UNESA	**Universitas Negeri Surabaya** **Faculty of Engineering** **, Electrical Engineering Education Undergraduate Study Program**	**Document Code**

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Science phylosophy	8320102206		T=2	P=0	ECTS=3.18	2	July 18, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Dr. Nur Kholis, 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

	P.O

PO Matrix at the end of each learning stage (Sub-PO)

P.O	Week															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Short Course Description	This course discusses, (1) The nature of the philosophy of science; (2) Principal Philosophical Teachings in the Field of Philosophy of Science (materialism, idealism/spiritualism, realism); (3) theories of truth; (4) ontological aspects, epistemological aspects, and axiological aspects; (5) Educational Philosophy (Essentialism, Perennialism, Progressivism, Existentialism, Reconstruction, Critical Pedagogy); (6) Postmodernism (Social Constructionism, Hermeneutics, Deconstruction, Structuralism); (7) Critical Thinking (relativity of reasoning power, mastery of basic literacy and mastery of critical literacy.
References	**Main :**

1. Fautanu, Idzam. 2012.Filsafat Ilmu. Teori dan Aplikasinya..Jakarta: Referensi.
2. Jerome R. Ravertz. 1982. Philosophyi of Science. London.: University Press.
3. Jujun S. Suriasumantri. 2009.Ilmu Dalam Perspektif. Kumpulan Karangan Tentang Hakekat Ilmu. Jakarta: Obor Indonesia
4. The Liang Gie. 2004. Pengantar Filsafat Ilmu. Yogyakarta: Liberty.
5. Surajiyo. 2008.Filsafat Ilmu dan Perkembangannya di Indonesia: Suatu Pengantar. Jakarta: Bumi Aksara.

	Supporters:
Supporting lecturer	Prof. Dr. Ismet Basuki, M.Pd. Dr. Edy Sulistiyo, 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	After taking this course, students are expected to: 1. Understand concepts and theories about philosophy, philosophy of science, and philosophy of technology and vocational education; 2. Develop critical thinking related to philosophy, philosophy of science, and philosophy of technology and vocational education; 3. Become an active learner and creator in building your own knowledge through direct study and study of philosophy, philosophy of science, and philosophy of technology and vocational education.	This course includes the development of essential knowledge, attitudes and skills regarding philosophy, philosophy of science, and philosophy of technology and vocational education, especially to develop competence regarding PKJ philosophy. This course is divided into three main parts, each of which is focused on: (1) the general understanding and characteristics of philosophy, philosophy of science, and philosophy of technological and vocational education, (2) understanding of philosophy, philosophy of science, and philosophy of technological and vocational education, and (3) the implications of philosophy, philosophy of science, and philosophy of technology and vocational education.	**Criteria:** 1.1. Participation in lectures: 16 meetings, weight 20% 2.2. Mid-semester exam: 1 time, weight 20% 3.3. Final semester exam: 1 time, weight 30% 4.4. Article presentation (including materials): 1 time, 30% weight	Direct learning, discussions, lectures, and giving paper assignments, 2 X 50 presentations			0%

2	After taking this course, students are expected to: 1. Understand concepts and theories about philosophy, philosophy of science, and philosophy of technology and vocational education; 2. Develop critical thinking related to philosophy, philosophy of science, and philosophy of technology and vocational education; 3. Become an active learner and creator in building your own knowledge through direct study and study of philosophy, philosophy of science, and philosophy of technology and vocational education.	This course includes the development of essential knowledge, attitudes and skills regarding philosophy, philosophy of science, and philosophy of technology and vocational education, especially to develop competence regarding PKJ philosophy. This course is divided into three main parts, each of which is focused on: (1) the general understanding and characteristics of philosophy, philosophy of science, and philosophy of technological and vocational education, (2) understanding of philosophy, philosophy of science, and philosophy of technological and vocational education, and (3) the implications of philosophy, philosophy of science, and philosophy of technology and vocational education.	**Criteria:** 1.1. Participation in lectures: 16 meetings, weight 20% 2.2. Mid-semester exam: 1 time, weight 20% 3.3. Final semester exam: 1 time, weight 30% 4.4. Article presentation (including materials): 1 time, 30% weight	Direct learning, discussions, lectures, and giving paper assignments, 2 X 50 presentations			0%

