GEOL 104 Historical Geology Laboratory

Credit Hours: 1
Scheduled hours per week
  Lecture: 0
  Lab: 2
  Other: N/A

Catalog Course Description: The laboratory study of sedimentary rocks, fossils, correlation or rock units, interpretation of geologic maps, and local geology with field trips.

Pre-requisites: N/A

Co-requisites: GEOL 103 Historical Geology

Course Learning Outcomes:
• Ability to demonstrate critical thinking by analyzing data to infer logical conclusion.
• Demonstrate and practice the scientific method of investigation of a problem or idea.
• Ability to collect accurate scientific data by practicing accurate data collecting techniques.
• Practice experimentation and/or observation of nature in order to evaluate scientific questions or scientific problems.
• Ability to analyze data by using graphing and other techniques to infer general trends in data and make inductive inferences.
• Ability to make hypothetical-deductive predictions relative to scientific concepts and understand how to test those predictions.
• Capability to correctly practice the steps involved in solving problems with the scientific formulas.
• Ability to take measurements and do calculations using the basic metric system of measurement.
• Learn and practice methodical study and work habit.
• Ability to understand demonstrate, and analyze Geologic Time.
• Ability to identify rocks and fossils.
• Demonstrate and understanding of Earth’s origin, history, composition, and internal and external process.
• Demonstrate an understanding of the relationship of Earth to the Universe as a whole.

Topics to be studied:
• Geologic maps
• Correlation of rock units
• Sedimentary environments
• Taxonomy, morphology, and evolution of fossil organism groups
• Paleoecology
• Paleogeography,
• Paleoclimatology

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:**

GEOL 104 Historical Geology Laboratory is a separate grade from GEOL 103.

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