



Bachelor Program in Geophysics

Faculty of Mathematics and Natural Sciences
HASANUDDIN UNIVERSITY

3. Natural Disaster Mitigation

Module Name	:	Natural Disaster Mitigation
Module Level	:	Bachelor
Code, if applicable	:	23H06121602
Subtitle, if applicable	:	-
Courses, if applicable	:	Geophysics
Semester(s) in which the module is taught	:	4 (Fourth Semester)
Module coordinator(s)	:	Ir. Bambang Hari Mei Soeprapto, M.Si.
Lecturer(s)	:	Ir. Bambang Hari Mei Soeprapto, M.Si. Dr. Eng. Amiruddin, S.Si., M.Si.
Language	:	Bahasa (Indonesian language)
Relation to curriculum	:	Elective course in the second 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. Able to collect, process disaster data and interpret the results logically and systematically; CLO 2. Able to analyze in making appropriate disaster management decisions in various types of organizations; The following is the mapping of the ILO and the CLO of this course:



Bachelor Program in Geophysics

Faculty of Mathematics and Natural Sciences

HASANUDDIN UNIVERSITY

				ILO 7	ILO 10	ILO 13	ILO 14																														
		CLO 1	✓																																		
		CLO 2			✓	✓	✓																														
Content	:	1. Earthquake Disaster 2. Tsunami Disaster 3. Volcanic Disaster 4. Landslide Disaster 5. Hydrometeorological Disaster																																			
Study and examination requirements		Participants are marked based on their performance in theory: Project/Case Study (95%), Assignments (5%). 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																																			
65 - < 70	B-	2.75																																			
60 - < 65	C+	2.5																																			
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 and assignments. The project or case study is conducted individually or in groups and requires students to apply theoretical concepts to analyze and solve a problem, culminating in a written report that is evaluated and may be revised after feedback. Assignments are completed individually and may include problem-solving tasks, data processing, or short essays;																																			



Bachelor Program in Geophysics

Faculty of Mathematics and Natural Sciences

HASANUDDIN UNIVERSITY

		these are submitted in written form and may involve graphical or computational outputs.
Reading list	1.	Main References: 1. Bott, MHP, <i>Bagian Dalam Bumi</i> . Edward Arnold, Ltd., 1971 2. Bremaecker, JC <i>Geofisika: Interior Bumi</i> .John Wiley & Sons, 1985 3. Fowler, CMR, <i>Bumi yang kokoh</i> . Cambrige Univ.Press.1990. 4. Kearey, P. & FJ Halus, <i>Tektonik Global</i> , Publikasi Ilmiah Blackwell., 1990 5. Tazzief, H. & Sabroux, JC, <i>Peramalan Peristiwa Vulkanik</i>, Elsevier, 1983 Additional References: 1. Carter, WN, <i>Manajemen Bencana</i> , ADB, 1991 2. Bell, D.H., <i>Tanah Longsor</i> , Balkema , 1991 3. Giani, GP, <i>Analisis Stabilitas Seluncuran Batuan</i>, Balkema, 1992 4. Karashudi, P., Balasubramaniam, AS & Kanok-Nakulchai, <i>Teknik untuk Perlindungan dari Bencana Alam</i> , John Wiley & Sons, 1980
Last revision date		July 1 st , 2025