3	After taking this course, students are expected to: 1. Understand concepts and theories about philosophy, philosophy of science, and philosophy of technology and vocational education; 2. Develop critical thinking related to philosophy, philosophy of science, and philosophy of technology and vocational education; 3. Become an active learner and creator in building your own knowledge through direct study and study of philosophy, philosophy of science, and philosophy of technology and vocational education.	This course includes the development of essential knowledge, attitudes and skills regarding philosophy, philosophy of science, and philosophy of technology and vocational education, especially to develop competence regarding PKJ philosophy. This course is divided into three main parts, each of which is focused on: (1) the general understanding and characteristics of philosophy, philosophy of science, and philosophy of technological and vocational education, (2) understanding of philosophy, philosophy of science, and philosophy of technological and vocational education, and (3) the implications of philosophy, philosophy of science, and philosophy of technology and vocational education.	**Criteria:** 1.1. Participation in lectures: 16 meetings, weight 20% 2.2. Mid-semester exam: 1 time, weight 20% 3.3. Final semester exam: 1 time, weight 30% 4.4. Article presentation (including materials): 1 time, 30% weight	Direct learning, discussions, lectures, and giving paper assignments, 2 X 50 presentations			0%

4	After taking this course, students are expected to: 1. Understand concepts and theories about philosophy, philosophy of science, and philosophy of technology and vocational education; 2. Develop critical thinking related to philosophy, philosophy of science, and philosophy of technology and vocational education; 3. Become an active learner and creator in building your own knowledge through direct study and study of philosophy, philosophy of science, and philosophy of technology and vocational education.	This course includes the development of essential knowledge, attitudes and skills regarding philosophy, philosophy of science, and philosophy of technology and vocational education, especially to develop competence regarding PKJ philosophy. This course is divided into three main parts, each of which is focused on: (1) the general understanding and characteristics of philosophy, philosophy of science, and philosophy of technological and vocational education, (2) understanding of philosophy, philosophy of science, and philosophy of technological and vocational education, and (3) the implications of philosophy, philosophy of science, and philosophy of technology and vocational education.	**Criteria:** 1.1. Participation in lectures: 16 meetings, weight 20% 2.2. Mid-semester exam: 1 time, weight 20% 3.3. Final semester exam: 1 time, weight 30% 4.4. Article presentation (including materials): 1 time, 30% weight	Direct learning, discussions, lectures, and giving paper assignments, 2 X 50 presentations			0%

5	After taking this course, students are expected to: 1. Understand concepts and theories about philosophy, philosophy of science, and philosophy of technology and vocational education; 2. Develop critical thinking related to philosophy, philosophy of science, and philosophy of technology and vocational education; 3. Become an active learner and creator in building your own knowledge through direct study and study of philosophy, philosophy of science, and philosophy of technology and vocational education.	This course includes the development of essential knowledge, attitudes and skills regarding philosophy, philosophy of science, and philosophy of technology and vocational education, especially to develop competence regarding PKJ philosophy. This course is divided into three main parts, each of which is focused on: (1) the general understanding and characteristics of philosophy, philosophy of science, and philosophy of technological and vocational education, (2) understanding of philosophy, philosophy of science, and philosophy of technological and vocational education, and (3) the implications of philosophy, philosophy of science, and philosophy of technology and vocational education.	**Criteria:** 1.1. Participation in lectures: 16 meetings, weight 20% 2.2. Mid-semester exam: 1 time, weight 20% 3.3. Final semester exam: 1 time, weight 30% 4.4. Article presentation (including materials): 1 time, 30% weight	Direct learning, discussions, lectures, and giving paper assignments, 2 X 50 presentations			0%

