



**Universitas Negeri Surabaya**  
**Faculty of Engineering,**  
**Building Engineering Education Undergraduate Study Program**

Document Code

**SEMESTER LEARNING PLAN**

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
RESEARCH METHODOLOGY	8320503288		T=3	P=0	ECTS=4.77	4	July 17, 2024
AUTHORIZATION	SP Developer		Course Cluster Coordinator			Study Program Coordinator	
	Dr. Nurmi Frida Dorintan Bertua Pakpahan, M.Pd		.....			Dr. Gde Agus Yudha Prawira Adistana, S.T., M.T.	

Learning model	Project Based Learning																																																		
Program Learning Outcomes (PLO)	PLO study program which is charged to the course																																																		
	Program Objectives (PO)																																																		
	<b>PO - 1</b> Able to understand the basic concept of scientific research as systematic, controlled, empirical research through preparing research proposals based on the principle of novelty in the field of building engineering education with independent, high-quality, measurable performance and avoiding plagiarism, as well as presenting it with a responsible attitude.																																																		
	PLO-PO Matrix																																																		
	<table border="1" style="margin-left: 40px;"> <tr><td>P.O</td></tr> <tr><td>PO-1</td></tr> </table>	P.O	PO-1																																																
P.O																																																			
PO-1																																																			
PO Matrix at the end of each learning stage (Sub-PO)	<table border="1" style="margin-left: 40px;"> <tr> <th rowspan="2">P.O</th> <th colspan="16">Week</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th><th>11</th><th>12</th><th>13</th><th>14</th><th>15</th><th>16</th> </tr> <tr> <td>PO-1</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>	P.O	Week																1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	PO-1																
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PO-1																																																			

**Short Course Description** Lecture material consists of the relationship between research activities in the dimensions and development of science and technology, research steps which include preparing the background of the problem, formulation of the problem, formulation of objectives and benefits, assumptions and development of theoretical studies, formulation of hypotheses, types and design of research, population and samples, data collection methods and development of data collection tools, data analysis methods, discussion of analysis results, drawing conclusions, and compiling abstracts and scientific articles.

References	<p><b>Main :</b></p> <ol style="list-style-type: none"> <li>Suharsimi Arikunto. 2015. Prosedur Penelitian (Suatu Pendekatan Praktek). Jakarta: Rineka Cipta.</li> <li>Tuckman, Bruce W. 1978. Conducting Educational Research . NewYork: Harcourt Brace Jovanovich Pub..</li> <li>Sevilla, Consuelo G., dkk., 1993. Pengantar Metode Penelitian, terjemahan Alimudin Tuwu. Jakarta: Universitas Indonesia</li> <li>Sugiyono. 2011. Metode Penelitian Kombinasi . Bandung: Penerbit Alfabeta.</li> <li>Sujana. 1995. Desain dan Analisis Eksperimen . Bandung: Tarsito.</li> </ol> <p><b>Supporters:</b></p> <ol style="list-style-type: none"> <li>Pakpahan, Nurmi Frida D.B., 2021. Modul Metodologi Penelitian Seri: Penelitan Tindakan Kelas, Surabaya</li> </ol>
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**Supporting lecturer** Dr. Nurmi Frida Dorintan Bertua Pakpahan, M.Pd.  
 Prof. Dr. Suparji, S.Pd., M.Pd.  
 Wahyu Dwi Mulyono, S.Pd., M.Pd.

Week-	Final abilities of each learning stage (Sub-PO)	Evaluation		Help Learning, Learning methods, Student Assignments, [ Estimated time]		Learning materials [ References ]	Assessment Weight (%)
		Indicator	Criteria & Form	Offline ( offline )	Online ( online )		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

