

## BIOE 16 - Introduction to Horticulture (2 units)

Summer 2022 (8 week session)

Wednesdays, 1:00-4:00

Classroom: Thimann Labs 239

### INSTRUCTOR INFORMATION

Instructor: Sylvie Childress, UCSC Greenhouse Director, [sylviechildress@ucsc.edu](mailto:sylviechildress@ucsc.edu)

Office Hours: Wednesdays, 4:00-5:00 (after class, at the Greenhouses) or by appointment

Bio: I've been growing plants since I was a child working for my mother's small wholesale nursery business. Since then I've worked in propagation nurseries, wholesale and retail nurseries, California native plant restoration nurseries, and I've been working at UCSC's research and instructional greenhouses for the past 6 years. For fun I ride bikes, botanize, garden, and volunteer with the California Native Plant Society.

Teaching Assistant: Sushmita Poudel, [spoudel@ucsc.edu](mailto:spoudel@ucsc.edu)

Bio: I am Sushmita Poudel, a 4th-year graduate student in the Zavaleta lab. My research focuses on drought adaptation strategies in Californian blue oaks. I carry out the greenhouse and common garden experiments to ask questions about how different ecotypes survive drought. In my leisure time I like gardening, listening to podcasts, and hiking around Santa Cruz.

### COURSE INFORMATION

Welcome to BIOE 16, the Introduction to Horticulture course! This class will take place fully in-person during the 8-week summer session. We will be meeting in the Thimann Labs 239 classroom at the beginning of each class. Since classes will consist of both classroom lecture work as well as hands-on activities in the Jean H. Langenheim Greenhouses, there will be many days that we are not in the classroom for the full class period.

Course communication and assignments will occur through the Canvas platform. If you haven't yet, please log on to Canvas and check out our course page! Ask Sylvie or Sushmita if you need assistance accessing the site.

### TEXTBOOK

YOU DO NOT NEED TO PURCHASE THIS BOOK. I will be providing selected readings as PDFs.

*Greenhouse Management: A Guide to Operations and Technology, 1st ed. 2019. Goldammer.*

*Apex Publishing. ISBN# 13-978-0-9675212-9-9*

*Additional resources and favorite recommended texts will be noted on the Resources page of Canvas*

## COVID-19 INFORMATION FOR THIS CLASS

For updated campus news and policies related to COVID-19, please refer to the [SlugStrong website](#).

### What you can expect from me:

If updated public health recommendations and university requirements make our current *in person* course format unfeasible, or if I experience a need to self-isolate, I will alter the class format. I will communicate clearly with you via Canvas announcements about any changes that occur. I will provide as much advance warning as possible and give you all the information you need to transition smoothly to the new format.

### What I expect from you:

Each individual at UC Santa Cruz should act in the best interests of everyone else in our community. Please take care to comply with all university guidelines about masking, performing daily symptom and badge checks, testing as required by the campus vaccine policy, self-isolating in the event of exposure, and respecting others' comfort with distancing.

***Important: If you experience an illness or exposure that requires you to miss class sessions or to attend remotely, please communicate with me as soon as possible and I will provide you with options to allow you to continue making progress in the class.***

## ACADEMIC INTEGRITY

All members of the UCSC community benefit from an environment of trust, honesty, fairness, respect, and responsibility. You are expected to present your own work and acknowledge the work of others in order to preserve the integrity of scholarship.

Academic integrity includes:

- Following exam rules, using only permitted materials during an exam
- Viewing exam materials only when permitted by your instructor
- Incorporating proper citation of all sources of information
- Submitting your own original work

Academic misconduct includes, but is not limited to, the following:

- Disclosing exam content during or after you have taken an exam
- Copying/purchasing any material from another student or other source that is submitted as your own
- Plagiarism, including use of Internet material without proper citation
- Using cell phones or other electronics to obtain outside information during an exam without explicit permission from the instructor
- View the full policy and disciplinary procedures on academic dishonesty: [Academic Misconduct page](#) at the [Division of Undergraduate Education](#).

## ACCESSIBILITY

UC Santa Cruz is committed to creating an academic environment that supports its diverse student body. If you are a student with a disability who requires accommodations to achieve equal access in this course, please affiliate with the DRC. Contact them by phone at 831-459-2089 or by email at [drc@ucsc.edu](mailto:drc@ucsc.edu). For students already affiliated, make sure that you have requested Academic Access Letters, where you intend to use accommodations. You can also request to meet privately with me during my office hours or by appointment, as soon as possible.