6	After taking this course, students are expected to: 1. Understand concepts and theories about philosophy, philosophy of science, and philosophy of technology and vocational education; 2. Develop critical thinking related to philosophy, philosophy of science, and philosophy of technology and vocational education; 3. Become an active learner and creator in building your own knowledge through direct study and study of philosophy, philosophy of science, and philosophy of technology and vocational education.	This course includes the development of essential knowledge, attitudes and skills regarding philosophy, philosophy of science, and philosophy of technology and vocational education, especially to develop competence regarding PKJ philosophy. This course is divided into three main parts, each of which is focused on: (1) the general understanding and characteristics of philosophy, philosophy of science, and philosophy of technological and vocational education, (2) understanding of philosophy, philosophy of science, and philosophy of technological and vocational education, and (3) the implications of philosophy, philosophy of science, and philosophy of technology and vocational education.	**Criteria:** 1.1. Participation in lectures: 16 meetings, weight 20% 2.2. Mid-semester exam: 1 time, weight 20% 3.3. Final semester exam: 1 time, weight 30% 4.4. Article presentation (including materials): 1 time, 30% weight	Direct learning, discussions, lectures, and giving paper assignments, 2 X 50 presentations			0%

7	After taking this course, students are expected to: 1. Understand concepts and theories about philosophy, philosophy of science, and philosophy of technology and vocational education; 2. Develop critical thinking related to philosophy, philosophy of science, and philosophy of technology and vocational education; 3. Become an active learner and creator in building your own knowledge through direct study and study of philosophy, philosophy of science, and philosophy of technology and vocational education.	This course includes the development of essential knowledge, attitudes and skills regarding philosophy, philosophy of science, and philosophy of technology and vocational education, especially to develop competence regarding PKJ philosophy. This course is divided into three main parts, each of which is focused on: (1) the general understanding and characteristics of philosophy, philosophy of science, and philosophy of technological and vocational education, (2) understanding of philosophy, philosophy of science, and philosophy of technological and vocational education, and (3) the implications of philosophy, philosophy of science, and philosophy of technology and vocational education.	**Criteria:** 1.1. Participation in lectures: 16 meetings, weight 20% 2.2. Mid-semester exam: 1 time, weight 20% 3.3. Final semester exam: 1 time, weight 30% 4.4. Article presentation (including materials): 1 time, 30% weight	Direct learning, discussions, lectures, and giving paper assignments, 2 X 50 presentations			0%

8	After taking this course, students are expected to: 1. Understand concepts and theories about philosophy, philosophy of science, and philosophy of technology and vocational education; 2. Develop critical thinking related to philosophy, philosophy of science, and philosophy of technology and vocational education; 3. Become an active learner and creator in building your own knowledge through direct study and study of philosophy, philosophy of science, and philosophy of technology and vocational education.	This course includes the development of essential knowledge, attitudes and skills regarding philosophy, philosophy of science, and philosophy of technology and vocational education, especially to develop competence regarding PKJ philosophy. This course is divided into three main parts, each of which is focused on: (1) the general understanding and characteristics of philosophy, philosophy of science, and philosophy of technological and vocational education, (2) understanding of philosophy, philosophy of science, and philosophy of technological and vocational education, and (3) the implications of philosophy, philosophy of science, and philosophy of technology and vocational education.	**Criteria:** 1.1. Participation in lectures: 16 meetings, weight 20% 2.2. Mid-semester exam: 1 time, weight 20% 3.3. Final semester exam: 1 time, weight 30% 4.4. Article presentation (including materials): 1 time, 30% weight	Direct learning, discussions, lectures, and giving paper assignments, 2 X 50 presentations			0%

