



Universitas Negeri Surabaya
Faculty of Education,
Undergraduate Study Program in Out-of-School Education

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Science phylosophy	8620502216	Compulsory Curriculum Subjects - National	T=2	P=0	ECTS=3.18	3	January 1, 2023
AUTHORIZATION	SP Developer		Course Cluster Coordinator			Study Program Coordinator	
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Learning model	Case Studies
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Program Learning Outcomes (PLO) | **PLO study program which is charged to the course**

PLO-1	Able to demonstrate religious, national and cultural values, as well as academic ethics in carrying out their duties
PLO-4	Develop yourself continuously and collaborate.
PLO-5	Mastering the basic concepts of out-of-school education to be able to manage non-formal education programs
PLO-6	Mastering community empowerment techniques to plan and apply them to non-formal education programs
PLO-9	Able to empower the community and apply social entrepreneurship in the management of non-formal education unit institutions

Program Objectives (PO)

PO - 1	Demonstrate a religious attitude and live up to the values of faith in studying and applying the philosophy of science for the development of science (S1)
PO - 2	Mastering various philosophical views about scientific concepts and their implications for educational practice (P1, KU1, KU3)
PO - 3	Understand the conflict between rationalism and empiricism in the development of science through research (P2, KU1)
PO - 4	Able to analyze the implications of ethics and philosophy in the development of science (P1, KU3)
PO - 5	Able to apply the philosophy of science to study the development of interdisciplinary science (KU3, KU5)
PO - 6	Able to participate in academic discussions related to philosophical issues in science (KU5)

PLO-PO Matrix

P.O	PLO-1	PLO-4	PLO-5	PLO-6	PLO-9
PO-1	✓	✓		✓	
PO-2	✓	✓			✓
PO-3	✓		✓		✓
PO-4			✓	✓	✓
PO-5	✓	✓		✓	
PO-6		✓	✓	✓	

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

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	<table border="1"> <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> <tr> <td>PO-2</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> <tr> <td>PO-3</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> <tr> <td>PO-4</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> <tr> <td>PO-5</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> <tr> <td>PO-6</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	✓		✓														PO-2		✓		✓							✓						PO-3					✓						✓		✓				PO-4						✓	✓								✓		PO-5								✓	✓	✓							PO-6													✓			✓
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Short Course Description The Philosophy of Science course (3 credits) discusses various philosophical views about the nature of science, the relationship between science and ethics, and its implications for educational practice and scientific development. Through this course, students are expected to master the basic concepts of philosophy of science, such as rationalism, empiricism, and postpositivism; and being able to analyze ethical issues in scientific research and development. An indicator of the success of this course is if students are able to understand the philosophical nature of science.

References

Main :

- Descartes, R. (1979). The philosophical works of descartes vol. 1. Cambridge University Press.
- Kirkham, R.L. (1995). Theories of truth: A critical introduction. MIT press.
- Solomon, R.C. (2011). Introducing philosophy: A text with integrated readings. Oxford University Press.
- Wibowo, A. (2013). Pendidikan karakter: Strategi membangun karakter bangsa ber peradaban. Pustaka Pelajar.
- Suseno, F.M. (1987). Filsafat sebagai ilmu kritis. Kanisius.
- Hatta, M. (2014). Alam pikiran Yunani. Tinta Medina.
- Supratiknya, A. (2014). Tinjauan kritis paradigam penelitian ilmu sosial dan perilaku. UMM Press.
- Magnis-Suseno, F. (1987). Etika dasar: Masalah-masalah pokok filsafat moral. Kanisius.
- Capra, F., & Stone, G.L. (2010). Jaring-jaring kehidupan: Visi baru epistemologi dan kehidupan. Fajar Pustaka Baru.
- Sunhaji. (2018). Pembelajaran tematik integratif: Pendidikan karakter dalam proses pembelajaran. Graha Cendekia.
- Tan, C. (2022). Collaborative practices for teacher learning and change. In Oxford Research Encyclopedia of Education

Supporters:

Supporting lecturer Dr. Heryanto Susilo, S.Pd., M.Pd.
Dr. Rofik Jalal Rosyanafi, 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	Demonstrate a religious and law-abiding attitude in philosophy of science lecture activities	Attitude observation scoring rubric	<p>Criteria: Scoring rubric, attitude observation sheet</p> <p>Form of Assessment : Participatory Activities</p>	Discussion, case study 2 X 50	Discussion, case study 2 X 50	<p>Material: Introduction to the philosophy of science: basic concepts of philosophy, science and education</p> <p>References: Solomon, RC (2011). <i>Introducing philosophy: A text with integrated readings.</i> Oxford University Press.</p>	3%

2	Able to explain philosophy, science, and their relationship with education	Understanding the concepts of philosophy, science, education and their interactions	<p>Criteria: Objective questions, quizzes</p> <p>Form of Assessment : Participatory Activities</p>	Group discussion, inquiry 2 X 50	Group division and lectures 2 X 50	<p>Material: The relationship between philosophy, science and education</p> <p>Reference: <i>Wibowo, A. (2013). Character education: Strategy for building the character of a civilized nation. Student Library.</i></p>	3%
3	Able to distinguish various philosophical schools and their implications in the field of education	Ability to comparative analysis of philosophical schools	<p>Criteria: Scoring rubric, material presentation</p> <p>Form of Assessment : Participatory Activities</p>	Student centered learning, 2 X 50 collaborative project	Student centered learning, 2 X 50 collaborative project	<p>Material: Philosophical schools (idealism, realism, pragmatism, etc.) and their implications in the field of education</p> <p>References: <i>Bertens, K. (2013). Western philosophy of the XX century: Anglo-German. Gramedia Pustaka Utama.</i></p>	3%
4	Able to analyze the concepts of knowledge and truth according to a philosophical view	Ability to analyze concepts of knowledge and truth	<p>Criteria: Scoring rubric, concept analysis assignment</p> <p>Form of Assessment : Participatory Activities</p>	Problem based learning, literature study 2 X 50	Problem based learning, literature study 2 X 50	<p>Material: Analysis of the philosophical views of constructivism, naturalism, humanism in the context of learning.</p> <p>Reference: <i>Suseno, FM (1987). Philosophy as a critical science. Canisius.</i></p>	3%
5	Able to differentiate between rationalism and empiricism approaches in research methodology	Understanding the differences between rationalism and empiricism approaches	<p>Criteria: Objective questions, quizzes</p> <p>Form of Assessment : Participatory Activities</p>	2 X 50 Panel Discussion	2 X 50 Panel Discussion	<p>Matter: The concept of knowledge and truth according to philosophers Rene Descartes and David Hume</p> <p>Bibliography: <i>Descartes, R. (1979). The philosophical works of descartes vol. 1. Cambridge University Press.</i></p>	3%
6	Able to explain ethics, values and morality in the development of science	Understanding ethical and moral concepts in research/science	<p>Criteria: Discussion observation sheets, reflective assignments</p> <p>Form of Assessment : Participatory Activities</p>	Problem based learning, role playing 2 X 50	Problem based learning, role playing 2 X 50	<p>Material: Theory of the nature of truth and its relationship to education</p> <p>Reference: <i>Kirkham, RL (1995). Theories of truth: A critical introduction. MIT press.</i></p>	3%

