	Universitas Negeri Surabaya **Faculty of Mathematics and Natural Sciences** **Biology Undergraduate Study Program**	**Document Code**

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
General Physics	4620103073		T=3	P=0	ECTS=4.77	1	July 17, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Dr. H. Sunu Kuntjoro, S.Si., M.Si.

Learning model	**Project Based Learning**	
Program Learning Outcomes (PLO)	**PLO study program which is charged to the course**	
	PLO-5	Able to communicate scientific ideas, both orally and in writing using appropriate communication media according to the target, as a means of lifelong learning for academic self-development.
	PLO-10	Able to design and conduct experiments in the field of biology, manage, analyze, interpret, document and store research data, to manage biological natural resources
	PLO-12	Able to demonstrate basic knowledge of biology relevant to science and mathematics to understand current scientific phenomena and issues and apply them in problem solving
	Program Objectives (PO)	
	PLO-PO Matrix	

P.O	PLO-5	PLO-10	PLO-12

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 Vectors, Particle Kinematics, Particle Dynamics, Fluids, Thermophysics, Optics, Static and Dynamic Electricity, Magnetism	
References	**Main :**	

1. Bueche, F.J. 2000. Schaum 19s Outline of College Physics . McGraw-Hill.
2. Sarojo, A.G. 2014. Seri Fisika Dasar Mekanika . Edisi 5. Salemba Teknika.
3. Serway, R.A., and Jewet, JW. 2010. Physics for Scientist and Engineers with Modern Physics . Salemba Teknik.

Supporters:

Supporting lecturer	Dra. Suliyanah, M.Si. Drs. Imam Sucahyo, M.Si. Dr. Dwikoranto, M.Pd. Woro Setyarsih, S.Pd., M.Si. Nugrahani Primary Putri, S.Si., M.Si. Setyo Admoko, S.Pd., M.Pd. Abd. Kholiq, S.Pd., M.T. Endah Rahmawati, S.T., M.Si. Dr. Eng. Evi Suaebah, M.Si., M.Sc. Dr. Muhammad Satriawan, M.Pd. Nurita Apridiana Lestari, S.Pd., M.Pd. Dr. Muhimmatul Khoiro, S. Si. Dr. Oka Saputra, 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			**Form of Assessment** : Participatory Activities				0%
2			**Form of Assessment** : Project Results Assessment / Product Assessment				0%
3			**Form of Assessment** : Project Results Assessment / Product Assessment				0%
4			**Form of Assessment** : Project Results Assessment / Product Assessment				0%
5			**Form of Assessment** : Project Results Assessment / Product Assessment				3%
6			**Form of Assessment** : Project Results Assessment / Product Assessment				2%
7			**Form of Assessment** : Project Results Assessment / Product Assessment				0%
8			**Form of Assessment** : Participatory Activities				10%

9			**Form of Assessment** : Project Results Assessment / Product Assessment				0%
10			**Form of Assessment** : Project Results Assessment / Product Assessment				5%
11			**Form of Assessment** : Project Results Assessment / Product Assessment				0%
12			**Form of Assessment** : Project Results Assessment / Product Assessment				0%
13			**Form of Assessment** : Participatory Activities				10%
14			**Form of Assessment** : Participatory Activities, Practical Assessment				10%
15			**Form of Assessment** : Participatory Activities				10%
16			**Form of Assessment** : Participatory Activities				10%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	45%
2.	Project Results Assessment / Product Assessment	10%
3.	Practical Assessment	5%
		60%

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.