General Education Course Proposal

Proposed Course: Geol (Prefix) 112 (No.) PLANET EARTH THROUGH TIME (Title) Units 3

Department: Geology School: Natural Sciences

GE Category (Indicate one category only):

Foundation: A1___; A2___; A3___; B4___

Breadth: B1___; B2___; C1___; C2___; D___; E___

Integration: B_X_; C___; D___; International/Multicultural___

Existing Course___; Revised Course_X_; New Course___

Course Included in Current GE Program_X_

New courses require the Undergraduate Course Proposal form in addition to this form.

Revised courses require the Undergraduate Course Change Request in addition to this form.

Proposed catalog description: Limit course description to 40 words using succinct phrases. Include prerequisites, limitations, lecture/lab hours. Indicate former course number, e.g., (Former Biol 105)

Prerequisite: General Education Area B1, B2, B4. Principles of Geology used in the interpretation of the history of the Earth as revealed in rocks and their fossils. Includes: origin of the solar system, evolution of atmosphere and oceans, origin of life, rise and fall of the dinosaurs, plate tectonics, and ice ages. General Education Integration, Area B. (3 lecture hours) (Former Geol. 2)

Enrollment limit per section: 50

Expected number of sections per semester – Year 1_1_; Year 3_1_

Attachments:

1. A statement presenting the ways in which this course meets the Specifications provided in the appropriate section of the General Education Policy as well as in the Policies for Inclusion and Evaluation of General Education Courses.
2. A statement of elements common to all sections of this course, identifying content, objectives, required student activities, grading policy, representative texts, and an approximate schedule for the course. Required student activities include such things as papers, research projects, homework, laboratory and/or studio performance, recitations, participation, attendance, and exams.
3. A typical syllabus for a particular offering of the course.
4. Any special cost factors associated with this course.

Approval for Inclusion in General Education

Department Chair — 4/24/98 (Date)

School Curriculum Committee — 9/21/98 (Date)

School Dean — 9/22/98 (Date)

General Education Subcommittee — 12/15/98 (Date)

Associate Provost — 12/22/98 (Date)

1/14/98

Planet Earth Through Time

Geology 112
MWF 9:10 - 10:00; Rm. McL 280
Fall, 2000

Instructor: Dr. Planet Earth
Office: McL 284
Phone: 278-3086 **E-mail:** pearth@csufresno.edu
Office Hours: MWF 10:10 - 11:00; 2:10 - 3:00

Course description:

This is a course about the history of the earth and its life. During the 4.6 billion years that the earth has existed, geological processes have been constantly reshaping its surface. Rocks have been created and later broken down, landscapes transformed, mountain ranges uplifted and then eroded away. Continents and oceans have shifted so much that a map of the world 500 million years ago would look wholely unfamiliar. Amidst such vast physical changes, life appeared and flourished, evolving through myriad forms that have given rise to the familiar plants and animals that we see today.

The record of past geological processes and past life is preserved in the rocks and landscapes around us. Rocks have a story to tell to those with a trained eye. We will explore that story, and the ways in which it is unravelled.

Text (required): The Earth Through Time (5th edition) by Harold L. Levin

Course objectives:

You will be expected to learn:

- Basic geologic principles and processes.
- Methods of determining the relative and absolute ages of rocks and geologic events.
- How the remains of organisms are preserved as fossils.
- The basic outlines of the process of organic evolution.
- How rocks and fossils are used to reconstruct past environments.
- The chronology of major events in the geologic history of the earth, with emphasis on North America.
- The major groups of organisms preserved as fossils, and their chronology.

Attendance: You are expected to attend all scheduled class sessions. Regular class attendance and prompt arrival for lectures will enable you to best utilize class sessions as an effective learning tool.

