Term Information

Effective Term	Autumn 2020
Previous Value	*Autumn 2016*

Course Change Information

What change is being proposed? (If more than one, what changes are being proposed?)

Adding a 100% distance learning option of the course, updating the course topics, and removing the exclusion (HCS 200) from the prerequisites list.

What is the rationale for the proposed change(s)?

Adding an 100% distance learning option will provide more flexibility on when the course can be offered and provide more opportunities for students to enroll.

Updating the course topics will keep the content fresh and the subject matter relevant. Removal of old quarter exclusions will prevent confusion.

What are the programmatic implications of the proposed change(s)?

(e.g. program requirements to be added or removed, changes to be made in available resources, effect on other programs that use the course)?

None

Is approval of the requrest contingent upon the approval of other course or curricular program request? No

Is this a request to withdraw the course? No

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	2200
Course Title	The World of Plants
Transcript Abbreviation	World of Plants
Course Description	Study of the cultivation, environmental, genetic, and social/cultural factors which influence the sustainable production of plants for food, fiber, ornamental and recreational uses.
Semester Credit Hours/Units	Fixed: 3

Offering Information

Length Of Course	14 Week, 12 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 Greater or equal to 50% at a distance Less than 50% at a distance
Previous Value	*Yes, Greater or equal to 50% at a distance, Less than 50% at a distance*
Grading Basis	Letter Grade
Repeatable	No
Course Components	Recitation, Lecture
Grade Roster Component	Lecture
Credit Available by Exam	Yes
Exam Type	EM Tests via Office of Testing
Admission Condition Course	No

Off Campus	Never
Campus of Offering	Columbus, Wooster

Prerequisites and Exclusions

Prerequisites/Corequisites	
Exclusions	
Previous Value	Not open to students with credit for 200.
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
Previous Value	*Freshman, Sophomore, Junior*

Requirement/Elective Designation

Required for this unit's degrees, majors, and/or minors
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

- Analyze and describe the fundamental concepts of successfully growing plants.
- Evaluate how environmental, economic, social, and other factors interact and influence why and how plants are grown.
- Describe how the interactions of the components of stable natural ecosystems can be used to create successful, sustainable ecosystems of crops, landscapes, golf courses, and athletic fields.
- Evaluate the role plants play in our lives and describe many of the specific plants that fill those roles.
- Be able to apply what is learned in this class to other classes and toward success in their careers or for greater enjoyment of an avocation.

Content Topic List

- Introduction to “The World of Plants” & group formation
- Where do plants grow? Plant Biomes of the World
- Growing plants & turf for human use
- Plants: The Good, the Bad and the Ugly
- Plant: Climate interactions - Solar radiation & moisture
- Plant: Climate interactions - Temperature & air
- Ohio Veggies!
- Plant structure, growth & development
- Plant origins, diversity & preservation
- Plant reproduction, breeding & propagation
- Plant genetics
- Soils
- Plant mineral nutrition
- Native plants & their use
- Plant cropping systems: (organic, conventional, sustainable, resilient)
- Integrated pest management (IPM)

Previous Value

- *Introduction: Why study the growing of plants, the value of growing plants, the history of growing plant and nomenclature.*
- *Plant science research*
- *Climatic factors that affect plant growth*
- *The ecological basis of plant growth including how human activity affects our ecological footprint*
- *Plant Anatomy: Vegatative and reproductive structures, flowers, fruits, and classifications of plant anatomy*
- *Genetic Resources: Sexual and asexual reproduction, Diversity, breeding strategies, Genetically modified plants.*
- *Carbon Flow: Photosythesis and Respiration*
- *Soils*
- *Crop Mineral Nutrition*
- *Pests and Diseases: Integrated Pest Managment, Growing Degree Days*
- *Plant Growing Systems: Conventional, Organic, Sustainable*
- *Applications and Vocations: Field crops, Nursery, Floriculture, Turfgrass, Landscaping*
- *Applications and Avocations, Master Gardeners, Home Gardening*

Sought Concurrence

No

Attachments

- GE Assessment - Natural Science - HCS2200 - The World of Plants.docx: GE Assessment Plan

  (GEC Course Assessment Plan. Owner: Luikart,Meredith Marie)

- GE Rationale - HCS 2200 The World of Plants.docx: GE Rationale

  (Other Supporting Documentation. Owner: Luikart,Meredith Marie)

- HCS 2200 Sherratt.pdf: GE Arts and Science DL Course Component Technical

  (Other Supporting Documentation. Owner: Luikart,Meredith Marie)

- HCS 2200_ In-PersonAU20-Sherratt_11_20.docx: Syllabus - In-Person

  (Syllabus. Owner: Luikart,Meredith Marie)

- HCS 2200_Online_AU20-Sherratt_11_20.docx: Syllabus - Online

  (Syllabus. Owner: Luikart,Meredith Marie)

Comments

- Revise as per email message on 15 November with updates provided on 20 November, 2019 *(by Osborne,Jeanne Marie on 11/20/2019 01:41 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Luikart,Meredith Marie	11/08/2019 10:22 AM	Submitted for Approval
Approved	Metzger,James David	11/08/2019 10:25 AM	Unit Approval
Revision Requested	Osborne,Jeanne Marie	11/20/2019 01:41 PM	College Approval
Submitted	Luikart,Meredith Marie	11/20/2019 02:32 PM	Submitted for Approval
Approved	Metzger,James David	11/20/2019 03:17 PM	Unit Approval
Approved	Osborne,Jeanne Marie	11/21/2019 10:25 AM	College Approval
Pending Approval	Jenkins,Mary Ellen Bigler Hanlin,Deborah Kay Oldroyd,Shelby Quinn Vankeerbergen,Bernadette Chantal	11/21/2019 10:25 AM	ASCCAO Approval

SYLLABUS

HCS 2200
THE WORLD OF PLANTS
AUTUMN 2020 ONLINE

COURSE OVERVIEW

Instructor

Instructor: Pam Sherratt
Email address: sherrratt.1@osu.edu
Phone/text number: 614-561-7749
Office location: 240C Howlett Hall
Office hours: By appointment through Zoom, Skype, or other videoconferencing tools. Contact instructor to set up a meeting and choose which tool to use.

