

SOUTHEAST COMMUNITY COLLEGE
DIVISION OF ARTS AND SCIENCES
Sciences
Revision Date: 07-01-24

I. CATALOG DESCRIPTION

Course Number: GEOL1030
Course Title: Historical Geology
Prerequisite(s): GEOL 1010, ENGL 1010 (recommended)
Catalog Description: Historical Geology is the study of the co-evolution life and the Earth through the entirety of Earth's history from its formation to the present. Using principles introduced in Physical Geology, students get a closer look at how the Earth's dynamic surface influenced the evolutionary path of plants and animals identified in the fossil record. They will also survey how biological advancements influenced changes the atmosphere, biosphere and lithosphere.
Credit Hours: 4.0
Class Hours: 45
Lab Hours: 30
Total Contact Hours: 75

II. COURSE OBJECTIVES: *Course will:*

- A. Explain how changes to geography, climate and environments are recorded in the rock record.
- B. Explain how the historic changes to the Earth affected the evolution and distribution of life.
- C. Explain how the historic changes to the Earth may have been affected by biological advancements.
- D. Teach students about the evidence and methods used to interpret Earth's geological and biological history.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

- A. Student Learning Outcomes: *Student will be able to:*
 - 1. Reconstruct ancient environments by using an understanding of sedimentary rocks and fossils.
 - 2. Infer how sea-level changed through time using geological evidence.
 - 3. Summarize the evolution of the oceans and continents
 - 4. Identify fossil specimens
 - 5. Identify geological structures from map data
- B. General Education Learning Outcomes
 - 1. GELO #5 Analytical, Quantitative and Scientific Reasoning
Outcome: Apply Mathematical and Scientific methods to solve problems from an array of contexts and everyday situations.
Outcome: Manipulate formulas, data sets, graphs, tables, etc. in a way to produce a meaningful outcome.

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information*)

- A. Rock and Minerals
- B. Fossilization
- C. Earth History
- D. Evolution of life
- E. Geological Time
- F. Surficial and Internal earth processes.
- G. Depositional environments
- H. Mass extinctions
- I. Stratigraphy

J. Climate

V. INSTRUCTIONAL MATERIALS

A. Required Text(s):

1. Stanley, Steven M. and Luczaj, John A. *Earth System History*, 4th ed., Macmillan Learning, 2015. ISBN: 9781429255264
2. Poort, John M., and Carlson, Roseann J., *Historical Geology: Interpretations and Applications*, 6th ed., 2005. ISBN: 9780131447868

VI. METHODS OF PRESENTATION/INSTRUCTION

A. Methods of presentation typically include a combination of the following:

1. Assignments
2. PowerPoints
3. Demonstrations

VII. METHODS OF EVALUATION

A. Methods of evaluation typically include a combination of the following:

1. Lecture
2. Labs
3. Exams
4. Assignments
5. Discussions

B. SCC GRADING SCALE

A+	95-100	C+	75-79	F	59 or less
A	90-94	C	70-74		
B+	85-89	D+	65-69		
B	80-84	D	60-64		

VIII. SPECIFIC COURSE REQUIREMENTS

A. None.