

**Understanding Pesticides
BSPM 310**

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**Three Credit Lecture:
Course Objectives:**

Successful students will be able to:

- Describe the benefits and risks of pesticide use in agriculture and elsewhere.
- Classify pesticides according to mode of action and target pests.
- Recognize pesticide resistant pests and recommend tactics for resistance avoidance and mitigation.
- Describe the fate of pesticides after they are released into the environment.
- Recommend methods for reducing undesirable effects of pesticides on the environment.
- Perform the calculations necessary for the accurate application of pesticides.
- Name pesticide regulatory agencies and describe their role in protecting the public from the adverse effects of pesticide use.
- Locate and demonstrate understanding of pesticide label information.
- Recognize pesticide safety equipment and the importance of its use.
- Define integrated pest management and its importance in the safe and effective use of pesticides.

Methods of Evaluation: There will be take home quizzes, two examinations and a final. The exams will be completed via RamCT. They will cover lecture material given since the previous exam (or the first lecture). There will be a 10-point extra credit section in each exam, which, on Exam II and the final, will be comprehensive.

Text and Readings: There is no text, however, background readings for individual lectures will be recommended.

Grading: Exam I (30%), Exam II (30%), Final Exam (30%), Quizzes (10%).

Grading Scale: A = 90-100%; B = 80-89%; C= 70-79%; D = 60-69%; F = <60%.

CLASS SCHEDULE

Date	Topic
	Introduction to understanding pesticides
	Introduction to understanding pesticides (continued)
	Economic value of pesticides
	Economic value of pesticides (continued)
	Pesticide alternatives (Biological controls)

Date	Topic
	Pesticide alternatives (Physical & mechanical controls)
	NO CLASS
	Pesticide alternatives (Genetic pest controls)
	Pesticide alternatives (Cultural controls)
	Introduction to IPM
	Introduction to IPM (continued)
	Pesticide use in IPM
	NO CLASS
	Exam I Review
	Pesticide classification
	Toxicology (classification by mode of action)
	Human health effects of pesticide exposure
	Human health effects of pesticide exposure (continued)
	Pesticide resistance
	Pesticide resistance (continued)
	Pesticide Formulations
	The pesticide industry + Adjuvants
	Pesticide application methods (Equipment)
	Pesticide application methods (Equipment)
	Pesticide application methods (Calibration)
	Pesticide application methods (Calibration)
	Pesticides in the Environment
	Pesticides in the Environment (continued)
	Exam II Review
	Pesticide regulations (History)
	Pesticide regulations (Federal process)
	Colorado pesticide regulations
	Colorado pesticide regulations (continued)
	The pesticide label
	The pesticide label (continued)
	Food Safety, Organic Pesticides, IPM Certification
	Food Safety, Organic Pesticides, IPM Certification (continued)
	Pesticide use in public health
	Good application practices, legal liabilities
	Good application practices, legal liabilities (continued)
	Good application practices, legal liabilities (continued)
	TBA
	Certified Operator review
	Exam III Review
	Final Exam/Exam III