



SACRAMENTO
STATE

Course Change Proposal Form A



Academic Group (College): Natural Sciences and Mathematics	Academic Organization (Department): Biological Sciences	Date: 11/17/08
Type of Course Proposal: New <input checked="" type="checkbox"/> Change <input type="checkbox"/> Deletion <input type="checkbox"/>	Department Chair: Rose Leigh Vines	Submitted by: Jamie Kneitel
Does this course fulfill a requirement for single-subject or multiple subject credential students? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	For Catalog Copy: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> CCE (Extension): Yes <input type="checkbox"/> No <input type="checkbox"/>	Semester Effective: Fall <input checked="" type="checkbox"/> Spring <input type="checkbox"/> , 2009

This course replaces experimental course Subject Area (prefix) and Catalog Nbr (course number):	
If changing an existing course, should new version be considered a repeat of the original version? If so, the same Course ID will be maintained. If not, a new Course ID will be assigned. Note: In PeopleSoft terminology, the Course ID is the unique system identifier, not the Catalog Nbr.	Yes <input type="checkbox"/> No <input type="checkbox"/>

Change from:

Subject Area (prefix) & Catalog Nbr (course no.):	Title:	Units:
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Change to:

Subject Area (prefix) & Catalog Nbr (course no.): BIO 100	Title: Introduction to Scientific Analysis	Units: 2
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JUSTIFICATION:

Upper division Biological Sciences students need the basic scientific skills necessary to effectively design and execute scientific experiments; collect, prepare and analyze data; and read, evaluate, write and present scientific material. This course is meant to be taken by both our native students and transfer students as one of the first upper division courses taken within the major and is meant to serve as a bridge course between the lower and upper division. The scientific skills presented in this course will reinforce the basic skills introduced in the lower division as well as extending the basic skills to a level where students feel comfortable with generating hypotheses, interpreting results from other studies, and presenting data effectively. By presenting these skills in a common course, we can reduce redundancies in upper division coursework and spend more time focusing on content and hypothesis testing from the point of view of each of these courses.

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

The following concepts are addressed in this course: Anatomy of scientific literature, reading and writing scientific papers, proper citation formats, basic interpretation of tables and figures, graphical analysis, basic statistical analysis, experimental design to effectively test a hypothesis, effective presentation of an experiment. Lecture 1 hour. Activity 2 hours.
Prerequisite: BIO 1, BIO 2, and STAT 1. Units 2.0.

Note:

Prerequisite: BIO 001; BIO 002; STAT 001	
Enforced at Registration: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Corequisite:	
Enforced at Registration: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Graded: Letter <input checked="" type="checkbox"/> Credit/No Credit <input type="checkbox"/>	Instructor Approval Required? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Course Classification (e.g., lecture, lab, seminar, discussion): C2, C7	Title for CMS (not more than 30 characters) Intro to Scientific Analysis
Cross Listed? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	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? <u>One</u>	
Can the course be taken for Credit more than once during the same term? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

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 should be able to :

- Read and interpret a scientific paper
- Produce relevant tables and graphs given different types of data
- Conduct a literature search on a topic
- Develop a hypothesis that can be tested
- Write an effective scientific paper
- Orally present results to a group of peers.

****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:

Exams, quizzes, culminating experiences including oral presentation and a scientific paper

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):

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>Ron Keith Vines</i>	2/4/09
College Dean or Associate Dean: <i>Laurel Heffernan</i>	2/5/09
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.