



## **MODULE HANDBOOK**

### **Urban Climatology**

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Module designation	Urban Climatology
Semester(s) in which the module is taught	Fourth (4th) Semester
Person responsible for the module	Dr.rer.nat. Eko Kusratmoko, M.S.
Lecturer	<ol style="list-style-type: none"> <li>1. Dr.rer.nat. Eko Kusratmoko, M.S.</li> <li>2. Faris Zulkarnain, S.Si., M.T.</li> <li>3.</li> </ol>
Language	Bahasa Indonesia
Relation to curriculum	Elective
Teaching methods	Student-centered Learning and combination with Cooperative Learning
Workload (incl. contact hours, self-study hours)	<ol style="list-style-type: none"> <li>1. Lectures: 100 minutes per week per semester</li> <li>2. Assignment: 120 minutes per week per semester</li> <li>3. Independent study: 120 minutes per week per semester</li> <li>4. Minutes x weeks x semester: <math>340 \times 14 \times 1 = 4760</math> minutes per semester</li> <li>5. Midterm Examination: 100 minutes per semester</li> <li>6. Final Examination: 100 minutes per semester</li> <li>7. Total workload per semester: 4950 minutes / 82 hours 40 minutes</li> </ol>
Credit points	2 (Two)
Required and recommended pre-requisites for joining the module	<ol style="list-style-type: none"> <li>1. Thinking Geographically</li> <li>2. Principles and Perspective in Physical Geography</li> <li>3. Principles and Perspective in Human Geography</li> <li>4. System and Process of Physical Geography</li> </ol>
Module objectives/intended learning outcomes	<p>After completing this course, if students are given meteorological data, land use maps, topographic maps and satellite imagery of an area, students are able to implement the concept of urban climatology to explain urban climate phenomena and further can analyze and assess spatial and temporal variations that occur in perspectives geography. The working language used in this course is Indonesian.</p>
Content	<ol style="list-style-type: none"> <li>1. Urban Climate Concepts and Scales</li> <li>2. City and urban as an ecosystem</li> <li>3. Urban Climate Measurement and monitoring methods</li> <li>4. Characteristics of urban atmospheric components</li> <li>5. Urban pollution (air pollution)</li> <li>6. Full geographic factors for urban climates</li> <li>7. Urban climates and human</li> <li>8. Urban Heat Island</li> </ol>
Examination forms	-
Study and examination requirements	<ol style="list-style-type: none"> <li>1. Individual Score (40%)</li> <li>2. Group and Presentation Score (30%)</li> <li>3. Mid Examination (30%)</li> <li>4.</li> </ol>

Reading list	<p>T. R. Oke, et al. (2017): Urban Climates. Cambridge Univ. Press</p> <p>Helmut E. Landsberg 1980): The Urban Climate. Inter. Geophysic Series Vol. 28. Academic Press. New York.</p> <p>F. Musco (ed,) (2016): Counteracting Urban Heat Island Effects in a Global Climate Change Scenario. SpringerOpen</p> <p>Journal "Urban Climate" Elsevier-Science Direct</p>
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