

CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

COURSE MODIFICATION PROPOSAL

**Courses must be submitted by November 2, 2009,
to make the next catalog (2010--2011) production**

DATE (CHANGE DATE EACH TIME REVISED): 5-4-10; REV 5.5.10; REV 10.25.10; REV 11.9.10

PROGRAM AREA(S): BIOLOGY

Directions: All of sections of this form must be completed for course modifications. All documents are stand alone sources of course information.

1. Course Information.

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

OLD

Prefix **BIOL** Course# **604** Title Biotechnology Across National Boundaries Units **(2)**

hours lecture per week
 hours blank per week

Prerequisites:

Consent of Instructor Required for Enrollment

Corequisites:

Catalog Description (Do not use any symbols): Addresses international efforts in biotechnological innovation, education, global commercialization and impact of biotechnology. Explores collaborations among science, education, industry and government in the age of globalization, ethical standards, international law and regulation in biotechnology and inter-and cross-cultural issues in business operations. An optional element of this course is a field trip to international businesses and education systems.

General Education Categories Graded Repeatable for up to units
 Lab Fee Requested **x** A - F Total Completions
Course Level: Multiple Enrollment in same semester
 Undergraduate Optional (Student's choice)
 Post-bac/Credential
 Graduate

NEW

Prefix **BIOL** Course# **604** Title Biotechnology Across National Boundaries Units **(2)**

2 hours lecture per week
 hours blank per week

Prerequisites:

Consent of Instructor Required for Enrollment

Corequisites:

Catalog Description (Do not use any symbols): Addresses international efforts in biotechnological innovation, education, global commercialization and impact of biotechnology. Explores collaborations among science, education, industry and government in the age of globalization, ethical standards, international law and regulation in biotechnology and inter-and cross-cultural issues in business operations.

General Education Categories Graded Repeatable for up to units
 Lab Fee Requested **x** A - F Total Completions
Course Level: Multiple Enrollment in same semester
 Undergraduate Optional (Student's choice)
XX Graduate

2. 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	2	1	30	 	Lecture	2	1	30	x	
Seminar	 	1	 	 	Seminar	 	1	 	 	
Lab	 	3	 	 	Lab	 	3	 	 	
Activity	 	2	 	 	Activity	 	2	 	 	
Field Studies	 	 	 	 	Field Studies	 	 	 	x	
Indep Study	 	 	 	 	Indep Study	 	 	 	 	
Other blank	 	 	 	 	Other blank	 	 	 	 	

3. 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).

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

OLD

BIOL 604 is a required course for the program. As witnessed by all, the world is changing and changing fast. Today, every educated person needs to be literate in world affairs. To emphasize the importance of internationalism in the program and to make our students globally competitive when they graduate from the program, intentional efforts are made to include international contents and experiences in the curriculum. BIOL 604, Biotechnology across National Boundaries, addresses this important need in the curriculum of our MS Biotechnology program. The course also offers an optional field trip for students to international businesses and education systems. The reason that this is an option is due to affordability of travel costs. The Program will offer scholarships to help students with financial challenge to defray the costs of the trip.

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

NEW

BIOL 604 is a required course for the Biomedical Engineering Emphasis of the MS in Biotechnology and Bioinformatics program. As witnessed by all, the world is changing and changing fast. Today, every educated person needs to be literate in world affairs. To emphasize the importance of internationalism in the program and to make our students globally competitive when they graduate from the program, intentional efforts are made to include international contents and experiences in the curriculum. BIOL 604, Biotechnology across National Boundaries, addresses this important need in the curriculum of our MS Biotechnology program. Students in Biomedical Engineering Emphasis are required to complete this course. Students in all emphases of the MS in Biotechnology and Bioinformatics program could take the course as an elective.

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

Submit Program Modification if this course changes your program.

