



Al-Ayen University / College of Petroleum Engineering

Template of Course Specification

Name and Scientific title of the subject instructor: Dr. Abdulhussien Neamah Shnawa AL-attabi

Name of Course: Structural and petroleum Geology-2nd stage

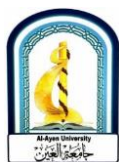
Course Specification

1.	Teaching Institution	Al-Ayen University / College of Petroleum Engineering
2.	University Department / Center	Petroleum Engineering
3.	Course Title / Code	Structural and Petroleum Geology/PE200
4.	Program(s) to which it contributes	B.Sc. in petroleum Engineering
5.	Modes of Attendance offered	Class attendance
6.	Semester/Year	1st and 2nd, 2023
7.	Number of hours tuition (total)	120
8.	Date of production/revision of this Specification	Jan. 2023
9.	Aims of the Course: The student will know the following:	
	1	The Mechanics of structural deformation.
	2	Folds,Faults and Joints.Unconformities and sedimentary environments.
	3	Origin of oil, Source Rock,generation ,migration and accumulation of petroleum..
	4	Reservoir Rocks,Cap Rocks,Traps and reservoir mechanics Such as pressure, Temperature),Subsufac Mapping.
	5	Iraqi and middle East oi
10.	Learning Outcomes, Teaching, Learning and Assessment Methods	
	A	Knowledge and understanding: the types of traps , source rocks migration and accumulation of oil in reservoirs within traps.
	B	Subject-specific skills: To get skill on types of reservoirs and types of traps and how to draw countour maps of beds and reservoirs.
	C	Assessment methods: The assessment method are divided into three parts; quizzes, monthly exams, and final exams.
	D	Thinking Skills: . From structural and petroleum geology we will study the oil in reservoirs within traps.
	E	Teaching and learning methods: The teaching is performed theoretically and practically the types of reservoirs and traps.

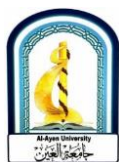


F	General and Transferable Skills (other skills relevant to employability and personal development): The most important thing that a student learns when working in his field of specialization is how to describe the lithology and structure of oil traps.
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11. Course Structure					
Week	Hours	Required Teaching Outputs	Unit/Module or Topic Title	Teaching Methods	Assessment Methods
1.	4	Student will understand	Introduction (Review of Fundamental Concepts of Structural geology.	Theoretical & practical in Lab.	Quizzes, monthly exams, and final exams
2.	4	Student will understand	Stress types.	Theoretical & practical in Lab.	Quizzes, monthly exams, and final exams
3.	4	Student will understand	Primary and secondary structures	Theoretical & practical in Lab.	Quizzes, monthly exams, and final exams
4.	4	Student will understand	. Types of folds.	Theoretical & practical in Lab.	Quizzes, monthly exams, and final exams
5.	4	Student will understand	Unconformities and their types	Theoretical & practical in Lab.	Quizzes, monthly exams, and final exams
6.	4	Student will understand	.Parts of Folds	Theoretical & practical in Lab.	Quizzes, monthly exams, and final exams
7.	4	Student will understand	Symmetry of folds	Theoretical & practical in Lab.	Quizzes, monthly exams, and final exams
8.	4	Student will understand	Plunging folds	Theoretical & practical in Lab.	Quizzes, monthly exams, and final exams

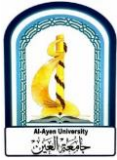


9.	4	Student will understand	Faults and types of Faults	Theoretical & Practical in Lab.	Quizzes, monthly exams, and final exams
10.	4	Student will understand	Principle of cross cutting relationship	Theoretical & Practical in Lab.	Quizzes, monthly exams, and final exams
11.	4	Student will understand	Types of Rocks	Theoretical & Practical in Lab	Quizzes, monthly exams, and final exams
12.	4	Student will understand	Behavior of material under stress	Theoretical & Practical in lab	Quizzes, monthly exams, and final exams
13.	4	Student will understand	Primary sedimentary structure	Theoretical	Quizzes, monthly exams, and final exams
14.	4	Student will understand	Secondary sedimentary structure	Theoretical	Quizzes, monthly exams, and final exams
15.	4	Student will understand	Rock deformation and sedimentary structures	Theoretical	Quizzes, monthly exams, and final exams
16.	4	Student will understand	Stratigraphic contacts and unconformities	Theoretical	Quizzes, monthly exams, and final exams
17.	4	Student will understand	Geological time scale and stratigraphic column of Iraqi oil fields	Theoretical	Quizzes, monthly exams, and final exams
18.	4	Student will understand	Origin of oil	Theoretical	Quizzes, monthly exams, and final exams
19.	4	Student will understand	Source Rocks	Theoretical	Quizzes, monthly exams, and final exams
20.	4	Student will	Types of Kerogen	Theoretical	Quizzes, monthly exams,



		understand			and final exams
21.	4	Student will understand	Van grivlen diagram	Theoretical	Quizzes, monthly exams, and final exams
22.	4	Student will understand	Generation , migration and accumulation of petroleum	Theoretical	Quizzes, monthly exams, and final exams
23.	4	Student will understand	Types of Traps and discovery techniques	Theoretical	Quizzes, monthly exams, and final exams
24.	4	Student will understand	Reservoir Rocks	Theoretical	Quizzes, monthly exams, and final exams
25.	4	Student will understand	Reservoir Mechanics	Theoretical	Quizzes, monthly exams, and final exams
26.	4	Student will understand	Reservoirs in Iraqi oil Fields	Theoretical	Quizzes, monthly exams, and final exams
27.	4	Student will understand	Petroleum System	Theoretical	Quizzes, monthly exams, and final exams
28.	4	Student will understand	Subsurface mapping	Theoretical	Quizzes, monthly exams, and final exams
29.	4	Student will understand	Oil Fields water	Theoretical	Quizzes, monthly exams, and final exams
30.	4	Student will understand	Iraq and middle east oil Fields	Theoretical	Quizzes, monthly exams, and final exams

12.	Infrastructure
Required reading:	Structural Geology of Rocks and Regions



<ul style="list-style-type: none"> •CORE TEXTS •COURSE MATERIALS • OTHER 	3rd Edition George H. Davis (Author), Stephen J. Reynolds (Author), Charles F. Kluth (Author) 4.5 out of 5 stars 63 ratings
Structural Analysis and Synthesis: A Laboratory Course in Structural Geology 4th Edition	Stephen M. Rowland, Ernest M. Duebendorfer, et al. May 17, 2021
Structural geology and deformation)	Authors: Bruce Hobbs, Alison Ord eBook ISBN: 9780124079335 Hardcover ISBN: 9780124078208 https://www.elsevier.com/books/structural-geology/hobbs/978-0-12-407820-8

13	The development of the curriculum plan
Adding more technical skills by adding petroleum sysetem	

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