

Term Information

Effective Term Spring 2021

General Information

Course Bulletin Listing/Subject Area Horticulture and Crop Science
Fiscal Unit/Academic Org Horticulture & Crop Science - D1127
College/Academic Group Food, Agric & Environ Science
Level/Career Undergraduate
Course Number/Catalog 1101
Course Title Plant Parenting
Transcript Abbreviation Plant Parenting
Course Description This course demonstrates how propagating, growing, and caring for plants is based on scientific principles that are appreciated by developing skills in plant parenting.
Semester Credit Hours/Units Fixed: 3

Offering Information

Length Of Course 8 Week, 7 Week
Flexibly Scheduled Course Never
Does any section of this course have a distance education component? Yes
Is any section of the course offered 100% at a distance
Grading Basis Letter Grade
Repeatable No
Course Components Lecture
Grade Roster Component Lecture
Credit Available by Exam No
Admission Condition Course No
Off Campus Always
Campus of Offering Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites
Exclusions
Electronically Enforced No

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code 01.1103
Subsidy Level Baccalaureate Course
Intended Rank Freshman, Sophomore, Junior, Senior

Requirement/Elective Designation

General Education course:

Biological Science

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

- Demonstrate basic skills of plant propagation and appreciate the science that support the practice.
- Describe how the manipulation of plant reproduction (a biological process) is inherent in plant propagation and provides a basis for the basic facts, principles, theories and methods of modern science (e.g. cell division, use of plant hormones, etc)
- Describe how tools and techniques for plant propagation have developed and changed over time and how scientific advancements have made this possible.
- Explain the importance of plant propagation for addressing societal needs (e.g. food production, consumer demand, species conservation, etc.).
- Explain how they will apply what is learned in this course to personal and/ or professional plant production experiences.
- Students understand the basic facts, principles, theories and methods of modern science.
- Students understand key events in the development of science and recognize that science is an evolving body of knowledge.
- Students describe the interdependence of scientific and technological developments.
- Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

Content Topic List

- Materials and Tools
- General plant biology and terminology
- Overview of plant genetics & growth habits
- Starting plants from seed
- Basic properties of seeds & seed storage
- History of propagation
- Cuttings, part 1: rooting in water
- Overview of plant physiology & hormones
- Troubleshooting propagation issues
- Cuttings, part 2: vegetative propagation
- Trade regulations and invasive species
- Modern propagation technologies
- Transplanting
- Basic soil and media properties
- Pests and diseases: keeping your plants alive

Sought Concurrence

No

Attachments

- GE Rationale - HCS 1101 Plant Parenting.docx: GE Rationale
(Other Supporting Documentation. Owner: Luikart, Meredith Marie)
- GE Assessment - Natural Science - HCS 1101 - Plant Parenting.docx: GE Assessment
(GEC Course Assessment Plan. Owner: Luikart, Meredith Marie)
- HCS 1101.docx: Tech Review Checklist
(Other Supporting Documentation. Owner: Meadows, Kendyl Ann)
- 2020-09-21_HCS 1101 Plant Parenting Syllabus.pdf: Updated Plant Parenting Syllabus
(Syllabus. Owner: Luikart, Meredith Marie)

Comments

- Revise as per email 8 Sept 2020; approved with minor rev by COAA 14 Sept, 2020 *(by Osborne, Jeanne Marie on 09/14/2020 12:36 PM)*

Workflow Information

| Status | User(s) | Date/Time | Step |
|--------------------|---|---------------------|------------------------|
| Submitted | Luikart, Meredith Marie | 08/24/2020 12:51 PM | Submitted for Approval |
| Approved | Metzger, James David | 08/24/2020 01:58 PM | Unit Approval |
| Revision Requested | Osborne, Jeanne Marie | 09/14/2020 12:36 PM | College Approval |
| Submitted | Luikart, Meredith Marie | 09/22/2020 03:38 PM | Submitted for Approval |
| Approved | Metzger, James David | 09/22/2020 03:39 PM | Unit Approval |
| Approved | Osborne, Jeanne Marie | 09/23/2020 11:25 AM | College Approval |
| Pending Approval | Jenkins, Mary Ellen Bigler Hanlin, Deborah Kay Oldroyd, Shelby Quinn Vankeerbergen, Bernadette Chantal | 09/23/2020 11:25 AM | ASCCAO Approval |



SYLLABUS

HCS 1101

Plant Parenting

Spring 2021 (7-week term)

3 credit hours

Online



COURSE OVERVIEW

Instructor

Dr. Klooster

217B Howlett Hall

Klooster.2@osu.edu (preferred contact method)

614-688-2637

Office hours: by appointment (www.go.osu.edu/klooster)

Prerequisites

None

Course description

This course demonstrates how propagating, growing, and caring for plants is based on scientific principles that are appreciated by developing skills in plant parenting. Online lectures are used to provide information, resources, demonstrations of techniques, and instructions for plant propagation activities. By the end of the term, students should be confident in their ability to grow a wide variety of houseplants and some popular garden plants.

