Sedimentary Geology and Stratigraphy

Course # EAES 4045

Credits 6

Prerequisites and/or corequisites: Introduction to Earth and Environmental Sciences

Course Description

Welcome to Sedimentary Geology and Stratigraphy. This course covers one of the most widespread type of rocks on the Earth's surface – sedimentary rocks. It includes classification of different types of sedimentary rocks, their composition, their structures and textures, sediment production, transport and deposition processes, sedimentary environments and systems, and stratigraphic patterns. The goal of this course is to provide students with theoretical and practical knowledge to distinguish sedimentary rocks in the field, to observe and document the lithological composition of sedimentary rocks, their macroscopic and microscopic textures and structures, and to interpret the origin of sedimentary rocks based on facial analysis of sedimentary deposits.

Course Learning Outcomes

Upon completion of this course, the student will be able to:

- **Document** sedimentary rocks, their structure, texture and composition in field.
- **Acquire** and interpret data from sedimentary deposits to recreate the mechanisms responsible for their formation and evolution.
- **Collect** or use existing data at many scales (outcrop to grain) to construct and evaluate a hypothesis about the type and spatial distribution of sedimentary environments or facies.
- **Interpret** changes in a depositional environment across time (stratigraphic change) at many geographical and temporal scales, using data from sedimentary rocks and successions.
- **Correlate** between different sequences of sedimentary rocks across space and reconstruct sedimentary basins of the geological past and their environments

Course Assignments and Grading

Item	**Weight**
Attendance	10%
Lab assignments	35%

Quizzes	10%
Mid-term Exam (quiz)	15%
Final Exam (quiz)	30%