

SEMESTER LESSON PLAN

(RPS)

COURSES	:	MASTER OF BASIC EDUCATION
COURSES	:	PHILOSOPHY OF SCIENCE
WEIGHT	:	2 credits
LECTURERS	:	Prof. Dr. M. Syarif Sumantri, M.Pd



POSTGRADUATE
JAKARTA STATE UNIVERSITY
2022



**JAKARTA STATE UNIVERSITY
POSTGRADUATE
S2 BASIC EDUCATION STUDY PROGRAM**

SEMESTER LESSON PLAN

COURSES	CODE	WEIGHTS (CREDITS)	SEMESTER	TIME	DATE OF DRAFTING
PHILOSOPHY OF SCIENCE	99008113	2 credits	1 (one)	16 Weeks (Aug-Dec 2022)	20 June 2022
AUTHORIZATION	Lecturers		Reviewer/Quality Assurance		Head of Study Program
	Prof. Dr. M. Syarif Sumantri, M.Pd				Erry Utomo
DESCRIPTION	<p>The Philosophy of Science course aims to provide students with the ability to understand <i>the nature of science</i> in relation to various other knowledge, various ways of obtaining scientific knowledge, abilities, and skills by applying philosophical and critical logical reasoning; by not ignoring the limitations of science, scientific methods, moral and social boundaries as an effort to obtain and utilize knowledge. Philosophy of Science examines the concept of philosophy of science, the field of ontology, epistemology, and axiology studies, in the constellation of educational research and assessment, as well as the development of scientific knowledge. The discussion of the ontology of science is focused on elements of <i>empiricism</i> such as facts, data, and information without detaching it from rational reality (<i>rationalism</i>), as well as its position in scientific activities. The axiology of science discusses values related to scientific activities and their usefulness both internally, externally, and socially. The epistemology of science is focused on the scientific method and its operationalization in research methodology.</p>				
	CPL		CPMK		Sub CPMK



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GRADUATE LEARNING OUTCOMES (CPL)	<p>1. Able to develop pedagogical theory, literacy, information technology in the field of basic education or professional practice through an interdisciplinary or multidisciplinary approach to produce solutions for improving the quality of life in society, nation and state (P1)</p>	<p>1. Understand the basic concepts of philosophical thinking, and the basis of the study of the philosophy of science and the relationship to basic education</p>	<p>1.1. Explaining the concept of thinking Philosophy of Science, rational, logical and analytical 1.2. Describes the basic field of study of philosophy of science (ontology, epistemology, and axiology) 1.3. Linking the philosophy of science to the basic education paradigm</p>
	<p>2. Able to solve basic education problems based on theories of pedagogy, literacy, information technology through scientific methods with an interdisciplinary or multidisciplinary approach based on academic values, norms, and ethics (P2).</p>	<p>2. Mastering the structure of scientific knowledge and scientific methods in solving basic education problems</p>	<p>2.1. Applying various sources of knowledge proportionally in the development of ilmu 2.2. Using the concept of truth criteria coherence, correspondence and pragmatism in compiling a thesis 2.3. Applying the scientific method and its procedures in the preparation of a thesis 2.4. Using the concepts of mathematics, language, and statistics as a means of scientific</p>



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			thinking
	3. Able to apply logical, critical, systematic, and innovative thinking in the field of basic education based on scientific rules, procedures and ethics in order to improve the profession in the field of basic education that has social sensitivity and concern for society and the environment (P3)	3. Implementing philosophical ways of thinking and scientific ways of thinking in the face of academic life	53.11 Applying the principles and techniques of scientific writing notation 53.21 Linking the philosophy of science with quantitative and qualitative research paradigms 53.31 Develop quantitative or qualitative research proposals
	4. Implementing solutions to basic education problems in accordance with the needs of basic education development through research and or development that is tested and has a new value (KK1)	4. Analyzing problem solutions based on educational development needs through a scientific thinking process	4. Analyze basic education problems with ontological, epistemological and axiological thinking.
	5. Applying innovative learning by applying didactic-pedagogical concepts and principles in basic	5. Applying science as a rationale and cultural development as a social responsibility of scientists.	5.1 Linking the role of science and technology with morals



