MODULE HANDBOOK

<table>
<tr><th colspan="6">METEOROLOGY AND CLIMATOLOGY</th></tr>
<tr><td colspan="2">Module/Course Title

8720203101</td><td>Student Workload
2 CU X 16 X 170’= 90,6618</td><td>Credits

2 CU
3.18 ECTS</td><td>Semester

3TH
SEMESTER</td><td>Frequency

ONCE
YEAR</td><td>Duration

1
SEMESTER</td></tr>
<tr><td>1</td><td colspan="2">Types of courses
LECTURES
PRACTICUM</td><td>Contact hours
(2CU X 1,59
ECTS)
X{(50:170’)X
28,51
Workhours=
26,64</td><td>Independent Study
(2CU X 1,59
ECTS)
X{(60:170’)X
28,51
Workhours=
31,96</td><td>Structured Study
(2CU X 1,59
ECTS)
X{(60:170’)X
28,51
Workhours=
31,96</td><td>Class size
MAX 37
STUDENT</td></tr>
<tr><td>2</td><td colspan="6">Prerequisites for participation (if applicable)
-</td></tr>
<tr><td rowspan="4">3</td><td colspan="6">Program Learning Outcomes</td></tr>
<tr><td colspan="6">PLO 2
Able to analyze regional and regional characteristics (regionalization) in the context of resources and disasters based on the principles and approaches of geography to support sustainable development</td></tr>
<tr><td colspan="6">PLO 6
Able to make appropriate decisions in the context of solving problems in the field of geography and geography education, based on the results of the analysis of information and data</td></tr>
<tr><td colspan="6">PLO 8
Able to formulate, process, analyze data, and present geosphere information both physical and human aspects by using geospatial technology to geography learning and research</td></tr>
<tr><td></td><td colspan="6">PLO 11
Shows a responsible attitude towards work in the field of expertise independently.</td></tr>
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	CLO CLO 2 Able to process, analyze, present data and information about climate using geospatial technology for learning and research of physical geography (PLO-2) CLO 6 Able to make appropriate decisions in the context of solving problems in the field of geography and geography education, based on the results of the analysis of information and data of weather elements to produce quality and measurable results. (PLO-6) CLO 8 Able to formulate, process, analyze data, and present geosphere information both physical and human aspects by using geospatial technology to geography learning and research of climate classification for sustainable regional planning and development. (PLO-8) CLO 11 Shows a responsible attitude towards work in the field of expertise independently for solving climate problems for the benefit of human life. (PLO-11)
4	**Subject aims/Content** 1. Definition of meteorology and climatology, as well as climate and weather control, composition and structure of the layers of the atmosphere, atmospheric characteristics, purposes and benefits of weather and climate 2. Radiation and the factors that influence it, air temperature in the atmosphere, heat transfer in the atmosphere, distribution of air temperature in the atmosphere, measurement of air temperature, and the relationship between solar radiation and air temperature, 3. Definition of air humidity and types of air humidity 4. Definition of clouds and classification of clouds, understanding of rain, the relationship between clouds and rain, classification of rain, and regional rain. 5. Understanding air pressure and wind, as well as the direction of wind movement in an area 6. Processing of meteorological data to determine the climate in an area 7. Analysis of meteorological data relating to climate change and its effects on human life
5	**Teaching methods** *Project Base Learning,*
6	**Assessment methods** *paper test*
7	**This module/course is used in the following study programme/s as well** -
8	**Responsibility for module/course** COMPULSORY/~~ELECTIVE~~*/ 1. Bayong Tjasyono HK, 2004, Klimatologi, Bandung, Penerbit ITB 2. Laode Sabaruddin,2014, AGROKLIMATOLOGI Aspek-aspek Klimatik untuk Sistem Budidaya Tanaman, Bandung, penerbit Alfa Beta 3. Tumiar Katarina Manik, 2014, Klimatologi Dasar Unsur Iklim dan Proses Pembentukan Iklim, Yogyakarta, Graha Ilmu

	4. Ance Gunarsih Kartasapoetra, 2016, KLIMATOLOGI Pengaruh Iklim Terhadap Tanah dan Tanaman, Jakarta, Bumi Aksara 5. Daldjoeni, N., 2014, Pokok-pokok Klimatologi, Yogyakarta, Penerbit Ombak 6. Bayu Dwi Apri Nugroho, 2016, Fenomena Iklim Global, Perubahan Iklim, dan Dampaknya di Indonesia, Yogyakarta, gadjah mada University Press. 7. Soewarno, 2015, HIROLOGI Pengukuran dan Pengolahan Data Curah Hujan, Contoh Aplikasi Hidrologi dalam Pengelolaan Sumber Daya Air, Yogyakarta, Graha Ilmu