



## SEMESTER LEARNING PLAN

**DEPARTMENT: URBAN AND REGIONAL PLANNING**

**FACULTY: CIVIL, PLANNING, AND EARTH**

<b>COURSES NAME</b>	<b>DISASTER RISK MANAGEMENT AND CLIMATE CHANGE</b>	
<b>COURSES CODE</b>	<b>DK 184713</b>	
<b>SEMESTER</b>	<b>VII</b>	
<b>CREDITS</b>	<b>3/ 4,86</b>	
<b>LECTURER</b>	<b>Adjie Pamungkas, ST.,M Dev.Plg.,Ph.D.</b>	
<b>COURSE METHODOLOGY:</b>		
a. Thematic Concept		
b. Approach and Management concet		
c. Thematic analysis		
d. Formulation of thematic scenario		
<b>PROGRAM LEARNING OUTCOME (PLO)</b>		
<b>SPECIFIC KNOWLEDGE</b>	1.1	Able to understand and apply the theoretical concept of urban and regional planning in the aspects of urban studies, regional studies, spatial science, data science & computer application, socio-political, environmental management, built environment design, infrastructureand transportation system, coastal studies, management, economics
	1.3	Able to apply the methods of spatial planning/aspatial in decision making
<b>SPECIFIC SKILLS</b>	2.1	Able to compile the planning concept and direction of the plan through the study of strategic issues in the context of urban, regional, and coastal planning problems with understanding through observation and utilization of the data of physical/spatial, social, economic andenvironmental
	2.5	Able to produce creative, innovative, sustainable planning that are accommodating public interest in which the resulted plans are reviewed on the rules and theories of planning and communicating them visually, verbally and in writing so that can be accounted academically
<b>COURSES LEARNING OUTCOMES (CLO)</b>		
<b>SPECIFIC KNOWLEDGE</b>	Students are able to apply the concepts and theories of disaster risk management and Climate change within	
	Students are able to conduct disaster risk management simulations	
<b>SPECIFIC SKILLS</b>	Students are able to apply the concepts and theories of city and regional resilience in the preparation of contingency plans and climate change adaptation	
	Students are able to carry out analysis and projection of greenhouse gas emissions	
	Students are able to formulate disaster risk management and climate change	

MAP OF PLO - CLO	CLO	PLO-1	PLO-2	PLO-3	PLO-4	PLO-5	PLO-6	PLO-7	PLO-8	PLO-9	PLO-10	PLO-11
	CPMK-1. Mahasiswa mampu menerapkan konsep dan teori manajemen risiko bencana dan perubahan iklim dalam	1										
CPMK-2. Mahasiswa mampu melakukan simulasi manajemen risiko bencana			1									
CPMK-3. Mahasiswa mampu menerapkan konsep dan teori ketahanan kota dan wilayah dalam penyusunan rencana kontingensi dan mitigasi-adaptasi perubahan iklim	1											
CPMK-4. Mahasiswa mampu melakukan analisa dan proyeksi emisi gas rumah kaca			1									
CPMK-5. Mahasiswa mampu menyusun formulasi pengelolaan risiko bencana dan perubahan iklim								1	1			
CPMK-6. Mahasiswa mampu mengkomunikasikan konsep dan formulasi pengelolaan risiko bencana dan perubahan iklim secara visual, verbal, dan tertulis berbasis ICT									1			

#### MODULE

- a. Theory and Management's Concept
- b. Theory and Disaster Risk's Concept
- c. Theory and Resilience City's Concept
- d. Disaster Risk, Hazard, Vulnerability, Capacity Characteristics;
- e. Disaster Risk, Hazard, Vulnerability, Capacity Analysis;
- f. Disaster Risk Management and Climate Change Formulation

