



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

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Instructional Media	8420502156	Study Program Elective Courses	T=2	P=0	ECTS=3.18	3	May 11, 2023
AUTHORIZATION	SP Developer		Course Cluster Coordinator			Study Program Coordinator	
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Learning model	Project Based Learning
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Program Learning Outcomes (PLO)	PLO study program that is charged to the course
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PLO-9	Able to design, implement and evaluate biology learning by utilizing ICT
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Program Objectives (PO)	
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PO - 1	Able to understand the development and implementation of media based on pedagogical concepts, student characteristics, learning theories and learning evaluation. Able to produce innovative learning materials and learning media and their implementation in learning. Able to produce learning media that has the potential to be an entrepreneurial activity in learning. Able to make the right decisions in the context of determining the right teaching media to solve learning problems in biology. Demonstrate an attitude of responsibility in developing learning media
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PLO-PO Matrix	
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P.O	PLO-9
PO-1	

PO Matrix at the end of each learning stage (Sub-PO)	
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P.O	Week															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PO-1																

Short Course Description	Study of the meaning, types/classification, functions, and basics of developing biology learning media. Media development emphasizes innovative biology learning media as a solution to biology learning management problems. The development of learning media takes into account the principles of utilizing the surrounding environment (contextual) and ICT. Lectures are delivered through presentations, discussions and assignments for projects to create various media ranging from simple to IT-based.
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References	Main :
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1. Fenrich, P.1997. Practical Guidelines For Creating Instructional Multimedia Application . USA: Harcourt Brace College Publisher.
2. Heinrich, R., Molenda. 1999. Instructional Media and Technologies for Learning. USA: Prentice Hall
3. Reynolds, Karen E. 1996. Technology for the teaching and learning science . Boston: Allyn and Bacon.
4. Arsyad, Azhar, 2009. Media pembelajaran . Jakarta: Raja Grafindo Persada.
5. Munadi, Yudhi. 2008. Media pembelajaran: sebuah pendekatan baru . Jakarta: Gaung Persada, 2008.
6. Isnawati. 2015. Media Pembelajaran Berbasis Bahan Sederhana . Surabaya: Jaudar Press

