



Bachelor Program in Geophysics

Faculty of Mathematics and Natural Sciences
HASANUDDIN UNIVERSITY

18. Selected Topics in Geophysics

Module Name	:	Selected Topics in Geophysics
Module Level	:	Bachelor
Code, if applicable	:	23H06130902
Subtitle, if applicable	:	-
Courses, if applicable	:	Geophysics Study Program
Semester(s) in which the module is taught	:	V (Fifth Semester)
Module coordinator(s)	:	Saaduddin. S.Pd., M.Sc
Lecturer(s)	:	Saaduddin. S.Pd., M.Sc Andi Muhammad Pramatie, S.T., M.Eng., Ph.D
Language	:	Bahasa (Indonesian language)
Relation to curriculum	:	Elective courses in the third year of the Bachelor of Geophysics program
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 implement spatial analysis using GIS tools into the design of spatial problem-solving and as support in decision-making. CLO 2. Students are able to apply appropriate geophysical methods for a case related to sustainable development goals.



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	contexts both orally and in writing with group. The following is the mapping of the ILO and the CLO of this course: <table><tr><td></td><td>ILO 4</td><td>ILO 8</td><td>ILO 14</td></tr><tr><td>CLO 1</td><td>✓</td><td></td><td></td></tr><tr><td>CLO 2</td><td></td><td>✓</td><td>✓</td></tr></table>		ILO 4	ILO 8	ILO 14	CLO 1	✓			CLO 2		✓	✓																		
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CLO 2		✓	✓																												
Content	: - SDGs and their 17 components; Geophysical survey methods - Remote sensing applications and geographic information systems - Study of ocean and coastal dynamics - Hydrometeorology scope																														
Study and examination requirements	Participants are marked based on their performance in: Case Study (100%) 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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Exams and assessment formats	Student performance in this course is fully evaluated through a comprehensive case study (100%). This assessment requires students to analyze the role of solid earth geophysics, hydrometeorology, geoinformatics, and ocean–coastal dynamics in addressing challenges related to the Sustainable Development Goals (SDGs). Students must also be able to select and apply appropriate geophysical methods to solve a specific case connected to SDG-related issues. The case study emphasizes integrative analysis, problem-solving, and the practical application of multidisciplinary geoscience knowledge in real-world contexts.
Reading list	1. Main References: 1. Kementerian Perencanaan Pembangunan Nasional. (2020). Pedoman Teknis Penyusunan Rencana Aksi Tujuan Pembangunan Berkelanjutan. Badan Perencanaan Pembangunan Nasional. 2. Capello, M.A., Shaughnessy, A., Caslim, E. (2021). The Geophysical Sustainability Atlas: Mapping Geophysics to the UN Sustainable Development Goals. The Leading Edge
Last revision date	July 1 st , 2025