**DISASTER RISK MANAGEMENT AND CLIMATE CHANGE COURSE LEARNING PLAN  
ODD SEMESTER OF ACADEMIC YEAR 2021–2022**

WEEK	LEARNING OUTCOME	MODULE LEARNING OUTCOME	MODULE	LEARNING OUTCOME( from weekly materials)	Scope	Learning Methods (Week 1-7)	Course Duration (minutes)	Modes of Delivery (Presentation, task, discussion, quize, practice)	Grading Policy	Assessment (%)
1	2	3	4	5	6	7	8	9	10	11
1	Students are able to apply the concepts and theories of disaster risk management and Climate change within	Students are able to formulate disaster risk	Theory and Management's Concept ; Theory and Disaster Risk's Concept	Understanding the outline of lecture content for a semester; Understand the important processes and elements that contribute to the occurrence of geological and volcanic disasters	Syllabus discussion, explanation of task and evaluation, groups formation, definition and category of disaster explanation, disaster risk concept explanation	W1,W3	60	Lecture, Discussion	Lecture attendance	0
					Explanation of process and important elements that contribute to the occurrence of geological and volcanic disasters	W1,W3	90	Lecture, Discussion	Lecture attendance	0
2	Students are able to apply the concepts and theories of disaster risk	Students are able to elements of disaster risk	Theory and Management's Concept ; Theory and Disaster Risk's	Understand process and elements that contributed to hydrology and	Understand process and elements that contributed to hydrology and	W1,W3	90	Lecture, Discussion	Lecture attendance	0
	management and Climate		Concept	technology disaster	technology disaster					

WEEK	LEARNING OUTCOME	MODULE LEARNING OUTCOME	MODULE	LEARNING OUTCOME( from weekly materials)	Scope	Learning Methods (Week 1-7)	Course Duration (minutes)	Modes of Delivery (Presentation, task, discussion, quize, practice)	Grading Policy	Assessment (%)
1	2	3	4	5	6	7	8	9	10	11
	change within				Study case: identification of risk elements in geology, vulcanology, hidrology, and technology	W1,W3, W5	60	Study case presentation	Accurate identification of disaster risk and individual performance	5
3	Students are able to apply the concepts and theories of disaster risk management and Climate change within	Students are able to do disaster risk analysis	Theory and Management's Concept ; Theory and Disaster Risk's Concept	Understand concept of disaster risk	Vulnerability concept	W1	90	Lecture, Discussion	Lecture attendance	0
					Practice of concept analysis	W3	60	Discussion	Individual performance	5
4	Students are able to apply the concepts and theories of disaster risk management and Climate change within	Students are able to do disaster risk management simulation	Theory and Management's Concept ; Theory and Disaster Risk's Concept	Understand disaster risk management concept through disaster simulation game	Game simulation and explanation of group assignment	W3	150	Simulation, Discussion	Score achieved in the game simulation	15
5	Students are able to apply the concepts and theories of disaster risk management and Climate change within	Students are able to formulate adaptation action in the context of disaster management	Theory and Management's Concept ; Theory and Disaster Risk's Concept	Understand disaster risk concept	Concept, risk and adaption management	W1,W3	150	Lecture, Discussion	Lecture attendance	0
6	Students are able to apply the concepts and	Students are able to analyze risk, hazard,	Disaster Risk, Hazard, Vulnerability,	Understand disaster vulnerability in	Concept, risk and adaption management	W1,W3	150		Lecture attendance	0

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1	2	3	4	5	6	7	8	9	10	11
	theories of city and regional resilience in the preparation of contingency plans and climate change adaptation	vulnerability, and capacity	Capacity Characteristics;	urban and regional						
7	Students are able to formulate disaster risk management and climate change	Students are able to formulate data needed in contingency planning, identify disaster risk aspect	Theory and Management's Concept ; Theory and Disaster Risk's Concept; Theory and Resilience City's Concept; Disaster Risk, Hazard, Vulnerability, Capacity Characteristics	Able to formulate disaster contingency report part I: formulate risk, hazard, vulnerability, and capacity characteristic in urban and regional area	Formulating disaster contingency planning part I	W1,W5	480	Group task assistance	Based on tsk guidance	10
8	Students are able to apply the concepts and theories of disaster risk management and Climate change within	Students are able to analyze risk, hazard, vulnerability, and capacity; Students are able to formulate data needed in contingency planning, identify disaster risk aspect	Disaster Risk, Hazard, Vulnerability, Capacity Analysis; Disaster Risk Management and Climate Change Formulation	Able to formulate disaster contingency report part II: formulate risk, hazard, vulnerability, and capacity characteristic in urban and regional area and formulate disaster	Formulating disaster contingency planning part II	W1,W5	480	Group task assistance	Based on tsk guidance	10

