Mercer County Community College  
B-STEM Division  
OHT 204 – Plant Diseases  
Fall 2018

Credits: 3
Lecture Hours: 2
Laboratory Hours: 2

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

Required Text: Plant Pathology; George N. Agrios

Catalog Description: Introduction to the history, economic importance, symptoms, causal agents and management of plant diseases. Lab exercises include the isolation, culture, and identification of plant pathogens.

Pre-requisites: OHT 101 or permission of the coordinator

Grading: Grades will be based on the following system

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>Midterm Exam</td>
<td>150</td>
</tr>
<tr>
<td>Final Exam</td>
<td>150</td>
</tr>
<tr>
<td>Lecture Quizzes</td>
<td>100</td>
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<tr>
<td>Lab Reports</td>
<td>100</td>
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<tr>
<td>Lab Practical</td>
<td>100</td>
</tr>
<tr>
<td>Semester Project</td>
<td>100</td>
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<tr>
<td>Total</td>
<td>700</td>
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Explanation of the Points System:

Lecture Exams – The midterm exam will be given in lecture and is based on lecture material. The final exam is cumulative with an emphasis on the second half of the course. Exam dates are listed in the course outline.

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.
**Lecture Quizzes** – Quizzes will be given in lecture each week and will cover material from the previous lecture. Each quiz is worth 10 points and will be given at the beginning of lecture. The lowest quiz grade will be dropped at the end of the semester. You will not be given extra time to complete the quiz if you show up late, and no make-up quizzes will be given.

**Lab Reports** – Lab reports are due before you leave lab each week. You may work together in lab, however, each person must turn in a lab report form and is held accountable for the information. Each lab report is worth 10 points with the lowest grade being dropped at the end of the semester. You will be given the report form for the lab report at the beginning of each lab. If you show up late to lab, you will be given an immediate 1 point deduction.

**Lab Practical** – One lab practical will be given during the semester and is worth 100 points. This will require you to recall and demonstrate the lab/diagnostic skills that you have learned throughout the semester.

You must show up on time to take the lab practical. If you are late to class to take it, and one of your classmates has already finished 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 lab practical and provide documentation in order to do a make-up.

**Semester Project** – This is an open project that allows you to explore any topic within plant pathology that interests you. The guidelines given are that your project must be typed, presented, and turned in on time. Your project should be a minimum of 5 pages of text (12 pt. font, double spaced, 1” margins) and must include a bibliography. You cannot rely just on the internet as a resource! Please use articles and reference books in addition to the internet. The presentation that you make should be practiced ahead of time and should be approximately 5 minutes in length. You will lose 10 points if your project is not typed, 20 points if you do not present it, and an additional 5 points deducted for every day the project is late. If you are late to class the day of presentations, you will lose 1 point for every minute you are late. Your grade will be based on your project and the presentation. Remember that this project is worth 100 points so it should be take very seriously!

**Cell Phones** – The ringer on your cell phones must be turned off during lab and lecture. If you are expecting an emergency phone call, please sit close to the door so you can excuse yourself without disturbance to the rest of the class. Text messaging is prohibited.

**Lab Dress Code** – You must wear sturdy foot wear to lab. This means no open-toe shoes, sandals or flip-flops. If you do not come dressed appropriately, you will not be able to do the lab that day and will receive a grade of “0”.

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.

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.

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 – this includes text messaging.
- Carrying on side conservations.
- One student dominating the class and preventing others from asking questions.

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
Course Objectives:

1. Acquaint the student with interactions between a variety of pathogens and their respective hosts.
2. Develop an understanding of the social impact that diseases have on mankind.
3. Understand the basic differences between fungi, bacteria and viruses along with the damage they cause.
4. Relate environmental conditions, proper sanitation, resistant varieties and pesticide spraying programs to disease control management.
5. Identify and become familiar with some of the most common and economically damaging diseases.

Behavioral Objectives:

1. Identify a variety of signs and symptoms.
2. Isolate a pathogen in culture and re-inoculate this pathogen on a given host.
3. Recognize the pathogenic causal agents as well as diseases caused by environmental problems.
4. Develop lab techniques necessary in the isolation and culture of pathogens.
5. Demonstrate the proper use of compound and dissecting microscopes.

Tentative Schedule:

Week #1: Lecture: Course Outline and Course Introductions; History of Plant Disease and Introduction to Plant Diseases Lab: Microscope and Material Usage Readings: Chapter 1

Week #2: Lecture: Introduction to Plant Diseases Continued (Quiz #1) Lab: Diagnostic Basics – Scavenger Hunt (Lab Report #1) Readings: Chapter 2

Week #3: Lecture: Fungal Diseases (Quiz #2) Lab: Diagnosing Fungal Diseases Using Sectioning and PDA (Lab Report #2) Readings: Chapter 11

Week #4: Lecture: Rust Diseases (Quiz #3) Lab: Diagnosing Fungal Diseases Using Sectioning and PDA (Lab Report #3) Readings: Chapter 11
Week #5: Lecture: Bacterial Diseases (Quiz #4)  
Lab: Diagnosing Bacterial Diseases Using Streaming and NA (Lab Report #4)  
Readings: Chapter 12

Week #6: Lecture: Viral Diseases (Quiz #5)  
Lab: Koch’s Postulates and Inoculations (Lab Report #5)  
Readings: Chapter 14

Week #7: Lecture: Non-Infectious/Abiotic Diseases (Quiz #6)  
Lab: Diagnosing Landscape Problems (Lab Report #6)  
Readings: Chapter 10

Week #8: Lecture: Midterm Exam  
Lab: Diagnosing Landscape Problems (Lab Report #7)  
Readings: None

Week #9: Lecture: Common Turf Grass Diseases  
Lab: Diagnosing Turf Grass Diseases (Lab Report #8)  
Readings: Chapter 7

Week #10: Lecture: Diseases of Food Products (Quiz #7)  
Lab: Fruit Bowl (Lab Report #9)  
Readings: Chapter 9

Week #11: Lecture: Soil Borne Pathogens (Quiz #8)  
Lab: Lab Practical  
Readings: Chapter 15

Week #12: Lecture: Insects: Vectoring Disease and Causing “Disease Like” Damage (Quiz #9)  
Lab: Identifying Insects (Lab Report #10)  
Readings: Pick a Chapter

Week #13: Lecture: Disorders of Houseplants (Quiz #10)  
Lab: Diagnosing Disorders of Houseplants (Lab Report #11)  
Readings: Pick a Chapter

Week #14: Lecture: Project Presentations (Quiz #11)  
Lab: Project Presentations (Lab Report #12)  
Readings: Pick a Chapter

Final Exam Date TBD