7	Able to analyze contemporary educational issues and their solutions from a philosophical perspective	Ability to analyze contemporary educational issues	Criteria: Written questions: Form of Assessment : Participatory Activities	Problem based learning, 2 X 50 panel discussions	Problem based learning, 2 X 50 panel discussions	Material: Rationalism and empiricism in the development of knowledge References: Hatta, M. (2014). <i>The Greek mind</i> . Medina Ink.	4%
8	UTS		Criteria: Students are able to answer questions as fully as possible Form of Assessment : Test	Written test 2 X 50	Written test 2 X 50	Material: Material about UTS Literature: Supratiknya, A. (2014). <i>A critical review of social and behavioral science research paradigms</i> . UMM Press. Material: educational paradigms Reference: Sunhaji. (2018). <i>Integrative thematic learning: Character education in the learning process</i> . Scholar House.	20%
9	Able to analyze contemporary educational issues and their solutions from a philosophical perspective	Ability to analyze contemporary educational issues	Criteria: Scoring rubric, opinion article Form of Assessment : Participatory Activities	Problem based learning, 2 X 50 panel discussions	Problem based learning, 2 X 50 panel discussions	Material: Deduction vs induction: reasoning in scientific research References: Supratiknya, A. (2014). <i>A critical review of social and behavioral science research paradigms</i> . UMM Press.	4%
10	Able to actively participate in academic discussions related to philosophical and ethical issues in science	Participation and quality of discussion	Criteria: Discussion observation sheet Form of Assessment : Participatory Activities	Group debate 2 X 50	Group debate 2 X 50	Material: Ethics and values in research and scientific publications Reference: Poespoprodjo, W. (2004). <i>Moral philosophy: Decency in theory and practice</i> . Graphics Library.	4%

11	Presentation and discussion of philosophy of science topics	Presentation and discussion skills	<p>Criteria: Presentation & discussion observation sheet</p> <p>Form of Assessment : Participatory Activities</p>	Student centered learning, presentation and discussion 2 X 50	Student centered learning, presentation and discussion 2 X 50	<p>Material: Morality in scientific practice and the development of science</p> <p>References: <i>Magnis-Suseno, F. (1987). Basic ethics: Basic problems of moral philosophy. Canisius.</i></p>	4%
12	Understand axiology as an integral part of the philosophy of science	Quality of learning reflection	<p>Criteria: Reflective worksheet</p> <p>Form of Assessment : Participatory Activities</p>	Reflective, feedback 2 X 50	Reflective, feedback 2 X 50	<p>Material: Contemporary issues in science: technology, environment, politics, etc.</p> <p>References: <i>Capra, F., & Stone, GL (2010). The web of life: A new vision of epistemology and life. New Library Dawn.</i></p>	4%
13	Able to design a quality assurance system for non-formal education programs	Completeness of the components of the education quality assurance system	<p>Criteria: Program report scoring rubric</p> <p>Form of Assessment : Participatory Activities</p>	Project based learning, team work 2 X 50	Project-based learning, team work 2 XX 50	<p>Material: Analysis of contemporary educational issues and their solutions from a philosophical perspective</p> <p>Reader: <i>Sunhaji. (2018). Integrative thematic learning: Character education in the learning process. Scholar House.</i></p>	4%
14	Understand the impact of the development and use of knowledge	Feasibility of collaborative research proposals	<p>Criteria: Proposal assessment rubric</p> <p>Form of Assessment : Participatory Activities</p>	Research-based learning, team work 2 X 50	Research-based learning, team work 2 X 50	<p>Material: Analysis of contemporary educational issues and their solutions from a philosophical perspective.</p> <p>Reference: <i>Tan, C. (2022). Collaborative practices for teacher learning and change. In Oxford Research Encyclopedia of Education.</i></p>	4%

15	Reflection on learning and feedback	Depth of learning reflection	Criteria: Reflection scoring rubric Form of Assessment : Participatory Activities	Reflective, open discussion 2 X 50	Reflective, open discussion 2 X 50	Material: Material about learning and feedback References: <i>Bertens, K. (2013). Western philosophy of the XX century: Anglo-German. Gramedia Pustaka Utama.</i>	4%
16	UAS	Ability to analyze contemporary educational issues	Criteria: Students are able to answer questions as fully as possible Form of Assessment : Test	WRITING TEST 2 X 50	WRITING TEST 2 X 50	Material: Material about UAS Library: <i>Supratiknya, A. (2014). A critical review of social and behavioral science research paradigms. UMM Press.</i>	30%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
1.	Participatory Activities	50%
2.	Test	50%
		100%

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.