



**Universitas Negeri Surabaya
Faculty of Education,
Basic Education Masters Study Program**

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date																																
Basic Concepts of Elementary School Science	8612203046		T=3 P=0 ECTS=6.72	2	July 17, 2024																																
AUTHORIZATION	SP Developer		Course Cluster Coordinator		Study Program Coordinator																																
		Neni Mariana, S.Pd., M.Sc., Ph.D.																																
Learning model	Case Studies																																				
Program Learning Outcomes (PLO)	PLO study program that is charged to the course																																				
	Program Objectives (PO)																																				
	PLO-PO Matrix																																				
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Short Course Description	Study of the nature of science, basic science concepts for elementary schools, misconceptions about science concepts and how to recognize and correct them, simple examples of learning science concepts in elementary schools. This course is presented in the form of theory, presentations, assignments and discussions.																																				
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td rowspan="2" style="width: 50px;">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
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References	Main : 1. (1) Ibrahim, Muslimin. (2012). Konsep, Miskonsepsi, dan Cara Pembelajarannya asar-dasar Pendidikan. Surabaya: University Press. (2) Nur, Mohamad (2000). Keterampilan Proses Sains. Surabaya: University Press. (3) Yeap Tok Kheng. (2008). Science Process Skill, Form 1 – 5. Selangor: Pearson Malaysia. (4) Peters, Joseph M. and Stout, David L. (2011). Science in Elementary Education: Methods, Concepts, and Inquiries, Supporters:																																				
Supporting lecturer	Dr. Zainul Arifin Imam Supardi, M.Si. Dr. Raharjo, M.Si. Prof. Dr. Suryanti, M.Pd. Dr. Elok Sudibyo, 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	Understand the concept	Identify the elements of a concept Explain the meaning of a concept Identify the attributes of a concept Write an example of a concept Summarize the benefits of a concept	Criteria: Each assignment given is averaged and given a weight of 30%	Questions and answers about students' conceptions, Presentation using modified CAM models to correct students' wrong conceptions, discussion 3 X 50		0%
2	Understand the nature of preconceptions and misconceptions	Comparing preconceptions and misconceptions Identifying ways to recognize the existence of misconceptions Skilled in detecting the existence of misconceptions in students Explaining mechanisms that can be used to prevent misconceptions	Criteria: All test results other than the UAS are averaged and given a weight of 20%	Presentation, discussion, 3 X 50		0%
3	Understand the nature of science	· Explain the concept of science as a scientific product, scientific process and scientific attitude · Identify examples of basic and integrated science process skills Skilled in carrying out science process skills	Criteria: All assessment results other than UAS are averaged and given a weight of 20%	Discussion, presentation and 3 X 50 modeling		0%
4	Understand the nature of science	Comparing observations and experiments Sequencing the steps of scientific investigation Explaining the meaning of mathematics as an art, language, as well as the science of structure	Criteria: All assessment results are given an average weight of 20%, while all assignments are averaged with a weight of 30%	Presentations, discussions and practical activities 3 X 50		0%
5	Understanding science concepts and inquiry for science learning: Physical Science	Explains the concepts of light, energy and color, perception and the concept of the eye	Criteria: All assignment grades are averaged and given a weight of 30%	Presentations, discussions and assignments, 3 X 50		0%

6	Understand the concepts of heat energy, calories and BTU, expansion, changes in form, temperature, heat transfer	Explain the meaning of the concept of heat energy, calories and BTU, expansion, change of form, temperature, heat transfer. Give examples of the concept of heat energy, calories and BTU, expansion, change of form, temperature, heat transfer. Explain the benefits of the concept of heat energy, calories and BTU, expansion, change of form, temperature, Heat transfer	Criteria: 20% weight for average test results other than UAS, 30% weight for assignments	Discussion and assignments, 3 X 50 presentations		0%
7	Understand the concept of sound	Explain the meaning of the concepts of sound energy, vibrations, waves, sound propagation, sound absorption and reflection, hearing Identify examples of the concepts of sound energy, vibrations, waves, sound propagation, sound absorption and reflection, hearing Summarize the benefits of the concepts of sound energy, vibrations, waves, sound propagation, absorption and sound reflection, hearing	Criteria: Average assessment (20%), average assignment (30%)	Presentation, discussion, experiment 3 X 50		0%
8	Ability to end meeting 1st. 7	Meeting indicators 1 to 1. 7	Criteria: The results of this assessment are given a weight of 20%	Giving 3 X 50 tests		0%
9	Understand the concept of magnetic interaction, making magnets, magnetic fields, magnetic therapy, static and dynamic electricity, electrical circuits, and simple airplane concepts	Explaining the concept of magnetic interaction, Skilled in making magnets, Explaining the meaning of magnetic fields, magnetic therapy, static and dynamic electricity, electrical circuits, Explaining the meaning, examples, uses and types of simple machines	Criteria: (2%2 participation 3%2 average assignment 2x average test 3x UAS): 10	Assignment, discussion 3 X 50		0%
10	Understanding the concepts of learning and inquiry for science learning: Life Science	Explain the concepts of Plants, Fungi and Algae	Criteria: Like the previous meeting	Presentation and assignment 3 X 50		0%

11	Understand the concept of animals and Protozoa	Explain the concept of animals and protozoa Explain the characteristics of animals and protozoa Identify examples of animals for each group Compare the main characteristics of each group of animals Summarize the role of animals and protozoa in human life	Criteria: 1.Daily test 20% 2.Duty 30%	Presentation and discussion of the 3 X 50 example			0%
12	Understand the concept of Virus, Monera,	Explain the characteristics of the Monera virus Show examples of viruses and monera Explain the role of viruses and monera in human life	Criteria: 1.Duty weight 30% 2.20% Test	Presentations, assignments and discussions 3 X 50			0%
13	Understand the concept of IPBA (Earth and Space Sciences	Explains the concept of water, air, weather, climate and their respective properties. Explains the concept of condensation, water and substance cycles. Explains the concepts of time and seasons, planets and satellites. Explains the solar system, gravity and motion systems.	Criteria: All tests are averaged and weighted at 30%	9 X 50 presentation and discussion assignment			0%
14	Understand the concept of IPBA (Earth and Space Sciences	Explains the concept of water, air, weather, climate and their respective properties. Explains the concept of condensation, water and substance cycles. Explains the concepts of time and seasons, planets and satellites. Explains the solar system, gravity and motion systems.	Criteria: All tests are averaged and weighted at 30%	9 X 50 presentation and discussion assignment			0%

15	Understand the concept of IPBA (Earth and Space Sciences)	Explains the concept of water, air, weather, climate and their respective properties. Explains the concept of condensation, water and substance cycles. Explains the concepts of time and seasons, planets and satellites. Explains the solar system, gravity and motion systems.	Criteria: All tests are averaged and weighted at 30%	9 X 50 presentation and discussion assignment			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.
- 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** abilities in the process and student learning outcomes are specific and measurable statements that identify the abilities 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.