



Universitas Negeri Surabaya
Faculty of Mathematics and Natural Sciences
Physics Education Undergraduate Study Program

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date																																										
Physics Experiment I	8420302043		T=2	P=0	ECTS=3.18	4	July 18, 2024																																										
AUTHORIZATION	SP Developer		Course Cluster Coordinator			Study Program Coordinator																																											
			Mita Anggaryani, M.Pd., 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																																																
		P.O																																															
	PO Matrix at the end of each learning stage (Sub-PO)																																																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td rowspan="2" style="width: 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
P.O	Week																																																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16																																	
Short Course Description	Experiment 1 is a course that studies designing and planning experimental activities in the field of mechanics and thermodynamics. Experimental Activities 1 start from planning experiments, design and experimental activities both online and offline, analyzing experimental data, experimental reports to communicating the results of experiments that have been carried out both online/offline.																																																
References	Main :																																																
	<ol style="list-style-type: none"> 1. PhET Simulations 2. Pasco laboratory 3. Didik Setyawarno. 2018. Tutorial Penggunaan Aplikasi Video Tracker untuk Analisis Gerak Benda. Pendidikan IPA FMIPA Universitas Negeri Yogyakarta. 4. Tracker-5.1.5-windows-installer 5. Djoko Untoro Suwarno. 2017. Analysis of rotating object using video tracker. Journal of Science and Science Education. Vol. 1 No. 2 November 2017 75–80. 6. Muhammad Rully Syepudin, Rahmi Siti Badriah, Resi Maryati Warga, Titin Kartini, Wildan Zikbal. 2018. Menganalisis Sudut Pendulum pada Bidang Miring Menggunakan Software Tracker Video. JoTaLP: Journal of Teaching and Learning Physics 3, 2 (2018): 14-20. 7. Tutorial Singkat Cara Menggunakan Tracker Video Analysis. https://youtu.be/1IDGvtNMQal 																																																
	Supporters:																																																
Supporting lecturer	Dra. Suliyannah, M.Si. Woro Setyarsih, S.Pd., M.Si. Nugrahani Primary Putri, S.Si., M.Si. Lydia Rohmawati, S.Si., M.Si.																																																

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							0%
2							0%
3							0%
4							0%
5							0%
6							0%
7							0%
8							0%
9							0%
10							0%
11							0%
12							0%
13							0%
14							0%
15							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.