

GEOL 120 Exploring Earth: Introduction to Physical Geology

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Course Description:

- Geology, as a scientific field, seeks to understand how the Earth System operates. This includes a broad range of topics including: Why does the Earth's surface look the way it does? What is the structure of the Earth under our feet? Why and where are natural hazards such as earthquakes and volcanic eruptions are likely to occur? How has Earth's climate changed in the past and how is it changing today? What does the rock record tell us about the Earth's history? These questions are motivated by our curiosity as humans to understand the world around us, but they also serve immense practical purposes. An alternative title to this course could be "How to live on Earth," as Geology affects our lives everyday. Geology informs us about where to find natural resources, where our water comes from, where to build our homes to avoid natural hazards, and how our actions affect the natural world. Geology is also as much a process of thinking as a body of knowledge. Geologists look at the Earth in a systematic way: making observations, forming hypotheses to explain their observations, testing their hypotheses through the collection of data, and communicating their findings to other scientists and the general public. Through this course you will begin to look at the Earth around you in new ways and begin to think like a geologist.

Learning Outcome:

- Make scientific observations about the Earth around you.
- Develop hypotheses to explain your observations and discuss ways that you could test your hypotheses.
- Read, understand, and assess geology-related information in the news.
- Understand and explain where certain natural hazards, such as earthquakes, volcanic eruptions, landslides and flooding are likely to occur.
- Understand and explain how plate tectonics shapes the Earth around you.
- Identify common rocks and minerals.
- Describe how and where different rock types form.
- Describe how and where natural resources, such as oil and natural gas, are formed.
- Understand and explain where Fort Collin's water comes from.
- Explain some of the processes that shape the landscape around you.
- Describe the primary factors that control Earth's climate and how climate changes.
- Interpret the rocks present in the Colorado Front Range to explain the geologic history of the area.