Course Organization

Credits: 3
Prerequisites (or concurrent): None
Students will be required to participate at least once per week in an activity, such as discussion response, group assignment etc.

Course description

Study of the cultural, environmental, genetic, and social/cultural factors which influence the sustainable production of plants for food, fiber, ornamental and recreational uses.

HCS 2200, The World of Plants is a Natural Science (Biological Science) general education course.

Course learning outcomes

GE 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.

GE 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.

How the course addresses the GE objectives: Students enrolled in HCS 2200 meet the GE Natural Science Learning Objectives in multiple ways. This course provides an introduction to the complex interaction of plants, other organisms (including humans), and their environment. Students gain an understanding of the foundations of modern plant science by studying plant production, plant diversity, ecological relationships within and among species, and the evolutionary forces that shape plant form and function. Additional readings and video content reinforce the plant management concepts introduced in lecture, and also explore scientific reasoning and methods. Students enrolled in HCS 2200 learn details of the interrelationship between technology and scientific methods in modern plant science and gain an appreciation of the social and philosophical ramifications of the knowledge of biology through the study of the history of key discoveries in plant science.

Course Learning Objectives: Upon successfully completing HCS 2200, students will

- Analyze and describe the fundamental concepts of successfully growing plants.
- Evaluate how environmental, economic, social, and other factors interact and influence why and how plants are grown.
- Describe how the interactions of the components of stable natural ecosystems can be used to create successful, sustainable ecosystems of crops, landscapes, golf courses, and athletic fields.
- Evaluate the role plants play in our lives and describe many of the specific plants that fill those roles.
- Be able to apply what is learned in this class to other classes and toward success in their careers or for greater enjoyment of an avocation.

How the course learning objectives address departmental learning objectives: HCS 2200 integrates fundamentals of physical and biological sciences in the context of sustainable plant systems (Dept. Objective 2), introduces concepts in translational plant science (Dept. Objective 3), introduces students to the ecological basis of sustainability and sustainable practices (Dept. Objective 4), and instills an appreciation for the necessity of life-long learning and using evaluation and synthesizing skills (Dept. Objective 7).

HOW THIS 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.

Group work: In week one, you will be assigned a group. Group projects and discussions will be assigned throughout the course. Each group will have a discussion forum within the course.

Pace of online activities: This course is divided into **weekly modules** that are released 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 course**. According to Ohio State policy, students should expect around 3 hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 6 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. The following is a summary of everyone's expected participation:

- **Participating in online activities for attendance**: **AT LEAST ONCE 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**: **OPTIONAL**
  Office hours, are optional and by appointment.
- **Participating in discussion forums**: **3+ TIMES PER WEEK**
  As part of your participation, each week you can expect to post at least three times on Packback as part of our substantive class discussion on the week's topics.

COURSE MATERIALS AND TECHNOLOGIES

TEXTBOOK

OPTIONAL

- Plant Science: Growth, Development, and Utilization of Cultivated Plants 6th Edition (2019), Margaret McMahon

OTHER FEE

- Packback fee $25.00

Course technology

All course materials are distributed via Carmen http://carmen.osu.edu, and grades can be viewed there. For help with your password, university email, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at https://ocio.osu.edu/help/hours, and support for urgent issues is available 24/7.

- **Self-Service and Chat support:** http://ocio.osu.edu/selfservice
- **Phone:** 614-688-HELP (4357)
- **Email:** 8help@osu.edu
- **TDD:** 614-688-8743

BASELINE TECHNICAL SKILLS FOR ONLINE COURSES

- Basic computer and web-browsing skills
- Navigating Carmen: for questions about specific functionality, see the Canvas Student Guide.

REQUIRED TECHNOLOGY SKILLS SPECIFIC TO THIS COURSE

- CarmenConnect text, audio, and video chat
- Recording a slide presentation with audio narration
- Recording, editing, and uploading video

REQUIRED EQUIPMENT

- Computer: current Mac (OS X) or PC (Windows 7+) 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) or landline to use for BuckeyePass authentication

REQUIRED SOFTWARE

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

You will need to use BuckeyePass 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.

- 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 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 the IT support staff will work out a solution with you.

PACKBACK

Participation is a requirement for this course, and the Packback Questions platform will be used for online discussion about class topics. Packback Questions is an online curiosity community where you can be fearlessly curious and ask BIG questions about how what we’re studying relates to life and the real world.

Your participation on Packback will count towards 10 percent of your final grade.

In order to receive your points per week, you must post **1 question and 2 answers relevant to our class subject matter** per week, starting 09/01/20. This will equate to 14 questions and 28 answers over the semester, so the grade will be based on that data.

Before you start posting, be sure to read the **Community Guidelines** found in the tutorial on Packback. If your post doesn’t follow the Packback Community Guidelines, there is a chance it will be removed, and you won’t receive points for that post.

There will be a **Sunday 11:59 PM deadline** for submissions in your community each week.

Each week, we will spend time in Carmen highlighting discussions from Packback, encouraging feedback and recognizing top students!

To start posting on Packback Questions:

1. Navigate to https://Packback.co/questions and click “Register as a new student”.
   Note: If you already have an account on Packback you can login with your credentials.
2. Make sure to register with your SCHOOL email address and real first name and last name.
3. Enter our class community’s access code into the “Join a new Community” module on your dashboard. Our Community access code: **CAF463AB-D1B5-0DFA-E632-92CDB43F3CFB <- This code will be updated with current code once semester starts.**
4. Follow the instructions on your screen to finish your registration.

For a brief introduction to Packback Questions and why we are using it in class, watch this video: vimeo.com/packback/Welcome-to-Packback-Questions

Packback Accessibility
Information can be found here: https://www.packback.co/product/accessibility/

Packback Support
Technical support for Packback can be found here: https://packback.zendesk.com/hc/en-us/requests/new

GRADING AND FACULTY RESPONSE

How your grade is calculated

ASSIGNMENT CATEGORY	PERCENTAGE
Course content and branching activity evaluation quizzes	20
Midterm 2-stage exam	20
Short group essay	15
Group presentation	15
Chadwick, phenology garden, greenhouse, OPGC tour	15
Packback (class participation)	10
Self-assessment	5
Total	**100**

See course schedule below for due dates.

