

GEOL 103 Historical Geology**Credit Hours:** 3**Scheduled hours per week**

Lecture: 3

Lab: 0

Other: N/A

Catalog Course Description: An introduction to the study of the origin of the Earth and its evolutionary development through time are presented. The concepts of geologic time, organic evolution, and plate tectonics are fundamental themes used to unravel Earth history. In this context, present and past interactions of Earth's subsystems (the lithosphere, biosphere, hydrosphere, and atmosphere) are studied.

Pre-requisites: GEOL 101 and 102 or PSCI 112

Co-requisites: GEOL 104 Historical Geology Laboratory

Course Learning Outcomes:

- Objectively analyze, evaluate, and practice scientific methods used to investigate the origin of Earth and its evolution (both physically and biologically) through time.
- Understand past Earth processes and rates of change and how the same processes can be affected by varying rates of change.
- Understand how a knowledge of Earth history can be used to locate Earth resources and gain a better understanding and prepare for geologic hazards and environmental problems.
- To be able to demonstrate critical thinking by analyzing data to infer logical conclusion.
- Evaluate objective questions and solve problems using critical thinking skills stressed in this course
- To demonstrate and practice the scientific method of investigation of a problem or idea.
- To be able to collect accurate scientific data by practicing accurate data collecting techniques.
- To practice experimentation and/or observation of nature in order to evaluate scientific questions or scientific problems.
- To be able to understand demonstrate, and analyze geologic time.
- To be able to understand, demonstrate, and analyze the fundamental principles, laws, and theories of historical geology.
- To demonstrate and understanding of Earth's origin, history, composition, and internal and external process.
- To demonstrate an understanding of the relationship of Earth to the Universe as a whole.

Topics to be studied:

- Origin of Earth and evolutionary development through time
- Physical evolution of the planet and life on earth.
- Chronological order of the Earth's history
- Concepts of time
- Organic evolution
- Plate tectonics
- Reconstruction of Earth's paleo-environments

Relationship of Course to Program or Discipline Learning Outcomes:

Relationship of Course to Science Learning Outcomes:	
Students will learn the process and reasoning behind the Scientific Method and be able to conduct experiments that meet the requirements of the model.	X
Students exhibit the basic safety-related rules and regulations of working in the lab.	X
Students be able to recount the basic safety tenants associated with a specific scientific discipline.	X
Students will become proficient at Science Writing.	X
Students will recognize and identify the applications of their specific discipline in the 'real world.'	X
Students will accurately recount important milestones in the history of scientific inquiry in their discipline.	X
5/3/2016	

Relationship of Course to General Education Learning Outcomes:	
Composition and Rhetoric Students illustrate a fundamental understanding of the best practices of communicating in English and meet the writing standards of their college or program-based communication requirements.	X
Science & Technology Students successfully apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions.	X
Mathematics & Quantitative Skills Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts.	X
Society, Diversity, & Connections Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.	X
Human Inquiry & the Past Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.	X
The Arts & Creativity Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.	X
5/3/2016	

Special requirements of the course:

N/A

Additional information:

N/A

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