1	Students are able to explain the meaning and steps in scientific research in building engineering education	<ol style="list-style-type: none"> <li>1.Explain the definition of scientific research</li> <li>2.Describe deductive and inductive thinking as well as scientific approaches in research as the attitude of a researcher</li> <li>3.Identify the characteristics of scientific research in education</li> <li>4.Describe the steps or procedures in research</li> <li>5.Identify the systematics of research proposals and reports</li> <li>6.Describing the various issues and problems in building engineering education that are currently developing is worth researching</li> </ol>	<b>Form of Assessment</b> : Participatory Activities	Learning: Direct and cooperative, questions and answers, discussions, exercises, assignments 3 x 50'			0%
2	Students are able to choose building engineering education problems that are actual and worthy of research, formulate them and create research objectives and research benefits correctly	<ol style="list-style-type: none"> <li>1.Choose an actual research problem that is worthy of research</li> <li>2.Explain in the background that the problem is important to research</li> <li>3.Identify research variables and other components in research</li> <li>4.Formulate the research problem that has been chosen correctly</li> <li>5.Formulate research objectives and research benefits correctly</li> <li>6.Prepare an introduction for a thesis proposal including the background of the problem, problem formulation, research objectives and research benefits.</li> </ol>	<b>Form of Assessment</b> : Participatory Activities, Project Results Assessment / Product Assessment	Learning: Project Based Learning (assignment) 3x 50'		<b>Material:</b> Sevilla, Consuelo G., et al., 1993. Introduction to Research Methods, translated by Alimudin Tuwu. Jakarta: University of Indonesia <b>Library:</b>	0%

3	Students can prepare Chapter 1: introduction to a thesis proposal including: background of the problem, problem formulation, research objectives and benefits of the research.	<ol style="list-style-type: none"> <li>1. Choose an actual research problem that is worthy of research</li> <li>2. Explain in the background that the problem is important to research</li> <li>3. Identify research variables and other components in research</li> <li>4. Formulate the research problem that has been chosen correctly</li> <li>5. Formulate research objectives and research benefits correctly</li> <li>6. Prepare an introduction for a thesis proposal including the background of the problem, problem formulation, research objectives and research benefits.</li> </ol>	<b>Form of Assessment</b> : Participatory Activities, Project Results Assessment / Product Assessment	Learning: Project Based Learning (assignment) 3x 50'		<b>Material:</b> Sevilla, Consuelo G., et al., 1993. Introduction to Research Methods, translated by Alimudin Tuwu. Jakarta: University of Indonesia <b>Library:</b>	0%
4	Students are able to carry out literature reviews using accurate and relevant library sources to produce correct hypotheses	<ol style="list-style-type: none"> <li>1. Define the meaning of literature review and why literature review is important</li> <li>2. Identify the characteristics and uses of theory as well as steps in reviewing the literature</li> <li>3. Explain the meaning of plagiarism, preventing plagiarism, and the consequences of plagiarism</li> <li>4. Select research that is relevant to the research to be carried out</li> <li>5. Formulate research hypotheses correctly based on the framework that has been developed previously</li> </ol>	<b>Form of Assessment</b> : Participatory Activities	Lecture (TM: 3x 50'); Learning: Project Based Learning (assignment)		<b>Material:</b> Sevilla, Consuelo G., et al., 1993. Introduction to Research Methods, translated by Alimudin Tuwu. Jakarta: University of Indonesia <b>Library:</b>	0%

5	Students can prepare Chapter 2: literature review for a thesis proposal including: theoretical studies along with conceptual definitions for each variable, relevant research, framework and hypotheses that are in accordance with applicable principles	<ol style="list-style-type: none"> <li>1. Define the meaning of literature review and why literature review is important</li> <li>2. Identify the characteristics and uses of theory as well as steps in reviewing the literature</li> <li>3. Explain the meaning of plagiarism, preventing plagiarism, and the consequences of plagiarism</li> <li>4. Select research that is relevant to the research to be carried out</li> <li>5. Formulate research hypotheses correctly based on the framework that has been developed previously</li> <li>6. Compiling Chapter 2: literature review for a thesis proposal including: theoretical studies along with conceptual definitions for each variable, relevant research, framework and hypotheses that are in accordance with applicable principles</li> </ol>	<b>Form of Assessment</b> : Participatory Activities	Lecture (TM: 3x 50'); Learning: Project Based Learning (assignment)		<b>Material:</b> Sevilla, Consuelo G., et al., 1993. Introduction to Research Methods, translated by Alimudin Tuwu. Jakarta: University of Indonesia Library:	0%
6	Students are able to differentiate between types of educational research methods and designs and are able to explain the steps in analyzing the data	<ol style="list-style-type: none"> <li>1. Define types of educational research methods and designs</li> <li>2. Identify the characteristics of research methods and designs</li> <li>3. Determining potential feasible issues in educational research designs</li> <li>4. Describe the steps in implementing educational research methods and designs</li> </ol>	<b>Form of Assessment</b> : Participatory Activities, Portfolio Assessment	Lecture (TM: 3x 50'); Learning: Project Based Learning (assignment)			0%
7		<ol style="list-style-type: none"> <li>1. Mention the steps in data collection techniques</li> <li>2. Identify how to select a population/sample or respondents in research</li> <li>3. Determine, select, and assess instruments used in data collection</li> <li>4. Describe the procedures in a data collection setting</li> </ol>	<b>Form of Assessment</b> : Participatory Activities, Portfolio Assessment	Lecture (TM: 3x 50'); Learning: Project Based Learning (assignment)			0%

