



SACRAMENTO
STATE

Course Change Proposal Form A



Academic Group (<i>College</i>): Natural Science and Mathematics	Academic Organization (<i>Department</i>): Physics and Astronomy	Date: 11/01/08
Type of Course Proposal: New <input checked="" type="checkbox"/> Change <input type="checkbox"/> Deletion <input type="checkbox"/>	Department Chair: Gary Shoemaker	Submitted by: Chris Taylor
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 (<i>Extension</i>): Yes <input checked="" 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*):

Change from:

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

Subject Area (<i>prefix</i>) & Catalog Nbr (<i>course no.</i>): ASTR 4A	Title: Introduction to the Solar System	Units: 3
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JUSTIFICATION:

The course content for the current ASTR 4: Introduction to Astronomy course is too long to cover in a single semester. Standard practice has been to cut discussion of the Solar System and focus more on stars and stellar evolution, galaxies and cosmology. We propose to re-introduce the Solar System content by dividing ASTR 4 into two separate courses: ASTR 4A: Introduction to Planetary Science and ASTR 4B: Introduction to Stars, Galaxies and Cosmology. The latter is how the course is currently taught. This proposal, combined with our proposal for ASTR 4C: Astrobiology, will allow us to offer all major areas of contemporary astronomy. This division is already common practice at many community colleges. All three courses will be taught from an astronomical perspective and are not meant to substitute for courses offered by other departments.

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)

ASTR 4A. Introduction to Planetary Science. Description and explanations of astronomical phenomena and measurements related to the Solar System and exoplanets. Structure and evolution of planetary systems. Formation of solar systems and planets. Occasional observation periods. **Prerequisite:** One year of high school geometry or instructor permission. **Graded:** Graded Student. **Units:** 3.0.

Note:

Prerequisite: High school geometry
Enforced at Registration: Yes No

Corequisite:
Enforced at Registration: Yes No

CAN (California Articulation Number): N/A

Graded: Letter Credit/No Credit Instructor Approval Required? Yes No

Course Classification (*e.g., lecture, lab, seminar, discussion*):
lecture C-01 Title for CMS (not more than 30 characters)
Intro to the Solar System

Cross Listed? Yes No 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? 1

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

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) Understand the place of human beings in the Solar System.
- 2) Explain how scientists use scientific inquiry and the scientific method in advancing our knowledge of the Solar System.
- 3) Describe the history of human knowledge of the Solar System.
- 4) Explain how scientists use the basic principles of physics and chemistry to understand our Solar System.
- 5) Discuss the process by which solar systems, and the planets within them, form.
- 6) Compare the properties of our solar system with those of planetary systems around other stars.

**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:

Examinations using factual, conceptual, and practical questions.
 Homework based on assigned readings.
 Daily mini-quizzes in class using electronic clickers.

For whom is this course being developed?

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

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

If yes, identify program(s): Minor in Astronomy, Earth Science Major

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 x

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

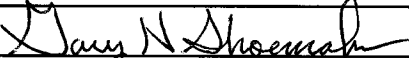
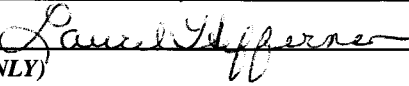
Indicate which department or programs will be affected by the proposed course (if any). Department of Physics and Astronomy ___
 Department of Geology _____

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: 	11/20/08
College Dean or Associate Dean: 	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.