Course learning outcomes

By the end of this course, students should successfully be able to:

- Demonstrate basic skills of plant propagation and appreciate the science that support the practice.
- Describe how the manipulation of plant reproduction (a biological process) is inherent in plant propagation and provides a basis for the basic facts, principles, theories and methods of modern science (e.g. cell division, use of plant hormones, etc.).
- Describe how tools and techniques for plant propagation have developed and changed over time and how scientific advancements have made this possible.
- Explain the importance of plant propagation for addressing societal needs (e.g. food production, consumer demand, species conservation, etc.).
- Explain how they will apply what is learned in this course to personal and/ or professional plant production experiences.

GE Natural Science – Biological Science

Goals:

Students understand the principles, theories, and methods of modern science, the relationship between science and technology, the implications of scientific discoveries and the potential of science and technology to address problems of the contemporary world.

Expected Learning Outcomes:

1. Students understand the basic facts, principles, theories and methods of modern science.
2. Students understand key events in the development of science and recognize that science is an evolving body of knowledge.
3. Students describe the interdependence of scientific and technological developments.
4. Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

Successfully propagating and caring for plants (i.e. becoming a 'plant parent') incorporates a variety of scientific principles and methods, such as plant biology, applying the scientific method to test variables, and collecting and recording data. Understanding historic techniques and discoveries informs our modern technologies. And recognizing the broader cultural and societal relationships with plants promotes greater appreciation for and interest in plant parenting.

HOW THIS ONLINE COURSE WORKS

Mode of delivery: This course is 100% online. There are no required sessions when you must be logged in to Carmen at a scheduled time.

Pace of online activities: This course is divided into **weekly modules** that are released approximately one week ahead of time. Students are expected to keep pace with weekly deadlines but may schedule their efforts freely within that time frame.

Credit hours and work expectations: This is a **3-credit-hour, 7-week course**. According to Ohio State policy (go.osu.edu/credithours), students should expect around 6 hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 12 hours of homework (reading and assignment preparation, for example) to receive a grade of (C) average.

Attendance and participation requirements: Because this is an online course, your attendance is based on your online activity and participation. If you have a situation that might cause you to miss an entire week of class, discuss it with me as soon as possible. And if extenuating circumstances prevent you from completing any course activity (online module or activity), please reach out to me ASAP to arrange an accommodation. You may be required to work with Student Life Disability Services, but I will coordinate as needed with SLDS to provide equitable opportunities for all students. The following is a summary of students' expected participation:

- **Participating in online activities for attendance: 3+ TIMES PER WEEK**
You are expected to log in to the course in Carmen every week. (During most weeks you will probably log in many times.) If you have a situation that might cause you to miss an entire week of class, discuss it with me *as soon as possible*.
- **Office hours and live sessions: OPTIONAL**
All live, scheduled events for the course, including my office hours, are optional.
- **Participating in discussion forums: 2+ TIMES PER WEEK**
As part of your participation, each week you can expect to post at least twice as part of our substantive class discussion on the week's topics.

COURSE MATERIALS AND TECHNOLOGIES

Textbooks

Required

- Plant Parenting: Easy Ways to Make More Houseplants, Vegetables, and Flowers. 2019. Leslie F. Halleck. Timber Press. ISBN-13: 978-1604698725.

Recommended

- Botany for Gardeners, 3rd edition. 2010. Brian Capon. Timber Press. ISBN-13: 978-1604690958.

Other fees or requirements

- You will be required to purchase (if you do not already have them) a small amount of propagation supplies, such as potting mix, containers, and plants necessary to complete the activities. These can be obtained from a wide variety of sources (recommendations will be provided in the first lecture recording) and should cost less than \$25 total.

Course technology

Technology support

For help with your password, university email, Carmen, or any other technology issues, questions, or requests, contact the Ohio State IT Service Desk. Standard support hours are available at ocio.osu.edu/help/hours, and support for urgent issues is available 24/7.

- **Self-Service and Chat support:** ocio.osu.edu/help
- **Phone:** 614-688-4357(HELP)
- **Email:** servicedesk@osu.edu
- **TDD:** 614-688-8743

Technology skills needed for this course

- Basic computer and web-browsing skills
- Navigating Carmen (go.osu.edu/canvasstudent)
- CarmenZoom virtual meetings (go.osu.edu/zoom-meetings)
- Recording a slide presentation with audio narration (go.osu.edu/video-assignment-guide)
- Recording, editing, and uploading video (go.osu.edu/video-assignment-guide)

Required equipment

- Computer: current Mac (MacOs) or PC (Windows 10) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed and tested
- Microphone: built-in laptop or tablet mic or external microphone
- Other: a mobile device (smartphone or tablet) to use for BuckeyePass authentication

Required software

- Microsoft Office 365: All Ohio State students are now eligible for free Microsoft Office 365. Full instructions for downloading and installation can be found at go.osu.edu/office365help.

