



**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	
		Dr. Filsa Bioresita, S.T., M.T.		-		Putra Maulida, S.T., M.T., Ph.D.	
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.					

	<table><tr><th colspan="4">Matrix ELO-CLO</th></tr><tr><td>CLO</td><td>ELO-8</td><td>ELO-11</td><td>ELO-12</td></tr><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></table>	Matrix ELO-CLO				CLO	ELO-8	ELO-11	ELO-12	CLO-1	V			CLO-2		V		CLO-3			V
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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	<div>1. Types of research</div> <div>2. Research steps</div> <div>3. Identify the problem</div> <div>4. Theoretical foundations and hypothesis formulation</div> <div>5. Research variables</div> <div>6. Design and research methods</div> <div>7. Data collection techniques</div> <div>8. Proposal structure and Final Project (TA) report</div> <div>9. Presentation techniques</div>																				
References	<div><div>Main:</div><div><div>1. Jurusan Teknik Geomatika ITS. 2013. Aturan Penyusunan Tugas Akhir. Institut Teknologi Sepuluh Nopember. Surabaya</div><div>2. Kantor Penjaminan Mutu ITS. 2017. Panduan Tugas Akhir. Institut Teknologi Sepuluh Nopember. Surabaya</div><div>3. Patton, Michael Quinn. 1990. Qualitative Evaluation and Research Methods (Second Edition). Sage Publications, Newbury Park, London, New Delhi.</div><div>4. Sukardi, 2004. Metodologi Penelitian Pendidikan, Percetakan Bumi Aksara. Jakarta.</div></div><div><div>Additional:</div><div><div>1. Saifuddin Azwar, 1999, Metode Penelitian, Percetakan Pustaka Pelajar:Yogyakarta</div><div>2. Colorado State University (CSU). Undated. An Introduction to Research Process. <a href="http://writing.colostate.edu/references">http://writing.colostate.edu/references</a></div></div></div></div>																				
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	Accuracy in explaining the definition of Research Methodology	1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [1 x 50'] 2. Discussion [1 x 50']		Introduction to Research Methodology	5
2 – 3	Students know and are able to explain the type of research	Accuracy in explaining the type of research	1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [2 x 50'] 2. Discussion [2 x 50']		Types of research	10
4 – 5	Students know and are able to identify problems in research	Accuracy in identifying problems in research	1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [2 x 50'] 2. Discussion [2 x 50']		Identify the problem	10
6 – 7	Students are able to make theoretical foundations and formulate hypotheses	Accuracy in making theoretical foundations and formulating hypotheses	1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [2 x 50'] 2. Discussion [2 x 50']		Theoretical foundations and hypothesis formulation	15
8	<b>Midterm Evaluation / Midterm Exam</b>						<b>40</b>
9	Students know and are able to explain research variables	Accuracy in	1. Completeness of the material	1. Lecture [1 x 50'] 2. Discussion [1 x 50']		Research variables	10

			2. Depth of explanation and effectiveness of communication				
<b>10 – 11</b>	Students know and are able to make designs and research methods	Accuracy in making designs and researching methods	1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [2 x 50'] 2. Discussion [2 x 50']		Design and research methods	10
<b>12</b>	Students know and are able to explain data collection techniques	Accuracy in explaining data collection techniques	1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [1 x 50'] 2. Discussion [1 x 50']		Data collection techniques	10
<b>13 – 14</b>	Students know and are able to compile proposals and Final Project reports	Accuracy in compiling proposals and Final Project reports	1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [2 x 50'] 2. Discussion [2 x 50']		Proposal structure and Final Project (TA) report	10
<b>15</b>	Students know and are able to perform presentation techniques	Accuracy in performing presentation techniques	1. Completeness of the material 2. Depth of explanation and effectiveness of communication	1. Lecture [1 x 50'] 2. Discussion [1 x 50']		Presentation techniques	20
<b>16</b>	<b>Final Semester Evaluation / Final Semester Examination</b>						<b>100</b>