Assignments

- **Quizzes** (15%) Dates of the three quizzes will be announced during the first week of classes. The quizzes will be evenly weighted to make up 15% of the overall grade. You will be required to login to Carmen to take the quiz online. There are typically 25 questions per quiz. Quizzes will cover current material and will not be comprehensive. **Branching Activities** (5%) Students will participate in interactive self-guided activities where they can select different options to learn about various topics in plant science. At the end of each option, students will take a short quiz on the topic presented.

- **2-step Midterm Exam** (20%) The midterm exam is worth 20% (points) and will be in two parts: Part 1 will be a multiple-choice exam online, done on your own (20 questions). Part 2 will consist of you working with your group to answer some of the same questions in more detail. Part two will be submitted by group leader online. Weight: 85% of the score for the midterm will come from the individual test, with 15% allocated for the group portion.
- **Short Group Essay** (15%) In assigned groups, students will pick a current issue/problem in plant basic research, breeding, production or plant conservation. Students will submit a 1-page short essay providing two potential solutions, and explaining in detail how those solutions can solve the problem.
- **Group Project** (15%) The group project will be chosen from the topic list provided. To receive the full 15%, students will be evaluated on presentation of content. Content should include introduction to the topic, great achievements/impact of the scientist/topic/plant in plant science and our lives (use evidence to support statements), a fun fact about the scientist/plant, or further discussion about the topic from different perspectives. Groups have the option to select how they present their project. For example: creating a video, creating a brochure, recorded power-point presentation etc. Projects are submitted as a group and graded as a group. If a group member does not contribute equally, the group leader must notify the instructor. Projects will be submitted online, via Carmen.
- **Tours** (20%) There will be three virtual tours of the horticulture campus. Students will be expected to watch & interact with each tour to receive full credit.
- **Packback (Class participation)** (10%) In order to receive your points per week, you must post **1 question and 2 answers relevant to our class subject matter** per week, starting 09/01/20. This will equate to 14 questions and 28 answers over the semester, so the grade will be based on that data.
- **Self-Assessment** (5%) At the end of the class, students are required to complete a self-assessment. This is a 250-word essay where students are asked to reflect upon their personal effort in the class and how well they worked together in their assigned group.

Student participation requirement

Because this is a distance-education course, your attendance is based on your online activity and participation. The following is a summary of everyone's expected participation:

- **Logging in**:
  Be sure you are logging in to the course in Carmen at least one time per week, including weeks with holidays or weeks with minimal online course activity. (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, and no less than one week prior to the anticipated absence.*
- **Participation in discussion forums**:
  You can expect to post an entry to the discussion forum at least one time (sometimes more) per week as part of our class discussion on the week's topics.
- **Excused Absences:** Students are responsible for reaching out to the instructor in a timely manner, ideally 24 hours before the next class. The instructor understands that

there are extenuating circumstances that pop up unexpectedly and will be dealt with on a case by case basis. Students are responsible for reaching out to the instructor either via email, phone, or text. An example of an excused absence: sickness, transportation difficulty, job/internship interview, family emergencies.

Late assignments

All assignments are due by 11:59pm on the designated due date. You can find the actual due dates in Carmen website under the syllabus/assignment sections. There are no extensions of due dates without documented, extenuating circumstances subject to the approval of the instructor. All requests for extensions must be received by the instructor no less than 1 week prior to the due date; in the case of a documented emergency, you must contact the instructor within 24 hours to request an extension. Make-up exams are permitted with permission of instructor. Students must communicate with instructor to establish a day/time for make-up exam.

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

Faculty 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-HELP** at any time if you have a technical problem.)

GRADING AND FEEDBACK
For large weekly assignments, you can generally expect feedback within **7 school days**.
For exams, you can generally expect feedback within **2 weeks**.

E-MAIL
Email sent to sherratt.1@osu.edu will receive a reply within **24 hours on school days**.

DO

- Include a descriptive statement in the subject line.
- Use proper salutations when beginning an e-mail.
- Be concise in the body of the e-mail, use complete sentences and proper grammar.
- Use an appropriate closure at the end of each e-mail followed by your first and last name.
- If replying to an e-mail, reference the original e-mail and its content.
- Be selective of your choice of words. Emotions are difficult to convey in text and without the benefit of facial expressions your sentiment can be lost in the words you choose to write.

DON'T

- Use all capital letters; this conveys a tone of ANGER.
- Use e-mail as a format to criticize other individuals.
- Ask for your grade via e-mail. Grades will not be discussed by e-mail. If you need to discuss a graded item make an appointment to do so in my office.
- E-mail to inquire when grades will be posted. We will work toward submitting grades promptly, however, recognize that grading assignments and exams requires considerable time to ensure uniformity and fairness.
- Send an e-mail out of frustration or anger. Learn to save the e-mail as a draft and review at a later time when emotions are not directing the content.

DISCUSSION BOARD

Discussion board will be used for assignments and group projects, not as a primary means for asking questions. Students are encouraged to email, text or call the instructor.

OTHER COURSE POLICIES

Discussion 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 discussions 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**: When we have academic discussions, please cite your sources to back up what you say. (For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.)

- **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.
- **For accessibility** – avoid using the colors red and green in presentations and coursework.

