COURSE OUTLINE

Course Number  
OHT 241  

Course Title  
Equipment and Integrated Pest Management  

Credits  
3  

Hours:  
Lecture/Lab/Other  
2/2/0  

Co- or Pre-requisite  
OHT 102 or Permission of the Program Coordinator  

Sem/Year  
Spring 2019  

Catalog Description:  
Equipment and procedures in horticultural settings with emphasis on pest management. Includes strategies and theories of integrated pest management; biological pest controls; application of pesticides; weed control; calibration of equipment; and spraying techniques.

Recommended Texts/Other Materials:  
Title:  
Concepts in Integrated Pest Management  
Author:  
Norris; Caswell-Chen; Kogan  
Publisher:  
Prentice Hall  

Course Coordinator:  
Amy Ricco, Professor  
609-570-3372  
riccoa@mccc.edu  
MS124

Course Competencies/Goals

The student will be able to: (Gen-Ed Knowledge Goals 1 and 2; MCCC Core Skills Goals A, B, D and F)

- Identify major insects, weeds, diseases, and other pests that are detrimental to every aspect of the horticulture industry.
- Define Integrated Pest Management.
- Implement a successful Integrated Pest Management program.
- Use and identify a wide variety of chemical, biological, cultural, mechanical, and preventative control methods for greenhouse and nursery crops.
- Calibrate sprayers and spreaders for the application of grass seed, fertilizers, and pesticides.
- Become familiar with various pieces of equipment such as skid steers, loaders, sod cutters, arborist equipment etc.
- Demonstrate safe mixing and application of pesticides.
- Identify possible jobs that are available in the field of Integrated Pest Management.
- Understand and use economic thresholds.
- Calculate growing degree days.
• Identify the steps necessary for obtaining your pesticide applicators license.
• Perform various Integrated Pest Management sampling techniques.
• Identify common predators and parasites.
• Use general management strategies such as proper plant, soil, and fertilizer selection.

**Units of Study:**

**Unit 1:** Introduction to Integrated Pest Management; Scouting and Monitoring Techniques; Developing a Scouting Plan  
Read: Chapters 1, 2, and 9

**Unit 2:** Economic Injury Levels, Economic Thresholds, Pest Resurgence, Secondary Pest Outbreaks, Growing Degree Day Calculations, etc.  
Read: Handouts; Chapters 4, 8, and 12

**Unit 3:** Cultural and Preventative Management Techniques  
Read: Chapters 16 and 17

**Unit 4:** Mechanical and Chemical Management Techniques  
Read: Chapters 11 and 15

**Unit 5:** Biological and Behavioral Management Techniques  
Read: Chapters 13 and 14

Midterm Exam

**Unit 6:** Proper Equipment Usage  
Read: None

**Unit 7:** Introduction to the Development and Implementation of IPM Programs  
Read: Chapters 18, 19, and 20

**Unit 8:** Common Insect Pests: Identification and Management  
Read: Chapters 5, 6, 7 and 10

**Unit 9:** Common Disease Pests: Identification and Management  
Read: Chapters 5, 6, 7 and 10

**Unit 10:** Common Weed Pests: Identification and Management  
Read: Chapters 5, 6, 7 and 10

**Unit 11:** Common Animal Pests: Identification and Management  
Read: Chapters 5, 6, 7 and 10

Final Project Due and Presented

Final Exam
**Evaluation of Student Learning**

Students will be evaluated based on the following point 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>Weekly Quizzes</td>
<td>100</td>
</tr>
<tr>
<td>Reports</td>
<td>100</td>
</tr>
<tr>
<td>Final Project</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>600</strong></td>
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</tbody>
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**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

**Explanation of Point System:**

**Exams:** Exams will be based on lecture material. The midterm exam will be based on the first half of the course. The final exam will be cumulative with an emphasis on the second half of the course. The date of the final exam is to be announced. I 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. Make-ups are allowed if the absence is a documented excuse. You are also responsible for all missed material for exams and quizzes. I would suggest you pair up with a classmate so you have easy access to notes, etc.

**Weekly Quizzes:** Quizzes will be given in lecture and will cover the 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 to lecture. Make up quizzes will be given if it is a documented excuse.

**Reports:** Periodic lab reports will be assigned over the course of the semester. Each report will be worth 10 points and will be due the following week. The reports are required to be typed and at least one page in length. You will lose 2 points if you do not type the report. Reports will not be accepted late so if you miss class, you must e-mail it to me on the day it is due. The lowest lab report grade will be dropped at the end of the semester.
Final Project: You are required to develop an Integrated Pest Management proposal for a real or theoretical business. Your project idea must be approved before you get started. Please include the following information...

Choose a business that you want to do a proposal for. Your business should be one of the following:
- field/forage crop farm
- vegetable farm
- orchard
- greenhouse operation
- golf course
- private estate
- nursery operation

Your business should be of reasonable and realistic size.

Choose your plants. You must have a minimum of 5 different plants grown for the business.

Create a detailed plan for the Integrated Pest Management proposal that you are submitting. Your plan should include, but not be limited to the following information:
- descriptions and/or pictures of the most common weeds, insects, diseases, and animals that affect the crops that you are growing
- chemical, mechanical, cultural, biological, and preventative controls that you plan on using in order to manage your plant pests
- how you plan on scouting for your pests
- the equipment and supplies that you will need in order to implement your program
- the damage levels that your plants can withstand
- estimated cost for the proposal to be implemented.

You will turn in a typed paper and prepare an organized presentation for your classmates. Your presentation should be no more than 10 minutes long.

Please include a bibliography with your project. The bibliography must include at least 3 different sources.

Policies:

Make-up Policy: The instructor must be notified within 24 hours of an exam if it is going to be missed for an excused reason. (Excused absences include illness, death, transportation problems etc.) If this is done, the student will be able to make up the exam at the convenience of the instructor as long as proper documentation is provided. Otherwise, no make-up will be offered.

Cell Phone Policy: According to college policy, the ringer on cell phones must be turned off during lab and lecture. In addition, text messaging is not allowed during lab or lecture.

Lab Dress Code: You must wear sturdy shoes to lab. This means no open toe shoes, flip-flops or sandals.
Academic Integrity Statement

“Any student a) who knowingly represents the work of others as his/her own; b) uses or obtains unauthorized assistance in the execution of academic work; or c) gives fraudulent assistance to another student is guilty of cheating. Violators will be penalized in accordance with established policies and procedures.

In this course, you will receive a grade of “0” for the assignment you are working on, and you will be reported to the college’s Academic Integrity Committee”.

Office of Student Services:

Accessibility Statement
Mercer County Community College is committed to ensuring the full participation of all students in its programs. If you have a documented differing ability or think that you may have a differing ability that is protected under the ADA and Section 504 of the Rehabilitation Act, please contact Arlene Stinson in LB 216 stinsona@mccc.edu for information regarding support services.

If you do not have a documented differing ability, remember that other student resources are available to all students on campus including academic support through our Learning Center located in LB 214.