Supporters:	
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Supporting lecturer	Dr. Rinie Pratiwi Puspitawati, M.Si. Dr. Isnawati, M.Si. Dr. Widowati Budijastuti, M.Si. Dr. Muji Sri Prastiwi, S.Pd., M.Pd. Ahmad Bashri, S.Pd., M.Si.
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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 meaning, types/classification, functions and benefits of Biology learning media. Have a responsible attitude towards performance in Biology learning media lectures	<ol style="list-style-type: none"> 1.Explain the meaning of media 2.Explain the types/classifications of Biology learning media 3.Describe the relevance between media types and their functions. 4.Identify the benefits of media from various examples of the Biology learning process. 5.Be present on time according to the lecture schedule 6.Collect assignments on time 	Form of Assessment : Project Results Assessment / Product Assessment	Examining teaching materials in the form of modules, PPT slides in cooperative groups and presenting the results as a form of formative evaluation that will get feedback from the lecturer 3 X 50	Observe teaching materials in the form of modules, PPT slides in cooperative groups in breakout rooms and present the results in virtual space on Zoom Sidia as a form of formative evaluation that will get feedback from the lecturer	Material: definition and types of learning media Reader: <i>Isnawati. 2015. Simple Material Based Learning Media. Surabaya: Jaudar Press</i>	5%
2	Understand the development principles and procedures for developing biology learning media. Have a responsible attitude towards performance in Biology learning media lectures	<ol style="list-style-type: none"> 1.Explain the principles of learning media development 2.Describe the procedures for developing learning media 3.Comparing several learning media development procedures in learning research. 4.Be present on time according to the lecture schedule 5.Collect assignments on time 	Criteria: Assessment is based on benchmarks (PAP). The assessment components consist of sub-summative, assignment, summative and participation grades. Participation assessment is an assessment of attitudes. Performance assessment in the form of presentation performance is carried out integrated during learning as an assignment grade Form of Assessment : Project Results Assessment / Product Assessment, Test	examine the teaching materials provided and discuss in cooperative groups to find concepts related to the principles and development of biology learning media followed by a presentation as a form of formative assessment which will receive input from the lecturer 3 X 50	pay close attention to the teaching materials provided and discuss in cooperative groups to find concepts related to the principles and development of biology learning media which are carried out in the virtual breakout room via Zoom SiDia which is followed by a SiDia presentation as a form of formative assessment which will receive input from the lecturer	Material: Principles and procedures for developing learning media. Reference: <i>Munadi, Yudhi. 2008. Learning media: a new approach. Jakarta: Gaung Persada, 2008.</i>	10%
3	Select and include arguments for selecting original learning media (specimens) to be used in biology learning. Using original learning media (specimens) in accordance with biology learning material. Have a responsible attitude towards performance in biology learning media lectures	<ol style="list-style-type: none"> 1. Describe the types and functions of original learning media. 2. Evaluate the suitability of original learning media (specimens) from the aspects of theoretical validity, practicality and security in learning. 3. Plan to procure original learning media (specimens) as a solution for managing learning on biology material. 4. Be present on time according to the lecture schedule. 5. Collect assignments on time 	Criteria: • According to the keywords you get the maximum score • If you answer incorrectly you get a score of 1 • If you don't answer you get a score of 0. Form: test Form of Assessment : Participatory Activities, Project Results Assessment / Product Assessment	Discussing the teaching materials provided in cooperative groups and continuing with a presentation of the results as a form of formative assessment that receives responses and feedback from lecturers and other groups 6 X 50	Discussing the teaching materials provided in cooperative groups and continuing with a presentation of the results as a form of formative assessment that receives responses and feedback from lecturers and other groups	Material: Assessment of the parameters of a learning media Reference: <i>Arsyad, Azhar, 2009. Learning media. Jakarta: Raja Grafindo Persada.</i>	10%
4	Select and include arguments for selecting original learning media (specimens) to be used in biology learning. Using original learning media (specimens) in accordance with biology learning material. Have a responsible attitude towards performance in biology learning media lectures	<ol style="list-style-type: none"> 1. Describe the types and functions of original learning media. 2. Evaluate the suitability of original learning media (specimens) from the aspects of theoretical validity, practicality and security in learning. 3. Plan to procure original learning media (specimens) as a solution for managing learning on biology material. 4. Be present on time according to the lecture schedule. 5. Collect assignments on time 	Criteria: Attached	Presentations, discussions and assignments 6 X 50			0%

5	Select and include arguments for choosing artificial media to be used in biology learning. Select and use artificial media in accordance with Biology learning. Create simple artificial learning media that have the potential to become entrepreneurial activities. Have a responsible attitude towards performance in biology learning media lectures.	1. Describe the types and functions of artificial learning media. 2. Evaluate the feasibility of artificial learning media from the aspects of theoretical validity, practicality and safety in learning. 3. Planning to procure artificial learning media as a solution for managing learning on biology material. 4. Be present on time according to the lecture schedule. 5. Collect assignments on time	Criteria: Attached Form of Assessment : Participatory Activities, Project Results Assessment / Product Assessment	Presentations, discussions and assignments. 6 X 50			10%
6	Implementing simple biology learning media in learning management. Create simple artificial learning media that has the potential to become an entrepreneurial activity. Have a responsible attitude towards performance in biology learning media lectures	1. Developing simple biology learning media. 2. Presenting simple biology learning media developed in a learning context 3. Be present on time according to the lecture schedule 4. Collect assignments on time	Criteria: Attached Form of Assessment : Project Results Assessment / Product Assessment	Presentations, discussions and assignments. 6 X 50			30%
7	Understand and be skilled at creating ICT-based games/gaming and audio-visual (photo, audio, video) learning media. Have a responsible attitude towards performance in biology learning media lectures	1. Explain the meaning, types/classification, functions, and basics of using ICT-based games/games and audio-visual (photo, audio, video) learning media 2. Develop game/play and audio-visual (photo, audio) learning media , video) ICT-based. 3. Be present on time according to the lecture schedule. 4. Collect assignments on time	Criteria: Attached Form of Assessment : Participatory Activities, Project Results Assessment / Product Assessment	Presentations, discussions and assignments. 6 X 50			5%
8	UTS	UTS	Criteria: Attached Form of Assessment : Test	UTS 2 X 50			15%
9	Select and use animated Biology learning media. Have a responsible attitude towards performance in biology learning media lectures	1. Explain the meaning, types/classification, functions, and basics of using Biology animation learning media. 2. Evaluate Biology animation learning media. 3. Be present on time according to the lecture schedule. 4. Collect assignments on time	Criteria: Attached	Lectures, discussion-information, Assignment 2 X 50		Material: types/classification, functions, and basics of using animated learning media Biology Library: Arsyad, Azhar, 2009. Learning media. Jakarta: Raja Grafindo Persada.	0%
10	Select and use virtual laboratory biology learning media. Have a responsible attitude towards performance in biology learning media lectures	1. Explains the meaning, types/classification, functions, and basics of using virtual laboratory biology learning media. 2. Using and evaluating virtual laboratory Biology learning media 3. Be present on time according to the lecture schedule 4. Collect assignments on time	Criteria: Attached	Lectures, discussion-information, Assignment 2 X 50			0%

