

Term Information

Effective Term Spring 2017
[Previous Value](#) Summer 2013

Course Change Information

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

Creating a hybrid offering for this course. Content not changing. In person offerings still being offered.

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

To make our classes more accessible and to capitalize on the distance education trends, creating a hybrid options for 2202 will allow students to watch lectures around their other course schedules and attend in-person labs for more hands on instruction.

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)?

There are no programmatic changes. The course already exists within the program.

Is approval of the request 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 2202
Course Title Form and Function in Cultivated Plants
Transcript Abbreviation Plnt Form & Fnctn
Course Description An introduction to plant growth and development with special emphasis on structure function relationships important to productivity and quality in cultivated plants.
Semester Credit Hours/Units Fixed: 4

Offering Information

Length Of Course 14 Week
Flexibly Scheduled Course Never
Does any section of this course have a distance education component? Yes
Is any section of the course offered Greater or equal to 50% at a distance
[Previous Value](#) No
Grading Basis Letter Grade
Repeatable No
Course Components Laboratory, Lecture
Grade Roster Component Lecture
Credit Available by Exam No
Admission Condition Course No
Off Campus Never
Campus of Offering Columbus, Wooster
[Previous Value](#) Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites

Exclusions

Not open to students with credit for 300, 300E, 310, 315, or PlntBio 300.

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code

01.1102

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

- Students will have a basic knowledge of plant anatomy and morphology with special emphasis on structure-function relationships of cultivated plants.
- Students will be familiar with the fundamental physiological processes occurring in plants and be able to relate this knowledge to how environmental factors affect crop productivity and quality.
- Students will have a working understanding of plant cellular and organismal processes and how modifications of these processes help determine in what kind of habitats a given cultivated species can survive.

Content Topic List

- The plant cell
- Cells and tissues of the plant body
- Roots
- Stems
- Leaves
- Flowers, fruits, & seeds
- Photosynthesis
- Transport of water and assimilates
- Environmental control of growth & development
- Mineral nutrition
- Plant stress responses

COURSE CHANGE REQUEST
2202 - Status: PENDING

Last Updated: Neal,Steven Michael
10/13/2015

Attachments

- HCS 2202 - Hybrid Development Syllabus - 9_15_15.docx: Syllabus-Revised
(Syllabus. Owner: Luikart,Meredith Marie)

Comments

- Please address the questions raised by COAA. *(by Neal,Steven Michael on 09/15/2015 12:51 PM)*
- Revised - Hybrid Syllabus is attached. *(by Luikart,Meredith Marie on 09/01/2015 02:49 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Luikart,Meredith Marie	08/24/2015 03:55 PM	Submitted for Approval
Approved	Barker,David John	08/24/2015 04:18 PM	Unit Approval
Revision Requested	Neal,Steven Michael	09/01/2015 02:35 PM	College Approval
Submitted	Luikart,Meredith Marie	09/01/2015 02:49 PM	Submitted for Approval
Approved	Metzger,James David	09/01/2015 02:57 PM	Unit Approval
Revision Requested	Neal,Steven Michael	09/15/2015 12:51 PM	College Approval
Submitted	Luikart,Meredith Marie	09/17/2015 09:43 AM	Submitted for Approval
Approved	Metzger,James David	09/17/2015 11:11 AM	Unit Approval
Approved	Neal,Steven Michael	10/13/2015 10:47 AM	College Approval
Pending Approval	Nolen,Dawn Vankeerbergen,Bernadette Chantal Hanlin,Deborah Kay Jenkins,Mary Ellen Bigler Hogle,Danielle Nicole	10/13/2015 10:47 AM	ASCCAO Approval