8	Midterm exam		<p><b>Criteria:</b></p> <ol style="list-style-type: none"> <li>1. Assessments carried out on aspects of attitudes, knowledge and skills include:</li> <li>2. Participation (weight 2): student activity during lectures through observation</li> <li>3. Assignments (weight 3): through individual and group assignments. Values are averaged</li> <li>4. UTS/ Subsummative Test (weight 2): to access all indicators during the half semester through written exams</li> <li>5. UAS/ Summative Test (weight 3): carried out according to schedule and in writing</li> </ol> <p><b>Form of Assessment :</b> Test</p>	Written Exam (3x 50')		0%
9	Students are able to analyze data and interpret it and make conclusions from the results of their research	<ol style="list-style-type: none"> <li>1. Identify the steps in analyzing and interpreting data</li> <li>2. Explain the process of preparing data to be analyzed</li> <li>3. Describe how to interpret data analyst results</li> <li>4. Describe the research results and draw conclusions</li> </ol>	<p><b>Form of Assessment :</b> Participatory Activities, Portfolio Assessment</p>	Lecture (TM: 3x 50'); Learning: Project Based Learning (assignment)		0%
10	Students are able to prepare a thesis proposal including Chapter 1, Chapter 2 and Chapter 3 as well as a bibliography based on the thesis preparation guide at Unesa and present it	<ol style="list-style-type: none"> <li>1. Prepare a research proposal according to the thesis proposal format based on the guidelines for preparing a thesis (scientific work) at Unesa</li> <li>2. Prepare proposals using systematics and writing procedures in accordance with the guidelines</li> <li>3. Demonstrate mastery in preparing a thesis proposal that complies with the provisions</li> <li>4. Demonstrate good ability in presenting a thesis proposal</li> </ol>	<p><b>Form of Assessment :</b> Participatory Activities, Project Results Assessment / Product Assessment</p>	Lecture (TM: 3x 50'); Learning: Project Based Learning (assignment)		0%