Carmen access

You will need to use BuckeyePass (buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you take the following steps:

- Register multiple devices in case something happens to your primary device. Visit the BuckeyePass - Adding a Device help article for step-by-step instructions (go.osu.edu/add-device).
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click **Enter a Passcode** and then click the **Text me new codes** button that appears. This will text you ten passcodes good for 365 days that can each be used once.
- Download the Duo Mobile application (go.osu.edu/install-duo) to all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at 614-688-4357(HELP) and IT support staff will work out a solution with you.

GRADING AND FACULTY RESPONSE

How your grade is calculated

| ASSIGNMENT CATEGORY | COMPONENTS | POINTS |
|------------------------------|---|--------|
| Engagement & professionalism | Intro/ exit Surveys (15 pts x2); prof. language & discourse (20 pts) | 50 |
| Weekly quizzes | For each Carmen module (15 pts x10) | 150 |

| | | |
|-------------------------------|---|------------|
| Weekly discussion (Q&A) posts | For each Carmen module (10 pts x 10) | 100 |
| Final exam | Cumulative | 75 |
| Propagation term project | Collaboration (25 pts); Video (25 pts); Weekly discussions (50); Report (25 pts) | 125 |
| Total | | 500 |

See course schedule below for due dates.

Descriptions of major course assignments

Engagement & professionalism

Description: At the beginning and end of the course, you are required to complete brief self-assessment surveys. The intro survey is a series of questions where you are asked to provide some background information on yourself and familiarity with the topics. The exit survey asks you reflect upon the course components, your personal effort in the class, and how well the activities worked out. For each module and activity, you should be prepared to actively listen, read, and participate in the discussion posts. Furthermore, you are expected to behave in a respectful and professional manner throughout every aspect of this course.

Academic integrity and collaboration: Any behavior including rude, dehumanizing, or unprofessional language or actions, whether expressed physically, verbally, or in writing, is not permitted, will result in a deduction of points, and will be reported to the office of student conduct; this includes swearing, threats, derogatory statements, and similar actions, and applies to interactions among students and with the instructor and any guest speaker(s).

Weekly quizzes

Description: Brief comprehension quizzes will be assigned for each textbook chapter and associated lecture module and will be due on Sunday of each week. The purpose of these quizzes is to encourage you to keep up with the lecture recordings and book chapters, and so you can recognize if there are topics that should be clarified and reviewed for better comprehension.

Academic integrity and collaboration: You must complete the weekly quizzes yourself, without any external help or communication.

Weekly discussion (Q&A) posts

Description: Each week you will be required to log in to the Q&A discussion forum on Carmen, post two questions (related to that course module), and help answer at least one question. You must also provide weekly updates on your propagation project by posting in the Project Update discussion forum and provide feedback on at least two other students' updates.

Academic integrity and collaboration: You may discuss the topics of the discussion forums with other individuals, but you must write and submit the actual discussion post questions, answers, and updates yourself.

Final exam

Description: The cumulative final exam will be completed in Carmen. The format will be a mix of multiple-choice questions and short essay prompts for a total of 75 points. You will only have one chance to complete the exam and there will be a 2-hr time limit once you begin the exam, but a 24-hour window during which you can take the exam. All technical (e.g. computer or Carmen-related issues) should be addressed with IT (<https://cfaesits.osu.edu>).

Academic integrity and collaboration: You must complete the final exam yourself, without any external help or communication. You are allowed to use books, notes, slides, and other academic resources but not other people: you must do your own work. Plagiarism and other academic misconduct (e.g. receiving/providing answers to other students) is not allowed and will not be tolerated. Furthermore, responses containing any inappropriate, unprofessional, inflammatory, or offensive language will be marked incorrect.

Propagation term project

Description: Throughout the term, you will be documenting your progress towards successfully propagating a plant. The term project incorporates various components, such as weekly update posts, virtual collaboration with fellow students, a video presentation, and a final report. Detailed instructions for each component will be provided in Carmen.

Academic integrity and collaboration: Collaboration is a required component of the term project: you will be placed in groups to compare and contrast methods used by other students and teach each other about your plant of choice. Other components of the term project, including the update posts, video presentation, and final report, can incorporate information gained from the collaboration, but each submission must be your own work.

Late assignments

Late submissions (without consultation regarding extenuating circumstances) will be marked down by 10% of the original assignment value per day (including partial days). If an

extenuating circumstance prevents you from completing an assignment on time, please reach out to me ASAP to request an accommodation. Please refer to Carmen for due dates.

