



Earth and Environmental Sciences Institute
Applied Geology and Environmental Sciences Department
Course Syllabus

Course Title: General Geology (2)	Instructor: Dr. Islam Aldabsheh
Course Number: 801108	Prerequisite: 0801106
Term: Second Semester 2019/2020	Credit hours: 3 h (2 lectures)
Class Meeting Days: Mo & Wed	Class Meeting Hours: 12:30-2:00/ 5 ج.ع
Office Hours: 9:30-11:00, 1:00-3:00 Su & Tu/ 2:00-3:00 Mo & Wed	Email: i_aldabsheh@aabu.edu.jo

Course Aims and Objectives:

This course aims to provide students with the basic scientific knowledge that enables them to understand the external processes acting on the Earth's surface including: weathering and soil formation, downslope movement of earth materials under the influence of gravity, groundwater and running water as geological factors. Also this course includes familiarizing students with the effect of wind, glacial ice, shorelines, seas, lakes and oceans as external geological factors.

Course Outlines:

- **Weathering, Erosion and Soil:** Mechanical weathering, chemical weathering, rates of weathering, controls of soil formation, the soil profile, soil types, soil erosion
- **Groundwater:** Distribution of underground water, the water table, porosity and permeability, movement of ground water, springs, wells, artesian wells, problems associated with ground water withdrawal, ground water contamination, hot springs and geysers, the geologic work of ground water
- **Running Water:** The hydrologic cycle, running water, stream, erosion, transport of sediments by streams, stream valleys, drainage networks, stages of valley development, cycle of landscape evolution
- **Mass Wasting:** Controls of mass wasting, classification of mass wasting, slump, rockslide, mudflow, earth flow, creep
- **Shorelines:** The shoreline: a dynamic interface, the coastal zone, waves, wave erosion, sand movement on the beach, shoreline features, stabilizing the shore, hurricanes: the ultimate coastal hazard, coastal classification, tides
- **Deserts and Wind:** Distribution and Causes of Dry Lands, Geologic Processes in Arid Climates, Transportation of sediment by wind, wind erosion, wind deposits, the evolution of a desert landscape
- **Glacier and Glaciation:** Types of glaciers, formation of glacial ice, movement of glacier, glacial erosion, landforms created by glacial erosion, glacial deposits

Text Books:

- Essentials of Geology (11th) Edition, by Tarbuck, E and Lutgens, F
- The Earth: An Introduction to Physical Geology (4th Edition), by Tarbuck, E. and Lutgens, F.

Grading Policy:

Determination of the final grade for this course will be based upon the following:

First exam 20%

Second exam 20%

Final 50%

Quizzes, Activities and Attendance 10%

Exams and Due Dates:

First Exam: Monday on 02/03/2020, Time: 1:00-2:00

Second Exam: Monday on 13/04/2020, Time: 1:00-2:00