JEFFERSON COLLEGE
COURSE SYLLABUS

PHY105
Physical Geology
4 Credit Hours

Prepared by:
Thomas F. Schuessler
January 2004

Arts and Science Education
Mindy Selsor, Dean
PHY105  Physical Geology

I.  Catalogue Description
Prerequisite: None
4 credit hours

Physical Geology is a General Education course which is designed to acquaint students with the geologic processes that affect the surface and interior of the earth. Three lectures and one two-hour lab per week. Two Saturday six-hour field trips are included as part of the lab. This course fulfills part of the Core science requirement for the Associate of Arts Degree. (F,S)

II.  Course General Objectives:
1. Students shall be able to identify 15 common minerals and 15 common rocks.
2. Students shall be able to develop a reasonable sequence of geological events from a stratigraphic section.
3. Students shall understand the processes which shape the earth's surface.
4. Students shall be able to read and interpret a topographical map.

III.  Course Outline (course content will be drawn from this)
A. Section 1:
   1. Introduction
   2. Minerals
   3. Igneous Rocks and Processes
   4. Volcanism
B. Section 2:
   1. Weathering
   2. Sedimentary Rocks and Processes
   3. Metamorphic Rocks and Processes
   4. Geologic Time
C. Section 3:
   1. Folding & Faulting
   2. Earthquakes
   3. Plate Tectonics
   4. Mass Movement
   5. Rivers & Floods
   6. Karst Landscapes
D. Section 4:
   1. Glaciers; Past & Present
   2. Wind Action
   3. Coastal Processes
   4. Brief Geologic History; Fossils
IV. Unit Objectives:
   A. Section 1
      1. Present a general overview of Planet Earth.
      2. Introduce the basic materials that form the earth.
      3. Present the first major geologic process and its products.
   B. Section 2
      1. Present the second major geologic process and its products.
      2. Show how these two processes can combine to form other products.
      3. Introduce relative and numeric geologic dating.
   C. Section 3
      1. Show how to interpret Stratigraphic Sections
      2. Present the effects of earthquake and ground water on the earth's surface.
   D. Section 4
      1. Complete the presentation of processes which shape the earth's surface.
      2. Present common fossils and how they are used to recreate a history of the earth.

V. Method(s) of Instruction:
   Lecture, Video, Laboratory, Textbook, Discussion

VI. Required Textbook(s) (with publication information):

VII. Required Materials (student): None

VIII. Supplemental References: None

IX. Method of Evaluation (student outcomes assessment)
   Exams...40%, Laboratories...15%, Term Project...15%,
   Pop-quizzes...10%, Final...20%
   Random pop-quizzes will be utilized to determine students' understanding of the current material. The exams and labs will be used evaluate the students' overall understanding of each section. Should there be a problem with comprehension of a given area, review and retesting will be done.