

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): 10-18-09; REV 12.7.09

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.

1. Course Information.

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

OLD

Prefix **BIOL** Course# **217** Title MEDICAL MICROBIOLOGY
Units (4)
3 hours lecture per week
3 hours blank per week

Prerequisites: BIOL 100 or a college-level biology course strongly recommended

Consent of Instructor Required for Enrollment

Corequisites:

Catalog Description (Do not use any symbols): Study of disease-causing microorganisms such as bacteria, viruses, fungi, protozoa and parasites, emphasizing microbial structure, genetics, physiology and pathogenesis of microorganisms. Topics also include interaction between pathogens and their hosts, diagnosis, treatment, disease prevention as well as impact of infectious diseases on psychology, society, economy and global affairs. Microbial culturing, identification, differentiation and clinical diagnostic assays will be studied in the laboratory. No credit given toward the biology major.

GenEd: B2

NEW

Prefix **BIOL** Course# **217** Title MEDICAL MICROBIOLOGY
Units (4)
3 hours lecture per week
3 hours laboratory per week

Prerequisites: BIOL 100 or a college-level biology course strongly recommended

Consent of Instructor Required for Enrollment

Corequisites:

Catalog Description (Do not use any symbols): Study of disease-causing microorganisms such as bacteria, viruses, fungi, protozoa and parasites, emphasizing microbial structure, genetics, physiology and pathogenesis of microorganisms. Topics also include interaction between pathogens and their hosts, diagnosis, treatment, disease prevention as well as impact of infectious diseases on psychology, society, economy and global affairs. Microbial culturing, identification, differentiation and clinical diagnostic assays will be studied in the laboratory. No credit given toward the biology major except for students enrolled in the Clinical Laboratory Science Emphasis.

General Education
Categories **B2**
 Lab Fee Requested

Course Level:
 Undergraduate
 Post-bac/Credential
 Graduate

Graded
 CR/NC
 A - F
 Repeatable for up to 4 units Total Completions
 Multiple Enrollment in same semester

General Education
Categories **B2**
 Lab Fee Requested

Course Level:
 Undergraduate
 Post-bac/Credential
 Graduate

Graded
 CR/NC
 A - F
 Repeatable for up to 4 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

Proposed

	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	24	<input type="checkbox"/>	3	1	24	X	<input type="checkbox"/>
Seminar	<input type="checkbox"/>	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lab	1	3	24	<input type="checkbox"/>	1	3	24	X	<input type="checkbox"/>
Activity	<input type="checkbox"/>	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Field Studies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Field Studies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Indep Study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Indep Study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other blank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other blank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

Medical Microbiology is a required course for pre-nursing and allied health students to be served by the Biology program. It is a study of disease-causing microorganisms, including their structures and functions and their interactions to their host animals and the environment. It provides valuable knowledge and skills to pre-nursing and allied health students in dealing with disease-causing microbes such as bacteria, viruses, fungi and protozoa in the hospital or clinical settings. It is a highly relevant course particularly in this era of global epidemics of numerous infectious diseases and potential biological warfare.

NEW

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

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- 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

1. Describe disease-causing microorganisms and microbial agents at organismal, cellular and/or molecular levels.
2. Relate normal cellular and molecular structures to their functions.
3. Explain cellular processes and mechanisms that lead to physiological functions and pathological state.
4. Handle situations and incidents at medical settings involving potential pathogens.
5. Apply modern biological techniques to identify potential pathogens and solve aspects of scientific problems.

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

1. Describe disease-causing microorganisms and microbial agents at organismal, cellular and/or molecular levels.
2. Relate normal cellular and molecular structures to their functions.
3. Explain cellular processes and mechanisms that lead to physiological functions and pathological state.
4. Demonstrate the ability to handle situations and incidents at medical settings involving potential pathogens.
5. Apply modern biological techniques to identify potential pathogens and solve aspects of scientific problems.

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

OLD

Introduction to medical microbiology
Basic principles of medical microbiology
Basic concepts in immune response
General principles of laboratory diagnosis
Medical bacteriology
Medical virology
Medical mycology
Medical parasitology
Impact of infectious diseases

NEW

Introduction to medical microbiology
Basic principles of medical microbiology
Basic concepts in immune response
General principles of laboratory diagnosis
Medical bacteriology
Medical virology
Medical mycology
Medical parasitology
Impact of infectious diseases

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 1. Medical Microbiology, Patrick Murray, Ken Rosenthal, G. Kobayashi, M. Pfaller. C. V. Mosby, ISBN: 0323012132; 4th edition (Jan, 2002)

2. Sherris Medical Microbiology, Kenneth J. Ryan, C. George Ray, McGraw-Hill/Appleton and Lange; ISBN: 0838585299; 4th edition (July, 2003)