ACADEMIC INTERGITY POLICY

POLICIES FOR THIS ONLINE COURSE

- **Quizzes and exams**: You must complete the midterm and final exams yourself, without any external help or communication. Weekly quizzes are included as self-checks without points attached.
- **Written assignments**: Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow **[MLA/APA]** style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in—but no one else should revise or rewrite your work.
- **Reusing past work**: In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on past research or revisit a topic you've explored in previous courses, please discuss the situation with me.
- **Falsifying research or results**: All research you will conduct in this course is intended to be a learning experience; you should never feel tempted to make your results or your library research look more successful than it was.
- **Collaboration and informal peer-review**: The course includes many opportunities for formal collaboration with your classmates. While study groups and peer-review of major written projects is encouraged, remember that comparing answers on a quiz or assignment is not permitted. If you're unsure about a particular situation, please feel free just to ask ahead of time.
- **Group projects**: This course includes group projects, which can be stressful for students when it comes to dividing work, taking credit, and receiving grades and feedback. I have attempted to make the guidelines for group work as clear as possible for each activity and assignment, but please let me know if you have any questions.

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*, 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:

- The Committee on Academic Misconduct web pages (COAM Home)
- *Ten Suggestions for Preserving Academic Integrity (Ten Suggestions)*
- *Eight Cardinal Rules of Academic Integrity* (www.northwestern.edu/uacc/8cards.htm)

UNIVERSITY RESOURCES

Counseling and Consultation Services

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's Counseling and Consultation Service (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 Suicide Prevention Hotline at 1-800-273-TALK or at suicidepreventionlifeline.org.

Advising

Students are encouraged to speak with their academic or major advising for scheduling issues, degree audit questions or other concerns. Academic advising models vary by department and major. Overview and contact information for advising services offered on main campus can be found at: https://advising.osu.edu

Student Services

Overview and contact information for student services (Buckeyelink) on main campus can be found at: https://contactbuckeyelink.osu.edu (formerly ssc.osu.edu)

Copyright disclaimer

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.

Intellectual Property (covered by copyright) includes Course materials (Text, Audio, Video, Multimedia, Sims, Apps, etc.), and Student Generated materials

Statement on Title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

Diversity Statement

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own

potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

Your Mental Health

A recent American College Health Survey found stress, sleep problems, anxiety, depression, interpersonal concerns, death of a significant other, and alcohol use among the top ten health impediments to academic performance. Students experiencing personal problems or situational crises during the quarter are encouraged to contact Ohio State University Counseling and Consultation Service (614-292-5766; www.ccs.osu.edu) for assistance, support and advocacy. This service is free and confidential.

Grievance Procedure

According to University Policies, if you have a problem with this class, you should seek to resolve the grievance concerning a grade or academic practice by speaking first with the instructor or professor. Then, if necessary, take your case to the department chairperson, college dean or associate dean, and to the provost, in that order. Specific procedures are outlined in Faculty Rule 3335-7-23. Grievances against graduate, research, and teaching assistants should be submitted first to the supervising instructor, then to the chairperson of the assistant's department.

Trigger Warning

Some contents of this course may involve media that may be triggering to some students due to descriptions of and/or scenes depicting acts of violence, acts of war, or sexual violence and its aftermath. If needed, please take care of yourself while watching/reading this material (leaving classroom to take a water/bathroom break, debriefing with a friend, contacting a Sexual Violence Support Coordinator at 614-292-1111, or Counseling and Consultation Services at 614-292-5766, and contacting the instructor if needed). Expectations are that we all will be respectful of our classmates while consuming this media and that we will create a safe space for each other. Failure to show respect to each other may result in dismissal from the class.

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Requesting accommodations

If you would like to request academic accommodations based on the impact of a disability qualified under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, contact your instructor privately as soon as possible to discuss your specific needs. Discussions are confidential.

In addition to contacting the instructor, please contact the Student Life Disability Services at 614-292-3307 or ods@osu.edu to register for services and/or to coordinate any accommodations you might need in your courses at The Ohio State University.

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Accessibility of course technology

This online course requires use of Carmen (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.

- Carmen (Canvas) accessibility
- Streaming audio and video
- Synchronous course tools
- Definition OSU
- Overview of Accessibility at OSU
- If you require specific software for the course list or provide a link to the software's accessibility privacy statements
    - Adobe Connect (Carmen Connect) Accessibility Adobe Privacy Policy
    - MediaSite Accessibility Statement
    - Microsoft Office Accessibility Microsoft Office 365 Privacy

COURSE SCHEDULE (TENTATIVE)

Week & Date	Topics	Assessments
1: Aug 25th	Introduction to "The World of Plants" & group formation	Bonus point: Who are you? **Assign group presentation topics**
Aug.27th	Where do plants grow? Plant Biomes of the World	Self-check quiz
2: Sept.1st	Growing plants & turf for human use	Packback discussion

		Self-check quiz.
Sept. 3rd	Virtual tour of Phenology Garden & Chadwick Arboretum	V. tour quiz
3: Sept. 8th	NPR: The Columbus Exchange	Packback discussion
Sept. 10th	Plants: The Good, the Bad and the Ugly	Self-check quiz, **Quiz 1**
4: Sept. 15th	Plant: Climate interactions - Solar radiation & moisture	Packback discussion
Sept. 17th	Plant: Climate interactions - Temperature & air	Self-check quiz
5: Sept. 22nd	Virtual tour of Learning Gardens, green roof & herb garden.	Packback discussion V. tour quiz
Sept. 24th	Ohio Veggies! (guest lecture)	Self-check quiz
6: Sept. 29th	Plant structure, growth & development	Packback discussion
Oct. 1st	Plant structure, growth & development	Self-check quiz
7: Oct. 6th	Plant origins, diversity & preservation	Packback discussion
Oct. 8th	Virtual tour of Ornamental Plant Germplasm Center (OPGC) and Howlett Hall Greenhouses	V. tour quiz **Assign group short essay**
8: Oct.13th	**Midterm 2-stage Exam** Packback discussion	
Oct. 15th	*Fall break (no classes)*	
9: Oct.20th	Plant reproduction, breeding & propagation	**Submit group presentation project** Packback discussion
Oct. 22nd	Plant reproduction, breeding & propagation	Self-check quiz
10: Oct 27th	Plant genetics	Packback discussion
Oct. 29th	Movie: Food Evolution	Self-check quiz
11: Nov. 3rd	Soils module (Dr. Pablo Jourdan)	Packback discussion
Nov. 5th	Soils module (Dr. Pablo Jourdan)	Self-check quiz
12: Nov. 10th	Soils module (Dr. Pablo Jourdan)	**Quiz 2**, Packback discussion

