

CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

COURSE MODIFICATION PROPOSAL

PROGRAM AREA _____

- 1. Catalog Description of the Course.** *[Include the course prefix, number, full title, and units. Provide a course narrative using underline for deletions and CAPITALS for additions including prerequisites/corequisites. If any of the following apply, include in the description: Repeatability (May be repeated to a maximum of ____ units); time distribution (Lecture ____ hours, laboratory ____ hours); non-traditional grading system (Graded CR/NC, ABC/NC). Follow accepted catalog format.]*

PHYS 434. INTRODUCTION TO BIOMEDICAL IMAGING (3 4)

THREEwo hours of lecture and two hours of lab activity per week, including two field trips per course.

Prerequisite: BIOL 210 or PHYS 200.

The course will present an overview of biomedical images and imaging systems. The fundamental concepts used in several imaging modalities (such as projection radiography, mammography, DEXA, computed tomography, ultrasonography and magnetic resonance imaging) will be examined: the emphasis will be on an intuitive and descriptive presentation of the main components of these systems. Image formation and reconstruction will be addressed. The resulting clinical images will be correlated with the underlying structure and function of the organs, and the diagnostic utility and limitations of the images will be considered.

Same as BIOL 434, HLTH 434.

GenEd: B2, E and Interdisciplinary

BIOL 434. INTRODUCTION TO BIOMEDICAL IMAGING (3 4)

THREEwo hours of lecture and two hours of lab activity per week, including two field trips per course.

Prerequisite: BIOL 210 or PHYS 200.

The course will present an overview of biomedical images and imaging systems. The fundamental concepts used in several imaging modalities (such as projection radiography, mammography, DEXA, computed tomography, ultrasonography and magnetic resonance imaging) will be examined: the emphasis will be on an intuitive and descriptive presentation of the main components of these systems. Image formation and reconstruction will be addressed. The resulting clinical images will be correlated with the underlying structure and function of the organs, and the diagnostic utility and limitations of the images will be considered.

Same as PHYS 434, HLTH 434

GenEd: B2, E and Interdisciplinary

HLTH 434. INTRODUCTION TO BIOMEDICAL IMAGING (3 4)

THREEwo hours of lecture and two hours of lab activity per week, including two field trips per course.

Prerequisite: BIOL 210 or PHYS 200.

The course will present an overview of biomedical images and imaging systems. The fundamental concepts used in several imaging modalities (such as projection radiography, mammography, DEXA, computed tomography, ultrasonography and magnetic resonance imaging) will be examined: the emphasis will be on an intuitive and descriptive presentation of the main components of these systems. Image formation and reconstruction will be addressed. The resulting clinical images will be correlated with the underlying structure and function of the organs, and the diagnostic utility and limitations of the images will be considered.

Same as PHYS 434, BIOL 434

GenEd: B2, E and Interdisciplinary

2. Mode of instruction

<u>Existing</u>				<u>Proposed</u>			
	Units	Hours Per Unit	Benchmark Enrollment		Units	Hours per Unit	Benchmark Enrollment
Lecture	<u> 2 </u>	<u> 1 </u>	<u> 20 </u>	Lecture	<u> 3 </u>	<u> 1 </u>	<u> 20 </u>
Seminar	<u> </u>	<u> </u>	<u> </u>	Seminar	<u> </u>	<u> </u>	<u> </u>
Laboratory	<u> </u>	<u> </u>	<u> </u>	Laboratory	<u> </u>	<u> </u>	<u> </u>
Activity	<u> 1 </u>	<u> 2 </u>	<u> 20 </u>	Activity	<u> 1 </u>	<u> 2 </u>	<u> 20 </u>

- 3. Course Content in Outline Form if Being Changed.** *[Be as brief as possible, but use as much space as necessary]*

4. **References.** *[Provide 3-5 references on which this course is based and/or support it.]*

5. **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

☒ X Units: Upon review of the course content and its first year of offering, it is clear that this course requires 3 hours of lecture per week in order to cover the necessary content for the course.

_____ Staffing formula and enrollment limits

_____ Prerequisites/corequisites

_____ Catalog description

_____ Course content

_____ References

_____ GE

_____ Other

6. **If this modification results in a GE-related change indicate GE category affected:**

A (English Language, Communication, Critical Thinking)	
B (Mathematics & Sciences)	
C (Fine Arts, Literature, Languages & Cultures)	
D (Social Perspectives)	
E (Human Psychological and Physiological Perspectives)	

7. **Consultation**

Attach consultation sheets from all program areas, Library, and others (if necessary)

8. If this course modification will alter any degree, credential, certificate, or minor program in your program attach a program modification.

_____ Ching-Hua Wang/ Geoff Dougherty _____ 3/8/04 _____
Proposer of Course Modification Date