



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

**Document
Code**

SEMESTER LEARNING PLAN (SLP)

COURSE NAME	CODE	COURSE GROUP	CREDITS (SKS)		SEMESTER	Date of Preparation
Research Methodology	CM234734	-	T=2	P=0	7	-
AUTHORIZATION	SLP Developer		Course Group Coordinator		Head of Study Program	
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Learning Outcomes (LO)	Expected Learning Outcomes (ELO) that Imposed in the Course					
	ELO-8	Able to compile scientific reports and provide solutions based on leadership, creativity and communication skills as well as being responsible for the work done.				
	ELO-11	Able to be responsible to the community and adhere to professional ethics in solving technical problems in the fields of Geodesy and Surveying, Hydrography, Photogrammetry and Remote Sensing also Geographic Information Systems and Cadastral.				
	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 compile scientific reports based on research steps that are in accordance with the topic or problem of the Final Project				
	CLO-2	Able to be responsible to the community in solving engineering problems in the fields of geodesy, surveying, hydrography, remote sensing, photogrammetry, geographic information systems, and cadastral in accordance with professional ethics				
	CLO-3	Able to carry out research in the fields of geodesy, surveying, hydrography, remote sensing, photogrammetry, geographic information systems, and cadastral in a sustainable and environmentally sound manner.				

	<p>Matrix ELO-CLO</p> <table border="1"> <thead> <tr> <th>CLO</th> <th>ELO-8</th> <th>ELO-11</th> <th>ELO-12</th> </tr> </thead> <tbody> <tr> <td>CLO-1</td> <td>V</td> <td></td> <td></td> </tr> <tr> <td>CLO-2</td> <td></td> <td>V</td> <td></td> </tr> <tr> <td>CLO-3</td> <td></td> <td></td> <td>V</td> </tr> </tbody> </table>	CLO	ELO-8	ELO-11	ELO-12	CLO-1	V			CLO-2		V		CLO-3			V
CLO	ELO-8	ELO-11	ELO-12														
CLO-1	V																
CLO-2		V															
CLO-3			V														
Course Description	This subject aims to equip students with knowledge, understanding and application of various research methods in the context of preparing a final project (TA). Lectures discuss various types of research, scientific research steps ranging from topic determination, problem identification, literature review, problem focus, variable determination, design and methods, data collection techniques, analysis and conclusions. The writing in the proposal and TA book is the learning achievement of this course.																
Course Materials	<ol style="list-style-type: none"> 1. Types of research 2. Research steps 3. Identify the problem 4. Theoretical foundations and hypothesis formulation 5. Research variables 6. Design and research methods 7. Data collection techniques 8. Proposal structure and Final Project (TA) report 9. Presentation techniques 																
References	<p>Main:</p> <ol style="list-style-type: none"> 1. Jurusan Teknik Geomatika ITS. 2013. Aturan Penyusunan Tugas Akhir. Institut Teknologi Sepuluh Nopember. Surabaya 2. Kantor Penjaminan Mutu ITS. 2017. Panduan Tugas Akhir. Institut Teknologi Sepuluh Nopember. Surabaya 3. Patton, Michael Quinn. 1990. Qualitative Evaluation and Research Methods (Second Edition). Sage Publications, Newbury Park, London, New Delhi. 4. Sukardi, 2004. Metodologi Penelitian Pendidikan, Percetakan Bumi Aksara. Jakarta. <p>Additional:</p> <ol style="list-style-type: none"> 1. Saifuddin Azwar, 1999, Metode Penelitian, Percetakan Pustaka Pelajar:Yogyakarta 2. Colorado State University (CSU). Undated. An Introduction to Research Process. http://writing.colostate.edu/references 																
Lecturer																	
Prerequisite	Practical Work																

Class/ Week	Lesson Learning Outcome (Sub-CLO)	Valuation		Learning Forms, Learning Methods, Student Assignments /Task, [Estimated Time]		Learning Materials [References]	Weight (%)
		Indicators	Criteria	Offline	Online		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Students know and are able to explain the definition of Research Methodology		1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [1 x 45'] 2. Discussion [1 x 45']		Introduction to Research Methodology	
2 – 3	Students know and are able to explain the type of research		1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [2 x 45'] 2. Discussion [2 x 45']		Types of research	
4 – 5	Students know and are able to identify problems in research		1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [2 x 45'] 2. Discussion [2 x 45']		Identify the problem	
6 – 7	Students are able to make theoretical foundations and formulate hypotheses		1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [2 x 45'] 2. Discussion [2 x 45']		Theoretical foundations and hypothesis formulation	
8	Midterm Evaluation / Midterm Exam						
9	Students know and are able to explain research variables		1. Completeness of the material	1. Lecture [1 x 45'] 2. Discussion [1 x 45']		Research variables	

			2. Depth of explanation and effectiveness of communication				
10 – 11	Students know and are able to make designs and research methods		1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [2 x 45'] 2. Discussion [2 x 45']		Design and research methods	
12	Students know and are able to explain data collection techniques		1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [1 x 45'] 2. Discussion [1 x 45']		Data collection techniques	
13 – 14	Students know and are able to compile proposals and Final Project reports		1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [2 x 45'] 2. Discussion [2 x 45']		Proposal structure and Final Project (TA) report	
15	Students know and are able to perform presentation techniques		1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [1 x 45'] 2. Discussion [1 x 45']		Presentation techniques	
16	Final Semester Evaluation / Final Semester Examination						100