Nov. 12th	Plant mineral nutrition	Self-check quiz Submit group short essay
13: Nov. 17th	Plant mineral nutrition	Packback discussion
Nov. 19th	Native plants & their use (guest lecture)	Self-check quiz
14: Nov. 24th	Plant cropping systems: (organic, conventional, sustainable, resilient)	Packback discussion Self-check quiz
Nov. 26th	*Thanksgiving (no classes)*	
15: Dec. 1st	Integrated pest management (IPM)	
Dec. 3rd	Integrated pest management (IPM)	Self-check quiz
16: Dec. 8th	Course Wrap-up & review	**Self-assessment**
Finals Dec. 11-17		**Quiz 3**

SYLLABUS

HCS 2200
THE WORLD OF PLANTS
AUTUMN 2020

COURSE OVERVIEW

Instructor

Instructor: Pam Sherratt
Email address: sherrratt.1@osu.edu
Phone number: 614-561-7749
Office location: 240C Howlett Hall
Office hours: Wednesdays at noon, or by appointment

Course Organization

Credits: 3
Distribution of class time: Tuesdays and Thursday
Prerequisites (or concurrent): None
Meeting times: Tuesday and Thursdays, 3:55 PM – 5:15 PM

Course description

Study of the cultural, environmental, genetic, and social/cultural factors which influence the sustainable production of plants for food, fiber, ornamental and recreational uses.

HCS 2200, The World of Plants is a Natural Science (Biological Science) general education course.

Course learning outcomes

GE 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.

GE 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.

How the course addresses the GE objectives: Students enrolled in HCS 2200 meet the GE Natural Science Learning Objectives in multiple ways. This course provides an introduction to the complex interaction of plants, other organisms (including humans), and their environment. Students gain an understanding of the foundations of modern plant science by studying plant production, plant diversity, ecological relationships within and among species, and the evolutionary forces that shape plant form and function. Outdoor activities reinforce the plant management concepts introduced in lecture and also explore scientific reasoning and related methods. Students enrolled in HCS 2200 learn details of the interrelationship between technology and scientific methods in modern plant science and gain an appreciation of the social and philosophical ramifications of the knowledge of biology through the study of the history of key discoveries in plant science.

Course Learning Objectives: Upon successfully completing HCS 2200, students will

- Analyze and describe the fundamental concepts of successfully growing plants.
- Evaluate how environmental, economic, social, and other factors interact and influence why and how plants are grown.
- Describe how the interactions of the components of stable natural ecosystems can be used to create successful, sustainable ecosystems of crops, landscapes, golf courses, and athletic fields.
- Evaluate the role plants play in our lives and describe many of the specific plants that fill those roles.
- Be able to apply what is learned in this class to other classes and toward success in their careers or for greater enjoyment of an avocation.

How the course learning objectives address departmental learning objectives: HCS 2200 integrates fundamentals of physical and biological sciences in the context of sustainable plant systems (Dept. Objective 2), introduces concepts in translational plant science (Dept. Objective 3), introduces students to the ecological basis of sustainability and sustainable practices (Dept. Objective 4), and instills an appreciation for the necessity of life-long learning and using evaluation and synthesizing skills (Dept. Objective 7).

HOW THIS COURSE WORKS

Mode of delivery: This course is an in-person course and attendance in class is required. There are no required sessions when you must be logged in to Carmen at a scheduled time.

Group work: In week one, you will be assigned a group. Group projects and discussions will be assigned throughout the course. Each group will have a discussion forum within the course.

Pace of activities: This course is divided into **weekly modules** that are released 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 course**. According to Ohio State policy, students should expect around 3 hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 6 hours of homework (reading and assignment preparation, for example) to receive a grade of (C) average.

Attendance and participation requirements: Your attendance is based on your class activity and interaction, as well as your group participation.

COURSE MATERIALS AND TECHNOLOGIES

TEXTBOOK

OPTIONAL

- Plant Science: Growth, Development, and Utilization of Cultivated Plants 6th Edition (2019), Margaret McMahon

Class Tours

During the class, students will have the opportunity to visit several horticultural facilities on the agriculture campus: Chadwick Arboretum, phenology garden, learning gardens, green roof, Ohio Plant Germplasm Center, and the Howlett greenhouse. Some of these experiences are 'hands-on", some are self-guided, and some are assessed by working with the tour guide and filling in a worksheet.

Other fees or requirements

None

Course technology

All course materials are distributed via Carmen http://carmen.osu.edu, and grades can be viewed there. For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at https://ocio.osu.edu/help/hours, and support for urgent issues is available 24x7.

- **Self-Service and Chat support:** http://ocio.osu.edu/selfservice
- **Phone:** 614-688-HELP (4357)

- **Email:** 8help@osu.edu
- **TDD:** 614-688-8743

BASELINE TECHNICAL SKILLS NECESSARY FOR IN-PERSON COURSE

- Basic computer and web-browsing skills
- Navigating Carmen

REQUIRED EQUIPMENT

- Computer: current Mac (latest Mac OS) or PC (Windows 7 or higher) with high-speed internet connection

REQUIRED SOFTWARE

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

You will need to use BuckeyePass 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.
- 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 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 the IT support staff will work out a solution with you.

GRADING AND FACULTY RESPONSE

How your grade is calculated

Assignment or category	Percentage
Course content and branching activity evaluation quizzes	20
Midterm 2-stage exam	20
Short group essay	15

Group presentation	15
Chadwick, phenology garden, greenhouse, OPGC tours	15
Class participation	10
Self-assessment	5
Total	100%

See course schedule below for due dates.