9	After taking this course, students are expected to: 1. Understand concepts and theories about philosophy, philosophy of science, and philosophy of technology and vocational education; 2. Develop critical thinking related to philosophy, philosophy of science, and philosophy of technology and vocational education; 3. Become an active learner and creator in building your own knowledge through direct study and study of philosophy, philosophy of science, and philosophy of technology and vocational education.	This course includes the development of essential knowledge, attitudes and skills regarding philosophy, philosophy of science, and philosophy of technology and vocational education, especially to develop competence regarding PKJ philosophy. This course is divided into three main parts, each of which is focused on: (1) the general understanding and characteristics of philosophy, philosophy of science, and philosophy of technological and vocational education, (2) understanding of philosophy, philosophy of science, and philosophy of technological and vocational education, and (3) the implications of philosophy, philosophy of science, and philosophy of technology and vocational education.	**Criteria:** 1.1. Participation in lectures: 16 meetings, weight 20% 2.2. Mid-semester exam: 1 time, weight 20% 3.3. Final semester exam: 1 time, weight 30% 4.4. Article presentation (including materials): 1 time, 30% weight	Direct learning, discussions, lectures, and giving paper assignments, 2 X 50 presentations			0%

10	After taking this course, students are expected to: 1. Understand concepts and theories about philosophy, philosophy of science, and philosophy of technology and vocational education; 2. Develop critical thinking related to philosophy, philosophy of science, and philosophy of technology and vocational education; 3. Become an active learner and creator in building your own knowledge through direct study and study of philosophy, philosophy of science, and philosophy of technology and vocational education.	This course includes the development of essential knowledge, attitudes and skills regarding philosophy, philosophy of science, and philosophy of technology and vocational education, especially to develop competence regarding PKJ philosophy. This course is divided into three main parts, each of which is focused on: (1) the general understanding and characteristics of philosophy, philosophy of science, and philosophy of technological and vocational education, (2) understanding of philosophy, philosophy of science, and philosophy of technological and vocational education, and (3) the implications of philosophy, philosophy of science, and philosophy of technology and vocational education.	**Criteria:** 1.1. Participation in lectures: 16 meetings, weight 20% 2.2. Mid-semester exam: 1 time, weight 20% 3.3. Final semester exam: 1 time, weight 30% 4.4. Article presentation (including materials): 1 time, 30% weight	Direct learning, discussions, lectures, and giving paper assignments, 2 X 50 presentations			0%

11	After taking this course, students are expected to: 1. Understand concepts and theories about philosophy, philosophy of science, and philosophy of technology and vocational education; 2. Develop critical thinking related to philosophy, philosophy of science, and philosophy of technology and vocational education; 3. Become an active learner and creator in building your own knowledge through direct study and study of philosophy, philosophy of science, and philosophy of technology and vocational education.	This course includes the development of essential knowledge, attitudes and skills regarding philosophy, philosophy of science, and philosophy of technology and vocational education, especially to develop competence regarding PKJ philosophy. This course is divided into three main parts, each of which is focused on: (1) the general understanding and characteristics of philosophy, philosophy of science, and philosophy of technological and vocational education, (2) understanding of philosophy, philosophy of science, and philosophy of technological and vocational education, and (3) the implications of philosophy, philosophy of science, and philosophy of technology and vocational education.	**Criteria:** 1.1. Participation in lectures: 16 meetings, weight 20% 2.2. Mid-semester exam: 1 time, weight 20% 3.3. Final semester exam: 1 time, weight 30% 4.4. Article presentation (including materials): 1 time, 30% weight	Direct learning, discussions, lectures, and giving paper assignments, 2 X 50 presentations			0%

12	After taking this course, students are expected to: 1. Understand concepts and theories about philosophy, philosophy of science, and philosophy of technology and vocational education; 2. Develop critical thinking related to philosophy, philosophy of science, and philosophy of technology and vocational education; 3. Become an active learner and creator in building your own knowledge through direct study and study of philosophy, philosophy of science, and philosophy of technology and vocational education.	This course includes the development of essential knowledge, attitudes and skills regarding philosophy, philosophy of science, and philosophy of technology and vocational education, especially to develop competence regarding PKJ philosophy. This course is divided into three main parts, each of which is focused on: (1) the general understanding and characteristics of philosophy, philosophy of science, and philosophy of technological and vocational education, (2) understanding of philosophy, philosophy of science, and philosophy of technological and vocational education, and (3) the implications of philosophy, philosophy of science, and philosophy of technology and vocational education.	**Criteria:** 1.1. Participation in lectures: 16 meetings, weight 20% 2.2. Mid-semester exam: 1 time, weight 20% 3.3. Final semester exam: 1 time, weight 30% 4.4. Article presentation (including materials): 1 time, 30% weight	Direct learning, discussions, lectures, and giving paper assignments, 2 X 50 presentations			0%

