

Module Handbook of Disaster Management

Module designation	<p>Disaster Management course is an elective subject in the Geography Masters Study Program. This course aims to build the competence or expertise of Masters program students in disaster management efforts with geographic knowledge. Introduction to the basic concepts of disaster management, such as hazard, vulnerability, risk, capacity and resilience is the basis for building a complex understanding of disaster management. A spatial, environmental, regional complex approach and a transparent and adaptive governance approach are the advantages that students are expected to have from this postgraduate program. Technical analysis that utilizes geographic information systems and remote sensing is a provision capable of responding to the challenges of using technology and information in this agile and volatile digital era. Disaster management that must be carried out in various types of regions throughout Indonesia is prepared to answer the diversity of types of mitigation, disaster risk reduction and strengthening resilience for components of society that are threatened by potential hazards. This lecture provides reference sources for reading from the research of the supporting lecturer: Dr. Dyah Rahmawati Hizbaron, S.Si, M.T., M.Sc, Dr. Djati Mardiatno, M.Sc and Prof. Dr. Muh Aris Marfai, M.Sc.</p>		
Semester(s) in which the module is taught	<p>Odds/ First (1st) Semester</p>		
Person responsible for the module	<p>Dr. Djati Mardiatno, M.Si Dr. Dyah Rahmawati Hizbaron, S.Si, M.T., M.Sc Prof. Dr.rer.nat. Muh Aris Marfai, M.Sc</p>		
Language	<p>Bahasa Indonesia</p>		
Relation to curriculum	<p>Elective</p>		
Teaching methods	<p>TCL (Teacher Centered Learning) SCL (Student Centered Learning) <i>Project (Team-based Project)</i></p>		
Workload (incl. contact hours, self-study hours)	CLO 1	<p>Interactive lectures and case discussions</p>	<p>4 meetings 4 x 50 minutes of classroom lectures and discussions 4 x 50 minutes of structured task 4 x 60 minutes independent study activities</p>
	CLO 2	<p>Interactive lectures and practice</p>	<p>5 meetings 5 x 50 minutes of classroom lectures and discussions 5 x 50 minutes of structured task 5 x 60 minutes independent study activities</p>
	CLO 3	<p>Interactive lectures, case discussions, presentations</p>	<p>3 meetings 3 x 50 minutes of classroom lectures and discussions 3 x 50 minutes of structured</p>

			task 3 x 60 minutes independent study activities				
	CLO 4	Project Tasks	2 meetings 1 x 50 minutes of classroom lectures and discussions 1 x 50 minutes of structured task 1 x 60 minutes independent study activities				
Credit points	Assessment Techniques	Percentage of Assessment (%)	Criteria/ Indicators	CLO (%)			
				1	2	3	4
	Participatory Activities*)	10%	Contribution of class discussion activities in each subject matter of the lecture; Presentation				10%
	Project Results/ Case Study Results/ PBL Results*)	10%	Problem Analysis; Project-based Learning Assessment Rubric				10%
	Cognitive						
	Skill-based Assessment (SBA)						
	Mid-term	40%	Students answer the questions correctly	10%	10%	10%	10%
	Final Exam	40%	Students answer the questions correctly	10%	10%	10%	10%
	Total	100%		20%	20%	20%	40%
	*) can be obtained from Mid-term or Final exams which are the results of participatory activities or the results of projects/case studies. By IKU 7, the total percentage of participatory activities and project results/case studies/PBL at least 20%.						
Required and recommended prerequisites for joining the module	Taken after taking compulsory courses						
Module	PLO A2	Understand and comprehend the methods and techniques of geographical analysis for managing human resources, watersheds, coasts, seas, disasters, and					

