

Master Course Syllabus  
Department of Chemistry and Geosciences

**Physical Geology (GEOL 105-4)**

Catalog Description: **Physical Geology. (3-2)** An introduction to the physical processes that operate in and on the planet earth. Topics of discussion include: the earth's structure, rocks and minerals, volcanoes, earthquakes, groundwater, rivers, glaciers, and deserts. Lab fee \$10.

Prerequisites: None

Expanded Course Description: This is a first course in the geosciences, and is intended for freshman-level students from all disciplines. Students may take this course to fulfill half of the university's "Lab Science" core requirement. The course provides a brief introduction to the earth's structure, and the processes that occur inside the earth, at the earth's surface, and in the oceans. Topics covered in the course include: gross structure of the earth, minerals, formation of rocks, igneous, metamorphic, and sedimentary rocks, volcanoes, weathering and erosion, soil formation, plate tectonics, rock deformation, faults, folds, structures of continents and oceans, mountain-building, earthquakes, groundwater occurrences, rivers and streams, landslides and other forms of mass wasting, glaciers, and deserts.

Intended Knowledge, Skill, and Value Outcomes: Students who successfully complete this course will be able to: identify common rocks and rock-forming minerals, and determine how each major type of rock was created; read topographic maps and recognize landscape characteristics on these maps; read geologic maps and interpret geologic structures on the maps; recognize faults and folds; compute plate velocities from tectonic data; understand the processes that drive earth's global cycles; identify potential for and causes of natural disasters; and understand where and how natural resources are found. At the conclusion of this course, students will appreciate the complexity of the earth's natural systems and human impact on these systems, as well as the importance of geology in our everyday lives.

Course Requirements: The course grade is determined by a combination of the following elements, subject to the instructor's discretion: 3-4 non-comprehensive lecture exams, a comprehensive final exam, quizzes, field trips, and the laboratory grade (consisting, subject to the instructor's discretion, of weekly laboratory exercises and/or quizzes, and laboratory exams).

Department Head Signature/Date:

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Signature

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Date