

### **Course Description**

#### **GLY1100 | Historical Geology | 3.00 credits**

This is a historically based course in geology. The student will learn about the history of the earth, the evolution of life, radiometric dating, and the history of modern geologic ideas on earth development.

#### **Course competencies:**

**Competency 1:** The student will demonstrate an understanding of the history of the earth by:

1. Describing the major geological events that shaped the earth's surface
2. Analyzing the impact of tectonic plate movements on the formation of continents and mountain ranges
3. Interpreting geological evidence to construct a timeline of earth's history

**Competency 2:** The student will showcase knowledge of the evolution of life by:

1. Identifying key milestones in the development of life on earth
2. Explaining the mechanisms of natural selection and adaptation
3. Evaluating fossil records to infer the evolutionary relationships between different species

**Competency 3:** The student will exhibit proficiency in radiometric dating by:

1. Applying the principles of radioactive decay to determine the age of rocks and fossils
2. Differentiating between different radiometric dating methods and their respective limitations
3. Interpreting radiometric dating results to draw conclusions about the chronology of geological events

**Competency 4:** The student will acquire an understanding of the history of modern geologic ideas on earth development by:

1. Exploring the contributions of influential geologists throughout history
2. Evaluating the impact of key scientific discoveries and theories on our understanding of earth's development
3. Critically analyzing and synthesizing different geologic models to develop a comprehensive understanding of earth's history

#### **General Education Learning Outcomes:**

- Use quantitative analytical skills to evaluate and process numerical data
- Solve problems using critical and creative thinking and scientific reasoning
- Formulate strategies to locate, evaluate, and apply information