HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	Al Ayen University/ College of Petroleum Engineering
2. University Department/Centre	Petroleum Engineering
3. Course title/code	PE 100
4. Programme(s) to which it contributes	B.Sc.
5. Modes of Attendance offered	class
6. Semester/Year	2022-2023
7. Number of hours tuition (total)	
8. Date of production/revision of this specification	22/10/2022

9. Aims of the Course

The general geology course aims to provide first-stage students with information about the branches of geology related to petroleum engineering, such as crystallography, minerals, petrology, and structural geology, and how to use them in the investigation, exploration and drilling of oil wells.

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and Understanding

A1- Know the types of rocks

A 2- Study of folds and faults

A3- Identify the types of crystals and crystal systems

A4- Studying the types of minerals, their properties and composition

A5.

A6 .

B. Subject-specific skills

B1. Ease of introducing the student to the types of rocks and their characteristics

B2 - Measuring the hardness of different types of minerals

B3 - Contour Mapping and Geological Sections

Teaching and Learning Methods

give lectures

Explainer videos

Scientific discussions and debates

ask questions

Assessment methods

daily exams

monthly exams

Scientific Reports

C. Thinking Skills

C1.

C2.

C3.

C4.

Teaching and Learning Methods

Assessment methods
daily exams monthly exams Scientific Reports

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1.
D2.
D3.
D4.

11. Course Structure

Week	Hours	ILOs	Unit/Module orTopic Title	Teaching Method	Assessmen tMethod
1.	3	A general definition of geology and its branches and its connection to petroleum engineering	the introduction	Meet & talk and discuss	home questions
2.	3	Definition of crystallography, its types and structures	crystallography	Meet & talk and discuss	home questions
3.	3	Define crystal systems and their types	crystallography	Meet & talk and discuss	home questions
4.	3	Definition of mineralogy and crystal	Metallurgy	Meet & talk and discuss	home questions

		formations of minerals			
5.	3	Types of metals and their properties	Metallurgy	Meet & talk and discuss	home questions
6.	3	The hardness of minerals and how to distinguish between them	Metallurgy	Meet & talk and discuss	home questions
7.	3	Learn about the transformation of rocks from one type to another	rock cycle	Meet & talk and discuss	home questions
8.	3	Characteristics and types of igneous rocks	igneous rocks	Meet & talk and discuss	home questions
9.	3	Characteristics and types of sedimentary rocks	Sedimentary rocks	Meet & talk and discuss	home questions
10.	3	Characteristics and types of	metamorphic rocks	Meet & talk and discuss	home questions

		metamorphic rocks			
11.	3	Effect of weathering and erosion on rock types	erosion and weathering	Meet & talk and discuss	home questions
12.	3	Chemical and mechanical weathering methods	Types of weathering (chemical and mechanical)	Meet & talk and discuss	home questions
13.	3	Learn about the theory of plate tectonics and how the Earth's crust moves	plate tectonics theory	Meet & talk and discuss	home questions
14.	3	Explain the boundaries between tectonic plates and the types of pressures that cause them	types of borders	Meet & talk and discuss	home questions
15.	3	Explain how mountains are formed and its	building mountains	Meet & talk and discuss	home questions

		effect on the formation of traps			
16.	3	Explain the types of folds	folds	Meet & talk and discuss	home questions
17.	3	Explanation of the types of faults	faults	Meet & talk and discuss	home questions
18.	3	The difference between faults and separators	Cracks and breaks	Meet & talk and discuss	home questions
19.	3	What are contour maps?	contour maps	Meet & talk and discuss	home questions
20.	3	How to draw and interpret geological sections	geological sections	Meet & talk and discuss	home questions

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	1. Essential of Geology 2.Principles of Earth Science
Special requirements (include for example workshops, periodicals, IT software, websites)	1. Journals of Sciences 2. Iraqi journal for geological science

Community-based facilities (include for example, guest Lectures , internship , field studies)	Wikipedia Google chrome researcher gate

13. Admissions	
Pre-requisites	
Minimum number of students	
Maximum number of students	