## 13. Maritime and Aviation Meteorology

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| Module Name | : | Maritime and Aviation Meteorology |
| Module Level | : | Bachelor |
| Code, if applicable | : | 23H06122603 |
| Subtitle, if applicable | : | - |
| Courses, if applicable | : | Maritime and Aviation Meteorology |
| Semester(s) in which the module is taught | : | IV (Fourth Semester) |
| Module coordinator(s) | : | Dr. Muhammad Alimuddin, Eng. |
| Lecturer(s) | : | Dr. Muhammad Alimuddin, Eng. and Saaduddin, S.Pd., M.Sc. |
| 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 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 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:<br>CLO 1. Able to understand maritime weather and climate instruments and access data from world climate sites;<br>CLO 2. Able to link triggers and maritime disasters due to weather and climate;<br>CLO 3. Able to carry out effective maritime disaster mitigation according to triggers and conditions in the maritime community. |

<table>
<tr><td></td><td></td><td>The following is the mapping of the ILO and the CLO of this course:
<table>
<tr><th></th><th>ILO 4</th><th>ILO 7</th><th>ILO 11</th><th>ILO 14</th></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>
<tr><td>CLO 3</td><td></td><td></td><td></td><td>✓</td></tr>
</table></td></tr>
<tr><td>Content</td><td>:</td><td>1. Access to maritime and aviation weather and climate data on the global climate website<br>2. The relationship between weather and climate phenomena and a number of events (disasters) in the maritime and aviation sectors<br>3. Mitigation of maritime and aviation events (disasters) caused by weather and climate.</td></tr>
<tr><td>Study and examination requirements</td><td></td><td>Participants are marked based on their performance in theory: Project/Case Study (60%), Assignments (10%), and Written Examination (30%).<br><br>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>
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| 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, data processing, or short essays; these are submitted in written form and may involve graphical or computational outputs. The written examination (*closed-book*, written) evaluates students' understanding of fundamental concepts covered CLO 1, CLO 2, and CLO 3. |
| Reading list | 1. | Main References:<br>1. Houghton, D. (2005). Weather at Sea 4th ed. Chichester: John Wiley & Sons<br>2. Ives, E., and M. Cornish (2009) Reed's Maritime Meteorology 3rd ed.. London: Adlard Coles Nautical.<br>Additional References:<br>1. World Meteorological Organization (2008). Guide to Meteorological Instruments and Methods of Observation (7 th ed.). Switzerland: WMO-No.8 |
| Last revision date | | July 1st, 2025 |