WEEK	LEARNING OUTCOME	MODULE LEARNING OUTCOME	MODULE	LEARNING OUTCOME( from weekly materials)	Scope	Learning Methods (Week 1-7)	Course Duration (minutes)	Modes of Delivery (Presentation, task, discussion, quice, practice)	Grading Policy	Assessment (%)
1	2	3	4	5	6	7	8	9	10	11
				management plans or action plans						
9	Students are able to apply the concepts and theories of disaster risk management and Climate change within	Students are able to identify cause and impact of climate change	Concept and theory of climate change	Students are able to understand concept and theory of climate change	Definition of climate change, process and aspect of climate change, sectors that contributed to climate change	W1,W3	150	Lecture, Discussion	Lecture attendance	0
10	Students are able to apply the concepts and theories of disaster risk management and Climate change within	Student are able to apply concept of climate change mitigation and best practice from study case in other city or region	Phenomenon characteristic and impact of climate change	Students are able to identify phenomenon characteristic and impact from climate change	Climate change mitigation concept; best practice of climate change mitigation	W1,W3	150	Lecture, Discussion	Lecture attendance	0
11	Students are able to apply the concepts and theories of disaster risk management and Climate change within	Student are able to apply concept of climate change mitigation and best practice from study case in other city or region	Phenomenon characteristic and impact of climate change	Students are able to identify phenomenon characteristic and impact from climate change	Climate change mitigation concept; best practice of climate change mitigation	W1,W3	150	Lecture, Discussion	Lecture attendance	0
12	Able to apply logical, critical, systematic, and innovative thinking in the context of development or		Theory and Management's Concept; Theory and Disaster Risk's Concept; Theory and		Quiz; written test		150	Quiz	Kebenaran jawaban; Orisinalitas jawaban Righ answer, originality answer	20

WEEK	LEARNING OUTCOME	MODULE LEARNING OUTCOME	MODULE	LEARNING OUTCOME( from weekly materials)	Scope	Learning Methods (Week 1-7)	Course Duration (minutes)	Modes of Delivery (Presentation, task, discussion, quice, practice)	Grading Policy	Assessment (%)
1	2	3	4	5	6	7	8	9	10	11
	implementation of science and technology by considering and applying the suitable value of humanities in accordance with their expertise		Resilience City's Concept							
13	Students are able to carry out analysis and projection of greenhouse gas emissions	Students are able to formulate variable to count greenhouse gas emission into greenhouse gas calculator (GRK)	Emission analysis and impact of climate change	Students are able to count greenhouse gas emission in every sector and do projection	Explanation of greenhouse gases calculation using greenhouse gas calculator	W1,W2	150	Lecture, Discussion	Lecture attendance	0
14	Students are able to formulate climate change management	Students are able to formulate mitigation and adaptation planning in climate change	Formulation of disaster risk management and climate change	Students are able to make mitigation and adaptation planning that suitable with analysis result and impact of climate change	Mitigation concept and climate change adaptation	W1,W3	150	Lecture, Discussion	Lecture attendance	0
					Determination of study area in greenhouse gas profile task in every groups	W1,W5	100	Group discussion		0
15	Students are able to formulate climate change management	Students are able to formulate mitigation and adaptation planning in climate change	Formulation of disaster risk management and climate change	Students are able to make mitigation and adaptation planning that suitable with analysis result and impact of	Pengumpulan tugas disaster game; Penyusunan profil emisi di wilayah studi yang sudah ditentukan	W1,W5	480	Asistance, group discussion	Substance suitability with task guidance	20

WEEK	LEARNING OUTCOME	MODULE LEARNING OUTCOME	MODULE	LEARNING OUTCOME( from weekly materials)	Scope	Learning Methods (Week 1-7)	Course Duration (minutes)	Modes of Delivery (Presentation, task, discussion, quize, practice)	Grading Policy	Assessment (%)
1	2	3	4	5	6	7	8	9	10	11
				climate change						
16	Students are able to communicate the concept and formulation of disaster risk management and climate change in visual, verbal, and written based on ICT	Students are able to make poster about disaster contingency planning	Disaster contingency poster	Students are able to make poster based on task guidance				Poster submission	Substance suitability with task guidance	5
		Students are able to make a presentation media in informative way	Presentation of emission profile	Students are able to presents its emissions profile based on task guidance in informmative way		W1,W5	480	Presentation and emissions profile report	Individual ability in informing information based on taskguidance substances	10