Assignments

- **Quizzes** (15%) Dates of the three quizzes will be announced during the first week of classes. The quizzes will be evenly weighted to make up 15% of the overall grade. You will be required to login to Carmen to take the quiz online. There are typically 25 questions per quiz. Quizzes will cover current material and will not be comprehensive. **Branching Activities** (5%) Students will participate in interactive self-guided activities where they can select different options to learn about various topics in plant science. At the end of each option, students will take a short quiz on the topic presented.
- **2-step Midterm Exam** (20%) The midterm exam is worth 20% (points) and will be in two parts: Part 1 will be a multiple-choice exam, done on your own (20 questions). Part 2 will consist of you working with your group to answer some of the same questions in more detail. Weight: 85% of the score for the midterm will come from the individual test, with 15% allocated for the group portion.
- **Short Group Essay** (15%) In assigned groups, students will pick a current issue/problem in plant basic research, breeding, production or plant conservation. Students will write a 1-page short essay providing two potential solutions, and explaining in detail how those solutions can solve the problem.
- **Group Presentation** (15%) This group presentation will be 8-10 minutes long from the topic list provided. To receive the full 15%, students will be evaluated on presentation skills and presentation content. The presentation should include: introduction to the topic, great achievements/impact of the scientist/topic/plant in plant science and our lives (use evidence to support statements), a fun fact about the scientist/plant, or further discussion about the topic from different perspectives. Presentations are submitted as a group and graded as a group. If a group member does not contribute equally, the group leader must notify the instructor.
- **Tours** (20%) There will be three tours of the horticulture campus. Students will be expected to attend each tour to receive full credit.
- **Class Participation** (10%) Attendance is recorded in every class, especially when guest speakers are scheduled to present in class and during group presentations.
- **Self-Assessment** (5%) At the end of the class, students are required to complete a self-assessment. This is a 250-word essay where students are asked to reflect upon their personal effort in the class and how well they worked together in their assigned group.

Student participation requirement

Your attendance and participation is essential for the success of this course. The following is a summary of everyone's expected participation:

- In Class Participation: Students are expected to attend in-person course lecture, tour sessions, and guest speaker events. Course material will be uploaded to Carmen for students to review.
- Excused Absences: Students are responsible for reaching out to the instructor in a timely manner, ideally 24 hours before the next class. The instructor understands that there are extenuating circumstances that pop up unexpectedly and will be dealt with on a case by case basis. Students are responsible for reaching out to the instructor either via email, phone, or text. An example of an excused absence: sickness, transportation difficulty, job/internship interview, family emergencies.

Late assignments

All assignments are due by 11:59pm on the designated due date. You can find the actual due dates in Carmen website under the syllabus/assignment sections. There are no extensions of due dates without documented, extenuating circumstances subject to the approval of the instructor. All requests for extensions must be received by the instructor no less than 1 week prior to the due date; in the case of a documented emergency, you must contact the instructor within 24 hours to request an extension. Make-up exams are permitted with permission of instructor. Students must communicate with instructor to establish a day/time for make-up exam.

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

Faculty 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-HELP** at any time if you have a technical problem.) In general:

GRADING AND FEEDBACK
For large weekly assignments, you can generally expect feedback within **7 school days**.
For exams, you can generally expect feedback within **2 weeks**.

E-MAIL
Email sent to sherratt.1@osu.edu will receive a reply within **24 hours on school days**.
DO

- Include a descriptive statement in the subject line.
- Use proper salutations when beginning an e-mail.
- Be concise in the body of the e-mail, use complete sentences and proper grammar.
- Use an appropriate closure at the end of each e-mail followed by your first and last name.
- If replying to an e-mail, reference the original e-mail and its content.
- Be selective of your choice of words. Emotions are difficult to convey in text and without the benefit of facial expressions your sentiment can be lost in the words you choose to write.

DON'T

- Use all capital letters; this conveys a tone of ANGER.
- Use e-mail as a format to criticize other individuals.
- Ask for your grade via e-mail. Grades will not be discussed by e-mail. If you need to discuss a graded item make an appointment to do so in my office.
- E-mail to inquire when grades will be posted. We will work toward submitting grades promptly, however, recognize that grading assignments and exams requires considerable time to ensure uniformity and fairness.
- Send an e-mail out of frustration or anger. Learn to save the e-mail as a draft and review at a later time when emotions are not directing the content.

DISCUSSION BOARD
Discussion board will be used for assignments and not as a primary means for asking questions. Students are encouraged to email, text or call the instructor.

OTHER COURSE POLICIES

Discussion 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 discussions 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**: When we have academic discussions, please cite your sources to back up what you say. (For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.)
- **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.
- **For accessibility** – avoid using the colors red and green in presentations and coursework.

ACADEMIC INTEGRITY POLICY

Policies for this course

- **Quizzes and exams**: You must complete the quizzes, midterm and final exams yourself, without any external help or communication. If you miss an exam, you will receive a grade of zero. Make up exam will be given only if the student has a legitimate reason for missing the exam and it is discussed and approved by the instructor prior to the date of the exam. If an emergency arises and the student misses an exam, a note from a doctor, clergyman, etc. will need to be provided to schedule a makeup exam. The instructor reserves the right to verify the authenticity of the document provided by the students for makeup exams.
- **Group presentations**: Presentations are submitted as a group and graded as a group. If a group member does not contribute equally, the group leader must notify the instructor.
- **Written assignments**: Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow **[MLA/APA]** style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in--but no one else should revise or rewrite your work.
- **Reusing past work**: In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on past research or revisit a topic you've explored in previous courses, please discuss the situation with me.
- **Falsifying research or results**: All research you will conduct in this course is intended to be a learning experience; you should never feel tempted to make your results or your library research look more successful than it was.
- **Collaboration and informal peer-review**: The course may include opportunities for formal collaboration with your classmates. While study groups and peer-review of major

written projects is encouraged, remember that comparing answers on a quiz or assignment is not permitted. If you're unsure about a particular situation, please feel free just to ask ahead of time.

- **Classroom Etiquette:** Interruptions from either unrelated idle conversation during class or from incoming cell phone calls are distractive to learning and inconsiderate to fellow classmates and the instructors. Please keep cell phones ***OFF*** or in ***Etiquette Mode*** during class. Exceptions will be granted only for extreme circumstances and with my prior consent.

