

**NEW COURSE PROPOSAL**

**Courses must be submitted by October 15, 2011, and finalized by the end of the fall semester for the next catalog production.**

DATE (*Change if modified and redate file with current date*) 10-3-2011; REV 10.20.11; REV 10.21.11  
 PROGRAM AREA(S) BIOLOGY

**1. Course Information.** *[Follow accepted catalog format.]*

**Prefix(es)** (Add additional prefixes if cross-listed) **and Course No. BIOL 452**

**Title: ENTOMOLOGY Units: 4**

Prerequisites: BIOL 200

Corequisites: N/A

Consent of Instructor Required for Enrollment: No

**Catalog Description** (Do not use any symbols)

Explore the biology of the most successful and diverse group of organisms on Earth: insects. Insect morphology, physiology, ecology, behavior, taxonomy, and evolutionary history of the major insect orders will be discussed, as will the importance of insects to humans and biological control. Laboratories will emphasize collection, mounting and preservation techniques for insect specimens, as well as identification to the level of insect order and families.

**Grading Scheme:**

- X A-F Grades
- Credit/No Credit
- Optional (Student Choice)

**Repeatability:**

- Repeatable for a maximum of \_\_\_ units
- Total Completions Allowed
- Multiple Enrollment in Same Semester

**Course Level Information:**

- X Undergraduate
- Post-Baccalaureate/Credential
- Graduate

**Mode of Instruction/Components** (*Hours per Unit are defaulted.*)

	Units	Hours per Unit	Benchmark Enrollment	Graded Component	CS & HEGIS # (Filled in by the Dean)
Lecture	3	1	20	X	_____
Seminar		1			_____
Laboratory	1	3	20	X	_____
Activity		2			_____
Field Studies					_____
Indep Study					_____
Other Blank					_____

Leave the following hours per week areas blank. The hours per week will be filled out for you.

3 hours **lecture** per week

3 hours laboratory per week

Is this course delivered online? Yes\_\_\_\_ No\_\_X\_\_

**2. Course Attributes:**

**General Education Categories:** All courses with GE category notations (including deletions) must be submitted to the GE website: <http://summit.csuci.edu/geapproval>. Upon completion, the GE Committee will forward your documents to the Curriculum Committee for further processing.

**A (English Language, Communication, Critical Thinking)**

- A-1 Oral Communication
- A-2 English Writing
- A-3 Critical Thinking

**B (Mathematics, Sciences & Technology)**

- B-1 Physical Sciences
- B-2 Life Sciences – Biology

B-3 Mathematics – Mathematics and Applications

B-4 Computers and Information Technology

**C (Fine Arts, Literature, Languages & Cultures)**

C-1 Art

C-2 Literature Courses

C-3a Language

C-3b Multicultural

**D (Social Perspectives)**

**E (Human Psychological and Physiological Perspectives)**

**UDIGE/INTD Interdisciplinary**

**Meets University Writing Requirement**

**Meets University Language Requirement**

**American Institutions, Title V Section 40404:** Government US Constitution US History

Refer to website, Exec Order 405, for more information: <http://senate.csuci.edu/comm/curriculum/resources.htm>

**Service Learning Course** (Approval from the Center for Community Engagement must be received before you can request this course attribute).

**3. Justification and Requirements for the Course.** (Make a brief statement to justify the need for the course)

A. Justification:

BIOL 452 is an elective course for biology majors. This is an advanced course that will be of wide interest to students in biology, especially those desiring to pursue a graduate degree in biology, a position with a government agency (e.g., National Park Service, Fish & Game) or in agriculture. (e.g., Pest Control Adviser).