13	After taking this course, students are expected to: 1. Understand concepts and theories about philosophy, philosophy of science, and philosophy of technology and vocational education; 2. Develop critical thinking related to philosophy, philosophy of science, and philosophy of technology and vocational education; 3. Become an active learner and creator in building your own knowledge through direct study and study of philosophy, philosophy of science, and philosophy of technology and vocational education.	This course includes the development of essential knowledge, attitudes and skills regarding philosophy, philosophy of science, and philosophy of technology and vocational education, especially to develop competence regarding PKJ philosophy. This course is divided into three main parts, each of which is focused on: (1) the general understanding and characteristics of philosophy, philosophy of science, and philosophy of technological and vocational education, (2) understanding of philosophy, philosophy of science, and philosophy of technological and vocational education, and (3) the implications of philosophy, philosophy of science, and philosophy of technology and vocational education.	**Criteria:** 1.1. Participation in lectures: 16 meetings, weight 20% 2.2. Mid-semester exam: 1 time, weight 20% 3.3. Final semester exam: 1 time, weight 30% 4.4. Article presentation (including materials): 1 time, 30% weight	Direct learning, discussions, lectures, and giving paper assignments, 2 X 50 presentations			0%

14	After taking this course, students are expected to: 1. Understand concepts and theories about philosophy, philosophy of science, and philosophy of technology and vocational education; 2. Develop critical thinking related to philosophy, philosophy of science, and philosophy of technology and vocational education; 3. Become an active learner and creator in building your own knowledge through direct study and study of philosophy, philosophy of science, and philosophy of technology and vocational education.	This course includes the development of essential knowledge, attitudes and skills regarding philosophy, philosophy of science, and philosophy of technology and vocational education, especially to develop competence regarding PKJ philosophy. This course is divided into three main parts, each of which is focused on: (1) the general understanding and characteristics of philosophy, philosophy of science, and philosophy of technological and vocational education, (2) understanding of philosophy, philosophy of science, and philosophy of technological and vocational education, and (3) the implications of philosophy, philosophy of science, and philosophy of technology and vocational education.	**Criteria:** 1.1. Participation in lectures: 16 meetings, weight 20% 2.2. Mid-semester exam: 1 time, weight 20% 3.3. Final semester exam: 1 time, weight 30% 4.4. Article presentation (including materials): 1 time, 30% weight	Direct learning, discussions, lectures, and giving paper assignments, 2 X 50 presentations			0%

15	After taking this course, students are expected to: 1. Understand concepts and theories about philosophy, philosophy of science, and philosophy of technology and vocational education; 2. Develop critical thinking related to philosophy, philosophy of science, and philosophy of technology and vocational education; 3. Become an active learner and creator in building your own knowledge through direct study and study of philosophy, philosophy of science, and philosophy of technology and vocational education.	This course includes the development of essential knowledge, attitudes and skills regarding philosophy, philosophy of science, and philosophy of technology and vocational education, especially to develop competence regarding PKJ philosophy. This course is divided into three main parts, each of which is focused on: (1) the general understanding and characteristics of philosophy, philosophy of science, and philosophy of technological and vocational education, (2) understanding of philosophy, philosophy of science, and philosophy of technological and vocational education, and (3) the implications of philosophy, philosophy of science, and philosophy of technology and vocational education.	**Criteria:** 1.1. Participation in lectures: 16 meetings, weight 20% 2.2. Mid-semester exam: 1 time, weight 20% 3.3. Final semester exam: 1 time, weight 30% 4.4. Article presentation (including materials): 1 time, 30% weight	Direct learning, discussions, lectures, and giving paper assignments, 2 X 50 presentations			0%
16							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.