



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																																	
Science phylosophy	8320502248		T=2 P=0 ECTS=3.18	1	July 18, 2024																																	
AUTHORIZATION	SP Developer		Course Cluster Coordinator		Study Program Coordinator																																	
		Dr. Gde Agus Yudha Prawira Adistana, S.T., M.T.																																	
Learning model	Case Studies																																					
Program Learning Outcomes (PLO)	PLO study program that is charged to the course																																					
	Program Objectives (PO)																																					
	PLO-PO Matrix																																					
		<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="width: 100px; height: 30px;">P.O</td> </tr> </table>					P.O																															
P.O																																						
	PO Matrix at the end of each learning stage (Sub-PO)																																					
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td rowspan="2" style="width: 50px; height: 30px;">P.O</td> <td colspan="16" style="text-align: center;">Week</td> </tr> <tr> <td style="width: 20px;">1</td> <td style="width: 20px;">2</td> <td style="width: 20px;">3</td> <td style="width: 20px;">4</td> <td style="width: 20px;">5</td> <td style="width: 20px;">6</td> <td style="width: 20px;">7</td> <td style="width: 20px;">8</td> <td style="width: 20px;">9</td> <td style="width: 20px;">10</td> <td style="width: 20px;">11</td> <td style="width: 20px;">12</td> <td style="width: 20px;">13</td> <td style="width: 20px;">14</td> <td style="width: 20px;">15</td> <td style="width: 20px;">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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Short Course Description	Philosophy of Science is one of the compulsory courses that must be taken by all students which will lead students to understand the scope of the philosophy of science, the challenges and future of science, the nature of knowledge, scientific truth, ontology: the nature of science, epistemology: how to obtain knowledge, axiology: the useful value of science , the structure of science, scientific means, the morality of science, and the history of the development of science.																																					
References	Main :																																					
	<ol style="list-style-type: none"> 1. Stefano Gattei. Philosophy of Science. New York: Madison Ave, 2009. 2. Jujun S. Suriasumantri. Filsafat Ilmu: Sebuah Pengantar. Jakarta: Pustaka Sinar Harapan, 2007. 3. Amsal Bahtiar. Filsafat Ilmu. Jakarta: PT. Raja Grafindo Persada, 2004. 4. Redja Mudyahardjo. Filsafat Ilmu Pendidikan: Suatu Pengantar. Bandung: Rosda, 2001. 5. Louis O. Katsoff. Pengantar Filsafat. Yogyakarta: Tiara Wacana, 2008 																																					
	Supporters:																																					
Supporting lecturer	Dr. Nurmi Frida Dorintan Bertua Pakpahan, M.Pd. Prof. Dr. Suparji, 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 have the same vision, mission and perception regarding the Philosophy of Science course, both in concept, principle and application.	a. Explain the general meaning of philosophy of science b. Explain the vision, mission and perception of the philosophy of science c. Explain the concept and application of the philosophy of science	Criteria: 0-100	Lectures and students listen to lectures Review various recommended learning resources Discussion 2 X 50			0%
2	Students can understand the scope of the philosophy of science	1. Explain the definition of the philosophy of science 2. Explain the definition, nature, objectives and conditions of the philosophy of science 3. Explain the philosophy of science as a basis for understanding	Criteria: 1-100	Lectures and students listen to lectures Review various recommended learning resources Discussion 2 X 50			0%
3	Students can describe the history of the development of science and schools of philosophy of science 1. Explain the history of science, 2. Explain the development of science, 3. Explain science and schools in the Philosophy of Science	History of the Development of Science The Foundations of Science in the Greek Period The Advancement of Science in the Renaissance and Modern Era The Progress of Science in the Contemporary Era Genres: Idealism, Rationalism, Materialism	Criteria: 1-100	Lectures and students listening to lectures Reviewing various recommended learning resources Discussion 2 X 50			0%
4	Students can understand the concept of the nature of knowledge	1. Explain the definition of knowledge. 2. Explain the definition, nature, objectives and requirements of knowledge	Criteria: 100	Lectures and students listen to lectures Review various recommended learning resources Discussion 2 X 50			0%
5	Students can understand the nature of scientific truth	1. Explain the meaning of scientific truth. 2. Explain the theories of scientific truth. 3. Explain the nature of scientific truth	Criteria: 0-100	§ Lectures and students listening to lectures § Reviewing various recommended learning resources § Discussion 2 X 50			0%
6	Students can describe ontology	1. Explain the meaning of ontology 2. Explain the components of the nature of science, 3. Explain the nature of science in terms of culture and language	Criteria: 0-100	§ Lectures and students listening to lectures § Reviewing various recommended learning resources § Discussion 2 X 50			0%