Grading scale

93–100: A

90–92.9: A-

87–89.9: B+

83–86.9: B

80–82.9: B-

77–79.9: C+

73–76.9: C

70–72.9: C-

67–69.9: D+

60–66.9: D

Below 60: E

Instructor feedback and response time

I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can call **614-688-4357(HELP)** at any time if you have a technical problem.)

- **Grading and feedback:** For large weekly assignments, you can generally expect feedback within **7 days**.
- **Email:** I will reply to emails within **24 hours on days when class is in session at the university**.
- **Discussion board:** I will check and reply to messages in the discussion boards every **24 hours on school days**.

OTHER COURSE POLICIES

Discussion forum and communication guidelines

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Writing style:** While there is no need to participate in class discussion forums as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. A more conversational tone is fine for non-academic topics.
- **Tone and civility:** Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online.
- **Citing your sources:** For academic discussion posts and written reports, please cite your sources to back up what you say. Use APA format or follow the guidelines of a reputable scientific journal; MLA format is not appropriate for scientific writing.
- **Backing up your work:** Consider composing your academic posts in a word processor, where you can save your work, and then copying into the Carmen discussion forum.

Academic integrity policy

See **Descriptions of major course assignments**, above, for my specific guidelines about collaboration and academic integrity in the context of this online class.

Ohio State's academic integrity policy

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the university's *Code of Student Conduct* (studentconduct.osu.edu), and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the university's *Code of Student Conduct* and this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the university or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the university's *Code of Student Conduct* is never considered an excuse for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by university rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the university's *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the university.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- Committee on Academic Misconduct web page (go.osu.edu/coam)
- Ten Suggestions for Preserving Academic Integrity (go.osu.edu/ten-suggestions)
- Eight Cardinal Rules of Academic Integrity (go.osu.edu/cardinal-rules)

Copyright for instructional materials

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Health and safety requirements

All students, faculty and staff are required to comply with and stay up to date on all university safety and health guidance (<https://safeandhealthy.osu.edu>), which includes wearing a face mask in any indoor space and maintaining a safe physical distance at all times. Non-compliance will be warned first and disciplinary actions will be taken for repeated offenses.

Creating an environment free from harassment, discrimination, and sexual misconduct

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Office of Institutional Equity:

- Online reporting form at equity.osu.edu,
- Call 614-247-5838 or TTY 614-688-8605,

- Or Email equity@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

This course adheres to The Principles of Community adopted by the College of Food, Agricultural, and Environmental Sciences. These principles are located on the Carmen site for this course; and can also be found at <https://go.osu.edu/principlesofcommunity>. For additional information on Diversity, Equity, and Inclusion in CFAES, contact the CFAES Office for Diversity, Equity, and Inclusion (<https://equityandinclusion.cfaes.ohio-state.edu/>). If you have been a victim of or a witness to a bias incident, you can report it online and anonymously (if you choose) at <https://studentlife.osu.edu/bias/report-a-bias-incident.aspx>.

Counseling and Consultation Services/ Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life Counseling and Consultation Services (CCS) by visiting ccs.osu.edu or calling (614) 292- 5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at (614) 292-5766 and 24 hour emergency help is also available through the 24/7 National Prevention Hotline at 1-(800)-273-TALK or at suicidepreventionlifeline.org.

David Wirt, wirt.9@osu.edu, is the CFAES embedded mental health counselor. He is available for new consultations and to establish routine care. To schedule with David, please call 614-292-5766. Students should mention their affiliation with CFAES when setting up a phone screening.

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Requesting accommodations

The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Accessibility of course technology

This online course requires use of CarmenCanvas (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.

- Canvas accessibility (go.osu.edu/canvas-accessibility)
- Streaming audio and video
- CarmenZoom accessibility (go.osu.edu/zoom-accessibility)
- Collaborative course tools

COURSE SCHEDULE (MAY BE REVISED, AS NEEDED)

Refer to the Carmen course for up-to-date assignment due dates.