## PRINCIPLES OF COMMUNITY

The University of California, Santa Cruz expressly prohibits students from engaging in conduct constituting unlawful discrimination, harassment or bias... [More here](#). I am committed to providing an atmosphere for learning that respects diversity and supports inclusivity. We need to work together to build this community of learning. I ask all members of this class to:

- be open to and interested in the views of others
- consider the possibility that your views may change over the course of the term
- be aware that this course asks you to reconsider some “common sense” notions you may hold
- honor the unique life experiences of your colleagues
- appreciate the opportunity that we have to learn from each other
- listen to each other’s opinions and communicate in a respectful manner
- keep confidential discussions that the community has of a personal (or professional) nature
- ground your comments in the texts we are studying. Refer frequently to the texts and make them the focus of your questions, comments, and arguments. This is the single most effective way to ensure respectful discussion and to create a space where we are all learning together.

## STUDENT SERVICES

### [Counseling and Psychological Services](#)

The university offers a variety of confidential services to help you through difficult times, including individual and group counseling, crisis intervention, consultations, online chats, and mental health screenings. These services are provided by staff who welcome all students and embrace a philosophy respectful of clients’ cultural and religious backgrounds, and sensitive to differences in race, ability, gender identity and sexual orientation.

### [Student Success and Engagement Hub](#)

The Division of Student Success provides campus-wide coordination and leadership for student success programs and activities across departments, divisions, the colleges, and administrative units.

### [Tutoring and Learning Support](#)

Learning Support Services (LSS) partners with faculty and staff to offer inclusive learning environments in Modified Supplemental Instruction, Small Group Tutoring, and Writing Support.

### [Slug Support Program](#)

Slug Support can give help with everything from basic needs (housing, food, or financial insecurity) to getting the technology you need during remote instruction. To get started with SLUG Support, please contact the [Dean of Students](#) Office at 831-459-4446 or email at [deanofstudents@ucsc.edu](mailto:deanofstudents@ucsc.edu).

### [Slug Help/Technology](#)

The ITS Support Center is your single point of contact for all issues, problems or questions related to technology services and computing at UC Santa Cruz. To get technological help, simply email [help@ucsc.edu](mailto:help@ucsc.edu).

### [On-Campus Emergency Contacts](#)

For all other help and support, including the health center and emergency services, Click here to go to UCSC’s [Emergency Services](#) page. Always dial 9-1-1 in the case of an emergency.

## STUDENT FEEDBACK

At the end of the quarter you will be asked to complete a Student Experience of Teaching survey for this course. SETs provide an opportunity for you to give valuable feedback on your learning that is honest and constructive. This anonymous feedback will help me consider modifications to the course that will help future students learn more effectively. Be sure to check out [CITL's Guide to Giving Useful Feedback to Instructors and TAs](#).

## LEARNING OUTCOMES

During this course, you can expect to learn:

- The fundamentals of plant form and function
- How a variety of environmental factors affect plant growth
- Multiple methods of seed and vegetative plant propagation
- Acquire a broad understanding of some emerging AgTech industry practices
- Methods to identify and address cultural and biological issues in the growing environment

## ASSIGNMENTS & ASSESSMENT

This is a 2 unit class, which assumes that students will spend an *average* of 6 hours per week on coursework. (3 hours of class time, plus 3 hours outside of class)

Quizzes (x 4, on Canvas, 5 points each)	Material is pulled from lectures, readings, and class discussions; Due dates will be announced via Canvas 1 week in advance	20 points
Paper: Crop Report	Draft with peer review comments (5 points) Final draft (15 points) (Total of 20 points possible)	20 points
Presentation: Emerging Topics in AgTech Sustainability	4 minute powerpoint presentation	15 points
In class activities, handouts	Worksheets, completion of hands-on class activities	15 points
Active participation and engagement with material	Come to class on time, do readings, and ask questions	30 points
<b>Total possible</b>		<b>100 points</b>
<i>Extra credit opportunity</i>	<i>(TBD, later in quarter)</i>	+ 5 points

## COURSE SCHEDULE

<b>Week</b>	<b>Topic</b>	<b>Deliverables</b>
One June 22	History of horticulture, plant form and function, helpful terminology	
Two June 29	Plant propagation part 1: Vegetative propagation Introduce Paper 1: Crop Report	Quiz 1: Due by start of class
Three July 6	Plant propagation part 2: Seed propagation	Quiz 2: Due by start of class
Four July 13	Soil management and plant nutrition	Paper: Crop Report First draft due for peer review
Five July 20	The growing environment	Pape: Crop Report Final paper due
Six July 27	Water quality, irrigation Introduce Project 2: AgTech Presentation	Quiz 3: Due by start of class
Seven Aug 3	Pests, diseases, and weeds	Quiz 4: Due by start of class
Eight Aug 10	AgTech/Sustainability Presentations Careers in Horticulture	Presentation: Ag Tech/Sustainability Presentations due