



**INSTITUT TEKNOLOGI SEPULUH NOPEMBER
FACULTY OF CIVIL, PLANNING AND GEO ENGINEERING
DEPARTMENT OF GEOMATICS ENGINEERING
UNDERGRADUATE PROGRAM**

Document Code

SEMESTER LEARNING PLAN (SLP)

COURSE NAME		CODE	COURSE GROUP		CREDITS (SKS)		SEMESTER	Date of Preparation
Geovisualization and Thematic Cartography		CM234992	Geoinformatics		T=2	P=0	Elective Course	-
AUTHORIZATION		SLP Developer		Course Group Coordinator		Head of Study Program		
		Agung Budi Cahyono, S.T., M.Sc., DEA.		Agung Budi Cahyono, S.T., M.Sc, DEA		Putra Maulida, ST, MT, Ph.D		
Learning Outcomes (LO)	Expected Learning Outcomes (ELO) that Imposed in the Course							
	ELO-6	Able to identify, formulate, analyze and solve problems in the fields of Geodesy and Surveying, Hydrography, Photogrammetry and Remote Sensing, as well as Geospatial and Land Information.						
	ELO-7	Able to perform spatial data acquisition using modern measurement methods, geospatial data processing, using industry standard software, and making standard designs and analyses in the fields of Geodesy and Surveying, Hydrography, Photogrammetry and Remote Sensing, as well as Geospatial and Land Information.						
	Course Learning Outcomes (CLO)							
	CLO-1	Students are able to explain the concept of thematic cartography						
	CLO-2	Students are able to apply cartographic concepts in making thematic maps						
	CLO-3	Students are able to explain the concept of geovisualization and apply it to cartography						
	CLO-4	Students are able to apply and solve problems based on theoretical and empirical						

		Matrix ELO – CLO					
		CPMK		ELO-6		ELO-7	
		CLO-1		V		V	
		CLO-2		V		V	
		CLO-3		V		V	
		CLO-4		V		V	
Course Description		Thematic Cartography and Geovisualization" within the field of Geomatics is a specialized subject that focuses on the application of geospatial technologies to represent and analyze thematic information through maps and visualizations. Geomatics is an interdisciplinary field that integrates various technologies, including surveying, GIS, remote sensing, and cartography, to capture, manage, analyze, and display spatial data. The thematic cartography and geovisualization aspect of Geomatics is crucial for effectively communicating complex spatial information related to specific themes or topics.					
Course Materials							
References		Main:					
		Additional :					
		-					
Lecturer							
Prerequisite							
Class/ Week	Lesson Learning Outcome (Sub-CLO)	Evaluation		Forms of Learning, Learning methods,Student Assignments/Task, [Estimated Time]		Learning Materials [References]	Weight (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1-2	Introduction, review and development of Cartography in the interdisciplinary geospatial field.		1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [1 x 50'] 2. Discussion [1 x 50']			10

3 – 4	Specific advanced Cartography techniques include symbolization, color coding, and map design principles adapted to represent thematic information effectively.		1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [2 x 50'] 2. Discussion [1 x 50'] 3. Task [1 x 50']			10
5	The strategy for creating thematic maps based on the nature of the data and themes involves selecting map types that suit statistical data, such as choropleth, isarithmic, and dasymetric mapping to represent various types of thematic information.		1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [2 x 50'] 2. Discussion [2 x 50']			10
6	Thematic mapping using cartograms and flow maps techniques.		1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [2 x 50'] 2. Discussion, Task [1 x 50'] 3. Response/Exercise [1 x 50']			10
7	Thematic mapping with multivariate techniques including the use of bivariate and cluster analysis.		1. Completeness of the material Depth of explanation and effectiveness of communication	1. Lecture [2 x 50'] 2. Discussion, Task [1 x 50'] Response/Exercise [1 x 50']			10
8							50
9 – 10	Geovisualization concepts and techniques of spatial data		1. Completeness of the material	1. Lecture [2 x 50'] 2. Discussion, Task [1 x 50'] 3. Response [1 x 50']			20

			2. Depth of explanation and effectiveness of communication				
11 – 12	Visualizing Terrain concepts and techniques		1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [2 x 50'] 2. Discussion, Task [1 x 50'] 3. Response/exercise [1 x 50']			10
13 – 14	Map Animation		1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [2 x 50'] 2. Discussion, Task [1 x 50'] 3. Response/exercise [1 x 50']			10
15	Virtual Environments and Augmented Reality		1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [1 x 50'] 2. Discussion, Task [1 x 50']			10
16	Final Semester Evaluation / Final Semester Examination						100