



SACRAMENTO
STATE

Course Change Proposal Form A



Academic Group (College): NSM	Academic Organization (Department): Biological Sciences	Date: October 6, 2008
Type of Course Proposal: New ___ Change <u>X</u> Deletion ___	Department Chair: Rose Leigh Vines	Submitted by: Thomas Peavy
Does this course fulfill a requirement for single-subject or multiple subject credential students? Yes ___ No <u>X</u>	For Catalog Copy: Yes <u>X</u> No ___ CCE: Yes ___ No <u>X</u>	Semester Effective: Fall <u>X</u> Spring ___, 2009__

This course replaces experimental course Subject Area (prefix) and Catalog Number (course number):	
This Catalog Number (course number) is being replaced:	

Change from:

Subject Area (prefix) & Catalog No. (course no.): BIO 184	Title: General Genetics	Units: 3
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Change to:

Subject Area (prefix) & Catalog No. (course no.): BIO 184	Title: General Genetics	Units: 4
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JUSTIFICATION:

The Department of Biological Sciences is requesting a change in units for the General Genetics course (BIO 184) from 3 units to 4 units so as to increase the lecture time from 2 hours to 3 hours per week. Currently, the course catalog lists the class as 2 hours lecture (actually two 50 min periods) and 3 hours of lab. Instructors who have taught this class have provided feedback on the course structure and all are in agreement that two 50 min lecture periods per week for a semester are simply not enough lecture time to cover the principles of genetics which encompasses modern molecular genetics in addition to classic transmission genetics (i.e. Mendelian genetics). This amount of lecture time does not allow enough time to adequately cover all of the content that students are held responsible for when taking generalized tests such as the MCAT and GRE exams. In addition, we surveyed comparable genetics courses taught within the CSU system (21 other campuses) by their respective biology departments and found that our genetics course is the only one that devotes two hours to lecture (see appendix 1). All of the other campuses have a genetics course that has at least 3 hours of lecture (mean of 3.2 lecture hours). Although these courses differ with respect to whether they have laboratory or discussion sections in addition to their lecture, it is clear that there is much more time devoted to content delivery within their lecture structure. In addition to requesting the increase in units, we are proposing to remove the microbiology prerequisite since the content previously deemed prerequisite is addressed within the current course structure.

NEW COURSE DESCRIPTION: (Not to exceed 80 words, and language should conform to catalog copy. See <http://www.csus.edu/acaf/univmanual/crspsl.htm> - Guidelines for Catalog Course Description)

Principles of inheritance as they relate to microorganisms, plants, animals and humans. Genetic mechanisms are analyzed according to evidence derived from both classical and current research. The nature, structure and function of the genome are considered at the molecular level. Lecture three hours; laboratory three hours. Fee course. **Prerequisite:** BIO 010, BIO 011 and BIO 012 or both BIO 001 and BIO 002. 4 units.

Note:

Prerequisite: BIO 010, BIO 011 and BIO 012, or both BIO 001 and BIO 002

Corequisite:

CAN (California Articulation Number):

Graded: Letter ___ Credit/No Credit X **Instructor Approval Required? Yes ___ No X**

Course Classification (e.g., lecture, lab, seminar, discussion):
Lecture and Laboratory C2, C16 **Title for SIS+/CMS (not more than 30 characters)**
General Genetics

Cross Listed? Yes ___ No X **If yes, do they meet together and fulfill the same requirement, and what is the other course.**

How Many Times Can This Course be Taken for Credit? ___once___

Can the course be taken for Credit more than once during the same term? Yes ___ No X

FOR NEW COURSE PROPOSALS OR SUBSTANTIVE CHANGES ONLY:

Description of the Expected Learning Outcomes: Describe outcomes using the following format: "Students will be able to: 1), 2), etc." See the example at <http://www.csus.edu/acaf/example.htm>

Students will be able to:

1. discuss a historical perspective of genetics and breakthroughs of discovery.
2. use problem-solving skills to predict genetic outcomes.
3. describe basic inheritance patterns and the chromosomal basis of heredity.
4. explain mutation as a source of genetic variability.
5. discuss the role of sex chromosomes in sex determination, sexual dimorphism and chromosomal inactivation.
6. explain how cells reproduce through DNA and nucleic acids.
7. describe how DNA transcribes into RNA that ultimately translates into protein.
8. articulate some of the major issues related to modern biotechnology and genetic manipulation

****Attach a list of the required/recommended course readings and activities [Note: it is understood that these are updated and modified as needed by the instructor(s).] This attachment should be forwarded only to your Dean's office, not Academic Affairs.**

Assessment Strategies: A description of the assessment strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers) which will be used by the instructor to determine the extent to which students have achieved the learning outcomes noted above:

Students will be assessed by a combination of lecture examinations (typically 3 per semester), homework or quiz assignments, laboratory practical exams or reports, and oral presentations on a current topic in genetics (during laboratory). An alternative service-learning option is usually provided within the laboratory course structure which generally substitutes for the oral presentation.

For whom is this course being developed?

Majors in the Dept Majors of other Depts ___ Minors in the Dept ___ General Education ___ Other ___

Is this course required in a degree program (major, minor, graduate degree, certificate)? Yes No ___

If yes, identify program(s): Master of Arts

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer facilities, faculty, etc.)? Yes ___ No

If yes, attach a description of resources needed and verify that resources are available.

Indicate which department or programs will be affected by the proposed course (if any). _____

The Department Chair's signature below indicates that affected programs have been sent a copy of this proposal form.

Approvals: If proposed change, new course or deletion is approved, sign and date below. If not approved, forward without signing to the next reviewing authority, and attach an explanatory memorandum to the original copy.

Signatures:

Date

Department Chair: <i>Rose Ledy Vines</i>	12/9/08
College Dean or Associate Dean: <i>Raymond Hefferman</i>	12/9/08
CPSP (for school personnel courses ONLY)	
Associate Vice President and Dean for Academic Programs	

Distribution: Academic Affairs (original), Department Chair and College Dean. Dean's office to send original after approval to Academic Affairs, at mail zip 6016. An electronic copy must also be sent.