| WEEK | MODULE TOPICS | READINGS/ ASSIGNMENTS |
|--------------|---|--|
| 1 | Course overview and introductions | Syllabus; Carmen intro survey |
| | Materials and tools | Halleck, chapter 2; Carmen quiz #1 |
| | Propagation term project detailed instructions | Acquire supplies; Q&A posts #1 |
| 2 | General plant biology and terminology | Halleck, chapter 1; Carmen quiz #2 |
| | Overview of plant genetics & growth habits | Reading TBD; Q&A posts #2 |
| | Post example photos and videos | Project update post #1 |
| 3 | Starting plants from seed | Halleck, chapter 3; Carmen quiz #3 |
| | Basic properties of seeds & seed storage | Reading TBD; Q&A posts #3 |
| | History of propagation | Project update post #2 |
| 4 | Cuttings, part 1: rooting in water | Halleck, chapter 4; Carmen quiz #4 |
| | Overview of plant physiology & hormones | Reading TBD; Q&A posts #4 |
| | Troubleshooting propagation issues | Project update post #3 |
| 5 | Cuttings, part 2: vegetative propagation | Halleck, chapter 5; Carmen quiz #5 |
| | Trade regulations and invasive species | Reading TBD; Q&A posts #5 |
| | Modern propagation technologies | Project update post #4 |
| 6 | Transplanting | Halleck, chapter 7; Carmen quiz #6 |
| | Basic soil and media properties | Reading TBD; Q&A posts #6 |
| | Synthesis and review of key concepts | Project update post #5 |
| 7 | Pests and diseases: keeping your plants alive | Halleck, chapter 6; Carmen quiz #7 |
| | Fact sheets and other reliable sources | Reading TBD; Q&A posts #7 |
| | Propagation project video/ photo presentations (and peer evaluations) | Propagation lab reports & videos due; Peer evaluations; Carmen exit survey |
| Final | Final exam | Final exam in Carmen |

GE Rationale – HCS 1101 Plant Parenting

Course Objectives:

Successful students will be able to:

- Demonstrate basic skills of plant propagation and appreciate the science that support the practice.
- Describe how the manipulation of plant reproduction (a biological process) is inherent in plant propagation and provides a basis for the basic facts, principles, theories and methods of modern science (e.g. cell division, use of plant hormones, etc.).
- Describe how tools and techniques for plant propagation have developed and changed over time and how scientific advancements have made this possible.
- Explain the importance of plant propagation for addressing societal needs (e.g. food production, consumer demand, species conservation, etc.).
- Explain how they will apply what is learned in this course to personal and/ or professional plant production experiences.

GE Learning Objective 1: Students understand the basic facts, principles, theories and methods of modern science.

Course Objectives:

- Demonstrate basic skills of plant propagation and appreciate the science that support the practice.
- Describe how the manipulation of plant reproduction (a biological process) is inherent in plant propagation and provides a basis for the basic facts, principles, theories and methods of modern science (e.g. cell division, use of plant hormones, etc.).
- Describe how tools and techniques for plant propagation have developed and changed over time and how scientific advancements have made this possible.
- Explain how they will apply what is learned in this course to personal and/ or professional plant production experiences.

Topics: General plant biology and terminology, plant genetics and growth habits, basic properties of seeds and seed storage, basic soil and media properties, plant physiology and hormones; propagation and transplantation techniques

Readings/Lecture Material: Readings from Plant Parenting: Easy Ways to Make more Houseplants, Vegetables, and Flowers (2019) by Leslie F. Halleck; scientific articles uploaded to Carmen; and videos on plant science and related topics (e.g. NPR videos, TED talks)

Written Assignments: Quizzes, discussion posts, presentations, final exam

GE Learning Objective 2: Students understand key events in the development of science and recognize that science is an evolving body of knowledge

Course Objectives:

- Demonstrate basic skills of plant propagation and appreciate the science that support the practice.
- Describe how the manipulation of plant reproduction (a biological process) is inherent in plant propagation and provides a basis for the basic facts, principles, theories and methods of modern science (e.g. cell division, use of plant hormones, etc.).
- Describe how tools and techniques for plant propagation have developed and changed over time and how scientific advancements have made this possible.
- Understand the importance of plant propagation for addressing societal needs (e.g. food production, consumer demand, species conservation, etc.).

Topics: History of propagation, propagation and transplantation techniques, modern propagation technologies, trade regulations and invasive species, plant physiology and hormones, plant genetics and growth habits

Readings/Lecture Material: Readings from Plant Parenting: Easy Ways to Make more Houseplants, Vegetables, and Flowers (2019) by Leslie F. Halleck; scientific articles uploaded to Carmen; and videos on plant science and related topics (e.g. NPR videos, TED talks).

Written Assignments: Quizzes, discussion posts, final exam

GE Learning Objective 3: Students describe the interdependence of scientific and technological developments

Course Objectives:

- Demonstrate basic skills of plant propagation and appreciate the science that support the practice.
- Describe how the manipulation of plant reproduction (a biological process) is inherent in plant propagation and provides a basis for the basic facts, principles, theories and methods of modern science (e.g. cell division, use of plant hormones, etc.).
- Describe how tools and techniques for plant propagation have developed and changed over time and how scientific advancements have made this possible.
- Understand the importance of plant propagation for addressing societal needs (e.g. food production, consumer demand, species conservation, etc.).
- Explain how they will apply what is learned in this course to personal and/ or professional plant production experiences.

Topics: Propagation and transplantation techniques, modern propagation technologies, plant genetics and growth habits, plant physiology and hormones

Readings/Lecture Material: Readings from Plant Parenting: Easy Ways to Make more Houseplants, Vegetables, and Flowers (2019) by Leslie F. Halleck; scientific articles uploaded to Carmen; and videos on plant science and related topics (e.g. NPR videos, TED talks).