Grades: Your grade in this course will be based on your performance on lecture exams, quizzes, and a term paper. The grading breakdown will be as follows:

Three one-hour exams:	45%
Final exam:	25%
Term paper:	20%
Quizzes:	10%

Exams will cover material discussed in lecture and in reading assignments. They will include a mix of objective questions (mostly multiple choice), fill-in-the-blanks, and possibly some short-answer questions. The emphasis will be on your understanding of concepts, principles, and relationships, as well as the events of geologic history. The review questions and lists of important terms at the end of each chapter in the text should be useful in preparing for exams, and I will hand out review sheets prior to each exam as well.

Exam grades will be assigned using the following percentage scale:

100%	to	88%	= A
87.9%	to	76%	= B
75.9%	to	58%	= C
57.9%	to	46%	= D
Less	than	46%	= F

Term paper: An original term paper on an approved topic will comprise 20% of your final course grade. The minimum paper length is 4000 words (a requirement for upper division general education courses). The paper should be written with a word processing program on a computer.

Cheating and Plagiarism: Each student is expected to perform his or her own work throughout the course. Cheating and plagiarism will not be tolerated and will be dealt with according to university policy. Please refer to the CSU Fresno catalog for further information.

Disabled Students: It is the responsibility of students with disabilities to identify themselves to the university and the instructor so reasonable accommodation for learning and evaluation within the course can be made.

	Lecture Topics	**Text Chapter**
Week 1 (1/27- 1/31)	Introduction The Earth in Change Geologic Principles (uniformitarianism) Earth Structure and Seismic Waves	 1, p. 1 - 5 1, p. 6 - 16 5, p. 157 - 167
Week 2 (2/3- 2/7)	Continentals Adrift, Continents Aground Plate Tectonics: The New Revolution The Dynamic Earth	5, p. 172 - 180 5, p. 180 - 206
Week 3 (2/10-2/14)	Mountain Building Igneous Rocks: Origin , Composition, and Occurrence.	 2, p. 46 - 50
Week 4 (2/17-2/21)	Volcanic Eruptive Styles and Processes Volcanic Landforms The Mediterranean Sea was a Desert Once	2, p. 51 - 53

Week 5	Sedimentary Archives: Depicting the Past	2, p. 53 - 57
	REVIEW	
(2/24-2/28)	**EXAM 1**	

Week 6	Depositional Environments	3, p. 65 - 87
(3/3-3/7)	Deformation of Rocks	5, p. 168 - 172
	Faults and Folds	

Week 7	Earthquakes and Rates of Movement	
(3/10-3/14)	Concept of Geologic Time &	1, p. 16 - 35
	Dating Techniques	

Week 8	Stratigraphy & Sea Level Change	3, p. 91 - 95
(3/17-3/21)	The Fossil Record: Preservation and Bias	4, p. 113 - 120
		p. 134 - 148

SPRING BREAK

Week 9	Organic Evolution: Mechanism and	4, p. 120 - 125
(3/31-4/4)	Historical Development	

Week 10	Origin of the Earth	6, p. 211 - 219
(4/7-4/11)	REVIEW	
	EXAM 2	

Week 11	The Primordial Earth: The Archeon Eon	6, p. 219 - 222
(4/14-4/18)	Archeon Life	6, p. 234 - 242
	The Proterozoic Eon	7, p. 247 - 248
		& p. 261 - 270

Week 12	The PreCambrian/Cambrian Boundary	
(4/21-4/25)	Geology of the Paleozoic Era	8, p. 273 - 274
		9, p. 339 - 341
	Paleozoic Life	10,p.345 - 388

Week 13	Geology of the Mesozoic Era	11,p.391 - 392
(4/28-5/2)	Mesozoic Life	12,p.427 - 467

Week 14	Dinosaurs: Ruling Reptiles	"
(5/5- 5/9)	Cretaceous Mass Extinctions	"
	Geology of the Cenozoic Era	13,p.471 - 473

Week 15	Cenozoic climatic changes	13,p.498 - 508
(5/12-5/16)	Rise of the Mammals	14,p.515 - 546
	The Future: Oasis in Space?	
	REVIEW	
	EXAM 3	