SYLLABUS: HCS 2202 – HYBRID FORM AND FUNCTION IN CULTIVATED PLANTS SPRING 2016

Course overview

Instructor

Instructor: Kent Harrison

Email address: harrison.9@osu.edu

Phone number: 614-292-5056

Office hours: By appointment

Course description

An introduction to plant growth and development with special emphasis on structure function relationships important to productivity and quality in cultivated plants. *Lectures will be presented online and Labs will take place in-person. There will be three 55 minutes lectures per week. Students should allow for additional time for background reading and studying. Labs are 1 hour 50 minutes segments per week. Mid-term and final exams will be conducted in live in-person lab sections.*

Course learning outcomes

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

GE Goals & Objectives Courses in the Natural Sciences foster an understanding of the principles, theories and methods of modern science, the relationship between science and technology and the effects of science and technology on the environment.

GE Learning Objectives

1. Students understand the basic facts, principles, theories and methods of modern science.
2. Students learn key events in the history of science.
3. Students provide examples of the inter-dependence of scientific and technological developments.
4. Students discuss social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

How students meet the GE objectives through this course: Students enrolled in HCS 2202 meet the GE Natural Science Learning Objectives in multiple ways. This course, in conjunction with HCS 2201, provides an integrated introduction to the complex interaction of plant structure, physiology, and the environment. Students gain an understanding of the foundations of modern plant science by studying plant cell and tissue structure and function, development, and the physiological basis for plant responses to the environment. Laboratory activities reinforce the biological concepts introduced in lecture and help students learn scientific reasoning and methods. Students enrolled in HCS 2202 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 Objectives upon successfully completing HCS 2202, students will:

1. Have a basic knowledge of plant anatomy and morphology with special emphasis on structure-function relationships of cultivated plants.
2. Be familiar with the fundamental physiological processes occurring in plants and be able to relate this knowledge to how environmental factors affect crop productivity and quality.
3. Have a working understanding of plant cellular and organismal processes and how modifications of these processes help determine in what kind of habitats a given species can survive.

How the course learning objectives address departmental learning objectives: H&CS 2202 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 physiological basis of sustainable practices (Dept. Objective 4), and instills appreciation for the practice of life-long learning and using evaluation and synthesizing skills (Dept. Objective 7).

Course materials

Required supplemental materials

Botany – An Introduction to Plant Biology, 5th Edition, by James D. Mauseth

Course technology

Baseline technical skills necessary for online courses

- Basic computer and web-browsing skills
- Navigating Carmen

Technology skills necessary for this specific course

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

Necessary equipment

- Computer: current Mac (OS X) or PC (Windows 7+) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed
- Microphone: built-in laptop or tablet mic or external microphone

Grading and faculty response

Grades

Assignment or category	Points
Examinations	60%
In-Person Labs	40%
Total	100

See course schedule, below, for due dates

Late assignments

- Examinations (60%).** Your final grade will be based on two hour-exams and a final exam. The hour exams are each worth 17.5% of your final grade and the final exam is worth 25% of your final grade. Exam questions will be a mixture of objective (multiple choice, T-F, etc.) and short answer essays and essays and will be derived from lectures. **Make-up exams** will be given only for a reasonable excuse. Accepted excuses are limited to personal illness, death in the family, or other problems beyond your control. You must inform me **within 24 hours** of a missed exam that you have a valid excuse. Under no circumstances will examination periods be extended beyond the allotted times.
- In-Person Labs (40%).** The lab grade will be equally divided among 1) laboratory worksheets, 2) quizzes, 3) a lab report on the plant stress experiment, and 4) a laboratory practical exam. In other words, each of these four components will be worth 10% of your course grade.

The laboratory exercises are designed to reinforce concepts presented in lecture, and so they form an important component of your learning experience. As such, lab attendance is **mandatory** and students will be unable to make up missed activities. If an emergency arises that necessitates missing a lab, timely notification must be provided to me (**not the TA!**). Accepted excuses are limited to personal illness, death in the family, or other problems beyond your control. You will not be penalized for an excused absence; however, each unexcused absence will result in the **loss of two percentage points from your final grade in addition to the loss of the grade for that day's lab.**

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 days**.

