

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

Document Code

## SEMESTER LEARNING PLAN

Courses		CODE	CODE Course Fami						Cre	dit We	eight		SE	SEMESTER			Compilation
Learning Pla	nina	84203022	8420302283			ulsory	Stur	łv	T=2	P=0	ECT	FS=3.1	8	3		Dat	te v 17, 202
		SP Develo			Progra		bject	ctś									
			Dr. Muhammad Satriawan, M.Pd			[	Dr. Muhammad Satriawan, M.Pd					Study Program Coordinator					
Learning model	Project Based L	earning															
Program	PLO study prog	gram that is cha	arged t	o the	course												
Learning Outcomes	Program Objec	tives (PO)															
(PLO)	PO - 1	Have knowledge	of bas	ic conc	epts and	learni	ng p	lan de	evelop	ment	mode	ls.					
	PO - 2																
	PO - 3 Have a critical and creative thinking attitude in developing physics learning plans.																
	PLO-PO Matrix																
	PO Matrix at th	PO-2 PO-3 e end of each le P.O PO-1	earning	g stage	3 4	<b>20)</b>	6	7	8	Wee 9	< 10	11	12	13	14	15	16
		PO-2															
Short Course Description	This course is a l competency desi currently in effect	PO-3 basic skills course gn, development in secondary sch	of indic	iscusse ators, s	s learnir syllabi, a	ng syst nd dev	tems velop	and	learnin t of lea	ng pla arning	nning imple	which	involv tion p	/es lea lans bi	rning p ased o	plannir n the	ng model: curricului
References	Main :																
	<ol> <li>Sanjaya, W. 2015. Perencanaan dan desain sistem pembelajaran. Jakarta: Kencana.</li> <li>Kaharuddin, A. 2020. Pembelajaran Inovatif &amp; Variatif. Pusaka Almaida.</li> <li>Ibrahim N. 2014. Perencanaan pembelajaran teoritis dan praktis. Jakarta: Mitra Abadi.</li> </ol>																
	Supporters:																

Support lecturer	2. Rosenbe 3. Keputusa Teknolog Dasar, D 4. Kwangm to enhan 5. Peratura Peratura Pelajarar 6. RI, K. (2 PENDIDI ing Dra. Suliyanah, M Dr. Titin Sunarti, I Dr. Dwikoranto, M Dr. Muhammad S Nurita Apridiana I	rg, Joshua M., and an Kepala Badan S i Nomor 008/H/Kr an Jenjang Pendid uang, P., Jarutkam ce higher order thin n Menteri Pendidil n Menteri Pendidil n Menteri Pendidil n Menteri Pendidil n Menteri Pendidil Naka KEMENTERI M.Si. M.Si. M.Si. M.Si. A.Pd. astriawan, M.Pd. Lestari, S.Pd., M.Pd. Prahani, S.Pd., M.Pd.	I Matthew J. Koehler. Standar, Kurikulum, dai /2022 Tentang Capaia iikan Menengah Pada I olpong, S., Sangboonr nking skills for students kan Dan Kebudayaan 2013 Pada Pendidikan Tanya Jawab Kurikulu AN PENDIDIKAN, KEI	n Asesmen Pen an Pembelajara Kurikulum Merd- aung, W., & Dai s in Thailand junk Republik Indor Nomor 24 Tahu Dasar Dan Pen m Merdeka. Jał	ungtod, S. (2021). The de ior high schools. Heliyon, nesia Nomor 37 Tahun 2 In 2016 Tentang Kompe	didikan, Kebudaya Usia Dini, Jenjar velopment of learn 7(6), e07309. 2018 Tentang Pe tensi Inti Dan Kom , KURIKULUM, DA	ng Pendidikan ing innovation erubahan Atas petensi Dasar AN ASESMEN
Week-	Dr. Oka Saputra, Final abilities of each learning stage	Eva	luation	Help Learning, Learning methods, Student Assignments, [Estimated time]		Learning materials [References]	Assessment Weight (%)
	(Sub-PO)	Indicator	Criteria & Form	Offline( offline)	Online ( <i>online</i> )		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Describe the scope of the learning system	<ol> <li>Able to explain the concept of learning systems</li> <li>Able to analyze systems approaches in education</li> <li>Able to describe approaches in learning systems</li> </ol>	Criteria: Activity level Form of Assessment : Participatory Activities	Discussion, Q&A, and Presentation 2 x 50'		Material: Learning System Concepts; Systems Approach in Education; School as a System; Systems Approach in Library Learning: Sanjaya, W. 2015. Planning and design of learning systems. Jakarta: Kencana. Ananda, R., & Amiruddin, A. 2019. Material: Learning system Library:	5%

