COURSE OUTLINE

OXNARD COLLEGE

I. Course Identification and Justification:

A. Proposed course id: GEOL R101
Banner title: Physical Geology
Full title: Physical Geology

Previous course id: GEOL R101
Banner title: Physical Geology
Full title: Physical Geology

B. Reason(s) course is offered:
This course fulfills the general transfer requirements in physical science for universities, is required for geology majors, and fulfills the physical science requirement for associate degrees.

C. Reason(s) for current outline revision:
5 year review and update

II. Catalog Information:

A. Units:
Current: 3.00
Previous: 3.00

B. Course Hours:

1. In-Class Contact Hours:
Lecture: 52.5 Activity: 0 Lab: 0
2. Total In-Class Contact Hours: 52.5
3. Total Outside-of-Class Hours: 105
4. Total Student Learning Hours: 157.5

C. Prerequisites, Corequisites, Advisories, and Limitations on Enrollment:

1. Prerequisites
Current:
Previous:

2. Corequisites
Current:
Previous:

3. Advisories:
Current:
Previous:

4. Limitations on Enrollment:
Current:
Previous:

D. Catalog Description:
Current:

This course is a survey of the Earth and the processes that shape it. The course offers an overview of earthquakes, volcanism, plate tectonics, mountain building, weathering, erosion, soil, origin of minerals and rocks, and water and energy resources.

Previous, if different:

E. Fees:
Current: $ None
Previous, if different: $ None

F. Field trips:
Current:
Will be required: [ ]
May be required: [X]
Will not be required: [ ]

Previous, if different:
Will be required: [ ]
May be required: [ ]
Will not be required: [ ]

G. Repeatability:
Current:
A - Not designed as repeatable
Previous:
-

H. Credit basis:
Current:
Letter graded only [X]
Pass/no pass [ ]
Student option [ ]

Previous, if different:
Letter graded only [ ]
Pass/no pass [ ]
Student option [X]

I. Credit by exam:
Current:
Petitions may be granted: [ ]
Petitions will not be granted: [X]

Previous, if different:
Petitions may be granted: [ ]
Petitions will not be granted: [ ]

III. Course Objectives:
Upon successful completion of this course, the student should be able to:
A. Demonstrate an understanding of the internal and external processes that shape and form the Earth.

B. Demonstrate an understanding of the rock cycle and identify and describe the basic properties of rocks and minerals.
C. Demonstrate the common methods used by geologists to study the Earth such as seismography, petrography, and radiometric age dating.
D. Explain the scientific method.
E. Demonstrate a conceptual understanding of the fundamental concepts, principles, and interactions of the Earth's systems that are applicable to the Geological Sciences.
F. Demonstrate an understanding of plate tectonics and the Earth's resources.
G. Demonstrate an understanding of how geological environments are formed, changed, and eroded through geological time.

IV. Course Content:

Topics to be covered include, but are not limited to:

A. The Scientific Method
B. History of Geology
C. Geologic Time and Earth History
D. Relative and Absolute Dating
E. Fossils and Fossilization
F. Earth's interior
G. Characteristics and origin of the sea floor
H. Theory of plate tectonics
I. Earthquakes
J. Characteristics and origin of mountain belts
K. Folding, faulting, and the tectonic forces that act on the Earth's crust
L. Causes, locations, and effects of earthquakes
M. Concept of geological age and how it is determined
N. Mineral and rocks
O. Soils
P. Renewable and Non-Renewable Resources
Q. Volcanism, extrusive rocks, and intrusive rocks
R. Weathering and soils
S. Mass wasting
T. Sediments and sedimentary rocks
U. Metamorphism and metamorphic rocks
V. Mountain Building
W. The hydrolic cycle including stream erosion and sediment deposition
X. The source, movement, and pollution of groundwater
Y. Deserts and the action of wind on sediments
Z. Glacial erosion and deposition
AA. Waves, beaches, and coasts
BB. Geological resources

V. Lab Content:

VI. Methods of Instruction:

Methods may include, but are not limited to:

A. Students are introduced to the material through lecture and example. The instructor explains the material to be covered and demonstrates concepts such as plate tectonics, nebula hypothesis, and mountain building.
B. Instructional methods include group activities, visual aids, and question and answer periods. An example is a small group activity forecasting the probable locations and magnitudes of earthquakes.

VII. Methods of Evaluation and Assignments:
A. Methods of evaluation for degree-applicable courses:
Essays [X]
Problem-solving assignments (Examples: Math-like problems, diagnosis & repair) [X]
Physical skills demonstrations (Examples: Performing arts, equipment operation) [ ]

B. Typical graded assignments (methods of evaluation):
1. Students are graded on tests on subjects such as volcanoes, earthquakes, plate tectonics, and beach erosion.
2. Homework assignments are usually assigned from the text and cover course objectives. A typical assignment is to outline the tectonic plates and locate trenches, ridges, and transform faults on a map of the world. Students are expected to complete all homework assignments.
3. Students are graded on the scope, accuracy, and content of written work (written homework assignments, exams, and/or in-class writing assignments).

C. Typical outside of classroom assignments:
1. Reading
a. Each chapter of text studied in class is to be read by students prior to the corresponding lecture. For example, the chapter about earthquakes will be read by students prior to the earthquake lectures.
2. Writing
a. Assigned exercises (e.g., cause of earthquakes, origin of the Cascade Mountain chain) are to be completed by students outside of class and turned in for evaluation and grading.

VIII. Textbooks and Instructional Materials:
A. Textbooks/Resources:
1. Carlson; Plummer; Hammersley (2015). Physical Geology (15th/e). McGraw Hill.
2. O'Neil (2016). Geology Workbook Oxnard College.

B. Other instructional materials:
1. Wall maps
2. Overhead projections
3. PowerPoint presentations
4. Videos
5. Rock and mineral collections
6. Internet sources

IX. Minimum Qualifications and Additional Certifications:
A. Minimum Qualifications:
1. Earth Science (Masters Required)

B. Additional Certifications:
   1. Description of certification requirement:
   2. Name of statute, regulation, or licensing/certification organization requiring this certification:

X. Approval Dates
CC Approval Date: 10/12/2016
Board Approval Date: 10/12/2016
Course ID: 1932