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	education by utilizing science and technology oriented towards <i>life skills</i> and contributing to improving the quality of social life (KK2)		5.2 Internalizing the social responsibility of scientists in academic life
	6. Applying professionalism on an ongoing basis in the field of basic education through managing research and or development as a reflective and evaluative action (KK3)	6. Applying professionalism through the application of philosophy in the scientific method as a basis for educational development	6. Compiling scientific works on the topic of basic education areas by applying the scientific method
	7. Able to disseminate the results of basic education studies based on the results of current research with an inter-disciplinary and multi-disciplinary approach recognized by the Basic Education community both at the national and international levels (KK4)	7. Make scientific papers with at least 2 interconnected / influential variables based on the results of studies in the basic education area	7. Develop educational programs in accordance with the results of scientific studies in the basic education area
Study Materials	STUDY MATERIALS/ SUBJECT MATTER	SUB- STUDY MATERIALS /SUB-SUBJECT MATTER	



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	<p>1. The basic concept of philosophical thinking, the basis of the study of philosophy of science and the relationship to educational evaluation.</p>	<p>1.1 Philosophical concept of thinking, rational, logical and analytical 1.2 Basic concepts of the field of study philosophy of science (ontology, epistemology, and axiology) 1.3 The relationship of philosophy of science to the educational paradigm in elementary schools</p>
	<p>2. Mastery of the structure of scientific knowledge, the scientific method, the relations of science and cultural development, the social responsibility of the scientist.</p>	<p>2.1 Proportional use of various sources of knowledge in development of science 2.2 The concept of truth criteria coherence, correspondence and pragmatism in compiling a thesis 2.3 Application of the scientific method and its procedures in the preparation of the thesis 2.4 Concepts of mathematics, language, and statistics as a means of scientific thinking 2.5 Linking the role of science and technology with morals 2.6 Internalization of the social responsibility of scientists in academic life</p>



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	3. Implement philosophical ways of thinking and scientific ways of thinking in the face of academic life	3.1 Applying the principles and techniques of scientific writing notation 3.2 The relationship between the philosophy of science and the quantitative research paradigm and Qualitative 3.3 Preparation of quantitative or qualitative research proposals
LEARNING ACTIVITIES	Pedekatan	<i>Student centered learning..</i>
	Methods/strategies	Lectures, questions and answers, discussions, assignments, <i>project based learning.</i>
	Mode of activity	<i>Online learning: Synchronous and Asynchronous models.</i>
	Assignment	Make papers, paper presentations, project assignments for scientific papers
VALUATION	Methods/techniques	Written exams, Performance Appraisal, Product Appraisal, Attitude Assessment.
	Instrument	Writing questions, Rating <i>scale</i> , Rubric .



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REFERENCE	Main	<ol style="list-style-type: none"> 1. Jujun S. Suriasumantri. <i>Philosophy of Science: A Popular Introduction</i>. Jakarta: Sinar Harapan, 1993. 2. The Liang Gie. <i>Introduction to the Philosophy of Science</i>. Yogyakarta: Liberty, 1996. 3. Bernard Delfgaum. <i>Philosophy of the 20th Century</i>. Yogyakarta: Tiara Wacana, Yogya, 1987. 4. Michael Polanyi. <i>The Uncrowded Facets of Science</i>. Jakarta: Gramedia, 1996.
	Supporter	<ol style="list-style-type: none"> 1. K. Bertens. <i>French Contemporary Western Philosophy (Indonesian Edition)</i>. Jakarta: Gramedia Pustaka Utama, 2019. 2. Hisarma, Saragih, <i>et al.</i> <i>Philosophy of Education</i>. Holy: Our Writing Foundation, 2021. 3. Herlambang, Joseph Tri. <i>Pedagogic: A Critical Study of Educational Sciences in Multiperspective</i>. Jakarta: Bumi Aksara, 2021. 4. Husaini, Adrian et al. <i>Philosophy of Science Western and Islamic Perspectives</i>. Jakarta: Gema Insani, 2021. 5. Rusdiana. <i>Philosophy of Science</i>. Yogyakarta: CENTER FOR RESEARCH AND PUBLISHING UIN SGD BANDUNG, 2018.

