Entomology 5600
Principles and Applications of Integrated Pest Management
Syllabus

Instructor:
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Course Outline:
Overview of the principles of integrated pest management (IPM) of arthropod pests using an ecological approach, including examining how various management tactics can be used in an integrated manner

Course Objectives:

1. Understand the various concepts in the development and practice of IPM, and how the concept of pest control has been replaced with pest management
2. Understanding how the ecological paradigm is implemented in IPM, including how it addresses environmental compatibility, production efficiency, economic viability, and social responsibility
3. Understand that IPM is based on bioeconomics, making use of economic injury levels and thresholds in making management decisions
4. Understand how management tactics can be integrated to maintain pests below economically damaging levels in an ecological acceptable manner
5. Gain an appreciation of different IPM approaches across different geographical regions, including from an international perspective

Class:
55 minutes per class
3 days per week
Week 1
Introduction and IPM Overview
IPM Philosophy
Ecological Context of IPM

Week 2
Ecological Context of IPM
Ecological Context of IPM
Pest Concept

Week 3
Pest Concept / Economic Injury Levels
Sampling

Week 4
Sampling and Statistics
Tactic: Cultural/Ecological Management
Exam 1

Week 5
Tactic: Cultural/Ecological Management - Mechanical
Tactic: Host Plant Resistance
Tactic: Transgenics

Week 6
Tactic: Biocontrol – Predators/Parasitoids
Tactic: Biocontrol – Predators/Parasitoids
Tactic: Biocontrol – Pathogens/Nematodes

Week 7
Tactic: Behavior, Pheromones and Monitoring
Tactic: Behavior, Pheromones and Management (attractants, repellency)
Tactic: Insecticides

Week 8
Tactic: Insecticides
Case Studies: Field Crops

Week 9
Case Studies: Turf
Case Studies: Urban and Structural

Week 10
Case Studies: Urban and Structural
Case Studies: Fruits/Vegetables

Week 11
Case Studies: Veterinary
Case Studies: Medical
Case Studies: Ornamentals and Forests
Week 12  
Case Studies: Area-Wide Pest Management  
Case Studies: Controlled Environments  
Exam 2

Week 13  
Case Studies: IPM in the Organic and Sustainable Systems  
Case Studies: IPM in the Organic and Sustainable Systems  
Environmental Issues Related to IPM

Week 14  
Environmental Issues Related to IPM  
IPM at OSU, in NC Region, Nationally, Internationally

Textbook:  

Standard grading scale:  
A:  \( \geq 93\% \)  
A-:  90 to <93  
B+:  87 to <90  
B:  83 to <87  
B-:  80 to <83  
C+:  77 to <80  
C:  73 to <77  
C-:  70 to <73  
D+:  67 to <70  
D:  60 to <67  
E:  <60

Academic Integrity:  
Please note that the university policy will serve as the basis for dealing with any such issues in this course.  
http://studentaffairs.osu.edu/pdfs/csc_12-31-07.pdf

Special Needs and Accommodations:  
Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Please contact the Office for Disability Services at 614-292-3307 (Fax: 614-292-4190; TDD: 614-292-0901) in room 150 Pomerene Hall, 1760 Neil Ave, Columbus, Ohio 43210 to coordinate reasonable accommodations for students with documented disabilities.  
http://www.ods.ohio-state.edu/

Incomplete Grade Policy:  
Incomplete grades will be given only in special circumstances as outlined in university policy.
General Information:
Additional information on general Ohio State University Policies can be found at: http://trustees.osu.edu/ChapIndex/index.php

Late Policy:
A report that is handed in late will be reduced in value 10 percent per day that it is late.