5. Learning Objectives. (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

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

NEW

Upon completion of the course, the student will be able to:
 Describe the international efforts in biotechnological innovation
 Summarize the impact of biotechnological innovations on medicine, agriculture and the environment
 Demonstrate their understanding of progress of biotechnological innovations in the world
 Explain and apply bioethical standards, international law and regulation in biotechnology
 Identify and analyze inter- and cross-cultural issues in business operations
 Engage in collaborations with colleagues in biotechnological effort in a global environment

Describe the international efforts in biotechnological innovation
 Summarize the impact of biotechnological innovations on medicine, agriculture and the environment
 Demonstrate their understanding of progress of biotechnological innovations in the world
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 Identify and analyze inter- and cross-cultural issues in business operations
 Engage in collaborations with colleagues in biotechnological effort in a global environment

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

OLD

International efforts in biotechnological innovation
 Impact of biotechnological innovation on medicine
 Impact of biotechnological innovation on agriculture
 Impact of biotechnological innovation on the environment
 Biotechnology and Africa
 Biotechnology and Asia
 Biotechnology in North America and Europe
 Biotechnology in other parts of the world
 Biotechnology education in the world
 Global commercialization and impact of biotechnology
 Collaborations among science, education, industry and government in the age of globalization
 Bioethical standards, international law and regulation in biotechnology
 Inter- and cross-cultural issues in business operations.
 A field trip to international biotechnology businesses and education systems is an optional element of this course

NEW

International efforts in biotechnological innovation
 Impact of biotechnological innovation on medicine
 Impact of biotechnological innovation on agriculture
 Impact of biotechnological innovation on the environment
 Biotechnology and Africa
 Biotechnology and Asia
 Biotechnology in North America and Europe
 Biotechnology in other parts of the world
 Biotechnology education in the world
 Global commercialization and impact of biotechnology
 Collaborations among science, education, industry and government in the age of globalization
 Bioethical standards, international law and regulation in biotechnology
 Inter- and cross-cultural issues in business operations.

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.

7. 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: ☐

8. References. [Provide 3-5 references]

OLD

BioEvolution: How Biotechnology is Changing Our World by Michael Fumento Publisher: Encounter Books; 1 edition, 2003, ISBN-10: 1893554759

Starved for Science: How Biotechnology Is Being Kept Out of Africa by Robert Paarlberg (Author), Norman Borlaug (Foreword), Jimmy Carter (Foreword) Publisher: Harvard University Press; 1 edition, 2009, ISBN-10: 0674033477

Enough: Why the World's Poorest Starve in an Age of Plenty by Roger Thurow and Scott Kilman, Publisher: PublicAffairs, 2009, ISBN-10: 1586485113

Bioscience Entrepreneurship In Asia: Creating Value with Biology by Paul S. Teng, Publisher: World Scientific Publishing Company, 2008, ISBN-10: 981270020X

The Politics of Biotechnology in North America and Europe: Policy Networks, Institutions and Internationalization Studies in Public Policy) by Yric Montpetit, Publisher: Lexington Books; 1 edition, 2006, ISBN-10: 0739112481

NEW

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The Politics of Biotechnology in North America and Europe: Policy Networks, Institutions and Internationalization Studies in Public Policy) by Yric Montpetit, Publisher: Lexington Books; 1 edition, 2006, ISBN-10: 0739112481

9. Tenure Track Faculty qualified to teach this course.

Biology faculty

10. Requested Effective Date or First Semester offered: S2012

11. 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. ☐

12. Indicate Changes and Justification for Each. [Check all that apply and follow with justification. Be as brief as possible but, use as much space as necessary.]

☐ Course title

☐ Prefix/suffix

☐ Course number

☒ Units

☒ Staffing formula and enrollment limits

☐ Prerequisites/Corequisites

☒ Catalog description

☒ Mode of Instruction

☐ Course Content

☐ Course Learning Objectives

☐ References

☐ GE

☐ Other ☐

☐ Reactivate Course

Justification: The reason for this change is due to the liability issue of the field trip. If there is no credit unit associated with the field trip, the university will not be able to handle the possible liability issues associated with the field trip. Hence, two separate courses are proposed to cover the lecture portion and the fieldtrip.

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 5, 2009** of preceding year.

Priority deadline for Course Proposals and Modifications: **November 2, 2009**.

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

Ching-Hua Wang

10-26-10

Proposer(s) of Course Modification

Date

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

Approval Sheet

Course: BIOL 604

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.

Program Chair		
	Signature	Date
Program Chair		
	Signature	Date
Program Chair		
	Signature	Date
General Education Chair		
	Signature	Date
Center for Intl Affairs Director		
	Signature	Date
Center for Integrative Studies Director		
	Signature	Date
Center for Multicultural Engagement Director		
	Signature	Date
Center for Civic Engagement and Service Learning Director		
	Signature	Date
Curriculum Chair		
	Signature	Date
Dean of Faculty		
	Signature	Date