Mercer County Community College  
B – STEM Division  
OHT 101 – Plant Science  
Fall 2017

Credits: 3  
Lecture Hours: 2  
Laboratory Hours: 2

Lecture Instructor: Professor Amy Ricco  
Office Number: MS 124  
Phone Number: 609-570-3372  
E-Mail Address: riccoa@mccc.edu

Day Lab Instructor: Professor Amy Ricco

Evening Lab Instructor: Ronald Rabideau  
Office Number: Greenhouse  
Phone Number: 609-570-3512  
E-Mail Address: rabidear@mccc.edu

Required Text: *Introductory Plant Biology*, Stern  
Recommended Text: *Photographic Atlas of the Botany Laboratory*, Castner

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

Grading: Grades will be based on the following point system:

- Exam #1 125 points
- Exam #2 125 points
- Exam #3 125 points
- Quizzes 140 points
- Project 100 points
- A & P 120 points
- Total 735 points
Explanation of Point System:

**Exams** – Will be given in lecture and are based on lecture material. Lecture exams are not cumulative. We reserve the right to re-test you if a grade received is not consistent with your normal performance. You must show up on-time to take your exams. If you are late to class to take an exam, and one of your classmates has already finished the exam and left the room, you will not be allowed to take it. In case of an emergency, you must call within 24 hours of the exam and provide documentation in order to do a make-up.

**A & P (Attendance and Participation)** – Each week, you will earn a total of 8 points for attendance and participation for lecture and lab. You will lose points if...
- You show up to lecture late (-2)
- You show up to lab late (-2)
- You leave before the lecture has been completed (-2)
- You leave before the lab is completed – this includes clean-up (-2)
- You show up to lab without the proper foot wear (-4)
- You are continuously disruptive to the classroom atmosphere
- Your cell phone goes off during lecture or lab

**Lab Quizzes** – Quizzes will be given in lab and will cover material from the previous lecture. Each quiz is worth 20 points and will be given at the beginning of lab. You will not be given extra time to complete the quiz if you show up late and no make-up quizzes will be given. The lowest quiz grade will be dropped at the end of the semester.

**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 (it is not accepted late), and presented by the due date. **Your journal must be turned in as part of your project.** There is a 10 point deduction if you do not type it and a 30 point deduction off your semester total if you do not present it. On the day of the presentation, you must show up to lab on time or you will face a one point deduction for every minute you are late. Please include a bibliography with at least 3 resources (do not rely just on the internet). A paper without the bibliography will result in a grade of “0”. Any exceptions to these guidelines must be discussed one month prior to the project due date.
## Grading Rubric for Project (paper only, not presentation)

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Details</th>
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<tbody>
<tr>
<td>Research Component</td>
<td>20</td>
<td>- Basic Information on the Plant to include:</td>
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<tr>
<td></td>
<td></td>
<td>o Latin Name and Common Name Including Plant’s Origin</td>
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<td></td>
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<td>o Growth Requirements for the Plant</td>
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<td></td>
<td>o Pest Problems Common to the Plant</td>
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<td></td>
<td></td>
<td>o Plant Propagation Techniques Used for the Plant</td>
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<tr>
<td></td>
<td></td>
<td>o List Your Sources</td>
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<tr>
<td>Plant Propagation Component</td>
<td>40</td>
<td>- You must propagate the plant and document your results</td>
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<td></td>
<td>o Score partially based on level of creativity and difficulty</td>
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<td></td>
<td>o If your propagation technique does not work, you must re-do it</td>
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<tr>
<td>Plant Care Component</td>
<td>20</td>
<td>- Your plant needs to stay healthy over the course of the semester.</td>
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<td>- You will be responsible for some experimentation with the plant’s environment.</td>
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<tr>
<td>Overall Clarity</td>
<td>20</td>
<td>- 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.</td>
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<td>- You must hand in your journal entries along with your paper.</td>
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### 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 in to the Academic Integrity Committee.

### Other College Policies to be aware of...

- Smoking Policy
- Student ID Policy
- Parking Permit Policy

Mercer County Community College is committed to ensuring the full participation of all students in all activities and programs. If you have a documented differing ability or think that you may have a differing ability that is protected under the ADA or Section 504 of the Rehabilitation Act, please contact Arlene Stinson in LB216 {stinsona@mccc.edu} for information regarding academic accommodations and additional support services.
Lab Dress Code - You **must** wear sturdy shoes for lab. This means no open toe shoes, sandals, slippers or flip-flops.

Behavior Statement - I encourage participation in my course. I enjoy you asking questions and sharing your experiences. I, however, will not tolerate any of the following behaviors in my course.

- Physical or Verbal Threatening Behavior or Derogatory Remarks Towards the Instructor and/or Fellow Classmates
- Using Cell Phones During Class (including text messaging)
- Carrying on Side Conversations
- One student dominating the course and preventing others from asking questions.

Mercer's Grading System:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>93-100</td>
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<tr>
<td>A-</td>
<td>90-92</td>
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<tr>
<td>B+</td>
<td>87-89</td>
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<tr>
<td>B</td>
<td>83-86</td>
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<tr>
<td>B-</td>
<td>80-82</td>
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<tr>
<td>C+</td>
<td>77-79</td>
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<tr>
<td>C</td>
<td>70-76</td>
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<tr>
<td>D</td>
<td>60-69</td>
</tr>
<tr>
<td>F</td>
<td>0-59</td>
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</tbody>
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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.
**Tentative Schedule:**

Week 1:
- Lecture – Course Introductions, Plant Basics, Plant Classification
- Lab – Lab Orientation, Project Guidelines, Project Plant Selection
- Readings – Chapters 1 and 16; Leaf and Flower Morphology Hand-out

Week 2:
- Lecture – Plant Cycle: Seed to Flower, Pollination, Photo Responses
- Lab – Quiz #1; Nomenclature and Plant Part Reinforcement
- Readings – Chapters 8, 22, and 23

Week 3:
- Lecture – Plant Cycle: Seed to Flower, Pollination, Photo Responses
- Lab – Quiz #2; Plant Part Scavenger Hunt; **Research Due for Project**
- Readings - Chapters 8, 22, and 23

Week 4:
- Lab – Quiz #3; Propagation Techniques
- Readings – Chapter 14

Week 5:
- Lecture – Plant Propagation
- Lab – Quiz #4, Propagate Project Plant
- Readings - Chapter 14

Week 6:
- Lecture – **Exam #1**
- Lab – TBD
- Readings - None

Week 7:
- Lecture – Hormones and Inhibitors; Tissues and Plant Growth
- Lab – Project Work
- Readings - Chapters 4 and 11

Week 8:
- Lecture – Cell Structure and Function
- Lab – Quiz #5; Project Work
- Readings - Chapters 3 and 12
Week 9:
  Lecture – Genetics
  Lab – Quiz #6, Project Work
  Readings - Chapter 13

Week 10:
  Lecture – Roots
  Lab – Quiz #7, Root ID
  Readings - Chapter 5

Week 11:
  Lecture – Exam #2
  Lab – Bulbs
  Readings - None

Week 12:
  Lecture – Leaves
  Lab – Project Due
  Readings - Chapter 7

Week 13:
  Lecture – Stems and Transport
  Lab – Quiz #8; Leaf Lab
  Readings - Chapters 6 and 9

Week 14:
  Lecture – Photosynthesis
  Lab – Quiz #9; Wrap-up and Clean-up
  Readings - Chapter 10

Week 15:
  Lecture – Exam #3
  Lab – TBA
  Readings - None

*All dates and activities are subject to change.