E-mail

I will reply to e-mails within **24 hours on school days**.

Discussion board

I will check and reply to messages in the discussion boards every **24 hours on school days**.

Attendance, participation, and discussions

Student participation requirements

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: AT LEAST ONCE PER WEEK**
Be sure you are logging in to the course in Carmen each 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*.

- **Office hours and live sessions: OPTIONAL OR FLEXIBLE**
All live, scheduled events for the course, including my office hours, are optional. For live presentations, I will provide a recording that you can watch later. If you are required to discuss an assignment with me, please contact me at the beginning of the week if you need a time outside my scheduled office hours.
- **Participating in discussion forums: 4+ TIMES PER WEEK**
As participation, each week you can expect to post at least four times as part of our substantive class discussion on the week's topics.

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. Informality (including an occasional emoticon) 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.

Other course policies

Academic integrity policy

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.

Academic misconduct is 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:

1. Violation of course rules as contained in the course syllabus or other information provided to the student; violation of program regulations as established by departmental committees and made available to students;
2. Knowingly providing or receiving information during examinations such as course examinations and candidacy examinations; or the possession and/or use of unauthorized materials during those examinations;
3. Knowingly providing or using assistance in the laboratory, on field work, in scholarship or on a course assignment;
4. Submitting plagiarized work for an academic requirement. Plagiarism is the representation of another's work or ideas as one's own; it includes the unacknowledged word-for-word use and/or paraphrasing of another person's work, and/or the inappropriate unacknowledged use of another person's ideas;
5. Submitting substantially the same work to satisfy requirements for one course or academic requirement that has been submitted in satisfaction of requirements for another course or academic requirement, without permission of the instructor of the course for which the work is being submitted or supervising authority for the academic requirement;
6. Falsification, fabrication, or dishonesty in creating or reporting laboratory results, research results, and/or any other assignments;
7. Serving as, or enlisting the assistance of a substitute for a student in the taking of examinations;
8. Alteration of grades or marks by the student in an effort to change the earned grade or credit;
9. Alteration of academically-related university forms or records, or unauthorized use of those forms or records; and
10. Engaging in activities that unfairly place other students at a disadvantage, such as taking, hiding or altering resource material, or manipulating a grading system.

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)

Accommodations for accessibility

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 Office for Disability Services at [614-292-3307](tel: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.

Go to <http://ods.osu.edu> for more information.

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 \(Desire2Learn\) accessibility](#)
- Streaming audio and video
- Synchronous course tools

Course Topics

Unit	Topics (Lectures: Online)
1	Introduction and the plant cell
2	Cells and tissues of the plant body
3	Roots
4	Primary stems

5	Leaves
6	Modified leaves, roots, and stems
7	Sexual reproduction: Flowers, fruits and seeds
8	Carbon assimilation
9	Assimilate transport fate
10	Environmental control of growth & development
11	How temperature affects plants
12	Mineral nutrition
13	Plant responses to internal and external signals
14	Plant chemical defenses
15	Recombinant DNA

In-Person Lab Course Schedule (tentative)

LAB (In-Person)	Week	Topic
1	Jan 19-23	Lab Introduction and Overview of the Vascular Plant Body
2	Jan 26-30	Setup Plant Stress Response lab
3	Feb 2-6	Features of the Plant Cell
4	Feb 9-13	Plant Tissue Systems and Cell Types
5	Feb 16-20	QUIZ 1 Roots
6	Feb 23-27	Stems
7	March 2-6	Leaves

8	March 9-13	QUIZ 2 Flowers and Inflorescences
	March 16-20	SPRING BREAK
9	March 23-27	Harvest Plant Stress Response Experiment
10	March 30-April 3	Fruits
11	April 6-10	QUIZ 3 Data Analysis and Report Preparation Instructions
12	April 13-17	FINAL LAB PRACTICAL EXAM Plant Stress Lab Report DUE