

CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

COURSE MODIFICATION PROPOSAL

**Courses must be submitted by October 15, 2011, and finalized by the end of the fall semester to make the next catalog (2012-13) production**

DATE (CHANGE DATE EACH TIME REVISED): 11 OCTOBER 2011; REV 10.20.11; REV 11.4.11

PROGRAM AREA(S): BIOLOGY

**Directions:** All of sections of this form must be completed for course modifications. Use **YELLOWED** areas to enter data. All documents are stand alone sources of course information.

**1. Indicate Changes and Justification for Each.** [Mark all change areas that apply and follow with justification. Be as brief as possible but, use as much space as necessary.]

|                                                                 |                                                              |
|-----------------------------------------------------------------|--------------------------------------------------------------|
| <input checked="" type="checkbox"/> Course title                | <input checked="" type="checkbox"/> Course Content           |
| <input type="checkbox"/> Prefix/suffix                          | <input checked="" type="checkbox"/> Course Learning Outcomes |
| <input type="checkbox"/> Course number                          | <input checked="" type="checkbox"/> References               |
| <input type="checkbox"/> Units                                  | <input type="checkbox"/> GE                                  |
| <input type="checkbox"/> Staffing formula and enrollment limits | <input type="checkbox"/> Other <input type="checkbox"/>      |
| <input checked="" type="checkbox"/> Prerequisites/Corequisites  | <input type="checkbox"/> Reactivate Course                   |
| <input checked="" type="checkbox"/> Catalog description         |                                                              |
| <input type="checkbox"/> Mode of Instruction                    |                                                              |

**Justification:** The proposed modifications to course title, description, content, learning objectives, prerequisites, and references are intended to update and clarify these aspects of the course to reflect enhanced disciplinary expertise and align the catalog description more closely with what is currently being taught. BIOL 311 is an introduction to all aspects of plant biology and will serve as a prerequisite for current (plant physiology) and future (plant ecology, plant identification, economic botany) plant electives. The existing 2002 description, as written, does not fulfill these requirements.

**2. Course Information.**

[Follow accepted catalog format.] (Add additional prefixes i f cross-listed)

**OLD**

Prefix BIOL Course# 311  
 Title **Plant Biology and Ecology** Units (4)  
 3 hours lecture per week  
 3 hours laboratory per week

☐ Prerequisites: ☐  
☐ Consent of Instructor Required for Enrollment  
☐ Corequisites: ☐

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

A general introduction to diverse structures and functions of plants and their relationship to the environment. Identification of local native plants and plant communities, uses of native plants by Native Americans, and human and environmental impacts on native plant communities. Field trips to local sites will be taken. A lab fee is required.

General Education Categories: ☐

Grading Scheme (Select one below):

☒ A – F

☐ Credit/No Credit

☐ Optional (Student's Choice)

Repeatable for up to ☐ units

Total Completions ☐

Multiple Enrollment in Same Semester Y/N ☐

Course Level:

☒ Undergraduate

☐ Post-Baccalaureate

**NEW**

Prefix BIOL Course# 311  
 Title **Plant Biology** Units (4)  
 3 hours lecture per week  
 3 hours laboratory per week

☒ Prerequisites: BIOL 200 or consent of instructor  
☐ Consent of Instructor Required for Enrollment  
☐ Corequisites: ☐

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

Introduction to the structure, function, and diversity of land plants. Topics include basic plant anatomy, morphology, physiology, ecology, evolution, identification, and a survey of major lineages including mosses, ferns, gymnosperms, and flowering plants. A lab fee is required.

