CSS 415 – Integrated Pest Management
Spring 2026

Tuesday and Thursday from 1:30 to 2:45 pm
1404 Williams Hall

Course description

CS 415 is designed to introduce students to the theory and practice of integrated pest management systems in major agronomic and horticultural crops; turf grass and pasture systems; and aquatic, non-cropland, and urban settings. Students will be required to combine knowledge with analytical, managerial, and communication skills to address real-world problems in a diversity of management systems.

Student Learning Outcomes

Students successfully completing this course will be able to:

1) Integrate the principles of pest management into the environmentally responsible and economically feasible management of cropping systems and other ecosystems.
2) Utilize critical thinking principles for pest management decision-making.
3) Apply current pest management principles to crop production and other situations where pest management is critical.

Prerequisites

None

Instructor

Dr. David Jordan

Department of Crop and Soil Sciences, 4207 Williams Hall

Office phone: 919-810-6611, E-mail: david_jordan@ncsu.edu

Office hours: By appointment

Teaching Assistant

Grazia Corrales Jimenez

mgcorra2@ncsu.edu

Required textbook

Various electronic materials provided by the instructor

PowerPoint and screencast presentations will be provided in electronic format

Lectures will be recorded and made available to students

Student conduct

The NCSU Code of Student Conduct describes the kind of student behavior that disrupts and inhibits the normal functioning of the University and the actions that the University will take to protect the community from such disruption. It is your duty as a member of the University community to read, understand, and adhere to the Code of Student Conduct found at. http://www.ncsu.edu/policies/student_services/student_discipline/POL11.35.1.php

Academic integrity

Any attempt at unfairly influencing the grade received for an academic exercise is considered academic dishonesty and will not be tolerated.

Standard of Classroom Behavior

To maintain a positive learning atmosphere in this class, it is important that you respect your classmates, the instructors, class guests, and yourself at all times. As a student, you have the right to expect an atmosphere that is conducive to learning. And, you also have the responsibility to make sure that a positive environment is maintained. Please refrain from the use of tobacco products, speaking in a disruptive manner, entering the classroom late, and any other activity that may disrupt the class.

Students with Special Needs

Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with Disability Services for Students at 1900 Student Health Center, Campus Box 7509, 515-7653. For more information on NC State's policy on working with students with disabilities, please refer to information found at the following website:
http://www.ncsu.edu/policies/academic_affairs/pols_regs/REG205.00.28.php.

Grading Procedures

You are expected to complete assignments on time. All assignments are due on the date provided. Considerations will be made about late completion of assignments, on a case-by-case basis, provided arrangements are made prior to the due date.

Exams in this course are scheduled for a 90-minute time period. Make-up exams will be allowed only for illness, emergencies, or prescheduled reasons.

A quiz will be given at the start of each lecture. The quiz grade is worth 100 points on the final grade. There is no makeup for the quiz you miss. However, if your absence has an acceptable reason, missing that quiz will not count against your grade. The quiz will start at 60 or 70 points. Your answers will determine your grade between 60 or 70 and 100. If you are present and do not get any points for your answers, you still make 60 or 70 for that day.

During the semester, bonus points can be gained by providing a summary related to data interpretation during the class. A reasonable answer will be expected to gain bonus points.

There are no make-up for the quiz and bonus points.

Assignment	**Points**
Individual project	100
Quiz	100
Exam 1	100
Exam 2	100
Exam 3	100
Total	500

CS 415 – Integrated Pest Management – Spring 2026	
Week	**Topic**
January 13 January 15	Introduction and History of IPM Statistics in Pest Management Research and Recommendations
January 20 January 22	Overview of Weeds
January 27 January 29	Overview of Arthropods
February 3 February 5	Overview of Diseases
February 10 February 12	Overview of Nematodes **Exam 1**
February 17 February 19	**Wellness Day – No Class** PAMS Approach to IPM in Detail, Risk Tools
February 24 February 26	Climate Change and Pests Organic Production
March 3 March 5	Cover Crops and Pollinators Managing Invasive Pests
March 10 March 12	Pesticides and Pesticide Stewardship **Exam 2**
March 16 March 20	**Spring Break**
March 24 March 26	Pesticide Resistance **(individual project due)** Managing Pest Resistance
March 31 April 1	Pest Management in Urban and Greenhouse Settings Pest management in Orchards, Turfgrass, Pastures and Forages, and Small Grains
April 7 April 9	Pest Management in Agronomic and Horticulture Crops
April 14 April 16	Pest Management in Agronomic and Horticulture Crops

April 21	**Exam 3**
April 23	Managing Pests with Limited Resources
April 28	Aflatoxin Mitigation and Food Safety
NO FINAL EXAM	

Integrated Pest Management – CS 415

Individual Project

Undergraduate (CS 415) will be required to develop 1) a one-page Fact Sheet that describes: a) distribution, b) economic impact, and c) management of this pest using the PAMS approach and 2) a risk index for a pest and setting of their choice. The assignment is due March 24. The instructor will present an example fact sheet and risk index. Graduate students will be required to create items 1 and 2 above for a key arthropod, pathogen, nematode and weed in the crop they are working on in their graduate degree program.