2	Analyzing the current curriculum in secondary schools	<ul> <li>1.Able to explain the curriculum that applies in Indonesia</li> <li>2.Able to differentiate the learning process in the previous curriculum from the curriculum currently used in Middle School</li> </ul>	Criteria: Activity level Form of Assessment : Participatory Activities	Questions and answers, discussions and presentations 2 x 50'	2 x 50'	Material: 2013 Curriculum (K- 13); Independent Curriculum; Structure of the 2013 Curriculum and Merdeka Pustaka Curriculum: Decree of the Head of the Educational Standards, Curriculum and Assessment Agency of the Ministry of Education, Culture, Research and Technology Number 008/H/Kr/2022 concerning Learning Achievements in Early Childhood Education, Basic Education, Basic Education in the Independent Curriculum. Material: Analysis of the secondary school curriculum	5%
3	Understand innovative learning models, HOTS, and TPACK	<ol> <li>Able to explain innovative learning models</li> <li>Able to explain a variety of high-level skills</li> <li>Able to explain TPACK in learning</li> </ol>	Criteria: Activity level Form of Assessment : Participatory Activities, Portfolio Assessment	Discussion, question and answer, and presentation 2 x 50'		Material: Innovative learning model Reference: Kaharuddin, A. 2020. Innovative & Variative Learning. Almaida Heritage. Material: HOTS and TPACK References: Kwangmuang, P., Jarutkamolpong, S., Sangboonraung, W., & Daungtod, S. (2021). The development of learning innovation to enhance higher order thinking skills for students in Thailand junior high schools. Heliyon, 7(6), e07309.	2%

4	Understand innovative learning models, HOTS, and TPACK	<ol> <li>Able to explain innovative learning models</li> <li>Able to explain a variety of high-level skills</li> <li>Able to explain TPACK in learning</li> </ol>	Criteria: Non test Form of Assessment : Participatory Activities, Portfolio Assessment	Discussion, question and answer, and presentation 2 x 50'	Material: Innovative learning model Reference: Kaharuddin, A. 2020. Innovative & Variative Learning. Almaida Heritage. Material: HOTS and TPACK References: Kwangmuang, P., Jarutkamolpong, S., Sangboonraung, W., & Daungtod, S. (2021). The development of learning innovation to enhance higher order thinking skills for students in Thailand junior high schools. Heliyon, 7(6), e07309.	3%
5	Mastering the basic concepts of learning planning	<ol> <li>Able to explain the concept of learning planning</li> <li>Able to explain the concept of learning planning</li> <li>Able to analyze the benefits and functions of learning planning</li> <li>Able to differentiate learning planning models</li> </ol>	Criteria: Level of activeness and accuracy in answering Form of Assessment : Participatory Activities	Questions and answers, discussions and presentations 2 x 50'	Material: Understanding Planning, Studying and Learning; Meaning of Learning Planning; Types of Learning Planning; Principles of Learning Planning; Benefits and Functions of Learning Planning Library: Ibrahim N. 2014. Theoretical and practical learning planning. Jakarta: Eternal Partners. Material: Learning planning models Reference: Haynes, A. 2010. The complete guide to lesson planning and preparation. Bloomsbury Publishing.	5%

