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): 10-15-09; REV 12.8.09

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.

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1. Course Information.

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

OLD

Prefix BIOL Course# 508 Title ADVANCED IMMUNOLOGY
Units (4)
3 hours lecture per week
3 hours blank per week

x Prerequisites: BIOL 300 or permission of instructor
x Consent of Instructor Required for Enrollment
Corequisites:

Catalog Description (Do not use any symbols): This course will examine cellular and molecular aspects of the immune system. Topics include: molecular genetics and molecular structure of immunoglobulin, T cell receptor, and the MHC antigens; the functions and dysfunctions of the components of the immune system; applications of immunological technologies in modern scientific research and development.

General Education Categories
Lab Fee Requested
Course Level:
Undergraduate
Post-bac/Credential
x Graduate

Graded
CR/NC
x A - F
Optional (Student's choice)

Repeatable for up to units
Total Completions
Multiple Enrollment in same semester

NEW

Prefix BIOL Course# 508 Title ADVANCED IMMUNOLOGY
Units (4)
3 hours lecture per week
3hours laboratory per week

x Prerequisites: BIOL 504
x Consent of Instructor Required for Enrollment
Corequisites:

Catalog Description (Do not use any symbols)**:** Examines cellular and molecular aspects of the immune system. Topics include: molecular genetics and molecular structure of immunoglobulin, T cell receptor, and the MHC antigens; the functions and dysfunctions of the components of the immune system; applications of immunological technologies in modern scientific research and development.

General Education Categories
Lab Fee Requested
Course Level:
Undergraduate
Post-bac/Credential
x Graduate

Graded
CR/NC
x A - F
Optional (Student's choice)

Repeatable for up to units
Total Completions
Multiple Enrollment in same semester

2. Mode of Instruction (Hours per Unit are defaulted) **Hegis Code(s)**_____
(Provided by the Dean)

Existing

	Units	Hours Per Unit	Benchmark Enrollment	Graded
Lecture	3	1	15	
Seminar		1		
Lab	1	3	15	
Activity		2		
Field Studies				
Indep Study				
Other blank				

Proposed

	Units	Hours Per Unit	Benchmark Enrollment	Graded	CS No. (filled out by Dean)
Lecture	3	1	20	x	
Seminar		1			
Lab	1	3	20	x	
Activity		2			
Field Studies					
Indep Study					
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	**NEW**
Advanced immunology is an elective course for graduate students in the Professional Master of Science Degree Program in Biotechnology and Bioinformatics.	Advanced immunology is an elective course for graduate students in the Professional Master of Science Degree Program in Biotechnology and Bioinformatics.
Requirement for the Major/Minor	Requirement for the Major/Minor
x Elective for the Major/Minor	x Elective for the Major/Minor
Free Elective	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:	Upon completion of the course, the student will be able to:
OLD	**NEW**
• Describe the relationship between major cellular and molecular components of the immune system	Describe and analyze the relationship between major cellular and molecular components of the immune system
• Explain the molecular control mechanisms involved in immunoglobulin gene arrangement	• Explain and compare the molecular control mechanisms involved in immunoglobulin gene arrangement
• Explain how therapeutic antibodies can be “engineered”	• Demonstrate how therapeutic antibodies can be “engineered”
• Apply immunologic techniques to solve certain clinical and research problems	• Apply immunologic techniques to solve certain clinical and research problems

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

OLD	**NEW**
1. Mechanism and control of immunoglobulin gene rearrangement	1. Mechanism and control of immunoglobulin gene rearrangement
2. T cell antigen receptor genes	2. T cell antigen receptor genes

3. T lymphocyte signal transduction
4. Structure and function of MHC class I and class II antigens
5. Molecular mechanisms of antigen processing
6. B cell activation
7. Advances in antibody engineering
8. The complement system

3. T lymphocyte signal transduction
4. Structure and function of MHC class I and class II antigens
5. Molecular mechanisms of antigen processing
6. B cell activation
7. Advances in antibody engineering
8. The complement system

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.

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

Abbas, Lichtman, and Pober. (2003). Cellular and Molecular Immunology, 5th edition. W B Saunders.
Austyn, Wood and Austyn. (1994). Principles of Cellular and Molecular Immunology. Oxford University Press.
Hames and Glover. (1996). Molecular Immunology, 2nd edition. Oxford University Press

NEW

The Immune System by Peter Parham, Publisher: Garland Science; 3 edition (January 19, 2009) ISBN-10: 0815341466
Immunology: A Short Course by Richard Coico and Geoffrey Sunshine, Publisher: Wiley-Blackwell; 6 edition (January 14, 2009) ISBN-10: 0470081589
How the Immune System Works by Lauren M. Sompayrac, Publisher: Wiley-Blackwell; 3 edition (March 21, 2008) ISBN-10: 140516221X

9. Tenure Track Faculty qualified to teach this course.
Biology faculty

10. Requested Effective Date or First Semester offered: Summer 2010

11. New Resource Requested: Yes No x
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 Content
Course Learning Objectives

	Course number	x	References
	Units		GE
x	Staffing formula and enrollment limits		Other
x	Prerequisites/Corequisites		Reactivate Course
x	Catalog description		
	Mode of Instruction		

Justification: Since BIOL 504 is a foundation course for the MS Biotechnology and Bioinformatics program, students are advised to take BIOL 504 early on during their program of study and then take other required and elective courses. However, in the last few years of offering the program, we realized that some students have postponed taking BIOL 504, sometimes to the last term. To make sure students complete their foundation course first, BIOL 504 is included as a prerequisite course for BIOL 508, which requires the knowledge of 504 for students to succeed. References for the course is updated. The enrollment cap is raised from 15 to 20 to allow access of the course for more students and their time to graduation. Due to its lab requirement, the maximum enrollment is 20.

13. **Will this course modification 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 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 — 10-15-09

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

Approval Sheet

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.

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