B. Degree Requirement: Requirement for the Major/Minor  
X Elective for the Major/Minor  
Free Elective

**Note: Submit Program Modification if this course changes your program.**

**4. Student Learning Outcomes.** (List in numerical order. You may wish to use the following resource in utilizing measurable verbs: <http://senate.csuci.edu/comm/curriculum/resources.htm>)

Upon completion of the course, the student will be able to:

- Describe the importance of beneficial and pest insects to humans
- Match insect morphology with their ecological function
- Outline the classification and major evolutionary trends among the insect orders
- Properly mount and preserve insect specimens
- Identify insect orders and important families

**5. Course Content in Outline Form.** [Be as brief as possible, but use as much space as necessary]

Insects & Humans

External Insect Morphology

Insect Collection & Preservation

Internal Anatomy

Insect Physiology

Insect Reproduction & Development

Insect Behavior & Ecology

Arthropod Evolution

Entognathous & Apterygote Insect Orders

Orders: Ephemeroptera, Odonota, Grylloblattaria

Orders: Phasmida, Orthoptera, Mantodea

Orders: Blatteria & Isoptera

Orders: Dermaptera, Embiidina, Plecoptera

Orders: Zoraptera, Psocoptera, Phthiraptera

Orders: Hemiptera & Homoptera

Orders: Thysanoptera & Neuroptera

Order: Coleoptera

Orders: Strepsiptera, Mecoptera, Siphonaptera

Order: Diptera,

Orders: Trichoptera & Lepidoptera

Order: Hymenoptera

Does this course content overlap with a course offered in your academic program? **Yes** **No X**  
If YES, what course(s) and provide a justification of the overlap.

Does this course content overlap a course offered in another academic area? **Yes** **No X**  
If YES, what course(s) and provide a justification of the overlap.

Overlapping courses require Chairs' signatures.

**6. Cross-listed Courses** (Please note each prefix in item No. 1)

**A.** List Cross-listed Courses (Signature of Academic Chair(s) of the other academic area(s) is required).  
List each cross-listed prefix for the course:

**B.** Program responsible for staffing: Biology

**7. References.** [Provide 3 - 5 references]

Borror, D. J., C. A. Triplehorn, and N. F. Johnson. 1989. *Introduction to the Study of Insects, 6th Edition*. Philadelphia: Saunders College Publishers.

Castner, J.L., 2000. *Photographic Atlas of Entomology & Guide to Insect Identification*. Gainesville, FL: Feline Press

Chapman, R. F., 1998. *The Insects: Structure and Function, 4<sup>th</sup> Edition*. Cambridge University Press.

Snodgrass, R. E., 1993. *Principles of Insect Morphology*. Cornell University Press.

**8. Tenure Track Faculty Qualified to Teach This Course.**

Ruben Alarcon

**9. Requested Effective Date:**

First semester offered: Spring 2012

**10. New Resources Requested. Yes X No**

If YES, list the resources needed.

**A.** Computer Needs (data processing, audio visual, broadcasting, other equipment, etc.)

**B.** Library Needs (streaming media, video hosting, databases, exhibit space, etc.)

**C.** Facility/Space/Transportation Needs: a lab with access to dissecting microscopes

**D.** Lab Fee Requested (please refer to Dean's Office for additional processing) **Yes X No**

Funds are required to purchase consumables to mount and preserve specimens, including insect pins and 70% alcohol.

**E.** Other

**11. Will this new course alter any degree, credential, certificate, or minor in your program? Yes No X**

If, YES attach a program update or program modification form for all programs affected.

Priority deadline for New Minors and Programs: **October 1, 2011** of preceding year.

Priority deadline for Course Proposals and Modifications: **October 15, 2011**, of preceding year.

Last day to submit forms to be considered during the current academic year: **April 15<sup>th</sup>**.

Ruben Alarcon

10-3-2011

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Proposer of Course (Type in name. Signatures will be collected after Curriculum approval)

Date

# Approval Sheet

**Program/Course:**

If your course has a General Education Component or involves Center affiliation, the Center will also sign off during the approval process.

Multiple Chair fields are available for cross-listed courses.

The CI program review process includes a report from the respective department/program on its progress toward accessibility requirement compliance. By signing below, I acknowledge the importance of incorporating accessibility in course design.

Program Chair		
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Signature

Date

Program Chair		
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Signature

Date

Program Chair		
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Signature

Date

General Education Chair		
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Signature

Date

Center for International Affairs Director		
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Signature

Date

Center for Integrative Studies Director		
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Signature

Date

Center for Multicultural Engagement Director		
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Signature

Date

Center for Civic Engagement Director		
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Signature

Date

Curriculum Chair		
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Signature

Date

AVP		
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Signature

Date