



**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
Geospatial Industry		CM234940	Geoinformatics		T=1	P=1	Elective Course	-
AUTHORIZATION		SLP Developer		Course Group Coordinator			Head of Study Program	
		Nurwatik, S.T., M.Sc.		Agung Budi Cahyono, S.T., M.Sc., DEA.			Putra Maulida, S.T., M.T., Ph.D	
Learning Outcomes (LO)	Expected Learning Outcomes (ELO) that Imposed in the Course							
	ELO-2	Able to study and utilize science and technology in order to apply it to the areas of expertise in Geodesy and Surveying, Hydrography, Photogrammetry, and Remote Sensing, as well as Geospatial and Land Information, and able to make appropriate decisions from the results of their own work or group work in the form of a final project report or other forms of learning activities whose outcomes are equivalent to the final project through logical, critical, systematic and innovative thinking.						
	ELO-12	Able to apply the concepts of management, entrepreneurship, the latest technology-based innovation, sustainable, and environmentally wise.						
	Course Learning Outcomes (CLO)							
	CLO-1	Able to apply the field of Geodesy Geomatics science to the geospatial industry sector						
	CLO-2	Able to apply technology, innovation and Geospatial information for industry and society						
			Matrix ELO – CLO					
		CPMK	ELO-2	ELO-12				
		CLO-1	V					
		CLO-2		V				

Course Description		In this course, students study the development of science and technology in the current geospatial industry. The geospatial industry is an economic sector that focuses on the collection, management, analysis, and presentation of data related to geographic location or space. This course utilizes spatial data, which includes information about physical objects on the Earth's surface, either in digital form (such as maps) or derived from satellite technology, sensors, and other remote sensing tools. Students will also learn about the application of Geomatics Engineering disciplines (Photogrammetry, Remote Sensing, Surveying and Mapping, GIS, Hydrographic Surveying, Geodesy, and Geodynamics) in the modern geospatial industry (government agencies/companies) in a professional and responsible manner.					
Course Materials		1. Geospatial Concepts and the Development of the Geospatial Industry 2. 3. Sources of Spatial and Non-Spatial Data in the Geospatial Industry 4. 5. Thematic Data Visualization 6. 7. Applications of Spatial and Non-Spatial Data in the Geospatial Industry Across Various Sectors					
References		Main: 1. Burrough P.A, Principle of GIS for Land Resources Assessment, Oxford, 1998 2. Christopher Jones, GIS and Computer Cartography, Longman England, 1999 3. Aronoff S., Geographic information systems: a management perspective. WDL Publications, 1989. 4. Kang-Tsung Chang, Introduction to Geogpahic Information Systems, Fourth Edition. Singapore. Mc Graw Hill.2008 Additional : Law of the Republic of Indonesia Number 4 of 2011 concerning Geospatial Information.					
Lecturer		1. Hepi Hapsari Handayani, ST, MSc, PhD 2. Nurwatik, ST, MSc Nafisatus Sania Irbah, ST, MT					
Prerequisite		-					
Class/ Week	Lesson Learning Outcome (Sub-CLO)	Evaluation		Forms of Learning, Learning methods, Student Assignments/Task, [Estimated Time]		Learning Materials [References]	Weight (%)
		Indicators	Criteria and Form	Offline	Online		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1-2	Able to explain the concepts and development of the geospatial industry.	Accuracy in explaining the concepts and development of	1. Completeness of the material 2. Depth of explanation and	1. Kuliah [2 x 50'] 2. Diskusi [2 x 50'] 3. Tugas [1 x 50'] 4. Presentasi [1 x 50']		Geospatial Information Law, Development of the Geospatial Industry	20

		the geospatial industry.	effectiveness of communication				
3-7	Able to apply spatial and non-spatial data processing systems.	Accuracy in explaining and applying spatial and non-spatial data processing systems.	1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Kuliah [5 x 50'] 2. Diskusi [5 x 50'] 3. Tanya jawab [5 x 50'] 4. Tugas [4 x 50'] 5. Presentasi [1 x 50']		Sources of spatial data, spatial data structure, data processing methods, and spatial analysis models	30
8	Midterm Evaluation / Midterm Exam						50
9-12	Able to apply industry-standard technology.	Accuracy in applying industry-standard technology.	1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Kuliah [4 x 50'] 2. Tanya Jawab [4 x 50'] 3. Diskusi [2 x 50'] 4. Demo [2 x 50']		Technology in the Geospatial Industry	30
13-15	Able to write scientific reports related to activities in the geospatial industry.	Completeness of scientific reports related to activities in the geospatial industry.	1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Kuliah [3 x 50'] 2. Tanya jawab [3 x 50'] 3. Tugas [1 x 50'] 4. Presentasi [2 x 50']		Project reports and scientific reports (progress and final)	20
16	Final Semester Evaluation / Final Semester Examination						100