DETAILS OF THE LEARNING ACTIVITY PLAN

Week Ke-	Sub-CPMK	Lecture Material / Subject Matter	Indicator	Form/ Method of Pembelajaran	Learning Modes		Time Allocation	Valuation		Reference
					Luring	Daring		Strategy	Criteria & Rubric	
1	Understanding the philosophy of science in thinking logically and analytically	<ol style="list-style-type: none"> 1. The concept of thinking philosophy of science, rational, logical and analytical 2. Differences in reason and other thinking 3. Characteristics of reasoning 4. Understanding logic 5. Types of logic 	Explain the differences in reasoning and other ways of thinking, and be able to apply the way of reasoning thinking in life Academic	Assignment discussion		in	100'	Discussion	Rubric	1-5
2	Describes the field of study of philosophy of science.	<ol style="list-style-type: none"> 1. The scope of study of the philosophy of science 2. Philosophical branch of ontology 3. Philosophical branches of epistemology 4. Philosophical branches of Axiology 	Describes the concepts of ontology, epistemology and axiology in the philosophy of science	Assignment Discussion		in	100'	Essay test	Rubric	1-5
3	Understanding the philosophy of science towards the educational	<ol style="list-style-type: none"> 1. The contribution of philosophy of science to basic education 2. Basic education paradigms that are in accordance with the 	Linking the Philosophy of science to the Paradigm of Educational Evaluation	Discussion of an estimation		in	100'	Essay test	Rubric	1-5

DETAILS OF THE LEARNING ACTIVITY PLAN

Week Ke-	Sub-CPMK	Lecture Material / Subject Matter	Indicator	Form/ Method of Pembelajaran	Learning Modes		Time Allocation	Valuation		Reference
					Luring	Daring		Strategy	Criteria & Rubric	
	paradigm Basis	rules of philosophy of science								
4	Implementing various sources of knowledge proportionally	1. Stages of development of human knowledge 2. Sources of knowledge (rational, empirical, intuition, and revelation) 3. Characteristics of each source of knowledge 4. Sources of knowledge based on rationality and experience (empirical) as a human foothold	Applying various sources of knowledge, sources of knowledge that can be used as a foothold in constructing scientific knowledge (Science)	Assignment discussion		in	100'	Essay test	Rubric	1-5

DETAILS OF THE LEARNING ACTIVITY PLAN

Week Ke-	Sub-CPMK	Lecture Material / Subject Matter	Indicator	Form/ Method of Pembelajaran	Learning Modes		Time Allocation	Valuation		Reference
					Luring	Daring		Strategy	Criteria & Rubric	
5	Internalizing the concept of truth criteria coherence, correspondence and pragmatism in compiling thesis	<ol style="list-style-type: none"> 1. Understanding the concept of the criterion of truth coherence 2. Understanding the concept of correspondence truth criteria 3. Understanding the concept of pragmatic truth criteria 4. The benefits of the third concept of truth criteria in the preparation of scientific work 	Applying the concepts and criteria of truth coherence, concepts and criteria of correspondence truth, concepts and criteria of pragmatic truth, and the implications of the three concepts of truth criteria in the preparation of works scientific	Assignment discussion		in	100'	Nontes	Rubric	1-5
6 – 7	Implementing the scientific method and its procedures in the preparation of the thesis	<ol style="list-style-type: none"> 1. The nature of quantitative and qualitative research paradigms 2. The nature of the structure of scientific knowledge and the scientific method 3. Steps and procedures for the 	Applying quantitative and qualitative research paradigms, the nature of scientific structures and methods, and steps and procedures which is carried out in constructing scientific knowledge	Discussion of an estimation		in	100'	Nontes	Rubric	1-5

