



Bachelor Program in Geophysics

Faculty of Mathematics and Natural Sciences
HASANUDDIN UNIVERSITY

10. Weather and Climate

Module Name	:	Weather and Climate
Module Level	:	Bachelor
Code, if applicable	:	23H06122302
Subtitle, if applicable	:	-
Courses, if applicable	:	Geophysics Study Program
Semester(s) in which the module is taught	:	IV (Fourth Semester)
Module coordinator(s)	:	Prof. Dr. Halmar Halide, M.Sc
Lecturer(s)	:	Prof. Dr. Halmar Halide, M.Sc
Language	:	Bahasa (Indonesian language)
Relation to curriculum	:	Elective courses in the second 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. Able to identify weather and climate instruments and access weather and climate data from global climate websites. CLO 2. Able to correlate triggers and disasters caused by weather and climate.



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		CLO 3. Able to carry out effective disaster mitigation according to triggers and environmental and social conditions. The following is the mapping of the ILO and the CLO of this course: <table><tr><td></td><td>ILO 7</td><td>ILO 10</td><td>ILO 13</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><tr><td>CLO 3</td><td></td><td></td><td>✓</td></tr></table>		ILO 7	ILO 10	ILO 13	CLO 1	✓			CLO 2		✓		CLO 3			✓														
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CLO 1	✓																															
CLO 2		✓																														
CLO 3			✓																													
Content	:	1. Access weather and climate data from global climate websites 2. Correlation between weather and climate phenomena and various events (disasters) in communities 3. Mitigation of events (disasters) caused by weather and climate																														
Study and examination requirements		Participants are marked based on their performance in theory: Assignments (35%) and Case Study (65%). 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	Assessment in this course consists of assignments and case studies. Assignments are given periodically throughout the semester and require students to complete specific tasks that must be submitted within a defined deadline. The case study component involves providing students with a real-world problem that must be analyzed in depth; students prepare a comprehensive written report, receive feedback, and resubmit revised work.
Reading list	1. Main References: 1. Moran, J. M. (2012). Weather Studies (5 th ed). American Meteorological Society, USA. 2. World Meteorological Organization (2008). Guide to Meteorological Instruments and Methods of Observation (7 th ed.). Switzerland: WMO-No.8 Additional References: 1. Behringer, W. (2010). A Cultural History of Climate. Cambridge: Polity Press. 2. Fagan, B. (2001). The Little Ice Age: How Climate Made History 1300-1850. New York: Basic Books. 3. Fagan, B. (2004). The Long Summer: How Climate Changed Civilization. New York: Basic Books
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