11	Students are able to prepare a thesis proposal including Chapter 1, Chapter 2 and Chapter 3 as well as a bibliography based on the thesis preparation guide at Unesa and present it	<ol style="list-style-type: none"> <li>1.Demonstrate mastery in preparing a thesis proposal that complies with the provisions of the thesis preparation guidelines at Unesa</li> <li>2.Demonstrate good ability in presenting a thesis proposal</li> </ol>	<b>Form of Assessment</b> : Participatory Activities	Lecture (TM: 3x 50'); Learning: Project Based Learning (assignment).			0%
12	Students are able to prepare a thesis proposal including Chapter 1, Chapter 2 and Chapter 3 as well as a bibliography based on the thesis preparation guide at Unesa and present it	<ol style="list-style-type: none"> <li>1.Demonstrate mastery in preparing a thesis proposal that complies with the provisions of the thesis preparation guidelines at Unesa</li> <li>2.Demonstrate good ability in presenting a thesis proposal</li> </ol>	<b>Form of Assessment</b> : Participatory Activities	Lecture (TM: 3x 50'); Learning: Project Based Learning (assignment).			0%
13	Students are able to prepare a thesis proposal including Chapter 1, Chapter 2 and Chapter 3 as well as a bibliography based on the thesis preparation guide at Unesa and present it	<ol style="list-style-type: none"> <li>1.Demonstrate mastery in preparing a thesis proposal that complies with the provisions of the thesis preparation guidelines at Unesa</li> <li>2.Demonstrate good ability in presenting a thesis proposal</li> </ol>	<b>Form of Assessment</b> : Participatory Activities	Lecture (TM: 3x 50'); Learning: Project Based Learning (assignment).			0%
14	Students are able to prepare a thesis proposal including Chapter 1, Chapter 2 and Chapter 3 as well as a bibliography based on the thesis preparation guide at Unesa and present it	<ol style="list-style-type: none"> <li>1.Demonstrate mastery in preparing a thesis proposal that complies with the provisions of the thesis preparation guidelines at Unesa</li> <li>2.Demonstrate good ability in presenting a thesis proposal</li> </ol>	<b>Form of Assessment</b> : Participatory Activities	Lecture (TM: 3x 50'); Learning: Project Based Learning (assignment).			0%
15	Students are able to prepare a thesis proposal including Chapter 1, Chapter 2 and Chapter 3 as well as a bibliography based on the thesis preparation guide at Unesa and present it	<ol style="list-style-type: none"> <li>1.Demonstrate mastery in preparing a thesis proposal that complies with the provisions of the thesis preparation guidelines at Unesa</li> <li>2.Demonstrate good ability in presenting a thesis proposal</li> </ol>	<b>Form of Assessment</b> : Participatory Activities	Lecture (TM: 3x 50'); Learning: Project Based Learning (assignment).			0%

16			<b>Criteria:</b> 1. Assessments carried out on aspects of attitudes, knowledge and skills include: 2. Participation (weight 2): student activity during lectures through observation 3. Assignments (weight 3): through individual and group assignments. Values are averaged 4. UTS/ Subsummative Test (weight 2): to access all indicators during the half semester through written exams 5. UAS/ Summative Test (weight 3): carried out according to schedule and in writing 6. Final Grade (NA): (participation grade x2) (assignment grade x 3) (UTS grade x 2) (UAS grade x 3) divided by 10	Written Exam (3x 50')			0%
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**Evaluation Percentage Recap: Project Based Learning**

No	Evaluation	Percentage
		0%

**Notes**

- Learning Outcomes of Study Program Graduates (PLO - Study Program)** are the abilities possessed by each Study Program graduate which are the internalization of attitudes, mastery of knowledge and skills according to the level of their study program obtained through the learning process.
- The PLO imposed on courses** are several learning outcomes of study program graduates (CPL-Study Program) which are used for the formation/development of a course consisting of aspects of attitude, general skills, special skills and knowledge.
- Program Objectives (PO)** are abilities that are specifically described from the PLO assigned to a course, and are specific to the study material or learning materials for that course.
- Subject Sub-PO (Sub-PO)** is a capability that is specifically described from the PO that can be measured or observed and is the final ability that is planned at each learning stage, and is specific to the learning material of the course.
- Indicators for assessing** ability in the process and student learning outcomes are specific and measurable statements that identify the ability or performance of student learning outcomes accompanied by evidence.
- Assessment Criteria** are benchmarks used as a measure or measure of learning achievement in assessments based on predetermined indicators. Assessment criteria are guidelines for assessors so that assessments are consistent and unbiased. Criteria can be quantitative or qualitative.
- Forms of assessment:** test and non-test.
- Forms of learning:** Lecture, Response, Tutorial, Seminar or equivalent, Practicum, Studio Practice, Workshop Practice, Field Practice, Research, Community Service and/or other equivalent forms of learning.
- Learning Methods:** Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, and other equivalent methods.
- Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
- The assessment weight** is the percentage of assessment of each sub-PO achievement whose size is proportional to the level of difficulty of achieving that sub-PO, and the total is 100%.
- TM=Face to face, PT=Structured assignments, BM=Independent study.