DETAILS OF THE LEARNING ACTIVITY PLAN

Week Ke-	Sub-CPMK	Lecture Material / Subject Matter	Indicator	Form/ Method of Pembelajaran	Learning Modes		Time Allocation	Valuation		Reference
					Luring	Daring		Strategy	Criteria & Rubric	
		implementation of the scientific method in scientific research								
8	MIDTERM EXAMS									
9	Applying the concepts of mathematics, language, and statistics as a means of scientific thinking	<ol style="list-style-type: none"> 1. The nature of language as a means of scientific thinking 2. The nature of mathematics as a means of scientific thinking using deductive reasoning patterns 3. The nature of statistics as a means of scientific thinking using patterns inductive reasoning 	Applying the function of language as a means of scientific thinking, the function of mathematics as a means of scientific thinking, and the function of statistics as a means of scientific thinking	Discussion of an estimation		in	100'	nontes	Rubric	1-5

DETAILS OF THE LEARNING ACTIVITY PLAN

Week Ke-	Sub-CPMK	Lecture Material / Subject Matter	Indicator	Form/ Method of Pembelajaran	Learning Modes		Time Allocation	Valuation		Reference
					Luring	Daring		Strategy	Criteria & Rubric	
10	Understand the concept of social responsibility of scientists and be able to implement it in life	1. The role and social responsibility of the scientist in the realm of ontology, epistemology, and scientific axiology 2. Case studies of the impact of science and technology on human life	Internalizing the meaning of the social responsibility of scientists and having an attitude as a scientist who has social responsibility	Discussion of Estimation an		in	100'	nontes	Rubric	1-5
11	Implementing the structure of scientific knowledge in The process of creating scientific works	1. Steps of scientific research from the submission of problems to the drawing of conclusions 2. Scientific notation techniques (use of ibid, op.cit, loc.cit in footnotes and list writing library)	Applying the principles and procedures of scientific research, as well as the steps and procedures of scientific work preparation techniques	Discussion of an estimation		in	100'	nontes	Rubric	1-5

DETAILS OF THE LEARNING ACTIVITY PLAN

Week Ke-	Sub-CPMK	Lecture Material / Subject Matter	Indicator	Form/ Method of Pembelajaran	Learning Modes		Time Allocation	Valuation		Reference
					Luring	Daring		Strategy	Criteria & Rubric	
12-13	Implementing the philosophy of science with quantitative research paradigms and kualitati	1. The relationship of the philosophy of science with the paradigm of quantitative research 2. The relationship of philosophy of science with the paradigm of qualitative research	Applying the philosophy of science with quantitative and quality research paradigms in the field of education	Discussion of an estimation		in	2 x 100'	nontes	Rubric	1-5
14-15	Develop quantitative research proposals or qualitative	1. Quantitative or qualitative research procedures, 2. Systemize the writing of quantitative proposals or Kaulitattif	Applying philosophical rules in the preparation of quantitative research proposals or qualitative.	Discussion of an estimation		in	2 x 100'	nontes	Rubric	1-5
16	END-OF-SEMESTER EXAMS									

ATTACHMENT

- **Task Hints**. If there is an assignment, let alone a task in the form of a project, then it is recommended that there are task instructions so that it is clear to students.
- Scale/Rubric of task assessment, presentation or attitude

WEIGHT OF ASSESSMENT

COMPONENT	WEIGHTS (%)
Task-1	10
Task-2	10
Task-3 (<i>case based</i>)	15
Task-4 (<i>case based</i>)	15
UTS	20
UAS (<i>project based</i>)	30

GRADUATION KITERIA

MASTERY RATE (%)	LETTER	NUMBER	INFORMATION
86 – 100	A	4	Pass
81 - 85	A-	3,7	Pass
76 - 80	B+	3,3	Pass
71 - 75	B	3,0	Pass
66 - 70	B-	2,7	Haven't Graduated Yet
61 - 65	C+	2,3	Haven't Graduated Yet
56 - 60	C	2,0	Haven't Graduated Yet
51 - 55	C-	1,7	Haven't Graduated Yet
46 – 50	D	1	Haven't Graduated Yet