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*, 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:

- The Committee on Academic Misconduct web pages (COAM Home)

- *Ten Suggestions for Preserving Academic Integrity (Ten Suggestions)*
- *Eight Cardinal Rules of Academic Integrity* (www.northwestern.edu/uacc/8cards.htm)

UNIVERSITY RESOURCES

Counseling and Consultation Services

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's Counseling and Consultation Service (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 Suicide Prevention Hotline at 1-800-273-TALK or at suicidepreventionlifeline.org.

Advising

Students are encouraged to speak with their academic or major advising for scheduling issues, degree audit questions or other concerns. Academic advising models vary by department and major. Overview and contact information for advising services offered on main campus can be found at: https://advising.osu.edu

Student Services

Overview and contact information for student services (Buckeyelink) on main campus can be found at: https://contactbuckeyelink.osu.edu (formerly ssc.osu.edu)

Copyright disclaimer

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.

Intellectual Property (covered by copyright) includes Course materials (Text, Audio, Video, Multimedia, Sims, Apps, etc.), and Student Generated materials

Statement on Title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

Diversity Statement

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

Your Mental Health

A recent American College Health Survey found stress, sleep problems, anxiety, depression, interpersonal concerns, death of a significant other, and alcohol use among the top ten health impediments to academic performance. Students experiencing personal problems or situational crises during the quarter are encouraged to contact Ohio State University Counseling and Consultation Service (614-292-5766; www.ccs.osu.edu) for assistance, support and advocacy. This service is free and confidential.

Grievance Procedure

According to University Policies, if you have a problem with this class, you should seek to resolve the grievance concerning a grade or academic practice by speaking first with the

instructor or professor. Then, if necessary, take your case to the department chairperson, college dean or associate dean, and to the provost, in that order. Specific procedures are outlined in Faculty Rule 3335-7-23. Grievances against graduate, research, and teaching assistants should be submitted first to the supervising instructor, then to the chairperson of the assistant's department.

Trigger Warning

Some contents of this course may involve media that may be triggering to some students due to descriptions of and/or scenes depicting acts of violence, acts of war, or sexual violence and its aftermath. If needed, please take care of yourself while watching/reading this material (leaving classroom to take a water/bathroom break, debriefing with a friend, contacting a Sexual Violence Support Coordinator at 614-292-1111, or Counseling and Consultation Services at 614-292-5766, and contacting the instructor if needed). Expectations are that we all will be respectful of our classmates while consuming this media and that we will create a safe space for each other. Failure to show respect to each other may result in dismissal from the class.

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Requesting accommodations

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    - MediaSite Accessibility Statement
    - Microsoft Office Accessibility Microsoft Office 365 Privacy

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3: Sept. 8th	NPR: The Columbus Exchange	Packback discussion
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4: Sept. 15th	Plant:climate interactions - Solar radiation & moisture	Packback discussion
Sept. 17th	Plant:climate interactions - Temperature & air	Self-check quiz
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Sept. 24th	Ohio Veggies! (guest lecture)	Self-check quiz
6: Sept. 29th	Plant structure, growth & development	Packback discussion

Oct. 1st	Plant structure, growth & development	Self-check quiz
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Oct. 29th	Movie: Food Evolution	Self-check quiz
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Nov. 5th	Soils module (Dr. Pablo Jourdan)	Self-check quiz
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15: Dec. 1st	Integrated pest management (IPM)	
Dec. 3rd	Integrated pest management (IPM)	Self-check quiz
16: Dec. 8th	Course Wrap-up & review	**Self-assessment**
Finals		**Quiz 3**

Dec. 11-17		

GE Rationale – HCS 2200 The World of Plants

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

Course Objectives:
This course provides an introduction to the complex interaction of plants, other organisms (including humans), and their environment.

- Analyze and describe the fundamental concepts of successfully growing plants.
- Evaluate how environmental, economic, social, and other factors interact and influence why and how plants are grown.

Topics:
Students gain an understanding of the foundations of modern plant science by studying plant production, plant diversity, ecological relationships within and among species, and the evolutionary forces that shape plant form and function.

Readings/Lecture Material: Readings from Plant Science: Growth, Development, and Utilization of Cultivated Plants 6th Edition (2019), Margaret McMahon

Written Assignments: Group presentations

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:

- Evaluate how environmental, economic, social, and other factors interact and influence why and how plants are grown.
- Describe how the interactions of the components of stable natural ecosystems can be used to create successful, sustainable ecosystems of crops, landscapes, golf courses, and athletic fields.
- Evaluate the role plants play in our lives and describe many of the specific plants that fill those roles.

Topics: Integrated pest management, changes in climate, mineral nutrition, water quality, and plant genetics.

Readings/Lecture Material: Readings from Plant Science: Growth, Development, and Utilization of Cultivated Plants 6th Edition (2019), Margaret McMahon, scientific articles uploaded to Carmen, and videos on plant science and related topics (e.g. NPR videos, TED talks).

Written Assignments: Quizzes, group presentations

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

Course Objectives:

- Describe how the interactions of the components of stable natural ecosystems can be used to create successful, sustainable ecosystems of crops, landscapes, golf courses, and athletic fields.
- Evaluate the role plants play in our lives and describe many of the specific plants that fill those roles.
- Be able to apply what is learned in this class to other classes and toward success in their careers or for greater enjoyment of an avocation.

Topics: Soils, native plants & their use, plants for human use. Technology: Precision application technology, artificial light systems, remote sensing, plant genetics, autonomous machinery.

Readings/Lecture Material: Readings from Plant Science: Growth, Development, and Utilization of Cultivated Plants 6th Edition (2019), Margaret McMahon, guest lecturers, TED talks/NPR videos, Food Evolution (2016) movie, articles uploaded to Carmen.

Written Assignments: Group presentations, quizzes, Packback/in-class discussion

Other Course Components: Tours (in-person or virtual for online offering)

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:

- Evaluate how environmental, economic, social, and other factors interact and influence why and how plants are grown.
- Describe how the interactions of the components of stable natural ecosystems can be used to create successful, sustainable ecosystems of crops, landscapes, golf courses, and athletic fields.
- Evaluate the role plants play in our lives and describe many of the specific plants that fill those roles.
- Be able to apply what is learned in this class to other classes and toward success in their careers or for greater enjoyment of an avocation.

