



**Universitas Negeri Surabaya
Vocational Faculty,
D4 Mechanical Engineering Study Program**

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date																																	
Research methodology	2130202039		T=2 P=0 ECTS=3.18	5	July 17, 2024																																	
AUTHORIZATION	SP Developer		Course Cluster Coordinator		Study Program Coordinator																																	
		Arya Mahendra Sakti, S.T., M.T.																																	
Learning model	Case Studies																																					
Program Learning Outcomes (PLO)	PLO study program which is charged to the course																																					
	Program Objectives (PO)																																					
	PLO-PO Matrix																																					
		<table border="1" style="margin: auto;"> <tr> <td style="width: 10%;">P.O</td> <td colspan="15"></td> </tr> </table>					P.O																															
P.O																																						
	PO Matrix at the end of each learning stage (Sub-PO)																																					
	<table border="1" style="margin: auto;"> <tr> <td rowspan="2" style="width: 10%;">P.O</td> <td colspan="16" style="text-align: center;">Week</td> </tr> <tr> <td style="width: 5%;">1</td> <td style="width: 5%;">2</td> <td style="width: 5%;">3</td> <td style="width: 5%;">4</td> <td style="width: 5%;">5</td> <td style="width: 5%;">6</td> <td style="width: 5%;">7</td> <td style="width: 5%;">8</td> <td style="width: 5%;">9</td> <td style="width: 5%;">10</td> <td style="width: 5%;">11</td> <td style="width: 5%;">12</td> <td style="width: 5%;">13</td> <td style="width: 5%;">14</td> <td style="width: 5%;">15</td> <td style="width: 5%;">16</td> </tr> </table>					P.O	Week																1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16																						
Short Course Description	This course teaches about the philosophy of the nature of scientific truth, the concept-theory of scientific truth, the methodology for finding scientific truth using scientific principles. Scientific methodology takes the form of quantitative and qualitative research approaches starting from recognizing, limiting and formulating problems, studying theoretical references-scientific findings to explaining problems, formulating hypotheses and designing verification methods starting from determining population-samples, developing measuring instruments, data collection-analysis techniques, and reporting results, complete reports, thesis examinations, and scientific publications both through scientific journals and scientific proceedings.																																					
References	Main :																																					
	<ol style="list-style-type: none"> 1. Moh. Nazir. 2014. Metode Penelitian. Edisi ke IX. Bogor: Penerbit Ghalia. 2. Sugiyono. 2014. Metode Penelitian Kuantitatif, Kualitatif, dan R & D. Bandung: Penerbit Alfabeta. 3. Tim Penyusun Buku Pedoman Penulisan Skripsi Program Sarjana Strata Satu. 2014. Pedoman Penulisan Skripsi. Universitas Negeri Surabaya. 4. Gouri K. Bhattacharyya & Richard A. Johnson. 1977. Statistical Concepts and Methods. NewYork:John Wiley & Sons. 																																					
	Supporters:																																					
Supporting lecturer	Dr. Warju, S.Pd., S.T., M.T. Firman Yasa Utama, S.Pd., M.T. Ferly Isnomo Abdi, S.T., S.Pd., M.T.																																					
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 can find out the material that will be studied in the Research Methodology course, and lecture contracts such as: rules and regulations, and assessment	Can find out the material that will be studied in the Research Methodology course, and lecture contracts such as: rules and regulations, and assessment	Criteria: 1.Draft research proposal: 2.a. The sharpness of the problem formulation prepared 3.b. Completeness of the proposal includes: introduction, literature review, and research methods 4.c. Format compatibility	Lectures and questions and answers 2 X 50			0%
2	Students can explain the essence of research	Can explain the essence of research	Criteria: Conformity with the concept of the essence of research	Lectures, questions and answers, discussions and practice 2 X 50			0%
3	Students can implement knowledge about types of research in the research proposal design section	Can implement knowledge about types of research in the research proposal design section	Criteria: 1.Structured tasks: 2.a. Sharpness 3.b. Completeness 4.c. Format compatibility	Lectures, questions and answers, discussions and practice 2 X 50			0%
4	Students can implement knowledge about research design in the research proposal design section	Can implement knowledge about research design in the design part of a research proposal	Criteria: 1.Structured tasks: 2.a. Sharpness 3.b. Completeness 4.c. Format compatibility	Lectures, questions and answers, discussions and practice 2 X 50			0%
5	Students can implement knowledge about library studies in the research proposal design section	Can implement knowledge about library studies in the research proposal design section	Criteria: 1.Structured tasks: 2.a. Sharpness 3.b. Completeness 4.c. Format compatibility	Lectures, questions and answers, discussions and practice 2 X 50			0%
6	Students can implement knowledge about problem formulation in the research proposal design section	Can implement knowledge about problem formulation in the research proposal design section	Criteria: 1.Structured tasks: 2.a. Sharpness 3.b. Completeness 4.c. Format compatibility	Lectures, questions and answers, discussions and practice 2 X 50			0%
7	Students can implement knowledge about variables and measurement techniques in the research proposal design section	Can implement knowledge about variables and measurement techniques in the design part of a research proposal	Criteria: 1.Structured tasks: 2.a. Sharpness 3.b. Completeness 4.c. Format compatibility	Lectures, questions and answers, discussions and practice 2 X 50			0%
8	Students can compile the background of the problem, identify the problem, and formulate the problem	Can prepare problem background, problem identification, and problem formulation	Criteria: 1.Take home: 2.a. Preliminary equipment includes: problem background, problem identification, and problem formulation 3.b. Format compatibility	Take home examination 2 X 50			0%