7	Students can describe epistemology	1. Explain the meaning of epistemology 2. Explain the components of the nature of science, 3. Explain the steps to gain knowledge (epistemology)	Criteria: 1-100	§ Lectures and students listening to lectures § Reviewing various recommended learning resources § Discussion 2 X 50			0%
8	UTS (Mid-Semester Exam) Students can describe the history of the development of science and schools of philosophy of science; can understand the concept of the nature of knowledge; can understand the nature of scientific truth; can describe ontology; can describe epistemology	1. Explain the definition of philosophy of science; 2. Explain the definition, nature, objectives and conditions of the philosophy of science; 3. Explain the philosophy of science as a basis for understanding; 4. Explain the definition of knowledge; 5. Explain the definition, nature, objectives and requirements of knowledge; 6. Explain the meaning of ontology; 7. Explain the components of ontology (the essence of science); 8. Explain the nature of science in terms of culture and language; 9. Explain the meaning of epistemology; 10. Explain the steps to obtain knowledge (epistemology)	Criteria: 0-100	Closed Book 2 X 50			0%
9	Students can describe axiology	1. Explain the meaning of axiology 2. Explain the components of the usefulness of science, 3. Explain the components of the usefulness of science (axiology)	Criteria: 1-100	§ Lectures and students listening to lectures § Reviewing various recommended learning resources § Discussion 2 X 50			0%
10	Students can understand the structure of science	1. Explain the meaning of scientific method 2. Explain the meaning of theory 3. Explain the meaning of hypothesis 4. Explain the meaning of logic, data-information, proof, evaluation, paradigm	Criteria: 1-100	§ Lectures and students listening to lectures § Reviewing various recommended learning resources § Discussion 2 X 50			0%

11	Students can understand the concept of scientific facilities	1. Explain the concept of scientific tools 2. Explain language as a scientific tool 3. Explain statistics as a scientific tool 4. Explain logic as a scientific tool	Criteria: 1-100	§ Lectures and students listening to lectures § Reviewing various recommended learning resources § Discussion 2 X 50			0%
12	Students can describe the morality of science	1. Explain the responsibilities of scientists 2. Explain the concept of value-free science or not 3. Explain the concept of morality as science	Criteria: 1 - 100	1. Lectures and students listening to lectures 2. Reviewing various recommended learning resources 3. Discussion 2 X 50			0%
13	Students can describe the challenges and future of science	1. Explain the challenges and future of science 2. Identify the progress of science and the humanitarian crisis 3. Explain the relationship between religion, science, & the future of humanity	Criteria: 1 - 100	1. Lectures and students listening to lectures 2. Reviewing various recommended learning resources 3. Discussion 2 X 50			0%
14	Students can conclude the essence of the philosophy of science (1)	1. Briefly explain the nature of lectures in the philosophy of science. 2. Concluding the lecture on the philosophy of science	Criteria: 1 - 100	1. Lectures and students listening to lectures 2. Reviewing various recommended learning resources 3. Discussion 2 X 50			0%
15	Students can conclude the essence of the philosophy of science (2)	1. Briefly explain the nature of lectures in the philosophy of science. 2. Concluding the lecture on the philosophy of science	Criteria: 1 - 100	1. Lectures and students listening to lectures 2. Reviewing various recommended learning resources 3. Discussion 2 X 50			0%
16							0%

Evaluation Percentage Recap: Case Study

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.

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.