General Education Categories: ☐

Grading Scheme (Select one below):

☒ A – F

☐ Credit/No Credit

☐ Optional (Student's Choice)

Repeatable for up to ☐ units

Total Completions ☐

Multiple Enrollment in Same Semester Y/N ☐

Course Level:

☒ Undergraduate

☐ Post-Baccalaureate

### 3. Mode of Instruction (Hours per Unit are defaulted)

Hegis Code(s) \_\_\_\_\_  
(Provided by the Dean)

#### Existing

#### Proposed

|               | Units | Hours Per Unit | Benchmark Enrollment | Graded |               | Units | Hours Per Unit | Benchmark Enrollment | Graded | CS No. (filled out by Dean) |
|---------------|-------|----------------|----------------------|--------|---------------|-------|----------------|----------------------|--------|-----------------------------|
| Lecture       | 3     | 1              | 30                   | x      | Lecture       | 3     | 1              | 48                   | x      |                             |
| Seminar       |       | 1              |                      |        | Seminar       |       | 1              |                      |        |                             |
| Lab           | 1     | 3              | 30                   | x      | Lab           | 1     | 3              | 24                   | x      |                             |
| Activity      |       | 2              |                      |        | Activity      |       | 2              |                      |        |                             |
| Field Studies |       |                |                      |        | Field Studies |       |                |                      |        |                             |
| Indep Study   |       |                |                      |        | Indep Study   |       |                |                      |        |                             |
| Other blank   |       |                |                      |        | Other blank   |       |                |                      |        |                             |
| Online        |       |                |                      |        | Online        |       |                |                      |        |                             |

### 4. 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).

5. **Justification and Requirements for the Course.** *[Make a brief statement to justify the need for the course]*

**OLD**

This is an elective course for Biology and ESRM majors. This course will use lectures, audiovisual material, laboratory investigations and the extensive local resources around CSUCI campus for fieldwork. It will build student confidence in identification of plant species and develop understanding of the ecological principles operating in local plant communities.

☐ Requirement for the Major/Minor  
☒ Elective for the Major/Minor  
☐ Free Elective

**NEW**

Plants provide humans with food, medicine, clothing, shelter, oxygen and fossil fuel. Their biology is a critical factor in current environmental issues such as declining biodiversity, global climate change, and the impacts of resource extraction, pollutants, invasive species, and genetically modified organisms. An understanding of basic plant structure, function and diversity is essential for global citizens interested in history, anthropology, biodiversity, ecology, agriculture, forestry, medicine, pharmacology, biotechnology or forensics. This is a required course for Biology majors with an emphasis in Ecology, Evolutionary, and Organismal Biology, and an upper division elective for all other Biology and ESRM majors. It is a prerequisite for all upper-division plant courses in the Biology program.

☐ Requirement for the Major/Minor  
☒ Elective for the Major/Minor  
☐ Free Elective

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

6. **Student Learning Outcomes.** (List in numerical order. You may wish to visit resource information at the following website: <http://senate.csuci.edu/comm/curriculum/resources.htm>)

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

**OLD**

- Describe the diverse structures and functions of plants.
- Describe the ecological and evolutionary processes that affect plants.
- Identify the plant species which comprise the major plant communities in Southern California.
- Consider the ethnobotanical uses of plants and their importance to other cultures.
- Critically assess the major environmental impacts upon plant communities.

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

**NEW**

- Identify and describe the structural features of plants
- Discuss the basic processes of plant metabolism, transport, nutrition, growth, and reproduction
- Describe the major evolutionary lineages of plants and their defining characteristics
- Identify plant species important in local ecosystems
- Describe the cultural uses of plants for food, fiber, medicine, biotechnology, etc.
- Discuss plants in the context of broader environmental concerns, such as climate change, habitat destruction, pollution, invasive species, and agriculture

7. **Course Content in Outline Form.** (Be as brief as possible, but use as much space as necessary)

**OLD**

- Basic concepts and specializations in plant ecology
- Taxonomy and plant distributions
- Identification of local plants
- Species interactions
- Plant communities and classification
- Ethnobotanical uses of plants
- Photosynthesis
- Environmental factors (light, temperature, fire, soil)
- Major vegetation types

**NEW**

- Plant tissues and primary growth
- Stems
- Leaves
- Roots
- Secondary growth
- Life cycles and reproductive structures
- Metabolism
- Transport
- Nutrition
- Growth and development
- Breeding systems
- Classification and systematics
- Early plant evolution

Seedless vascular plants  
Gymnosperms  
Angiosperms  
Plant biogeography and adaptation

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

Overlapping courses require Chairs' signatures.

