

CS 415 – Integrated Pest Management
Spring 2014
Tuesday and Thursday 1:30-2:45 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 sound 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 situations where pest management is critical.

Prerequisites

Courses that should be completed prior to taking CS 415 include Bio 181/183 or BO 200 or BO 250. Students lacking knowledge in these subject areas may encounter difficulties in this course.

Instructor

Dr. David Jordan

Department of Crop Science

4207 Williams Hall

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Office hours: By appointment

Attendance policy

The course will have many exercises that require your participation. Thus, attendance is expected. If you must miss a class, contact the instructors prior to your absence to make arrangements for completing any missed assignments. The NCSU Attendance Policy can be found at:

[http://www.ncsu.edu/policies/academic affairs/pols_regs/REG205.00.4.php](http://www.ncsu.edu/policies/academic%20affairs/pols_regs/REG205.00.4.php)

Students will not be allowed to use cell phones, smart phones or lap tops in class.

Required textbook

Various materials provided by the instructor

PowerPoint presentations will be provided in electronic format

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

In order 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 in class. Considerations will be made for 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 75-minute time period. Make-up exams will be allowed only for illness, emergencies, or prescheduled reasons.

Cell Phones and Computers During Lectures

Students are encouraged to take notes in class although much of the information can be found on moodle and is taken from peer-reviewed articles or other sources. Because of the inability of a fraction of students to focus on the material presented in class, use of lap top computers and cell phones is prohibited during lectures. Just a few students texting and using a lap top for others purposes is too distracting for other students, the instructor and those providing guest lectures. Please abide by this policy.

Grading Scale	
A+ = 97 B 100%	C+ = 77 B 79%
A = 93 B 96%	C = 73 B 76%
A- = 90 B 92%	C- = 70 B 72%
B+ = 87 B 89%	D+ = 67 B 69%
B = 83 B 86%	D = 63 B 66%
B- = 80 B 82%	D- = 60 B 62%
	F = <60%

Component	Approximate Date	Points
Test 1	February 25	100
Test 2	April 22	100
Individual project	April 1 and 3	100
Daily quiz (within first 15 minutes)	Each day	100
Total		400

CS 415 – Integrated Pest Management – Spring 2014	
Date	Tentative Topic
January 7	History of Integrated Pest Management and appropriate definitions Articles 1 and 2 assigned
January 9	History of Integrated Pest Management and appropriate definitions
January 14	Overview of pests (weeds, insects, disease, nematodes)
January 16	Overview of pests (weeds, insects, disease, nematodes)
January 21	Overview of pests (weeds, insects, disease, nematodes)
January 23	PAMS (examples from agronomic and horticulture crops, organic and conventional systems, urban agriculture, non-crop situations)
January 29	Snow day
January 30	Ecology and Biological control (Dr. Orr)
February 4	Ecology and Biological control (Dr. Orr)
February 6	Overview of pests (weeds, insects, disease, nematodes) Article 3 assigned
February 11	PAMS (Prevention)
February 13	Snow day
February 18	PAMS (Avoidance, Monitoring)
February 20	PAMS (Monitoring, Suppression)
February 25	PAMS (Suppression)
February 27	Exam 1
March 4	Aquatics/Non-Cropland IPM (Steve Hoyle)
March 6	Tobacco IPM (Hannah Burrack) Article 4 assigned
March 11 and 12	Spring Break

March 18	Honey Bee Decline (David Tarpy)
March 20	Pesticide Resistance and Management (literature review and fact sheet due for individual project) Article 5 assigned
March 25	Cotton IPM (Jack Bachelier)
March 27	Vegetable IPM (David Jordan)
April 1	Individual project presented to instructor - Article 6 assigned [Several lectures will be recorded on topics not discussed during lecture and will be made available to students. Topics discussed in the recorded lectures will be components of quizzes and Exam 2]
April 3	Individual project presented to instructor
April 8	Individual project presented to instructor
April 10	Urban and Organic IPM, Pesticide residue (David Jordan)
April 15	Peanut IPM – focus on TSWV (David Jordan)
April 17	Spring holiday
April 22	Exam 2

Integrated Pest Management – CS 415

Individual Project

Students will be required to select a pest and develop 1) a two-page literature review, 2) a two page Cooperative Extension Service publication that describes how to manage this pest in the scenario selected, using the PAMS approach, 3) prepare a short PowerPoint presentation describing both the literature review and management of the pest, 4) a video explaining how to manage the pest using the PAMS approach, and 5) a drawing that explains how to manage the pest. Requirements 1 and 2 will be turned in to the instructor March 20. The PowerPoint presentation and video will be shown to the instructor during April 1, 3, or 8.

Integrated Pest Management – CS 415

Article Assignments

Seven articles will be assigned during the semester. Students are expected to read these articles prior to the next lecture. The topic will be germane to the subject matter discussed during that time of the semester. Some of the quiz and exam questions will be derived from these articles.