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6	<ol> <li>Analyzing Physics learning outcomes</li> <li>Develop a flow of learning objectives</li> <li>Describe the components and principles of preparing learning planning</li> </ol>	<ol> <li>Able to analyze learning outcomes in the curriculum</li> <li>Able to formulate a flow of physics learning objectives</li> </ol>	Criteria: Accuracy in analyzing and formulating the flow of learning objectives Form of Assessment : Project Results Assessment / Portfolio Assessment Assessment	Questions and answers, discussions and presentations 2 x 50'	Chara of Cou Gradu Comp Stand Comp Basic Comp Opera Verbs Form Indica Devel Litera Assee Indic Ibrahi Theor practi Iearni plann Jakan Partne Mater Merde Curric Libra Mater Merde Curric Libra Mater Merde Curric Libra Mater Merde Curric Libra Mater Merde Curric Libra Mater Merde Curric Libra	tion and icteristics mpetency; iate etency ards, Core etencies; tional ; ilating tors; oping ture assment ators: m N. 2014. etical and cal ng ing. ia: Eternal ers. ial: eka ulum ry: RI, K. ). endent ulum tion and er Pocket Jakarta: CATIONAL DARDS, RICULUM SSMENT ICY OF MINISTRY CATION, URE, CATION, URE, CATION, URE, CATION, URE, CATION, UNLOGY	5%

8	<ol> <li>Describe the scope of the learning system</li> <li>Analyzing the current curriculum in secondary schools</li> <li>Describe innovative learning models, HOTS, and TPACK</li> <li>Mastering the basic concepts of learning planning</li> </ol>	<ol> <li>Able to describe the scope of the learning system</li> <li>Able to analyze the curriculum currently in effect in secondary schools</li> <li>Able to describe innovative learning models, HOTS, and TPACK</li> <li>Able to explain the basic concepts of learning planning</li> </ol>	Criteria: Accuracy in answering questions Form of Assessment : Project Results Assessment / Product Assessment, Test	Written Test 2 x 50'	Material: Definition and Characteristics of Competency; Graduate Competency Standards, Core Competencies, Basic Competencies; Operational Verbs; Formulating Indicators; Developing Literature Assessment Indicators: Ibrahim N. 2014. Theoretical and practical learning planning. Jakarta: Eternal Partners. Material: Merdeka Curriculum Physics Learning Achievements Library: Decree of the Head of the Educational Standards, Curriculum and Assessment Agency of the Ministry of Education, Culture, Research and Technology Number 008/H/Kr/2022 concerning Achievements in Early Childhood Education, Basic Education Levels, and Secondary Education Levels, in the Independent	20%
9	Developing Physics learning planning in high school	Able to analyze physics learning topics based on the results of curriculum analysis	Criteria: Accuracy in determining learning topics Form of Assessment : Portfolio Assessment	Team based project (planning) 2 x 50'	Curriculum. Material: Analysis of physics material References: RI, K. (2022). Independent Curriculum Question and Answer Pocket Book. Jakarta: EDUCATIONAL STANDARDS, CURRICULUM AND ASSESSMENT AGENCY OF THE MINISTRY OF EDUCATION, CULTURE, RESEARCH AND TECHNOLOGY OF THE REPUBLIC OF INDONESIA.	5%