**EVALUATION PLAN AND EVALUATION ASSESSMENT PLAN IGROUP  
PRESENTATION**

Course Name	Disaster Risk Management
Credit	3 credits
Module (Main Study)	<ul style="list-style-type: none"> <li>• Characteristics of Risk, Hazard, Vulnerability, Capacity</li> <li>• Risk Analysis, Hazard, Vulnerability, Capacity</li> <li>• Formulation of Disaster Risk Management</li> </ul>
Learning purposes of module	Students are able to communicate concepts and formulations on ICT-based visual, verbal and written disaster risk management
Learning Purposes of Group Presentation	<ul style="list-style-type: none"> <li>• Students are able to understanding of disaster risk in handling certain disasters.</li> <li>• Students are able to give proposals according to the profession in certain disaster reduction.</li> <li>• Students are able to understand BNPB approaches.</li> <li>• Students are able to apply planning in one case of a disaster</li> </ul>
Depth level of assignment	C5 (interpreting, interpreting, describing impact)
Detail of Group Presentation	Description of task and evaluation criteria attached below

Evaluation I is a Group Presentation with an assessment weight of 20%

**A. PURPOSE**

The second evaluation was in the form of a GROUP TASK where students were asked to compile reviews and discuss process material and important elements in particular disaster risk reduction. **The purposes of this assignment are:**

- Students are able to understanding of disaster risk in handling certain disasters.
- Students are able to give proposals according to the profession in certain disaster reduction.
- Students are able to understand BNPB approaches.
- Students are able to apply planning in one case of a disaster.

**B. TASK MATERIALS**

Task material includes:

- Description of the selected disaster event.
- Explanation of threats to the disaster.
- Explanation of vulnerability to the disaster.
- Explanation of capacity for the disaster.
- BNPB (National Board for Disaster Risk Management) planning model

**C. IMPLEMENTATION OF TASKS**

- Tasks done individually are submitted to the **4-7th WEEK**.
- Students are advised to conduct consultation/assistance to the teaching lecturer before drafting/finalizing the assignment.
- Tasks are made in Doc and PPT formats.
- Softcopy of tasks in the "pdf" format and together with the referred journals are collected in USB form collectively (1 class 1 USB). Organizing files in USB as follows: one student one folder by name and NRP (Student ID Number)

Dimension	Very Good	Good	Average	Bad	Very Bad
<b>Technique Of Presentation</b>	The presentation was organized with showing fact that <b>supported by example that already analyzed based on concept</b>	The presentation was organized and <b>showing fact that make sure to support</b> the conclusions	The presentation has to focus point and showing some evidence that support the conclusions	The presentation has to focus point, <b>but evidence were insufficient</b> to used for make a conclusions.	<b>There's no specific organization.</b> Facts are not used to support their statement
	86-100	76-85	66-75	56-65	0-55
<b>Content</b>	Content that <b>can be inspire</b> listener to develop their minds.	Has an accurate and <b>complete presentation.</b> The listener <b>has a new knowledge</b> about that topics	<b>Has an accurate content but not complete.</b> The listener less active to discuss that topics	<b>The content was less accurate</b> because there's no data and fact that supports it	<b>The content are not accurate and very common.</b> Listener didn't get any lessons from this presentation
	86-100	76-85	66-75	56-65	0-55
<b>Discussion</b>	The right argumentation with example or the fact	The right Argumentation but lacking of the fact	The lack of argumentation but have fact or example	The lack of argumentation and not have example	Argumentation is wrong