Written Assignments: Quizzes, discussion posts, presentations, final exam

GE Learning Objective 4: Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

Course Objectives:

- Describe how tools and techniques for plant propagation have developed and changed over time and how scientific advancements have made this possible.
- Understand the importance of plant propagation for addressing societal needs (e.g. food production, consumer demand, species conservation, etc.).
- Explain how they will apply what is learned in this course to personal and/ or professional plant production experiences.

Topics: History of propagation, modern propagation technologies, seed storage, trade regulations and invasive species, pests and diseases, fact sheets and other reliable sources

Readings: Readings from Plant Parenting: Easy Ways to Make more Houseplants, Vegetables, and Flowers (2019) by Leslie F. Halleck; scientific articles uploaded to Carmen; and videos on plant science and related topics (e.g. NPR videos, TED talks).

Written Assignments: Quizzes, discussion posts, presentations, final exam

VII.B.9. Natural Science

Goals:

Students understand the principles, theories, and methods of modern science, the relationship between science and technology, the implications of scientific discoveries and the potential of science and technology to address problems of the contemporary world.

Expected Learning Outcomes:

Biological Science

1. Students understand the basic facts, principles, theories and methods of modern science.
2. Students understand key events in the development of science and recognize that science is an evolving body of knowledge.
3. Students describe the inter-dependence of scientific and technological developments.
4. Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

Physical Science

1. Students understand the basic facts, principles, theories and methods of modern science.
2. Students understand key events in the development of science and recognize that science is an evolving body of knowledge.
3. Students describe the inter-dependence of scientific and technological developments.
4. Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

Courses proposed for this component of the General Education (GE) should be designed with these goals and expected learning outcomes (ELOs) in mind and considered in terms of their contribution to the requirement as a whole. Courses will be reviewed by the Arts and Sciences Curriculum Committee (ASCC) in light of these goals and expected learning outcomes. All GE courses should be made available to undergraduates with a minimum of prerequisites and not be restricted to majors.

Proposals must include the following:

1. The appropriate Course Request Form via curriculum.osu.edu
2. A course syllabus that follows the ASC syllabus template guidelines (see pp. 13-15).
3. A GE rationale that discusses how *each individual GE expected learning outcome* will be met in most or all of the following: (a) the course objectives, (b) the readings, (c) the topics, (d) the written assignments, and (e) other course components.

The key is to discuss each GE expected learning outcome *separately* so that the reviewing faculty panel can clearly see that each ELO is sufficiently addressed in the course. In addition, please address the following two points as appropriate:

- a) How do the prerequisites provide an appropriate level of preparation for the proposed course? If there are no prerequisites, please indicate how this is consistent with the proposed level of the course.

- b) If the course is being proposed to fulfill the requirement for a course with a laboratory, please answer the following question: What type(s) of experiences will students have in the laboratory component of the course?

(Note: The ASC Model Curriculum (1988) states that “laboratory experiences may range from familiar experimental work to field trips, astronomical observations, or the like.” The document also states that the purpose of the laboratory is to, “provide concrete experiences of the principles being presented and of the problems of observation, measurement, and proof in the natural sciences.”)

4. A GE assessment plan which explains how the faculty teaching the course will assess the effectiveness of the course in achieving the GE expected learning outcomes over time, rather than how individual student grades will be assessed. As you develop your GE assessment plan, please bear in mind that the faculty will need to implement it from the very first offering of the course so keep it simple (a GE assessment plan should not be so complex that it cannot be implemented).

For either Biological Science or Physical Science, complete the following table to show how the faculty will assess the four expected learning outcomes. Then, in an appendix, provide one or more specific example(s) for each assessment method you will use.

| GE Expected Learning Outcomes | Methods of Assessment <i>*Direct methods are required. Additional indirect methods are encouraged.</i> | Level of student achievement expected for the GE ELO. <i>(for example, define percentage of students achieving a specified level on a scoring rubric)</i> | What is the process that will be used to review the data and potentially change the course to improve student learning of GE ELOs? |
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| <p>ELO 1</p> <p>Students understand the basic facts, principles, theories and methods of modern science.</p> | <p>1. Quizzes The quizzes will be evenly weighted to make up 17.5% of the overall grade. There are typically 10 questions per quiz. Quizzes will cover current material and will not be comprehensive.</p> <p>2. Discussion Forum Students will be required to log in to the discussion forum on Carmen. Students will be required to post two questions (related to that course module) per week, and help answer at least one question per week. Students must also provide</p> | <p>1. 85% of students achieve 80% or higher based on grading rubric.</p> <p>2. 100% participation from students and 85% of students achieve 80% or higher based on grading rubric</p> <p>3. 85% of students will achieve 80% or higher on grading rubric.</p> <p>4. 100% of students are expected to achieve 100% on rubric.</p> | <p>1. Average quiz scores and commonly-missed questions.</p> <p>2. Mid-semester student feedback; SEI information, especially if comments are negative on activities.</p> <p>3. Average final exam scores and commonly-missed questions.</p> <p>4. Carmen- or Zoom-based discussion and feedback</p> |