3. Laboratory Fundamentals of Microbiology, I. Edward, Phd Alcamo, Jones & Bartlett Pub; ISBN: 0763712353; 6th spiral edition (January 15, 2001)

Medical Microbiology: with STUDENT CONSULT Access (Medical Microbiology) (Paperback) by Patrick R. Murray, Michael A. Pfaller, Ken S. Rosenthal, Patrick R. Murray, Ken S. Rosenthal, Michael A. Pfaller. Publisher: Mosby; 5 edition (June 3, 2005) ISBN-10: 0323033032

NEW 1. Medical Microbiology, Patrick Murray, Ken Rosenthal, G. Kobayashi, M. Pfaller. C. V. Mosby, ISBN: 0323012132; 4th edition (Jan, 2002)

2. Sherris Medical Microbiology, Kenneth J. Ryan, C. George Ray, McGraw-Hill/Appleton and Lange; ISBN: 0838585299; 4th edition (July, 2003)

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9. Tenure Track Faculty qualified to teach this course.

Biology faculty

10. Requested Effective Date or First Semester offered: F2010

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: This course is a required course for students enrolled in the Clinical Laboratory Science (CLS) Emphasis of the BS in Biology program. Hence, we need to modify the last sentence of the catalog description for the course to allow students in the CLS program to obtain credit toward their major after completion of the course. The reason that students enrolled in other emphases of the biology program are not given credit toward their major after taking BIOL 217 is that they are required to take an upper-division microbiology course, BIOL 301, which is a general microbiology course, not one like BIOL 217 which is focused on medically-related microorganisms.

Deleted: This course is a required course for students enrolled in the Clinical Laboratory Science (CLS) Emphasis of the BS in Biology program. Hence, we need to modify the last sentence of the catalog description for the course to allow students in the CLS program to obtain credit toward their major after completion of the course. The reason that students enrolled in other emphases of the biology program are not given credit toward their major after taking BIOL 217 is that they are required to take an upper-division microbiology course, BIOL 301, which is a general microbiology course, not one like BIOL 217 which is focused on medically-related microorganisms.

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

10-18-09

Proposer(s) of Course Modification

Date

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

GE CRITERIA APPROVAL FORM

Course Number and Title: BIOL 217 Medical Microbiology

Faculty member(s) proposing Course: Ching-Hua Wang

Indicate which of the following GE would be satisfied by this course by marking an “X” on the appropriate lines.

Courses may be placed in up to *two* GE categories as appropriate. Upper Division Interdisciplinary GE courses (UDIGE) may be placed in two GE categories in addition to the UDIGE category.

GE Category	
<input type="checkbox"/>	A1: Oral Communication
<input type="checkbox"/>	A2: English Writing
<input type="checkbox"/>	A3: Critical Thinking
<input type="checkbox"/>	B1: Physical Sciences—Chemistry, Physics, Geology, and Earth Sciences
<input checked="" type="checkbox"/>	B2: Life Sciences—Biology
<input type="checkbox"/>	B3: Mathematics—Mathematics and Applications
<input type="checkbox"/>	B4: Computers and Information Technology
<input type="checkbox"/>	C1: Art
<input type="checkbox"/>	C2: Literature
<input type="checkbox"/>	C3a: Language
<input type="checkbox"/>	C3b: Multicultural
<input type="checkbox"/>	D: Social Perspectives
<input type="checkbox"/>	E: Human Physiological and Psychological Perspectives
<input type="checkbox"/>	Upper Division Interdisciplinary GE
Lab Included?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Please provide a brief explanation of how the proposed course meets *each* of the criteria for the selected GE categories.

BIOL. 217 Medical Microbiology is a study of disease-causing microorganisms such as bacteria, viruses, fungi, protozoa and parasites. The course covers extensively the relationship between these pathogenic organisms and their hosts and their environment. The principles and concepts that form the foundation of living systems will be discussed throughout this course. The impact of infectious diseases on psychology, society, economy and global affairs will be emphasized as well. It will present scientific knowledge in a historical perspective and demonstrate the importance of science to the development of civilizations. The course uses the scientific method to study the various microbial forms, and builds skills in scientific reasoning and critical thinking.

Students who successfully complete this course will be able to:

1. Describe disease-causing microorganisms and microbial agents at organismal, cellular and/or molecular levels.
2. Relate normal cellular and molecular structures to their functions.
3. Explain cellular processes and mechanisms that lead to physiological functions and pathological state.
4. Handle situations and incidents at medical settings involving potential pathogens.
5. Apply modern biological techniques to identify potential pathogens and solve aspects of scientific problems.

Hence we believe that this course meets each of the criteria in GE category B.

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