CP234636 - Disaster and Climate Risk Resilience

Module Name	Disaster and Climate Risk Resilience
Module level, if applicable	Intermediate BoURP
Code, if applicable	CP234636
Subtitle, if applicable	-
Course, if applicable	Disaster and Climate Risk Resilience
Semester(s) in which the module is taught	6th Semester
Person responsible for the module	Adjie Pamungkas, S.T., M.Dev,.Plg.,Ph.D
Lecturer	Adjie Pamungkas, S.T., M.Dev,.Plg.,Ph.D Ema Umilia, S.T, M.T.
Language	Indonesian, English
Relation to curriculum	Compulsory Courses for undergraduate program in Urban and Regional Planning
Type of teaching, contact hours	M3: Case study M6: Project Based Learning Lecture (Face to face lecture): 2.5 hours x 14 weeks 35 hours per semester
Workload	Regular (3 SKS)/Seminar/ Enrichment Class: 2.5 hours x 14 weeks = 35 hours Structured activities: 4 hours x 14 weeks = 56 hours Independent Study: 3 hours x 14 weeks = 42 hours Exam: 1.5 hours x 4 time = 6 hours Total = 133 hours
Credit points	3 SKS ~ 4.8 ECTS
Requirements according to the examination regulations	Registered in this course Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcomes	**General knowledge:** 1. Able to understand the theoretical concepts of urban and regional planning in the aspects of urban studies, regional studies, coastal studies, spatial science, planning science, data science,

	built environment design, infrastructure and transportation systems, environmental management, social systems, economics, management studies, and research /project. 2. Able to understand spatial and non-spatial planning methods in decision making in the field of urban and regional planning. 3. Able to understand the techniques and processes of urban and regional planning qualitatively, quantitatively, and spatial modeling (geographical information systems) and presentation techniques 4. Able to analyze potentials and problems in spatial and non-spatial contexts of cities, regions, and coasts through analysis of aspatial and spatial aspects linkages **Specific Knowledge:** 1. Students are able to apply concepts and theories of disaster risk management and climate change in understanding issues related to disaster mitigation and adaptation and climate change. 2. Students are able to carry out disaster risk management simulations. 3. Students are able to apply concepts and theories of urban and regional resilience in preparing contingency plans and climate change mitigation-adaptation. 4. Students are able to analyze and project greenhouse gas emissions. 5. Students are able to formulate disaster risk management and climate change. 6. Students are able to communicate ICT-based concepts and formulations of disaster risk management and climate change visually, verbally and in writing.
Content	1. The concept of urban and regional resilience 2. The concept of climate resilience 3. The concept of vulnerability and disaster capacity 4. Approach to disaster risk reduction according to National Agency for Disaster Countermeasure (Badan Nasional Penanggulangan Bencana). 5. Important processes and elements in hydrological and technological disaster risk reduction 6. Important processes and elements in reducing the risk of volcanic and geological disasters.

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<tr><td></td><td>7. Disaster game
8. Climate change concepts and theories
9. The characteristics of the phenomenon and the impacts that occur due to the phenomenon of climate change.
10. How to calculate greenhouse gas emissions in each greenhouse gas contributing sector and make projections
11. Mitigation and adaptation action plans that are in accordance with the results of the analysis and impacts of climate change</td></tr>
<tr><td>Study and examination requirements and forms of examination</td><td>4 assessments:
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<tr><th>Evaluation</th><th>Method</th><th>Weight</th></tr>
<tr><td>1</td><td>Practice of Concept Analysis</td><td>25%</td></tr>
<tr><td>2</td><td>Game Simulation</td><td>25%</td></tr>
<tr><td>3</td><td>Quiz</td><td>30%</td></tr>
<tr><td>4</td><td>Final Presentation</td><td>20%</td></tr>
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1. Practice of Concept Analysis – week 6-7
2. Game Simulation – week 8
3. Quiz – week 12
4. Final Presentaion – week 16</td></tr>
<tr><td>Media employed</td><td>Classical teaching tools with Arcgis, Ms. Word, Ms. Excel, Ms. Powerpoint, LCD, and Web Cam.</td></tr>
<tr><td>Reading list</td><td>Main reference:
1. IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi: 10.1017/9781009157926
2. Meltzer, J. P. (2018). Blending climate funds to finance low-carbon, climate-resilient infrastructure. Global Economy & Development, WP, 120.
3. BOSHER L. (2017) Disaster risk reduction for the built environment. In disaster risk reduction for the built environment, https://doi.org/10.1002/9781119233015.</td></tr>
</table>

	4. UN-ISDR (2002) Living with risk. A global review of disaster reduction intiatives, preliminary vervion, Geneva, Switzerland. 5. Bankoff, G., Frerks, G., & Hilhorst, D. (Ed.). (2004). Mapping Vulnerbility: Disaster, Development and People. USA and UK:Earthscan. 6. Blaikie, P., Cannon, T., Davis, I., & Wisner, B. (1994). At Risk: Natural Hazards, People's Vulnerability, and Disasters. London: Routledge. 7. Brikmann. J., & Wisner. B. (2006). Measuring the Un-Measurable: The Challenge of Vulnerability. SOURCE (Study Of the University Research, Consel, Education – Publication Series of UNU-EHS). 8. Burton, I., Kates, R.W., & White, G.F. (1978). The Environment as Hazards. Oxford University Press, New York. 9. Cannon, T. (2008). Reducing People's Vulnerability to Natural Hazards. Research Paper No. 2008/34, UNU Wider. 10. Handmer, J., & Dovers, S. (2007). Handbook of Disaster and Emergency Policies and Institutions. UK and USA: Earthscan. 11. Van Westen, CJ., Alkema, D., Damen MCJ., Kerle, N., Kingma, N.(2011). Multi-hazard risk assessment - Risk City Exercise Book. ITCUniversity of Twente.sity of Twente.