



**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
Land Information System	CM234952	Surveying and Cadastral	T=2	P=-	Elective Course	-
AUTHORIZATION	SLP Developer		Course Group Coordinator		Head of Study Program	
	Udiana Wahyu Deviantari, S.T., M.T.		Yanto Budisusanto, ST, M.Eng		Putra Maulida, ST, MT, 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-6	Able to identify, formulate, analyze and solve problems in the fields of geodesy, surveying, hydrographic, remote sensing, photogrammetry, and cadastral.				
	ELO-12	Able to be responsible to the community and adhere to professional ethics in solving technical problems in the fields of geodesy, surveying, hydrographic, remote sensing, photogrammetry, geographic information systems, and cadastral.				
	ELO-13	Able to apply the concepts of management, entrepreneurship, the latest technology-based innovation, sustainable, and environmentally wise.				
	Course Learning Outcomes (CLO)					
	CLO-1	Students have knowledge of the main objectives of information systems science.				
	CLO-2	Students have knowledge of the basic theory and methods of information systems for land				
	CLO-3	Students have experience in making simple applications for land use.				
	CLO-4	Students have experience in processing land data with information systems				
CLO-5	Students can present and analyze information system results quantitatively and visually.					

	<table border="1"> <thead> <tr> <th colspan="5">Matrix ELO - CLO</th> </tr> <tr> <th>CPMK</th> <th>ELO-2</th> <th>ELO-6</th> <th>ELO-11</th> <th>ELO-12</th> </tr> </thead> <tbody> <tr> <td>CLO-1</td> <td>V</td> <td>V</td> <td>V</td> <td></td> </tr> <tr> <td>CLO-2</td> <td></td> <td>V</td> <td>V</td> <td>V</td> </tr> <tr> <td>CLO-3</td> <td></td> <td>V</td> <td>V</td> <td>V</td> </tr> <tr> <td>CLO-4</td> <td></td> <td></td> <td>V</td> <td>V</td> </tr> <tr> <td>CLO-5</td> <td>V</td> <td>V</td> <td>V</td> <td>V</td> </tr> </tbody> </table>	Matrix ELO - CLO					CPMK	ELO-2	ELO-6	ELO-11	ELO-12	CLO-1	V	V	V		CLO-2		V	V	V	CLO-3		V	V	V	CLO-4			V	V	CLO-5	V	V	V	V
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Course Description	In this course students will be introduced to information system about land (SIP). SIP as per the definition of FIG (Federation de Geometres / The International Federation of Surveyors) is a means / tool for decision making both legal, administrative and economic and helps for planning and development. In this lecture, we will also learn about databases in land parcels that are spatially referenced (having locations) for a particular area, and on the other hand, procedures and techniques for systematic data collection, renewal, processing and distribution. It is expected that students can understand the land information system is the same spatial reference system for all data in the system that allows the relationship between data in the system with other data that is still related to land.																																			
Course Materials	<ol style="list-style-type: none"> 1. Land Information System Concepts 2. Land Information System Equipment and Legal Foundation 3. Land Cadastre Data and Information Requirement 4. Basics of php/html, CMS and Map Service 5. Compilation Component of Land Information System 6. Land Information System Design 7. Information Systems Application for Land Cadastre 8. Analysis of Land System Design 																																			
References	<p>Main:</p> <ol style="list-style-type: none"> 1. Dale, R.F. and J.D. McLaughlin, 1988. Land Information Management. Clarendon Press, Oxford 2. Dueker, K.J. 1987. Multipurpose Land Information Systems: Technical, Economic, and Institutional Issues. PE&RS, 53(10): 1361-1366. 3. 53(10): 1361-1366. 4. Tuladhar, A.M. 2004. Parcel-based Geo-Information System, ITC-Enchede. <p>Additional :</p> <ol style="list-style-type: none"> 1. Suharno dan Wahyuni, 2015. Sistem Informasi Pertanahan - STPN, Jogjakarta 2. Sistem Informasi Pertanahan, Land Edisi 12, Agustus - Oktober 2009 																																			
Lecturer	1. Udiana Wahyu Deviantari, S.T., M.T.																																			
Prerequisite	Geographic Information Systems, Land Administration																																			

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	Basic understanding of Information Systems Land Data Concept Legal Foundation		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	Relations of Land Information Systems with Land Politics, Land Management, and Land Administration		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']			20
4 - 5	Relational Data Model Techniques Entity Relationship Technique		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	DBMS Normalization Techniques: define, create, maintain, and control access to databases		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	Types of land spatial data Types of land textual data		1. Completeness of the material	1. Lecture [2 x 50'] 2. Discussion, Task [1 x 50'] 3. Response/Exercise [1 x 50']			

			2. Depth of explanation and effectiveness of communication				
8	Midterm Evaluation / Midterm Exam						50
9 – 10	1. Lay out with CMS 2. Fundamentals of programming languages (php, html) 3. Map Service (map server, Stat Map)		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 [1 x 50']			20
11 – 12	1. Planning 2. Analysis 3. Design 4. Development		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	Utilization of the KKP Application and GeoKKP		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	Identify Understand Analyze Report		1. Completeness of the material 2. Depth of explanation and effectiveness of	1. Lecture [1 x 50'] 2. Discussion, Task [1 x 50']			10

			communicatio n				
16	Final Semester Evaluation / Final Semester Examination						100