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| | <p>weekly updates on their propagation project throughout the term and provide feedback on at least two other students' updates.</p> <p>3. Final Exam The final exam will be comprehensive. Students will be required to log into Carmen to take the exam. There are typically multiple choice, matching, or short essay questions. The final exam will be 18.75% of the final grade.</p> <p>4. Exit Survey At the end of the class, students are required to complete a self-assessment. This is a series of brief essays where students are asked to reflect upon the course components, their personal effort in the class, and how well they worked together in their groups.</p> | | |
| <p>ELO 2</p> <p>Students understand key events in the development of science and recognize that science is an evolving body of knowledge.</p> | <p>1. Term Project Each student will attempt to propagate a plant, and must document their progress with either photos or videos throughout the term. Detailed documentation of the steps taken to propagate their plant must be provided in a lab report at the end of the term. Students will also be placed in teams and required to collaborate on these</p> | <p>1. 100% of work is split equally amongst student groups and 85% of students achieve 80% or better based on grading rubric.</p> <p>2. 100% participation from students and 85% of students achieve 80% or higher based on grading rubric.</p> | |

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| | <p>propagation term projects by working in groups to compare and contrast methods used by other students and teach each other about their plant of choice. A virtual presentation by each student will occur on CarmenZoom at the end of the class. Students will be asked to help evaluate each other's presentations. Evaluation will be an anonymous Carmen-based survey.</p> <p>2. Discussion Forum Students will be required to log in to the discussion forum on Carmen. Students will be required to post two questions (related to that course module) per week, and help answer at least one question per week. Students must also provide weekly updates on their propagation project throughout the term and provide feedback on at least two other students' updates.</p> | | |
| <p>ELO 3</p> <p>Students describe the inter-dependence of scientific and technological developments.</p> | <p>1. Term Project Each student will attempt to propagate a plant, and must document their progress with either photos or videos throughout the term. Detailed documentation of the steps taken to propagate their plant must be provided in a lab report at the end of the term. Students will</p> | <p>1. 100% of work is split equally amongst student groups and 85% of students achieve 80% or better based on grading rubric.</p> <p>2. 100% participation from students and 85% of students achieve 80% or higher based on grading rubric.</p> | |

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| | <p>also be placed in teams and required to collaborate on these propagation term projects by working in groups to compare and contrast methods used by other students and teach each other about their plant of choice. A virtual presentation by each student will occur on CarmenZoom at the end of the class. Students will be asked to help evaluate each other's presentations. Evaluation will be an anonymous Carmen-based survey.</p> <p>2. Discussion Forum Students will be required to log in to the discussion forum on Carmen. Students will be required to post two questions (related to that course module) per week, and help answer at least one question per week. Students must also provide weekly updates on their propagation project throughout the term and provide feedback on at least two other students' updates.</p> <p>3. Exit Survey At the end of the class, students are required to complete a self-assessment. This is a series of brief essays where students are asked to reflect upon the course components, their personal effort in</p> | <p>3. 100% of students are expected to achieve 100% on rubric</p> | |
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| | the class, and how well they worked together in their groups. | | |
| ELO 4 Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world. | <p>1. Lab Report Students will complete a lab report on the propagation methods for their plant of choice. The report should cover the type of plant, the ideal growing material, light requirements and a proper way to harvesting and/or transplanting the grown plant. The report should follow a template that will be provided on Carmen.</p> <p>2. Exit Survey At the end of the class, students are required to complete a self-assessment. This is a series of brief essays where students are asked to reflect upon the course components, their personal effort in the class, and how well they worked together in their groups.</p> | <p>1. 85% of students will achieve an 80% or above based on grading rubric.</p> <p>2. 100% of students will evaluate their work in the course and achieve 90% or higher on grading rubric</p> | |

***Direct Methods** assess student performance related to the expected learning outcomes. Examples of direct assessments are course-embedded questions; pre/post test; standardized exams; portfolio evaluation; videotape/audiotape of performance; rubric-based evaluation of student work.

***Indirect Methods** assess opinions or thoughts about student knowledge, skills, attitudes, learning experiences, and perceptions. Examples of indirect measures are student surveys about instruction; focus groups; student self-evaluations.

After the second offering of the course, please submit an initial report summarizing the GE assessment results following the format of the “Assessment Report Requirements” in Appendix 11.

