



Bachelor Program in Geophysics

Faculty of Mathematics and Natural Sciences
HASANUDDIN UNIVERSITY

22. Petroleum Geology

Module Name	:	Petroleum Geology
Module Level	:	Bachelor
Code, if applicable	:	23H06131303
Subtitle, if applicable	:	-
Courses, if applicable	:	Petroleum Geology
Semester(s) in which the module is taught	:	V (Fifth Semester)
Module coordinator(s)	:	Sabrianto Aswad, S.Si., MT
Lecturer(s)	:	Makhrani, S.Si. M.Si, Sabrianto Aswad, S.Si., MT
Language	:	Bahasa (Indonesian language)
Relation to curriculum	:	Elective course in the third year for Bachelor Degree in Geophysics
Type of teaching, contact hours	:	This course is delivered through Lectures (i.e., Project/Case-based learning), complemented by structured assignments (paper review, project/case evaluation) and independent study. Contact hours consist of 150 minutes lectures per week, plus 180 minutes per week for each of the following: structured assignments and independent study
Workload	:	Total workload is 135 hours per semester, consisting of 38 hours for lectures, and 48.5 hours each for structured assignments and independent study
Credit points	:	3 SKS (4.8 ECTS)
Requirements according to the examination regulations	:	Students are eligible to attend the final exam if their absences are less than 20% of the lectures
Recommended prerequisites	:	-
Module objectives/intended learning outcomes	:	After completion of this module, students will be able to: CLO 1. Students are able to apply and apply geophysics as well as the basic principles of geophysical and BMI-based methods; CLO 2. Able to apply the basic principles of various natural disaster exploration and mitigation methods The following is the mapping of the ILO and the CLO of this course:



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				ILO 4	ILO 6	ILO 11	ILO 12	ILO 14																														
		CLO 1	✓	✓																																		
		CLO 2				✓	✓	✓																														
Content	:	1. Lecture Contracts 2. Introduction 3. The nature of oil and gas in the form of solid hydrocarbon, liquid and gas 4. How oil and gas are produced 5. Rock Reservoir 6. Trap Reservoir 7. Origin of oil and gas 8. Master rocks, maturation, migration, and oil and gas accumulation 9. Oil and gas exploration 10. Oil and gas in Indonesia																																				
Study and examination requirements		Participants are marked based on their performance in theory: Case Study (70%), Written Examination (30%) Students are marked based on their percentage of points obtained and based on the following grade scale: <table><tr><th>Percentage of Achievement</th><th>Grade</th><th>Conversion Value</th></tr><tr><td>85 – 100</td><td>A</td><td>4.00</td></tr><tr><td>80 - <85</td><td>A-</td><td>3.75</td></tr><tr><td>75 - < 80</td><td>B+</td><td>3.5</td></tr><tr><td>70 - < 75</td><td>B</td><td>3.0</td></tr><tr><td>65 - < 70</td><td>B-</td><td>2.75</td></tr><tr><td>60 - < 65</td><td>C+</td><td>2.5</td></tr><tr><td>50 - < 60</td><td>C</td><td>2.00</td></tr><tr><td>40 - < 50</td><td>D</td><td>1.00</td></tr><tr><td>< 40</td><td>E</td><td>0.00</td></tr></table>							Percentage of Achievement	Grade	Conversion Value	85 – 100	A	4.00	80 - <85	A-	3.75	75 - < 80	B+	3.5	70 - < 75	B	3.0	65 - < 70	B-	2.75	60 - < 65	C+	2.5	50 - < 60	C	2.00	40 - < 50	D	1.00	< 40	E	0.00
Percentage of Achievement	Grade	Conversion Value																																				
85 – 100	A	4.00																																				
80 - <85	A-	3.75																																				
75 - < 80	B+	3.5																																				
70 - < 75	B	3.0																																				
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Exams and assessment formats	Assessment in this course consists of a project or case study and written examination. The project or case study is conducted in a group or individually and requires students to apply theoretical concepts to analyze and solve a problem, presented in the form of a written report. The written examination (<i>closed-book</i> , written) evaluates students' understanding of fundamental concepts covered by CLO 1 and CLO 2.
Reading list	1. Selley, R.C., 1998, Elements of Petroleum Geology (2nd edition): Academic Press, Toronto. 2. Knut Bjorlykke. Petroleum Geoscience, (Springer, 1st edition, 2010; 2nd edition 2015) 3. Koesoemadinata.R.P.1980. <i>Geologi Minyak dan Gas Bumi</i> ; Jilid 1, Penerbit ITB Bandung. 4. Koesoemadinata.R.P.1980. <i>Geologi Minyak dan Gas Bumi</i> ; Jilid 2, Penerbit ITB Bandung. 5. Ginanjar. 1984. <i>Geologi Minyak dan Gas Bumi</i>. Diktat. Workshop Geofisika. Unpad. Bandung. 6. Skinner.b.j.1980. <i>Earth's Energy and Mineral Resources</i>. William Kaufmann inc Los Altos.
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