

**Faculty of Engineering & Technology**

**General Geology**

**Information :**

**Course Code :** GEO 201

**Level :** Undergraduate

**Course Hours :** 2.00- Hours

**Department :** Department of Petroleum Engineering

**Instructor Information :**

Title	Name	Office hours
Associate Professor	Ashraf Fahmy Mohamed Ismael	1
Assistant Lecturer	Mohamed Ibrahim Mohamed Hussein	
Teaching Assistant	Haitham Sagheer Ahmed Nasr	

**Area Of Study :**

Expand the scope of knowledge of the petroleum engineer to include the Earth's internal structure and its internal and external processes, Identify the different rock-forming minerals, their origin, and the different type of rocks and Understand the topographic and geologic maps and their implications.

**Description :**

The course covers cosmology and Earth formation, mineralogy, different rock types, sedimentary processes, volcanoes, geologic time, plate tectonics and crustal deformation, earthquakes, surface processes of erosion, weathering in different geologic environments.

**Course outcomes :**

**a.Knowledge and Understanding: :**

1 -	Identify different types of minerals and rocks
2 -	Recognize different Earth's internal and external processes.
3 -	Draw and interpret topographic and geologic maps.

**b.Intellectual Skills: :**

1 -	Solve geologic mapping problems.
2 -	Construct cross sections and contour mapping of surface and subsurface geological formations.
3 -	Differentiate between reservoirs and non-reservoir rocks.

**c.Professional and Practical Skills: :**

1 -	Students have broad understanding of geological knowledge and supporting field, laboratory, and computer skills.
2 -	Analyse available data and material for subsurface geological evaluation.

**d.General and Transferable Skills: :**

1 -	Capable to work in team.
2 -	Write a report and presentation one.

**Course Topic And Contents :**

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction	2	2	--
Plate Tectonics	4	4	--
Minerals and Rocks	14	8	6
Topographic and Geologic Maps	14	6	8
Geologic Time	2	2	--
Weathering	2	2	--
Structural Geology and earthquakes	4	4	--
Water and Surface Processes	2	2	--

**Teaching And Learning Methodologies :**

Interactive lectures and discussion
Problem-solving
Cooperative research
Field trip

**Course Assessment :**

Methods of assessment	Relative weight %	Week No	Assess What
Final exam	40.00		
In Class Quizzes	10.00		
Mid-Term exams	30.00		
Participations	10.00		
Research/ Field trip/Assignments	10.00		

**Books :**

Book	Author	Publisher
Physical Geology	Plummer / Carlson / Hammersley	McGraw Hill

**Course Notes :**

PDF files available direct after lectures

**Recommended books :**

Lecture – Exploring Geology (2nd edition) by Reynolds et al.  
Lab – Laboratory Manual for Physical Geology (14th edition) by Zumberge et al.

**Periodicals :**

Teaching this course needs: Crystal models, Mineral samples, and Rock samples.

