

NEW COURSE PROPOSAL**Courses must be submitted by November 2, 2009, for priority catalog review.**DATE (*Change if modified and redate file with current date*)

APRIL 6, 2010; REV 4.27.10

PROGRAM AREA(S)

SCHOOL OF EDUCATION

1. Course Information. *[Follow accepted catalog format.]***Prefix(es)** (Add additional prefixes if cross-listed) and **Course No.** EDUC 814**Title:** CSET PREPARATION: GENERAL SCIENCE SUBTEST 118 **Units:** 2

Prerequisites

Corequisites

Consent of Instructor Required for Enrollment

Catalog Description (Do not use any symbols): **An overview of earth science and physics concepts for preparation for the California Subject Examinations for Teachers subtest 118. Repeatable for up to four units.****Grading Scheme:**

A-F Grades

x Credit/No Credit

Optional (Student Choice)

Repeatability:

x Repeatable for a maximum of 4 units

Total Completions Allowed 2

Multiple Enrollment in Same Semester

Course Level Information:

Undergraduate

x Post-Baccalaureate/Credential

Graduate

Mode of Instruction/Components (*Hours per Unit are defaulted*).

	Units	Hours per Unit	Benchmark Enrollment	Graded Component	CS & HEGIS # (Filled in by the Dean)
Lecture		1			
Seminar		1			
Laboratory		3			
Activity	2	2	20	x	
Field Studies					
Indep Study					
Other Blank					

Leave the following hours per week areas blank. The hours per week will be filled out for you.

4 hours activity per week

hours blank per week

2. Course Attributes:

General Education Categories: All courses with GE category notations (including deletions) must be submitted to the GE website: <http://summit.csuci.edu/geapproval>. Upon completion, the GE Committee will forward your documents to the Curriculum Committee for further processing.

A (English Language, Communication, Critical Thinking)

A-1 Oral Communication

A-2 English Writing

A-3 Critical Thinking

B (Mathematics, Sciences & Technology)

B-1 Physical Sciences

B-2 Life Sciences – Biology

B-3 Mathematics – Mathematics and Applications

B-4 Computers and Information Technology

C (Fine Arts, Literature, Languages & Cultures)

C-1 Art

C-2 Literature Courses

C-3a Language

C-3b Multicultural

D (Social Perspectives)
E (Human Psychological and Physiological Perspectives)
UDIGE/INTD Interdisciplinary
Meets University Writing Requirement
Meets University Language Requirement

American Institutions, Title V Section 40404: ☐ Government ☐ US Constitution ☐ US History
Refer to website, Exec Order 405, for more information: <http://senate.csuci.edu/comm/curriculum/resources.htm>

Service Learning Course (Approval from the Center for Community Engagement must be received before you can request this course attribute).

3. Justification and Requirements for the Course. (Make a brief statement to justify the need for the course)

A. Justification: The State of California's Commission on Teacher Credentialing has developed a new subject matter credential in General Science. Addressing the advertised shortages in math and science teaching, this course will help prepare future teachers with the content required for one of the two subject matter exams to meet subject matter competency for this credential. This fulfills the need for an expedited pathway for producing math and science teachers as advocated by the CSU Chancellor's Office.

B. Degree Requirement: ☐ Requirement for the Major/Minor
☐ Elective for the Major/Minor
x Free Elective

Note: Submit Program Modification if this course changes your program.

4. Learning Objectives. (List in numerical order. You may wish to use the following resource in utilizing measurable verbs: <http://senate.csuci.edu/comm/curriculum/resources.htm>)

Upon completion of the course, the student will be able to:

Students will be able to:

1. Describe the variety of tectonic processes and how they are involved in changing land forms
2. Identify the steps in the rock cycle and describe the superficial processes involved in changing land forms.
3. Explain energy transfer processes and how they relate to weather and seasonal changes in the sky.
4. Analyze how Earth's resources are classified as renewable or nonrenewable.
5. Compare the characteristics of sound, light, seismic, and ocean waves and explain how energy is transferred.
6. Identify and describe the structures of the solar system and universe and describe the tools used to study them.
7. Explain how lenses are used in optical systems.
8. Apply Newton's Laws of Motion and calculate the mechanical advantage of simple machines.
9. Identify fundamental forces and analyze problems relating to motion, forces, pressure, and buoyancy.
10. Design and interpret series and parallel electrical circuits and calculate power, voltage drop, current, and resistance in these circuits.
11. Relate electricity to magnetism and provide examples of electrostatic and magnetostatic phenomena.
12. Design and discuss experiments relating to both forces and motion as well as dynamic processes of the Earth.

