



Bachelor Program in Geophysics

Faculty of Mathematics and Natural Sciences

HASANUDDIN UNIVERSITY

19. Tectonics of Indonesia

Module Name	:	Tectonics of Indonesia
Module Level	:	Bachelor
Code, if applicable	:	23H06131002
Subtitle, if applicable	:	-
Courses, if applicable	:	Geophysics
Semester(s) in which the module is taught	:	V (Fifth Semester)
Module coordinator(s)	:	Prof. Dr. Ir. Muh. Altin Massinai, MT., Surv.
Lecturer(s)	:	- Prof. Dr. Ir. Muh. Altin Massinai, MT., Surv. - Makhrani, S.Si. M.Si
Language	:	Bahasa (Indonesian language)
Relation to curriculum	:	Elective courses 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 100 minutes lectures per week, plus 120 minutes per week for each of the following: structured assignments and independent study
Workload	:	Total workload is 90 hours per semester, consisting of 28 hours for lectures, and 31 hours each for structured assignments and independent study
Credit points	:	2 SKS (3.2 ECTS)
Requirements according to the examination regulations	:	Students are eligible to attend the examination 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 analyze tectonic phenomena by interpreting surface deformation; CLO 2. Students are able to analyze tectonic processes in Indonesia using geophysical modeling; The following is the mapping of the ILO and the CLO of this course:



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		<table><tr><td></td><td>ILO 4</td><td>ILO 7</td><td>ILO 12</td><td>ILO 13</td></tr><tr><td>CLO 1</td><td>✓</td><td>✓</td><td></td><td></td></tr><tr><td>CLO 2</td><td></td><td></td><td>✓</td><td>✓</td></tr></table>		ILO 4	ILO 7	ILO 12	ILO 13	CLO 1	✓	✓			CLO 2			✓	✓															
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CLO 1	✓	✓																														
CLO 2			✓	✓																												
Content	:	1. Plate Tectonics 2. Tectonostratigraphy 3. Neogene Orogeny in Indonesia 4. Microcontinents in Indonesia 5. Economic Aspects of Microcontinents																														
Study and examination requirements		Participants are marked based on their performance in theory: Project / Case Study (60%), Assignments (30%), Written Examination (10%). 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
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50 - < 60	C	2.00																														
40 - < 50	D	1.00																														
< 40	E	0.00																														
Exams and assessment formats		Assessment in this course consists of a project or case study, assignments, 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. Assignments are completed individually and may include problem-solving tasks,																														



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	data processing, or short essays; these are submitted in written form and may involve graphical or computational outputs. The written examination (<i>closed-book</i> , written) evaluates students' understanding of fundamental concepts covered by CLO 1 and CLO 2.
Reading list	1. Main References: 1. Hamilton, Warren. 1979. Tectonics of the Indonesian Region. Washington: Geological Survey Profesional Paper 1078. 345 p. 2. Hall, Robert (2003) Cenozoic Tectonics of Indonesia, Short Course of Indon. Petrol. Assoc. Annual Meeting, Jakarta, 183p. 3. Simandjuntak, TO (2004) Tektonika, Pusat Penelitian dan Pengembangan Geologi, Bandung, 216 p.
Last revision date	July 1 st , 2025