

CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

COURSE MODIFICATION PROPOSAL

PROGRAM AREA BIOLOGY

- 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.]*

NEW:

BIOL 302. GENETICS AND EVOLUTION (4)

Three hours of lecture and one hour of recitation per week.

Prerequisite: CHEM 122; BIOL 201 with a grade of C or better.

Principles of classical transmission genetics, population genetics and evolution, with an introduction to modern molecular genetics.

2. Mode of Instruction.

<u>Existing</u>			<u>Proposed</u>				
	Units	Hours Per Unit	Benchmark Enrollment		Units	Hours per Unit	Benchmark Enrollment
Lecture	<u>3</u>	<u>1</u>	<u>30</u>	Lecture	<u>3</u>	<u>1</u>	<u>40</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>1</u>	<u>30</u>	Activity	<u>1</u>	<u>1</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]*

The scientific method
Mendelian genetics
transmission of genetic material
linkage and mapping in prokaryotes
linkage and mapping in eukaryotes
cytogenetics
sex determination and pedigree analysis
quantitative inheritance
population genetics-the hardy-weinberg equilibrium
evolution and speciation
molecular genetics

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

Genetics, Analysis of Genes and Genomes Fifth Edition D. L. Hartl and E. W. Jones, Jones and Bartlett Publishers, Sudbury, MA ISBN 0-7637-0913-1

Essentials of Genetics P. J. Russell, ISBN 0-8053-4697-X

Essentials of Genetics W. S. Klug and M. R. Cummings, Prentice Hall, ISBN 0-13-080017-1

Principles of Genetics R. H. Tamarin, McGraw Hill, ISBN 0-07-233419-3

- 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.]*

X Course title
___ Prefix/suffix
___ Course number

- ☐ Units
☒ Staffing formula and enrollment limits
☐ Prerequisites/corequisites
☒ Catalog description
☒ Course content
☐ References
☐ GE
☐ Other

The course is being modified to remove evolution from the course title and content. Evolution is a central, unifying theme in all sub-fields of biology and in the current course, sufficient time is not available to devote to this important biological concept. Thus, the evolution content has been removed from the genetics course and expanded to create a new course in evolutionary biology (BIOL 303). BIOL 302 and BIOL 303 will both be required for the BS degree in Biology and the BS degree in Biology with an emphasis in Cell/Molecular Biology. The enrollment number for the recitation section was reduced to 20 because the recitation is intended as a small group, problem-solving activity.

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

A (English Language, Communication, Critical Thinking)	
B (Life 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. ATTACHED

_____ Nancy Mozingo _____ 5 December 03 _____
 Proposer of Course Modification Date