 hours after the posted due date except by prior arrangement.

### **Course Grading Scale**

#### **By percentage**

A ..... 93.45-100	A- ..89.45-93.44	
B+. 86.45-89.44	B... 82.45-86.44	B-.. 79.45-82.44
C+ ..76.45-79.44	C.... 73.45-76.44	C- .. 69.45-72.44
D+.66.45-69.44	D... 62.45-66.44	D-.. 59.45-62.44

**Course feedback** - Each semester I use student input via chats, polls, and evaluations to improve my courses-I welcome your feedback during the semester and look forward to constructive comments both informally and formally via GatorEvals. Please note: course evaluations are a professional academic tool, not a social media post or Amazon review. Useful guidance on how to give feedback in a professional and respectful manner is available at [gatorevals.aa.ufl.edu/students/](http://gatorevals.aa.ufl.edu/students/). Students will be automatically notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via [ufl.bluera.com/ufl/](http://ufl.bluera.com/ufl/). Summaries of course evaluation results are available to students at [gatorevals.aa.ufl.edu/public-results/](http://gatorevals.aa.ufl.edu/public-results/).

**Academic Honesty** – As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.” You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/scr/process/student-conduct-honor-code>.

### **CAMPUS HELPING RESOURCES**

Students experiencing crises or personal problems that interfere with their general wellbeing are encouraged to utilize the university’s counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, [www.counseling.ufl.edu](http://www.counseling.ufl.edu)
- Counseling Services - Groups and Workshops - Outreach and Consultation - Self-Help Library - Wellness Coaching –
- U Matter We Care, [www.umatter.ufl.edu/](http://www.umatter.ufl.edu/)
- Career Connections Center, First Floor JWRU, 392-1601, <https://career.ufl.edu>
- Student Success Initiative, <http://studentsuccess.ufl.edu>

Student Complaints:

- Residential Course: <https://sccr.dso.ufl.edu/policies/student-honor-code-studentconduct-code>
- Online Course: <http://www.distance.ufl.edu/student-complaint-process>

### **Academic Resources**

- E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu).
- Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services [career.ufl.edu/](http://career.ufl.edu/)
- Library Support: [cms.uflib.ufl.edu/ask](http://cms.uflib.ufl.edu/ask) various ways to receive assistance with respect to using the libraries or finding resources.
- Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352-392-6420. General study skills and tutoring. [teachingcenter.ufl.edu/](http://teachingcenter.ufl.edu/)
- Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers. [writing.ufl.edu/writing-studio/](http://writing.ufl.edu/writing-studio/)
- Student Complaints On-Campus: [sccr.dso.ufl.edu/policies/student-honor-codestudent-conduct-code/](http://sccr.dso.ufl.edu/policies/student-honor-codestudent-conduct-code/)
- On-Line Student Complaints: [distance.ufl.edu/student-complaint-process/](http://distance.ufl.edu/student-complaint-process/)

### **Additional Useful Materials**

Beyl, C.A. and R.N. Trigiano, (Eds.). 2016. Plant propagation concepts and laboratory exercises, 2<sup>nd</sup> Ed. CRC Press, Boca Raton, FL.

Brickell, C., T. Cole, & E. McDonald, (Eds.). 1993. *The American Horticultural Society Encyclopedia of Gardening*. DK Publishing, Inc. New York, NY.

Capon, B. 2010. *Botany for Gardeners*, 3<sup>rd</sup> Ed. Timber Press.

Free, M. 1957. *Plant propagation in pictures: How to increase the number of plants in your home & garden by division, grafting, layering, cuttings, bulbs & tubers, sowing seeds & spores*. The American Garden Guild, Inc. and Doubleday & Co., NY.

Garner, R.J. 2013. *The Grafter's Handbook*, 6<sup>th</sup> Ed. Chelsea Green Publishing, White River Junction, VT.

Toogood, A. 1999. *American Horticultural Society Plant Propagation: The Fully Illustrated Plant-by-Plant Manual of Practical Techniques*

### **COVID Conditions from UF:**

We will have face-to-face instructional sessions to accomplish the student learning objectives of this course. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.
- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.
- 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.
- Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing COVID-19 symptoms (Click here for guidance from the CDC on symptoms of coronavirus), please use the UF Health screening system and follow the instructions on whether you are able to attend class. Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms.
- 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. Find more information in the university attendance policies.

## Class Schedule

*Subject to change! See Canvas for current final schedule, assignments, and dates-these may change from what's posted here. If a discrepancy exists, defer to Canvas dates.*

Week	Dates	Lecture topics	Lab topic
1	1/11-15	Syllabus Week! Also Propagation and Human Society, Modern Propagation <b>KC 1</b>	Lab 1: Introduction
2	1/19-22	Biology of Plant Propagation, Development <b>KC 2</b>	Lab 2: Safety, Propagation Overview
3	1/25-29	Plant Propagation Environment <b>KC 3</b>	Lab 3: Propagation Environment
4	2/1-5	Portfolio Workday <b>Assignment #1 Due 5pm 2/5:</b> Plant Propagation Potential	Virtual Field Trip #1: Seed Banks
5	2/8-12	Seed Development Principles and Techniques of Propagation by Seed	Lab 4: Seed Harvesting, Dormancy
6	2/15-19	Techniques of Seed Production and Handling <b>KC 4</b>	Virtual Field Trip #2: Commercial Seed Nursery
7	2/22-26	Principles of Clonal Selection <b>KC 5</b>	Lab 5: Cuttings
8	3/1-5	Principles and Techniques of Propagation by Cuttings <b>KC 6</b>	Virtual Field Trip #3: Commercial Cutting Production
9	3/8-12	Layering <b>Assignment #2 Due 5pm 3/12:</b> Plant Science Fiction Fact Check	Lab 6: Layering
10	3/15-19	Grafting <b>KC 7</b>	Lab 7: Grafting
11	3/22-26	Geophytes <b>KC 8</b>	Lab 8: Geophytes
12	3/29-4/2	Tissue Culture, Micropropagation <b>KC 9</b>	Lab 9: Micropropagation
13	4/5-9	<b>Assignment #3 Due 5pm 4/9:</b> Lightning Pitch	Virtual Field Trip #4: Tissue Culture
14	4/12-16	Lightning Pitches and Portfolio Presentations <b>KC 10</b>	Lab Poster Presentations
15	4/19-21	Portfolio Presentations and Peer Reviews	Lab Practical Review, GH cleanout
16	4/26-30	Final Exam Week: <b>Final Portfolio Due by 5 pm Wed 4/28</b>	