



CC APPROVAL: 03/23/2015
ACADEMIC SENATE APPROVAL: 04/22/2015
BOT APPROVAL: 05/11/2015
STATE ID: CCC000526893
EFFECTIVE TERM: Spring 2016

College of the Sequoias Course Outline of Record

SUBJECT AREA AND COURSE NUMBER: AG 003

COURSE TITLE: ECONOMIC ENTOMOLOGY

UNITS/HOURS

Units: 3

Hours:

Lecture Hours Per Week: 3

Lab Hours Per Week: 1

Total Lecture Hours Per Semester: 52.5

Total Lab Hours Per Semester: 17.5

Activity Hours Per Week:

Total Activity Hours Per Semester:

Total Hours Per Week: 4

Total Contact Hours Per Semester: 70

TOP CODE: 0103.10 - Agricultural Pest Control Adviser and Operator (Licensed)*

Cross-Listed Courses:

CATALOG COURSE DESCRIPTION:

The study of the insects and mites of economic importance to agriculture, including morphology, taxonomy, identification, life cycles, hosts, habitat relationships, and control methods. Collection and labeling of specimens will be required. Laboratory required. Recommended for Pest Control Advisors' licensing. (C-ID AG-PS 144L)

REQUISITES:

NONE

FIELD TRIP REQUIREMENTS: Required

GRADING: S - Standard Grading A-F

REPEATABLE:

TRANSFERABLE:

Approved COS GE--Pre Fall 2013

B: Natural Science-Biological Sci

Approved UC BA Transferable (1-99)

YES

METHODS OF INSTRUCTION:

Methods of instruction may include, but are not limited to, the following:

* Laboratory

* Lecture and/or Discussion

METHODS OF EVALUATION:

A student's grade will be based on multiple measures of performance unless the course requires no grade. Multiple measures may include, but are not limited to, the following:

- Skill demonstrations
- Problem solving assignments or activities
- Essay quizzes or exams
- Written essays or extended papers
- Multiple choice tests
- Short answer quizzes or exams
- Oral presentations
- Project
- Problem solving quizzes or exams

COURSE TOPICS:

1. The Place of the Insect in the Agricultural Economy
2. Elementary Anatomy, Morphology, and Physiology of Insects
3. Identification and Classification of Insects
4. Field Specimens Collected and Identified
5. Type of Damage to Agricultural Crops, Products, and Materials
6. Principles of Control
7. Methods of Control
8. Selection and Application of Control Methods
9. Insect Collections
 - a. Collecting
 - b. Preserving
 - c. Mounting
 - d. Identification
10. Regulations and Legal Aspects of Pest Control
11. Field Reports and Required Forms
12. Calibration of Pesticide Application Equipment
13. Integrated Pest Management (I.P.M.)

OUTCOMES:

Course Objectives

The main concepts for this course will ask students to...

1. Identify insects and closely related plant and animal pests and pest damage.
2. Describe rules and regulations for pest control.
3. Operate pesticide equipment efficiently and safely.
4. Explain the economic aspects of beneficial and harmful insects.
5. Diagram and describe the anatomy, morphology, and physiology of a typical insect.
6. Classify insects into orders.
7. Describe the danger levels of categories I, II, III, and IV pesticides.
8. Compare alternate methods of pest control.
9. Prepare and classify an insect collection.
10. Select possible methods and timing of control in a given circumstance.
11. Define common pest and control terminology.
12. Estimate the critical levels in an insect population.
13. Identify the common chemicals in use today.
14. Prepare field reports and other required forms in pest control.
15. Describe spraying and fumigation systems, formulations, and adjuncts currently in use.
16. Explain Integrated Pest Control (I.P.M.) principles.

Institutional Outcomes

1. Use appropriate creative and analytic methods to interpret ideas, solve problems, and present conclusions.
2. Demonstrate effective self-management and interpersonal skills with people from a variety of backgrounds to seek consensus, resolve conflicts and take responsibility.
3. Locate, evaluate, and use information from a variety of sources to take action or make a decision.
4. Communicate effectively for a given purpose within the specific context of a communication event.

5. Write coherently and effectively, adjusting to a variety of audiences and purposes, while taking into account others' writings and ideas.

Assignments

Reading:

In a possible reading assignment students will be given the latest UC Agriculture Extension bulletins on Integrated Pest Management Principles for reading as homework. Discussion in class shall cover topics from this reading.

Writing:

In a possible writing assignment students will be given a scenario of a particular crop production cycle. From this production cycle students will be asked to propose in writing an integrated pest management plan.

Homework:

In a possible reading assignment students will be given the latest UC Agriculture Extension bulletins on Integrated Pest Management Principles for reading as homework. Discussion in class shall cover topics from this reading.

Lab Content:

In an orchard or field crop, students will examine insects and pests in leading crops, determine if they are beneficial or harmful, identify natural enemies of that pest or effective integrative pest management, environmentally safe and cost-effective treatments.

TEXTS AND SUPPLIES:

Textbooks may include, but are not limited to:

TEXTBOOKS:

1. Harry Edwin Jaques. How To Know Insects: An Illustrated Key To The More Common Families Of Insects. With Suggestions For Collecting, Mounting And Studying Them. 1st ed. Literary Licensing, LLC , 2012, ISBN: ISBN-13: 978-12

MANUALS:

PERIODICALS:

MATERIALS FEE: NO

OTHER:

1. University of California research publications, news releases, and related publications on pest management and crop protection.

SLO: <http://cos.edu/CO318>

[AG 003 SLO'S](#)

ORIGINATOR: [Frank Tebeau](#)

DATE: [03/11/2015](#)