objectives/intended learning outcomes		environmental and socio-economic issues in regional development.
	PLO B1	Mastering the application of geography to manage the environment and human resources in rural, urban, watershed, coastal and marine areas through spatial, ecological and regional complex approaches.
	PLO D2	Have a leadership spirit, think rationally, work cooperatively, be responsible, have social sensitivity and concern for humans and the environment and be able to communicate the research findings to the stakeholders.
	CLO 1	Understand concept and theory of disaster management from different perspective, disaster paradigm, and disaster relevance with environment and development [PLO A2]
	CLO 2	<ol style="list-style-type: none"> 1. Understand the policy of disaster management, disaster cycle, mitigation strategy, and specified disaster risk reduction, community based disaster risk reduction, and identification of vulnerable groups such as by gender, children, elderly, disable etc [PLO B1] 2. Understanding appropriate approach for disaster management from geographic perspective [PLO B1].
	CLO 3	Understand the risk analysis, disaster planning and disaster risk reduction management, stakeholder involvement in the disaster management [PLO B1]
	CLO 4	Reflecting the right solutions to problems in the industrial 4.0/society 5.0 era and the impacts that will occur and increasing self-regulated learning skills as part of efforts to become lifelong learners. [PLO D2]
Content	CLO 1	<ol style="list-style-type: none"> 1. The concept of disaster management from various scientific perspectives; (1 meeting) 2. Introduction of paradigms and approaches to disaster management; (1 meeting) 3. The relevance of disaster risk reduction to environmental development; (1 meeting) 4. Introduction to the 5 basic concepts of disaster management, namely: hazard, vulnerability, vulnerability, risk and capacity (1 meeting). 5. Individual Assignment: Look for examples of the application of one of the basic concepts, calculation techniques, data used and strategic value in disaster management in Indonesia.
	CLO 2	<ol style="list-style-type: none"> 1. Identifying more specifically related to iterative cycles and factors that cause disaster problems (1 meeting) 2. Identification of disaster problems from the physical aspect (climatic, hydrological, land) (1 meeting) 3. Analyzing with geographical approaches and techniques (1 meeting). 4. Identification of socio-economic problems in disaster (population, socio-economic and policy) analysis with geographical and governance approaches and techniques (1 meeting). 5. Identify potential data and methods that can be used to interpret the 5 basic concepts of disaster management (1 meeting).
	CLO 3	<ol style="list-style-type: none"> 1. Disaster management method). (1 meeting) 2. Disaster resilience strengthening method. (1 meeting) 3. Community based disaster management method (1 meeting)
	CLO 4	<ol style="list-style-type: none"> 1. Presentation of the Tasks of the Disaster Management Group
Examination forms	Mid-term and Final Exam	

Study and Examination Requirements	Student participation 10%, Project result 10%, Summative Test (Mid-term and Final Exam) 80%
Reading list	<p>Main:</p> <ol style="list-style-type: none"> 1. Birkmann, J. (2006). <i>Measuring Vulnerability to Natural Hazards: Towards Disaster Resilient Societies</i>. Tokyo: United Nations University Press. 2. Hizbaron, D., Baiquini, M., Sartohadi, J., & Rijanta, R. (2012, August 30). Urban Vulnerability in Bantul District, Indonesia - Towards Safer and Sustainable Development. <i>Sustainability</i>, 4(doi: 10.3390/su4092022), 2022-2037. 3. Marfai, M. A., & King, L. (2008). Coastal flood management in Semarang, Indonesia. <i>Environment Geology</i>, 55(DOI: 10.1007/s00254-007-1101-3), 1507-1518. 4. Wisner, B., Gaillard, J., & Kelman, I. (2011). Framing Disaster. In B. Wisner, J. Gaillard, & I. Kelman, <i>The Routledge Handbook of Hazards and Disaster Risk Reduction</i> (pp. 18 - 33). London: The Routledge Handbook. 5. Wisner, B., Blaikie, P., Cannon, T., & Davis, I. (2003). <i>At Risk: Natural Hazards, People's Vulnerability and Disaster 2nd Edition</i>. Routledge. 6. Hizbaron, D. R., Hadmoko, D., E.T.W Mei, S. M., Laksani, M., Tiyansyah, A., Siswanti, E., & Tampubolon, I. (2018, June 22). Towards measurable resilience: Mapping the vulnerability of at-risk community at Kelud Volcano, Indonesia. <i>Applied Geography</i>, 97, 212-227. 7. Mileti, D. S., & Sorensen, J. H. (1990). <i>Communication of Emergency Public Warnings: A Social Science Perspective and State of the Art Assessment</i>. Washington: Federal Emergency Management Agency and US Department of Energy. 8. Adger, W., Agrawala, S., Mirza, M., Conde, C., O'Brien, K., Puhin, J., . . . Takahashi, K. (2007). <i>Assessment of adaptation practices, options, constraints and capacity. Climate Change 2007: Impacts, Adaptations and Vulnerability</i>. Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Working Group II . Cambridge: Cambridge University Press. 9. UNISDR. (2017). <i>Worlds into Action Guidelines: National Disaster Risk Assessment (4. Flood Hazard and Risk Assessment)</i>. UNISDR. 10. IPCC. (2012). <i>Managing the Risks of Extreme Events and Disaster to Advance Climate Change Adaptation: A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change</i>. Cambridge: Cambridge University Press. 11. Afifah, S., & Hizbaron, D. . (2020). Vulnerability assessment of residential buildings to tidal flood hazards in Sriwulan Village, Sayung District, Demak Regency. <i>E3S Web of Conferences</i>, 200, 1–12. https://doi.org/10.1051/e3sconf/202020001008 12. Afifah, S., Putra, A. U., Christianawati, A., Prastika, K. P., Thoban, M. I., Lukafiardi, R., Siahaan, S. E., Widyanarko, U., & Hizbaron, D. R. (2020). An Evaluation of Valuable Lands towards Landslide Susceptibility at Heritage Site, Sangiran, Central Java, Indonesia. <i>IOP Conference Series: Earth and Environmental Science</i>, 412(1). https://doi.org/10.1088/1755-1315/412/1/012019 <p>Additional:</p>