

ENV 104 - LIFE OF THE PAST

Course Description

This course introduces students to the record of life on Earth. The roles of global change, origins, evolution, and extinction in life history are examined. Great Lakes and North American fossil records with Precambrian microorganisms and Paleozoic invertebrates and vertebrates are highlighted. Appearance, evolution, and disappearance of dinosaurs during the Mesozoic Era, human evolution, and the recent demise of the giant Ice Age mammals are analyzed in depth. Laboratory and class activities are included. Group 1 lab course.

Credit Hours

4

Contact Hours

5

Lecture Hours

3

Required Prerequisites

MTH 100 or equivalent

Corequisites

ENV 104L

Recommended Prerequisites or Skills Competencies

ENG 111

General Education Outcomes supported by this course

Quantitative Reasoning

Course Learning Outcomes

Knowledge:

- Use the geologic time scale and a stratigraphic column to discuss the history of life on Earth.
- Identify common fossils.
- Explain the theory of evolution.
- Explain how plate tectonics creates major land features.
- Explain how plate tectonics influences the evolution and distribution of life on Earth.
- Describe major events in the evolution of life from its origins on Earth to the occurrence of humans.

Application:

- Apply relative dating methods to determine a sequence of geologic events.
- Calculate numerical ages using radiometric dating methods.
- Associate common sedimentary rocks and structures with corresponding sedimentary environments.
- Be able to identify and classify common fossils.
- Explain how fossilization processes create specific fossils.

Integration:

- Relate past geologic events and patterns in evolution to explain the current distribution of plants and animals on Earth.
- Connect changes in environmental conditions with observed trends in evolution.

Human Dimension:

- Recognize how the scientific method is used in their daily lives.

Caring - Civic Learning:

- Express an appreciation for how past events and evolutionary milestones have shaped our world and modern ecosystems.

Learning How to Learn:

- Explore research topics related to paleontology.
- Utilize scientific literacy skills to research beyond this course.