5. Course Content in Outline Form. [Be as brief as possible, but use as much space as necessary]

1. Earth Sciences: Tectonic Processes and Landform Features
2. Earth Sciences: Rock formation and Surficial Processes and Landform Features
3. Earth Sciences: Weather, maps
4. Earth's Resources
5. Astronomy
6. Waves
7. Optics: Electromagnetic spectrum and optical instruments
8. Forces and Motion: Newton's Laws of Motion, simple machines
9. Forces and Motion: Forces, buoyancy, relationship between force, mass, and acceleration
10. Electricity
11. Magnetism and Electromagnetism
12. Scientific method and experimental design

Does this course content overlap with a course offered in your academic program? **Yes** ☐ **No** ☒

If YES, what course(s) and provide a justification of the overlap. ☐

Does this course content overlap a course offered in another academic area? **Yes** ☐ **No** ☒

If YES, what course(s) and provide a justification of the overlap. ☐

Overlapping courses require Chairs' signatures.

6. Cross-listed Courses (Please note each prefix in item No. 1)

A. List Cross-listed Courses (Signature of Academic Chair(s) of the other academic area(s) is required).

List each cross-listed prefix for the course: ☐

B. Program responsible for staffing: EDUC

7. References. [Provide 3 - 5 references]

See the following for subject matter content:

http://www.cset.nesinc.com/PDFs/CS_genscience_SMR.pdf;

http://www.cset.nesinc.com/PDFs/CS_earthplanetarysci_SMR.pdf

http://www.cset.nesinc.com/PDFs/CS_physics_SMR.pdf

8. Tenure Track Faculty Qualified to Teach This Course.

Grier, Bleicher, all science faculty

9. Requested Effective Date:

First semester offered: SP or SU 2010 through Extended Education

10. New Resources Requested. **Yes** ☐ **No** ☒

If YES, list the resources needed.

A. Computer Needs (data processing, audio visual, broadcasting, other equipment, etc.)

Access to CI Learn—existing resource

B. Library Needs (streaming media, video hosting, databases, exhibit space, etc.)

☐

C. Facility/Space/Transportation Needs

Wet lab preferred but not required

D. Lab Fee Requested (please refer to Dean's Office for additional processing) **Yes** ☐ **No** ☐

E. Other

☐

11. Will this new course alter any degree, credential, certificate, or minor in your program? **Yes** ☐ **No** ☒

If, YES attach a program update or program modification form for all programs affected.

Priority deadline for New Minors and Programs: **October 5, 2009** of preceding year.

Priority deadline for Course Proposals and Modifications: **November 2, 2009**, of preceding year.

Last day to submit forms to be considered during the current academic year: **April 15th**.

Proposer of Course (Type in name. Signatures will be collected after Curriculum approval)

Date

Approval Sheet

Program/Course: EDUC 814

If your course has a General Education Component or involves Center affiliation, the Center will also sign off during the approval process.

Multiple Chair fields are available for cross-listed courses.

Program Chair		
	Signature	Date
Program Chair		
	Signature	Date
Program Chair		
	Signature	Date
General Education Chair		
	Signature	Date
Center for International Affairs Director		
	Signature	Date
Center for Integrative Studies Director		
	Signature	Date
Center for Multicultural Engagement Director		
	Signature	Date
Center for Civic Engagement Director		
	Signature	Date
Curriculum Chair		
	Signature	Date
Dean of Faculty		
	Signature	Date