**8. 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).
- B. List each cross-listed prefix for the course: ☐
- C. Program responsible for staffing: Biology

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

OLD Barbour, M.G. *et al. Terrestrial Plant Ecology* (3<sup>rd</sup> ed.) Addison Wesley Longman, Inc  
Begon, M. *et al.* 1996. *Ecology: Individuals, Populations and Communities*. Blackwell Scientific  
Dale, N. 2000. *Flowering Plants: The Santa Monica Mountains, Coastal & Chaparral Regions of Southern California* California Native Plant Society  
Harris, J. G. & Harris, M. W. *Plant Identification Terminology* Spring Lake Publishing  
Hickman, J. C. (ed) *The Jepson Manual*. University of California Press.  
Kingsley, R. *et al.* 2002. *Introductory Plant Biology*. McGraw Hill.  
McAuley, M. *Wildflowers of the Santa Monica Mountains*. Canyon Publishing Co.

NEW Mauseth, J.D. 2009. *Botany: An Introduction to Plant Biology*, 4<sup>th</sup> edition. Jones and Bartlett, Massachusetts.  
Judd, W.S. *et al.* 2007. *Plant Systematics, A Phylogenetic Approach*, 3<sup>rd</sup> edition. Sinauer Associates, Massachusetts  
Harris, J.G. & Harris, M.W. 2001. *Plant Identification Terminology*, 2<sup>nd</sup> edition. Spring Lake Publishing, Utah  
Van de Graaff, K., *et al.* 2004. *A Photographic Atlas for the Botany Laboratory*, 4<sup>th</sup> edition. Morton Publishing, Colorado.

**10. Tenure Track Faculty qualified to teach this course.**  
Biology faculty (Amy Denton, Ruben Alarcón)

**11. Requested Effective Date or First Semester offered: Spring 2012**

**12. New Resource Requested: Yes ☐ 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:  
☐
- D. Lab Fee Requested: Yes ☐ No ☒ ( Refer to the Dean's Office for additional processing)
- E. Other. ☐

**13. Will this course modification alter any degree, credential, certificate, or minor in your program? Yes ☐ No ☒**

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

Amy Denton

October 11,  
2011

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Proposer(s) of Course Modification

Date

Type in name. Signatures will be collected after Curriculum approval.

# Approval Sheet

## Course: BIOL 311

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 |  |  |
|---------------|--|--|

Signature

Date

|               |  |  |
|---------------|--|--|
| Program Chair |  |  |
|---------------|--|--|

Signature

Date

|               |  |  |
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| Program Chair |  |  |
|---------------|--|--|

Signature

Date

|                         |  |  |
|-------------------------|--|--|
| General Education Chair |  |  |
|-------------------------|--|--|

Signature

Date

|                                  |  |  |
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| Center for Intl Affairs Director |  |  |
|----------------------------------|--|--|

Signature

Date

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| Center for Integrative Studies Director |  |  |
|-----------------------------------------|--|--|

Signature

Date

|                                              |  |  |
|----------------------------------------------|--|--|
| Center for Multicultural Engagement Director |  |  |
|----------------------------------------------|--|--|

Signature

Date

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|-----------------------------------------------------------|--|--|
| Center for Civic Engagement and Service Learning Director |  |  |
|-----------------------------------------------------------|--|--|

Signature

Date

|                  |  |  |
|------------------|--|--|
| Curriculum Chair |  |  |
|------------------|--|--|

Signature

Date

|     |  |  |
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| AVP |  |  |
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Signature

Date