9	Students can implement knowledge about formulating and testing hypotheses in the research proposal design section	Can implement knowledge about formulating and testing hypotheses in the design part of a research proposal	Criteria: 1.Structured tasks: 2.a. Sharpness 3.b. Completeness 4.c. Format compatibility	Lectures, questions and answers, discussions and practice 2 X 50			0%
10	Students can implement knowledge about data collection in the research proposal design section	Can implement knowledge about data collection in the design part of a research proposal	Criteria: 1.Structured tasks: 2.a. Sharpness 3.b. Completeness 4.c. Format compatibility	Lectures, questions and answers, discussions and practice 2 X 50			0%
11	Students can implement knowledge about experimental design in the design part of a research proposal	Can implement knowledge about experimental design in the design part of a research proposal	Criteria: 1.Structured tasks: 2.a. Sharpness 3.b. Completeness 4.c. Format compatibility	Lectures, questions and answers, discussions and practice 2 X 50			0%
12	Students can implement knowledge about sampling techniques in the research proposal design section	Can implement knowledge about sampling techniques in the design part of a research proposal	Criteria: 1.Structured tasks: 2.a. Sharpness 3.b. Completeness 4.c. Format compatibility	Lectures, questions and answers, discussions and practice 2 X 50			0%
13	Students can implement knowledge about sampling techniques in the research proposal design section	Can implement knowledge about sampling techniques in the design part of a research proposal	Criteria: 1.Structured tasks: 2.a. Sharpness 3.b. Completeness 4.c. Format compatibility	Lectures, questions and answers, discussions and practice 2 X 50			0%
14	Students can implement knowledge about data analysis and interpretation in the research proposal design section	Can implement knowledge about data analysis and interpretation in the design part of a research proposal	Criteria: 1.Structured tasks: 2.a. Sharpness 3.b. Completeness 4.c. Format compatibility	Lectures, questions and answers, discussions and practice 2 X 50			0%
15	Students can implement knowledge about data analysis and interpretation in the research proposal design section	Can implement knowledge about data analysis and interpretation in the design part of a research proposal	Criteria: 1.Structured tasks: 2.a. Sharpness 3.b. Completeness 4.c. Format compatibility	Lectures, questions and answers, discussions and practice 2 X 50			0%
16	Students can prepare theoretical studies and research procedures	Can prepare theoretical studies and research procedures	Criteria: 1.Structured tasks: 2.a. Sharpness 3.b. Completeness 4.3. Format suitability	Take home examination 2 X 50			0%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
		0%

Notes

1. **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.
2. **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.
 3. **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.
 4. **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.
 5. **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.
 6. **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.
 7. **Forms of assessment:** test and non-test.
 8. **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.
 9. **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.
 10. **Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
 11. **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%.
 12. TM=Face to face, PT=Structured assignments, BM=Independent study.