5. *For ASC units only:* If the GE request applies to a new course and the new course can also count toward the major of the submitting unit (whether as a required course or as an elective), please include the curriculum map of that program to which you have added the newly proposed course, indicating the program goal(s) and levels it is designed to meet. If the course is not new but the request involves moving

the course to a new level or place on the major's curriculum map, the updated map will need to be provided as well.

Notice that in ASC, some GE Natural Science courses are for both BA and BS students and some courses are for BA-students only. *BA/BS Natural Science GE courses* are distinguished from BA-only courses by fulfilling several or all of the following criteria. The ASCC Natural and Mathematical Sciences Panel and the full ASCC will use these guidelines (approved by ASCC on April 20, 2012) as the basis for evaluation of BA/BS or BA-only status. Fulfillment of one or more of these criteria would make the course eligible to be considered for both BA and BS students, with the final decision based on the overall rigor and sophistication of the course.

- Advanced math requirements of the course (specifically, pre-Calculus for BA or Calculus for BS);
- Sophisticated scientific knowledge and reliance on other scientific knowledge from other disciplines;
- More intensive use of data collection and analysis;
- Course could potentially serve as an immediate prerequisite for a major course in the sciences;
- Whether the course is intended for majors in that discipline;
- Lab inclusion would not be mandatory but if included might need to have particular rigor for data analysis and also for some number of formal lab reports;
- Course would need to be consistent with level of currently approved BA/BS Natural Science GE courses.

Bachelor of Arts students must take 10 hours, usually three courses. At least one course must be in the biological sciences and one course must be in the physical sciences. At least one course must have a laboratory.

Bachelor of Science students must take 10 hours, usually three courses. At least one course must be in the biological sciences with a laboratory and one course must be in the physical sciences with a laboratory.

Arts and Sciences Distance Learning Course Component Technical Review Checklist

Course: HCS 1101

Instructor: Dr. Klooster

Summary: Plant Parenting

| Standard - Course Technology | Yes | Yes with Revisions | No | Feedback/ Recomm. |
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| 6.1 The tools used in the course support the learning objectives and competencies. | X | | | <ul style="list-style-type: none"> • Carmen • Office 365 • CarmenZoom |
| 6.2 Course tools promote learner engagement and active learning. | X | | | <ul style="list-style-type: none"> • CarmenZoom • Carmen Quizzes • Carmen Discussion Boards |
| 6.3 Technologies required in the course are readily obtainable. | X | | | All are available for free via OSU site license |
| 6.4 The course technologies are current. | X | | | All are updated regularly. |
| 6.5 Links are provided to privacy policies for all external tools required in the course. | X | | | No external tools are used |
| Standard - Learner Support | | | | |
| 7.1 The course instructions articulate or link to a clear description of the technical support offered and how to access it. | X | | | Links to 8HELP are provided. |
| 7.2 Course instructions articulate or link to the institution's accessibility policies and services. | X | | | a |
| 7.3 Course instructions articulate or link to an explanation of how the institution's academic support services and resources can help learners succeed in the course and how learners can obtain them. | X | | | b |
| 7.4 Course instructions articulate or link to an explanation of how the institution's student services and resources can help learners succeed and how learners can obtain them. | X | | | C |
| Standard – Accessibility and Usability | | | | |
| 8.1 Course navigation facilitates ease of use. | X | | | Recommend using the Carmen Distance Learning "Master Course" template developed by ODEE and available in the Canvas Commons to provide student-users with a consistent user experience in terms of navigation and access to course content. |
| 8.2 Information is provided about the accessibility of all technologies required in the course. | X | | | Accessibility links are provided for all tools. |
| 8.3 The course provides alternative means of access to course materials in formats that meet the needs of diverse learners. | X | | | |
| 8.4 The course design facilitates readability | X | | | Comes across like a wall of text. This could be solved by using the distance learning syllabus template. |
| 8.5 Course multimedia facilitate ease of use. | X | | | All assignments and activities that use the Carmen LMS with embedded multimedia facilitates ease of use. All other multimedia resources facilitate ease of use by being available through a standard web browser |

Reviewer Information

- Date reviewed: 8/27/20
- Reviewed by: Ian Anderson

Notes: Dates need to be added to the weekly breakdown

^aThe following statement about disability services (recommended 16 point font):
Students with disabilities (including mental health, chronic or temporary medical conditions) that have been certified by the Office of Student Life Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office of Student Life Disability Services is located in 098 Baker Hall, 113 W. 12th Avenue; telephone 614- 292-3307, slds@osu.edu; slds.osu.edu.

^bAdd to the syllabus this link with an overview and contact information for the student academic services offered on the OSU main campus.
<http://advising.osu.edu/welcome.shtml>

^cAdd to the syllabus this link with an overview and contact information for student services offered on the OSU main campus. <http://ssc.osu.edu>. Also, consider including this link in the “Other Course Policies” section of the syllabus.