**EVALUATION PLAN AND EVALUATION ASSESSMENT PLAN II  
DISASTER GAME**

<b>Course Name</b>	Disaster Risk Management
Credit	3 credits
Module (Main Study)	<ul style="list-style-type: none"> <li>• Characteristics of Risk, Hazard, Vulnerability, Capacity</li> <li>• Risk Analysis, Hazard, Vulnerability, Capacity</li> <li>• Formulation of Disaster Risk Management</li> </ul>
Learning purposes of module	Students are able to apply the concept of disaster risk management through disaster game simulation
Learning Purposes of Group Presentation	<ul style="list-style-type: none"> <li>• Students are able to understand the concept of disaster risk and its elements.</li> <li>• Students are able to understand management approaches and procedures.</li> <li>• Students are able to apply a disaster risk management approach in certain cases. Students can make risk reduction formulations</li> <li>• Students are able to understand the concept of disaster risk and its elements.</li> <li>• Students are able to understand management approaches and procedures.</li> <li>• Students are able to apply a disaster risk management approach in certain cases. Students can make risk reduction formulations</li> </ul>
Depth level of assignment	C5 (construing, interpreting, describing impact)
Detail of Group Presentation	Description of task and evaluation criteria attached below

Evaluation II is a mid-semester Individual assignment (Disaster Game) with an assessment weight of 30%

**A. PURPOSE**

The second evaluation was in the form of an INDIVIDUAL TASK where students were asked to answer certain questions in disaster risk reduction. The purposes of this assignment are:

- Students are able to understand the concept of disaster risk and its elements.
- Students are able to understand management approaches and procedures.
- Students are able to apply a disaster risk management approach in certain cases.
- Students can make risk reduction formulations

**B. TASK MATERIALS** Task

material includes:

- Description of the selected disaster event.
- Give a resume lesson learned from the simulation based on:
  - approach elements in disaster risk reduction
  - what BNPB approaches are taken in disaster risk reduction.

**C. IMPLEMENTATION OF TASKS**

- Tasks done in groups are handed over to the 8th WEEK.
- Tasks are made in ".doc" format.

Softcopy of tasks in the format ".pdf" and together with the journals referred to are collected in USB form collectively (1 class 1 USB). Organizing files in USB as follows: one student one folder by name and NRP (Student ID Number)

## EVALUATION PLAN AND EVALUATION ASSESSMENT PLAN III

### SIMULATION OF GHG CALCULATOR

Course Name	Disaster Risk Management
Credit	3 credits
Module (Main Study)	<ul style="list-style-type: none"> <li>• Analysis of Emissions and Impacts of Climate Change</li> <li>• Formulation of Management of Disaster Risk and Climate Change</li> </ul>
Learning purposes of module	<ul style="list-style-type: none"> <li>• Students are able to calculate GHG emissions in each GHG contributing sector and make projections</li> <li>• Students are able to compile GHG Emission Profiles in districts/cities</li> </ul>
Learning Purposes of Group Presentation	<ul style="list-style-type: none"> <li>• Students are able to inventory data for the calculation of GHG emissions from one or all AFOLU sectors.</li> <li>• Students are able to calculate GHG emissions and interpret the results of calculations</li> <li>• Students are able to describe the estimated effects of climate change</li> </ul>
Depth level of Assignment	C5 (construing, interpreting, and describing impact)
Detail of Group Presentation	Tasks are carried out in groups, at least 3 students with a weight of 20%

#### **Purpose:**

Test competencies in basic understanding of greenhouse gases (GHG), GHG-producing source activities, GHG emission calculations from AFOLU (Agriculture, Forestry and Other Land Uses) sectors in districts/cities.

#### **Competence:**

1. Students are able to explain the sources of GHG emissions.
2. Students are able to inventory data for the calculation of GHG emissions from one or all AFOLU sectors.
3. Students are able to calculate GHG emissions and interpret the results of calculations.
4. Students are able to describe the estimated impact of climate change from the results of the analysis in point 3.

#### **Description:**

provisions of Evaluation III:

- Students inventory data relating to GHG emission source activities by selecting one or several sectors, based on AFOLU (Agriculture, Forestry and Other Land Uses) in the district/city.
- Input data can be obtained from primary and secondary data
- Students simulate GHG emission calculations through the GHG calculator
- Presenting simulation results

#### **Assignment rules:**

Collection of tasks in the form of PPT files to email: fa.ummi99@gmail.com at the 14th week at 16.00 WIB.