Topics: Integrated pest-management, mineral nutrition, GMOs/plant breeding, water quality, cropping systems (organic vs. conventional).

Readings: Readings from Plant Science: Growth, Development, and Utilization of Cultivated Plants 6th Edition (2019), Margaret McMahon, scientific articles uploaded to Carmen, and videos on plant science and related topics (e.g. NPR videos, TED talks).

Written Assignments: Group Essay, Packback/in-person discussions, End of class self-assessment essay

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** **Direct methods are required. Additional indirect methods are encouraged.*	**Level of student achievement expected for the GE ELO.** *(for example, define percentage of students achieving a specified level on a scoring rubric)*	**What is the process that will be used to review the data and potentially change the course to improve student learning of GE ELOs?**
ELO 1 Students understand the basic facts, principles, theories and methods of modern science.	**1.** Quizzes The quizzes will be evenly weighted to make up 15% of the overall grade. There are typically 25 questions per quiz. Quizzes will cover current material and will not be comprehensive. **2.** Midterm Exam The midterm exam is worth 20% (points) and will be in two parts: Part 1 will be a multiple-choice exam online, (20 questions). Part 2 will consist of students working with their group to answer some of the same questions in more detail. Part two will be	**1.** 85% of students to achieve 80% or higher based on grading rubric. **2.** 85% of students will achieve a grade in the top ten percentile of grading rubric. **3.** 100% of students will evaluate their work in the course and achieve 90% or higher on grading rubric. **4.** 100% of students are expected to achieve 100% on rubric.	**1.** Team evaluation and review. **2.** SEIs information, especially is comments are negative on activities. **3.** Carmen analytics: Do students participate and view each page as required? **4.** In-class discussion and feedback

	submitted by group leader online. Weight: 85% of the score for the midterm will come from the individual test, with 15% allocated for the group portion. **3.** Self-Assessment At the end of the class, students are required to complete a self-assessment. This is a 250-word essay where students are asked to reflect upon their personal effort in the class and how well they worked together in their assigned group. **4.** Tour Participation There will be three (virtual- online) tours of the horticulture campus. Students will be expected to watch & interact with each tour to receive full credit. Online offering requires students to participate in discussion forum in order to achieve credit for tour participation.		
ELO 2 Students understand key events in the development of science and recognize that science is an evolving body of knowledge.	**1.** Group presentations The group project will be chosen from the topic list provided. To receive the full 15%, students will be evaluated on presentation of content. Content should include introduction to the topic, great achievements/impact of the scientist/topic/plant in plant science and our lives (use evidence to support statements), a fun fact about the scientist/plant, or further	**1.** 100% of work is split equally amongst student groups and 85% of students achieve 80% or better based on grading rubric. **2.** 100% of students are expected to achieve 100% on rubric. **3.** 100% student participation (outlined in syllabus and rubric)	

	discussion about the topic from different perspectives. Groups have the option to select how they present their project. For example: creating a video, creating a brochure, recorded power-point presentation etc. **2.** Tour Participation There will be three (virtual- online) tours of the horticulture campus. Students will be expected to watch & interact with each tour to receive full credit. Online offering requires students to participate in discussion forum in order to achieve credit for tour participation. **3.** Guest lectures Guest Lectures – Students are assessed on in-class attendance (and online viewing of guest lecture videos).		
ELO 3 Students describe the inter-dependence of scientific and technological developments.	**1.** Group Presentations The group project will be chosen from the topic list provided. To receive the full 15%, students will be evaluated on presentation of content. Content should include introduction to the topic, great achievements/impact of the scientist/topic/plant in plant science and our lives (use evidence to support statements), a fun fact about the scientist/plant, or further discussion about the topic from different perspectives. Groups	**1.** 100% of work is split equally amongst student groups and 85% of students achieve 80% or better based on grading rubric. **2.** 100% participation from students and 85% of students achieve 80% or higher based on grading rubric. 3. 80% of students achieve 75% or higher based on grading rubric.	

	have the option to select how they present their project. For example: creating a video, creating a brochure, recorded power-point presentation etc. **2.** Packback discussions (online offering) Packback discussion (online) - In order to receive points each week, students must post 1 question and 2 answers relevant to our class subject matter per week. This will equate to 14 questions and 28 answers over the semester, so the grade will be based on that data. 3. Branching Activities Students will participate in interactive self-guided activities where they can select different options to learn about various topics in plant science. At the end of each option, students will take a short quiz on the topic presented.		
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.	**1.** Short Essay In assigned groups, students will pick a current issue/problem in plant basic research, breeding, production or plant conservation. Students will write a 1-page short essay providing two potential solutions and explaining in detail how those solutions can solve the problem. **2.** Self-Assessment	**1.** 85% of students will achieve an 80% or above based on grading rubric. **2.** 100% of students will evaluate their work in the course and achieve 90% or higher on grading rubric	

	At the end of the class, students are required to complete a self-assessment. This is a 250-word essay where students are asked to reflect upon their personal effort in the class and how well they worked together in their assigned group.		

***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 2200
Instructor: Pam Sherratt
Summary: Distance Learning Course

Standard - Course Technology	Yes	Yes with Revisions	No	Feedback/ Recomm.
6.1 The tools used in the course support the learning objectives and competencies.	X			• Carmen • Microsoft Office 365
6.2 Course tools promote learner engagement and active learning.	X			• Packback
6.3 Technologies required in the course are readily obtainable.	X			All are free and easily obtainable apart from Packback.
6.4 The course technologies are current.	X			Technologies are all web based and updated regularly.
6.5 Links are provided to privacy policies for all external tools required in the course.	X			Links to Packback are provided.
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 and Packback support 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			
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: 10/31/19
- Reviewed by: Ian Anderson

Notes: Is there a reason why Packback is being used instead of the free Carmen Message Boards? Office hours must be virtual and method (Carmen Zoom, Skype, etc.), must be noted.

[a]The 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.

[b]Add 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

[c]Add 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.