0 – 45	And	0	Haven't Graduated Yet
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HANDOUT ASSIGNMENT INSTRUCTIONS AND PRESENTATIONS

Courses	:	Philosophy of Science
Semester	:	Odd
Credits	:	2 credits
Tasks to	:	1 (one)
Purpose of the task	:	Students can: 1. Creating Handouts 2. Presenting a paper
Implementation Time assignment	:	4th- 15th Meeting
Submission time assignment	:	Meeting 7
Job description	:	The following are the stages of working on the task: 1. Divide the student workgroup into 12 groups 2. Each group received one topic of discussion, namely: a. Philosophy of Science b. Imu Knowledge c. History of the Development of Science d. Permission e. Reasoning f. Scientific Ethics g. Ontology h. Epistemology i. Axiology j. Science and Culture k. Development of National Science and Culture l. Philosophy of Education 3. Create a complete paper according to the given topic 4. Presenting papers according to the topic
Assessment criteria	:	Use rubric sheets as a tool for assessment. The points obtained depend on the completeness and quality of what is done. The range of values to be obtained is 0 – 100

FINAL SEMESTER EXAM (UAS)

COURSE : PHILOSOPHY OF SCIENCE

CLASS : S2 BASIC EDUCATION

SEMESTER : 1/115

Credits : 3

SUPERVISOR : PROF. SUMANTRI

FORM ; TAKE HOME TEST

Question:

Make a paper in the form of the results of ontology thinking about the topic of the Basic Education area which consists of 2 aspects / variables / focuses that are interrelated or related or influential.

Typed with scientific writing rules, how to citation apa model (body note / endnote)

Systematics :

Heading

- A. Introduction
- B. Problem formulation
- C. Discussion
- D. Conclusion
- E. Bibliography

Sources of putaka/references : 50% of articles, 30% of foreign references, 70% of sources of the last 5 years

Font Time new Roman , size 12

The results of the written work are made in a soft file and will be checked by Turnitin if it exceeds 20% then it is declared TL

The deadline for the last collection was December 6, 2021 at 23:00.

Collected in 1 file by the class leader sent via email syarifsumantri@unj.ac.id

Good work

ASSESSMENT SHEET
PRESENTATION

Courses:.....

Courses:.....

Semester :

Student name:

Assignment/product: presentation in a class discussion

Assessment date:

No	Assessed aspects	Weight (%)	Shoes (1-5)	Value (bobotxskor)
1	Communication skills	15		
2	Mastery of the material	30		
3	Ability to answer questions	20		
4	Media use	20		
5	Attitude/Personality (look/spirit/hospitality/cooperation)	15		
Sum		100		
Average value (end)				

Information:

1= very lacking

2= less

3= enough

4= good

5= excellent

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Assessment

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ASSESSMENT SHEET

WORKS

Courses:.....

Courses:.....

Semester :

Student name:

Tasks/products:

Assessment date:

No	Assessed aspects	Weight (%)	Shoes (1-5)	Value (bobotxskor)
1	Use of references/sources	10		
2	Theory support (relevance of theory)	10		
3	Comprehensive review (various perspectives)	10		
4	Originality of the work	15		
5	Novelty/innovation	20		
6	Practicality (ease of use)	15		
7	Product expediency/effectiveness	20		
Sum		100		
Average value (end)				

Information:

1= very lacking

2= less

3= enough

4= good

5= excellent

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Assessment

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ASSESSMENT SHEET

ATTITUDES/PERSONALITIES

Courses:.....

Courses:.....

Semester :

Student name:

Tasks/products:

Assessment date:

No	Assessed aspects	VALUE (1-5)
1	Notability/participation	
2	Honesty	
3	Discipline	
4	Tanggung jawab	
5	Collaborate	
AVERAGE VALUE		

Information:

1= very lacking

2= less

3= enough

4= good

5= excellent

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Assessment

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