



Course Number and Title: SCI 206 Pesticide Principles and Applications

Campus Location:

Georgetown

Effective Date:

2018-51

Prerequisite:

ENG 090 or ENG 091, MAT 010, AGS 105

Co-Requisites:

none

Course Credits and Hours:

3.00 credits

3.00 lecture hours/week

0.00 lab hours/week

Course Description:

This course examines the principles of insects, weed and disease control in agricultural crops, horticultural plants and turf, integrated pest management, economics, and safety.

Required Text(s):

Obtain current textbook information by viewing the [campus bookstore - https://www.dtcc.edu/bookstores](https://www.dtcc.edu/bookstores) online or visit a campus bookstore.

Check your course schedule for the course number and section.

Additional Materials:

Pesticide Applicators Training Manual/Core Manual

Schedule Type:

Classroom Course

Disclaimer:

None

Core Course Performance Objectives (CCPOs):

1. Identify major insect anatomy features and functions. (CCC 1; PGC: LOH 1, 5; PAG 1, 2, 4)
2. Identify major crop, horticulture, and turf pests and control systems. (CCC 1; PGC: LOH 2, 3, 4, 5; PAG 1, 2, 3, 4)
3. Differentiate between the concepts and principles of integrated pest management. (CCC 1; PGC: LOH 2, 4, 5; PAG 1, 2, 3, 4)
4. Identify the major weed problems associated with agronomic crops, horticulture plants, and turf. (CCC 1, 2; PGC: LOH 2, 4; PAG 1, 2, 3, 4)
)Identify basic safety and handling rules for pesticide use. (CCC 1, 6; PGC: LOH 5; PAG 1, 2, 3, 4)

See Core Curriculum Competencies and Program Graduate Competencies at the end of the syllabus. CCPOs are linked to every competency they develop.

Measurable Performance Objectives (MPOs):

Upon completion of this course, the student will:

1. Identify major insect anatomy features and functions.
 1. Name characteristics that aid in distinguishing one insect from another.
 2. List main groups of pests.
 3. Name identifying characteristics common to all adult insects.
 4. List ways insects may damage crops.
 5. List ways insects affect livestock and people.
2. Identify major crop, horticulture and turf pests, and control systems.
 1. List vertebrate pest animals.
 2. Name sources for aid in identifying pests.
 3. Describe the difference between grasses and broadleaf plants.
 4. Identify the insect species that are serious pests of turfgrass.
 5. Explain how insect pests are controlled.
 6. Explain what causes turfgrass disease.
3. Differentiate between the concepts and principles of integrated pest management.
 1. Discuss the importance of an integrated pest management (IPM) program.
 2. Discuss the components of an IPM program.
 3. Describe monitoring techniques.
 4. Explain how to develop an IPM program.
4. Identify the major weed problems associated with agronomic crops, horticulture plants, and turf.
 1. List some of the most common weed species.
 2. Discuss the methods of controlling annual grasses, perennial grassy weeds, and broadleaf weeds.
 3. Describe methods of weed classification and identification.
 4. Explain how weeds affect agronomic crops.
5. Identify basic safety and handling rules for pesticide use.
 1. Explain the process of pesticide applicator certification as mandated by the Environmental Protection Agency.
 2. Describe the fate of pesticides in the environment.
 3. Discuss pesticide toxicity and methods of measuring toxicity.
 4. State why it is important to read a pesticide label and follow the directions on the label.
 5. List the protective clothing that must be worn when handling various pesticides.
 6. Identify the symptoms of pesticide poisoning.
 7. Describe safe methods of pesticide storage.

Evaluation Criteria/Policies:

Students must demonstrate proficiency on all CCPOs at a minimal 75 percent level to successfully complete the course. The grade will be determined using the Delaware Tech grading system:

92	-	100	=	A
83	-	91	=	B
75	-	82	=	C
0	-	74	=	F

Students should refer to the [Student Handbook - https://www.dtcc.edu/handbook](https://www.dtcc.edu/handbook) for information on the Academic Standing Policy, the Academic Integrity Policy, Student Rights and Responsibilities, and other policies relevant to their academic progress.

Core Curriculum Competencies (CCCs are the competencies every graduate will develop):

1. Apply clear and effective communication skills.
2. Use critical thinking to solve problems.
3. Collaborate to achieve a common goal.
4. Demonstrate professional and ethical conduct.
5. Use information literacy for effective vocational and/or academic research.
6. Apply quantitative reasoning and/or scientific inquiry to solve practical problems.

Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his or her major):
Landscape and Ornamental Horticulture Option:

1. Safely operate landscape equipment.
2. Demonstrate basic greenhouse management functions to include environmental controls, scheduling, production, pest control, nutrient management, and marketing of floriculture crops.
3. Demonstrate effective customer service skills for horticulture business success.
4. Apply business principles and strategies to the landscape and ornamental horticulture industries.
5. Explain the importance of soil and water management to the Landscape and ornamental horticulture industry.
6. Design and install a finished landscape plan.

Production Agriculture Option:

1. Apply basic agribusiness management procedures as they apply to production and marketing of agriculture products.
2. Assess procedures related to integrated pest management.
3. Demonstrate production techniques related to sustainable agriculture.
4. Demonstrate skills related to scheduling, production, marketing, harvesting, and safe handling of crops.
5. Describe the importance of poultry, livestock, and crop production to the agriculture industry.
6. Assess skills needed for the breeding, care, and nutrition of livestock animals.

Disabilities Support Statement:

The College is committed to providing reasonable accommodations for students with disabilities. Students are encouraged to schedule an appointment with the campus Disabilities Support Counselor to request an accommodation needed due to a disability. A listing of campus Disabilities Support Counselors and contact information can be found at the [disabilities services - https://www.dtcc.edu/disabilitysupport](https://www.dtcc.edu/disabilitysupport) web page or visit the campus Advising Center.