10	Developing Physics learning planning in high school	Able to analyze physics learning topics based on the results of curriculum analysis	Criteria: Accuracy in determining the learning model	Team based project (Planning) 2 x 50'		Material: Analysis of physics material References: RI, K. (2022). Independent Curriculum Question and Answer Pocket Book. Jakarta: EDUCATIONAL STANDARDS, CURRICULUM AND ASSESSMENT AGENCY OF THE MINISTRY OF EDUCATION, CULTURE, RESEARCH AND TECHNOLOGY OF THE REPUBLIC OF INDONESIA.	5%
11	Developing Physics learning planning in high school	Able to design learning scenarios	Criteria: Accuracy in designing learning planning scenarios Form of Assessment : Project Results Assessment / Product Assessment, Portfolio Assessment		Team based project (Workshop) 2 x 50'	Material: Physics Learning Teaching Module Library: RI, K. (2022). Independent Curriculum Question and Answer Pocket Book. Jakarta: EDUCATIONAL STANDARDS, CURRICULUM AND ASSESSMENT AGENCY OF THE MINISTRY OF EDUCATION, CULTURE, RESEARCH AND TECHNOLOGY OF THE REPUBLIC OF INDONESIA.	5%
12	Developing Physics learning planning in high school	Able to design learning scenarios	Criteria: Accuracy in designing learning planning scenarios Form of Assessment : Portfolio Assessment		Team based project (Workshop) 2 x 50'	Material: Physics Learning Teaching Module Library: RI, K. (2022). Independent Curriculum Question and Answer Pocket Book. Jakarta: EDUCATIONAL STANDARDS, CURRICULUM AND ASSESSMENT AGENCY OF THE MINISTRY OF EDUCATION, CULTURE, RESEARCH AND TECHNOLOGY OF THE REPUBLIC OF INDONESIA.	5%

13	Developing physics learning teaching modules	Able to design assessment instruments	Criteria: Accuracy in designing learning assessments Form of Assessment : Project Results Assessment / Product Assessment	Team based projects (workshops)	Material: Development of Physics learning teaching modules Library: RI, K. (2022). Independent Curriculum Question and Answer Pocket Book. Jakarta: EDUCATIONAL STANDARDS, CURRICULUM AND ASSESSMENT AGENCY OF THE MINISTRY OF EDUCATION, CULTURE, RESEARCH AND TECHNOLOGY OF THE REPUBLIC OF INDONESIA.	5%
14	Developing physics learning teaching modules	Able to design assessment instruments	Criteria: Accuracy in designing learning assessments Form of Assessment : Project Results Assessment / Product Assessment	Team based project (workshop) 2 x 50'	Material: Development of Physics learning teaching modules Library: RI, K. (2022). Independent Curriculum Question and Answer Pocket Book. Jakarta: EDUCATIONAL STANDARDS, CURRICULUM AND ASSESSMENT AGENCY OF THE MINISTRY OF EDUCATION, CULTURE, RESEARCH AND TECHNOLOGY OF THE REPUBLIC OF INDONESIA.	5%
15	Developing physics learning teaching modules	Able to develop physics learning teaching modules	Criteria: Conformity of product results with the assessment rubric Form of Assessment : Project Results Assessment / Product Assessment	Team based project (Product Presentation) 2 x 50'	Material: Development of Physics learning teaching modules Library: RI, K. (2022). Independent Curriculum Question and Answer Pocket Book. Jakarta: EDUCATIONAL STANDARDS, CURRICULUM AND ASSESSMENT AGENCY OF THE MINISTRY OF EDUCATION, CULTURE, RESEARCH AND TECHNOLOGY OF THE REPUBLIC OF INDONESIA.	10%

16	Presenting the teaching module that has been developed	Able to communicate and be accountable for the physics learning teaching modules produced	Criteria: Conformity of product results with the assessment rubric Form of Assessment : Project Results Assessment / Product Assessment		Team based project/ Product presentation 2 x 50'	Material: Physics Learning Teaching Module Library: RI, K. (2022). Independent Curriculum Question and Answer Pocket Book. Jakarta: EDUCATIONAL STANDARDS, CURRICULUM AND ASSESSMENT AGENCY OF THE MINISTRY OF EDUCATION, CULTURE, RESEARCH AND TECHNOLOGY OF THE REPUBLIC OF INDONESIA.	15%
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Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	17.5%
2.	Project Results Assessment / Product Assessment	50%
3.	Portfolio Assessment	20%
4.	Test	12.5%
		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.
- 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 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.
- 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.
- 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.