11	Understand and be skilled at creating Biology learning media in the form of PPT-based slides. Have a responsible attitude towards performance in biology learning media lectures	1. Explain the meaning, types/classification, functions and basics of using Biology learning media in the form of PPT-based slides. 2. Evaluate Biology learning media in the form of PPT-based slides that are valid, practical, effective and safe. 3. Be present on time according to the lecture schedule. 4. Collect assignments on time	Criteria: Attached Form of Assessment : Participatory Activities	Lectures, discussion-information, Assignment 2 X 50		Material: create Biology learning media in the form of PPT-based slides. References: <i>Munadi, Yudhi. 2008. Learning media: a new approach. Jakarta: Gaung Persada, 2008.</i>	0%
12	Understand and be skilled in creating distance (online) learning media for Biology learning. Have a responsible attitude towards performance in biology learning media lectures	1. Explain the meaning, types/classification, functions, and basics of using distance learning media (online) for learning Biology. 2. Create and evaluate online (websites) for learning Biology that are valid, practical, effective, and safe. 3. Be present on time according to the lecture schedule. 4. Collect assignments on time	Criteria: Attached	Lectures, discussion-information, Assignment 2 X 50		Material: types/classification, functions, and basics of using distance learning media (online) Reader: <i>Isnawati. 2015. Simple Material Based Learning Media. Surabaya: Jaudar Press</i>	0%
13	Understand and be skilled in creating distance (online) learning media for Biology learning. Have a responsible attitude towards performance in biology learning media lectures	1. Explain the meaning, types/classification, functions, and basics of using distance learning media (online) for learning Biology. 2. Create and evaluate online (websites) for learning Biology that are valid, practical, effective, and safe. 3. Be present on time according to the lecture schedule. 4. Collect assignments on time	Criteria: Attached	Lectures, discussion-information, Assignment 2 X 50		Material: types/classification, functions and basics of using distance learning media (online) Reader: <i>Munadi, Yudhi. 2008. Learning media: a new approach. Jakarta: Gaung Persada, 2008.</i>	0%
14	Skilled in reporting the results of learning media development in accordance with content, process and value standards.	1. Communicate the results of learning media development in accordance with content, process and value standards. Reflecting on the results of learning media development in an effort to improve the results of learning media development	Criteria: Attached	Presentation 2 X 50		Material: learning media in accordance with content, process and value standards. Reference: <i>Fenrich, P. 1997. Practical Guidelines For Developing Instructional Multimedia Applications. USA: Harcourt Brace College Publishers.</i>	0%
15	Skilled in reporting the results of learning media development in accordance with content, process and value standards.	1. Communicate the results of learning media development in accordance with content, process and value standards. Reflecting on the results of learning media development in an effort to improve the results of learning media development	Criteria: Attached Form of Assessment : Project Results Assessment / Product Assessment	Presentation 2 X 50		Material: learning media in accordance with content, process and value standards. Reference: <i>Reynolds, Karen E. 1996. Technology for the teaching and learning science. Boston: Allyn and Bacon.</i>	5%
16			Form of Assessment : Test	test			35%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	12.5%
2.	Project Results Assessment / Product Assessment	57.5%
3.	Test	55%
		100%

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.