

Introduction to Earth and Environmental Sciences

Course # EAES 1001

Credits 6

Prerequisites and/or Corequisites: None

Course Description

Introduction to Earth and Environmental Sciences is the initial foundation course of the EES programme. Earth is a dynamic planet, and the processes that have shaped it over geological time and continue to shape it before our very eyes are the focus of this course. Students examine the evidence for our current understanding of the formation of our planet and the fundamental processes of plate tectonics, geomagnetism, and magmatism. Secondary geological processes are explored including earthquakes, volcanism, orogenesis, and surface processes that shape our planet. These are all components of the complex, interconnected Earth System that is examined in the context of the Earth's climate system and the evolution of life. Students develop an understanding of how scientific research is carried out within the context of the Earth sciences.

Course Learning Outcomes

As a citizen of Planet Earth, you make environmental, political, and socio-economic decisions about your life for which knowledge of our planet is relevant. By the end of this course, you will be able to:

- Apply an evidence-based, logical, scientific approach to ask and address questions about our planet and solar system.
- Interpret everyday observations of the natural world and evaluate Earth Science-related topics covered in the media in terms of the Earth System and planetary processes including tectonics, magmatism, surface processes, and climate.
- Recognize the complex links among geologic, oceanic, glacial, atmospheric, and biologic processes.
- Identify and use appropriate time scales to describe and link different planetary processes.
- Articulate the relevance of Earth Science to individuals and to mountain societies.

Course Assessments and Grading

| Item | Weight |
|---|--------|
| Active class participation and contribution | 10% |

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|-------------------|-----|
| Group assignments | 14% |
| Field work report | 10% |
| Laboratory report | 10% |
| Two quizzes | 20% |
| Mid-term exam | 10% |
| Final Exam | 26% |