

## OHT 101 Course Outline Fall 2021

<b>Course Number</b> OHT 101	<b>Course Name</b> Plant Science	<b>Credits</b> 3
<b>Lecture Hours</b> 2	<b>Lab Hours</b> 2	<b>Course Duration</b> 14 weeks

### **Recommended Text**

*Introductory Plant Biology, Stern*

### **Supplemental Materials**

Blackboard

iCev

JoVE

Zoom

### **Course Description**

Introduction to the field of plant science. Topics include basic botany and plant physiology; plant growth; leaves, roots, fruits, stems, and flowers; cells; plant reproduction; genetics; and the plant kingdoms.

### **Pre-Requisites**

None

### **Learning Outcomes**

Upon successful completion of OHT 101, students should be able to:

1. Understand the scientific principles behind plant nomenclature and classification
2. Describe the plant cycle of a typical plant as it moves from seed to fruit, and identify the parts of seeds, flowers, and fruits.
3. Identify and demonstrate various methods of plant propagation to include both sexual and asexual techniques.
4. Understand how a plant grows and how natural and synthetic hormones play a role in plant growth.
5. Identify the components of a plant cell, and recall their functions.
6. Analyze the difference between mitosis and meiosis.
7. Demonstrate principles of genetics through the use of Punnett Squares to predict dominant, recessive, and co-dominant traits in plants.
8. Identify and describe the various parts and functions of leaves, stems and roots.
9. Understand plant processes such as photosynthesis, respiration and reproduction.

**Course Coordinator and Lecture Instructor**

Professor Amy Ricco

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**Lab Instructors**

Professor Amy Ricco

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**Grading**

Grades will be based on the following point system:

Exam #1	100 points
Exam #2	100 points
Exam #3	100 points
Quizzes	140 points
Project	100 points
Labs	160 points
Total	700 points (estimated total)

**Mercer's Grading System**

A	93-100
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	70-76
D	60-69
F	0-59

**Assessment Activities**

Exams – Over the course of the semester, you will have 3 exams based on lecture material. There is no final exam. All exams will be administered via BlackBoard during lecture.

Lecture Quizzes – Quizzes will be given on Mondays each week, and will need to be completed independently outside of lecture time. The quiz will be based on the lecture from the previous Monday. Each quiz is worth 20 points and the lowest quiz grade will be dropped at the end of the semester.

Attendance – Attendance will be taken in lecture and lab each meeting. Your attendance in both lecture and lab is directly correlated to your success in the course.

Lab Reports – Whether you are performing labs remotely or in person, you will have periodic lab reports due throughout the semester. Lab reports are to be submitted through BlackBoard and are worth 20 points each.

Lab Project – There will be one lab project given at the beginning of the semester which will require you to select a plant that you are interested in, learn about its care, and propagate it. The project must be typed, turned in on-time, and presented by the due date.

#### Grading Rubric for Project (paper only, not presentation)

Research Component (Worksheet) – 20 points

- ✓ Basic Information on the Plant to include:
  - Latin Name and Common Name Including Plant's Origin
  - Growth Requirements for the Plant
  - Pest Problems Common to the Plant
  - Plant Propagation Techniques Used for the Plant
  - List Your Sources

Plant Propagation Component - 40 points

- ✓ You must propagate the plant and document your results
  - Score partially based on level of creativity and difficulty
  - If your propagation technique does not work, you must re-do it

Plant Care Component – 20 points

- ✓ Your plant needs to stay healthy over the course of the semester.
- ✓ You will be responsible for some experimentation with the plant's environment.

Overall Clarity – 20 points

- ✓ Your paper must read well and be easy to understand because it is a summary of what you have done. You want the reader to be able to clearly understand the progression of your project.
- ✓ You must hand in your journal entries along with your paper.

Lab Dress Code – Please come to lab each week dressed to walk around outside, work with plants, and possibly get a little dirty.

### Statement of Academic Integrity

“Any student who a) knowingly represents the work of others as his/her own. B) uses or obtains unauthorized assistance in the execution of any academic work, or c) gives fraudulent assistance to another student is guilty of cheating. Violators will be penalized in accordance with established college policies and procedures.” – If you are caught cheating in this course, you will receive a 0 for the assignment, and you will be turned into the Academic Integrity Committee.

### Accessibility

Mercer County Community College recognizes disability as an aspect of diversity. This class has been designed to meet the diverse needs of all learners. Please feel free to schedule an appointment with me to discuss your unique learning needs.

If you feel that you will require academic accommodations, please contact Arlene Stinson [stinsona@mccc.edu](mailto:stinsona@mccc.edu) or visit [https://www.mccc.edu/student\\_services\\_needs.shtml](https://www.mccc.edu/student_services_needs.shtml) for information about obtaining academic accommodations in the remote environment.

Mercer County Community College is in full compliance with both the ADA and section 504 of the Rehabilitation Act.

### **Tentative Schedule**

Week 1: Course and Lab Introductions, Plant Basics, and Plant Classification

Week 2: Quiz #1; Plant Cycle: Seed to Flower, Pollination, Photo Responses

Week 3: Quiz #2; Plant Cycle: Seed to Flower, Pollination, Photo Responses

Week 4: Quiz #3; Plant Propagation

Week 5: **Exam #1**

Week 6: Hormones and Inhibitors; Tissues and Plant Growth

Week 7: Quiz #4; Cell Structure and Function

Week 8: Quiz #5; Genetics

Week 9: **Exam #2**

Week 10: Roots

Week 11: Quiz #6; Leaves

Week 12: Quiz #7; Stems and Transport

Week 13: Quiz #8; Photosynthesis

Week 14: **Exam #3**

\*All dates and activities are subject to change.