MODULE HANDBOOK

<table>
<tr><td colspan="2">Module name</td><td colspan="4">Hydrology and Climatology</td></tr>
<tr><td colspan="2">Module level, if applicable</td><td colspan="4">2nd year</td></tr>
<tr><td colspan="2">Code, if applicable</td><td colspan="4">SST-312</td></tr>
<tr><td colspan="2">Semester(s) in which the module is taught</td><td colspan="4">3rd (third)</td></tr>
<tr><td colspan="2">Person responsible for the module</td><td colspan="4">Achmad Fauzan, S.Pd., M.Si.</td></tr>
<tr><td colspan="2">Lecturer</td><td colspan="4">Dr. Nur Aini Iswati Hasanah, ST, M.Si.</td></tr>
<tr><td colspan="2">Language</td><td colspan="4">Bahasa Indonesia</td></tr>
<tr><td colspan="2">Relation to curriculum</td><td colspan="4">Elective course in the second year (3rd semester) bachelor’s degree</td></tr>
<tr><td>Type of teaching and learning</td><td>Class size</td><td>Attendance time (hours per week per semester)</td><td>Form of active participation</td><td colspan="2">Workload (hours per semester)</td></tr>
<tr><td rowspan="4">Lecture</td><td rowspan="4">50-60</td><td rowspan="4">1.67</td><td rowspan="4">Problem solving</td><td>Face to face teaching</td><td>23.33</td></tr>
<tr><td>Structured activities</td><td>32</td></tr>
<tr><td>Independent study</td><td>32</td></tr>
<tr><td>Exam</td><td>3.33</td></tr>
<tr><td colspan="2">Workload</td><td colspan="4">90.67 hours</td></tr>
<tr><td colspan="2">Credit points</td><td colspan="4">2 CUs / 3.4 ECTS</td></tr>
<tr><td colspan="2">Requirements according to the examination regulations</td><td colspan="4">Minimum attendance at lectures is 75%. Final score is evaluated based on assignment, mid-term exam, and final exam.</td></tr>
<tr><td colspan="2">Recommended prerequisites</td><td colspan="4">-</td></tr>
<tr><td colspan="2">Related course</td><td colspan="4">Geostatistics 1 (SST-509)</td></tr>
<tr><td colspan="2">Module objectives/intended learning outcomes</td><td colspan="4">After completing this course, the students have ability to:
CO 1. explain hydrology and climatology theories and concepts.
CO 2. explain statistical methodologies (methods and models) in hydrological and climatological problems.
CO 3. partition hydrological and climatological problems using statistical techniques.
CO 4. create statistical modeling for hydrological and climatological problems.</td></tr>
<tr><td colspan="2">Content</td><td colspan="4">1. Basic Concepts of Hydrology and Climatology
2. Hydrological Components:
a. Hydrological Cycle
b. Surface water and subsurface water
c. Watershed System
d. Hydrological processes: flow, infiltration, and percolation
3. Meteorological and climatological components, atmosphere components, cloud and rain formation and wind formation mechanisms
4. Process and Mechanism of El Nino and El Nina
5. Impact of climate change on human life</td></tr>
<tr><td colspan="2">Study and examination requirements and forms of examination</td><td colspan="4">The final mark will be weighted as follows:
No | Assessment components | Assessment types | Weight (percentage)
1 | CO 1 | Assignment, Midterm Exam | 20%
2 | CO 2 | Assignment, Midterm Exam | 30%
3 | CO 3 | Assignment, Final Exam | 25%
4 | CO 4 | Assignment, Final Exam | 25%</td></tr>
<tr><td colspan="2">Media employed</td><td colspan="4">Google Classroom, relevant websites, slides (power points), video, interactive media, white-board, laptop, LCD projector</td></tr>
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Reading list	Ralph J.C., et.al.2001. Climate Change Science. Washington D.C. : National Academy Press

Mapping CO, PLO, and ASIIN's SSC

ASIIN		PLO											
		E	N	T	H	U	S	I	A	S	T	I	C
Knowledge	a												
	b						CO3						
	c												
	d												
Ability	e						CO1 CO2						
	f												
Competency	g						CO4						
	h												
	i												
	j												
	k												
	l												