**Assessment criteria:**

1. Data inventory completely based on data series (minimum 3 years) and selected sector scope.
2. Accuracy in the preparation of survey designs and explanation of emission calculation methods
3. The common thread from the data obtained in the general description with the results of the calculation of emissions (depth of interpretation of the data and results of analysis)
4. Detail criteria for range values are explained below:

Sub Chapter	86-100	76-85	66-75	56-65	0-55
Methodology	Data that is needed, how to obtain data and techniques for processing the the right data and explained in detail	Data needed and how to get the right data but the technique of processing data is not right	How to get the right data, the data that you need is less, the data processing technique is not right	Data needed, how to obtain data and data processing techniques is not right	Data needed, how to obtain data and data processing techniques are not appropriate
Data and Analysis	Complete data, precise and comprehensive analysis with appropriate interpretations	Complete data, precise and comprehensive analysis without interpretation	Complete data with inappropriate analysis	Complete data but not suitable and without analysis	Data is incomplete and not suitable and without analysis

**EVALUATION PLAN AND EVALUATION ASSESSMENT PLAN III DEVELOPMENT  
ADAPTATION OF CLIMATE CHANGE OR MITIGATION CONCEPT**

<b>Course Name</b>	Disaster Risk Management
Credit	3 credits
Module (Main Study)	<ul style="list-style-type: none"> <li>• Analisa Emisi dan Dampak Perubahan Iklim</li> <li>• Formulasi Pengelolaan Risiko Bencana dan Perubahan Iklim</li> </ul>
Learning purposes of module	Students are able to conceptualize mitigation or adaptation approaches
Learning Purposes of Group Presentation	Students arrange appropriate handling of climate change impacts through climate change mitigation/adaptation approach
Depth level of Assignment	C6 (Arranging climate change mitigation/adaptation approaches)
Detail of Group Presentation	Continued from the third assignment, with a weight of 30%

**Purpose**

Develop concepts of mitigation or adaptation approaches

**Competence**

1. Students are able to compile GHG Emission Profiles in districts/cities
2. Students make appropriate recommendations through climate change mitigation / adaptation approach

**Description**

The output of this assignment is the Final Report with the substance of the report consisting of:

1. Introduction Chapter: contains at least the background, goals, and objectives, scope of the study area (accompanied by maps) and report outlines.
2. Chapter Theory Review
3. Chapter of Methodology: contains an explanation of methods in the calculation of emissions and survey design (any data, source of data, the output of data obtained)
4. Chapters of Data and Analysis: general description, analysis, and discussion
5. Closing Chapter: contains conclusions and recommendations.

**Assignment rules:**

Collection of tasks in the form of PPT files to email: fa.ummi99@gmail.com at the 16th week at 16.00 WIB.

**Criteria for Evaluation:**

Sub Chapter	86-100	76-85	66-75	56-65	0-55
Introduction	Empirical and theoretical facts are very complete and very relevant, the urgency of the problem is high	Complete and relevant empirical and theoretical facts, but the urgency of the the problem is lacking	Empirical and theoretical facts exist but are irrelevant and not urgent	Empirical and theoretical facts are incomplete, irrelevant, not urgent	There are no empirical and theoretical facts and cannot formulate problems
Literature Review	The substance of the complete literature review by mentioning more than the specified reference, the correct synthesis of the library	complete substance of the literature review in accordance with the TOR, the synthesis of the appropriate library	Less complete but according to the topic of the task, the synthesis of the library is not quite right	Less complete and not in accordance with the topic of the assignment , improper synthesis of the library	Incomplete and incompatible and there is no library synthesis
Methodology	Data that is needed, how to obtain data and techniques for processing the the right data and explained in detail	Data needed and how to get the right data but the technique of processing data is not right	How to get the right data, the data that you need is less, the data processing technique is not right	Data needed, how to obtain data and data processing techniques is not right	Data needed, how to obtain data and data processing techniques are not appropriate
Data and Analysis	Complete data, precise and comprehensive analysis with appropriate	Complete data, precise and comprehensive analysis without interpretation	Complete data with inappropriate analysis	Complete data but not suitable and without analysis	Data is incomplete and not suitable and without analysis
Conclusion	The quality of conclusions are appropriate according to the results of the analysis and answers the research objectives	The quality of conclusions are appropriate according to the results of the analysis but does not answer the research objectives	The quality of conclusions are appropriate according to the results of the analysis but does not answer the research objectives	Conclusion quality is not in accordance with the analysis and does not answer the research objectives	The quality of conclusions is very inappropriate