



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

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date																																	
Visual Programming	8420202004		T=2 P=0 ECTS=3.18	3	July 17, 2024																																	
AUTHORIZATION	SP Developer		Course Cluster Coordinator		Study Program Coordinator																																	
		Dr. Endah Budi Rahaju, M.Pd.																																	
Learning model	Project Based Learning																																					
Program Learning Outcomes (PLO)	PLO study program which is charged to the course																																					
	Program Objectives (PO)																																					
	PLO-PO Matrix																																					
		<table border="1" style="margin: auto;"> <tr><td style="width: 30px; height: 30px;">P.O</td></tr> </table>					P.O																															
P.O																																						
	PO Matrix at the end of each learning stage (Sub-PO)																																					
	<table border="1" style="margin: auto;"> <tr> <td rowspan="2" style="width: 30px; height: 30px;">P.O</td> <td colspan="16" style="text-align: center;">Week</td> </tr> <tr> <td style="width: 20px;">1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>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	This course examines the basic concepts of visual programming languages, how to use existing tools to produce a good application display. Visual design and graphic displays are also introduced in this course. And ending with a project to create an application for learning Mathematics																																					
References	Main :																																					
	1. Christodoulou, M., Szczygiel, E., Kłapa, Ł., & Kolarz, W. (2018). Algorithmic and Programming. Gaddis, T., & Halsey, R. (2014). Starting Out with App Inventor for Android. Pearson.. Kuhlman, D. 2013 . A Python Book: Beginning Python, Advanced Python, and Python Exercises. MIT. Ford, J. L. (2008). Scratch programming for teens. Course Technology Press. Gaddis, T., & Irvine, K. R. (2009). Starting Out with Visual Basic 2008. Pearson Addison Wesley.																																					
	Supporters:																																					
Supporting lecturer	Dr. Atik Wintarti, M.Kom. Shofan Fiangga, S.Pd., M.Sc. Evangelista Lus Windyana Palupi, S.Pd., M.Sc. Riska Wahyu Romadhonia, S.Si., M.Sc.																																					
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	Introduction to Programming and Programming Languages (CLO-1)	1. Get to know the meaning of programming 2. Get to know the basic concepts of programming 3. Get to know the types of programming languages		Lectures, Responsibilities, and Teaching Tutorials/Practicums with a 2 X 50 scientific approach			0%
2	Get to know the basic concepts of visual programming (CLO-1)	Get to know the meaning of visual programming Get to know the basic concepts of programming		Lectures, Responsibilities, and Tutorials/Practicum Teaching with a scientific approach Selection program 3 x 50 minutes 2 X 50			0%
3	Get to know selection program control (CLO-1)	Using if-else syntax to select a condition Using switch-case with conditions of integer data type Using switch-case with conditions of character data type		2 X 50			0%
4	Get to know repetition program control (CLO-1)			2 X 50			0%
5	Introduction to Block-based programming (CLO-1)	Get to know Block-based programming Get to know various programming software based on Block-based programming		2 X 50			0%
6	Using Block-based programming to develop simple applications (GUI) (CLO-1)	Create and program simple applications using block-based programming		2 X 50			0%
7	Using Block-based programming to develop simple applications (GUI) (CLO-1)	Create and program simple applications using block-based programming		2 X 50			0%
8	Midterm exam			2 X 50			0%
9	Getting to know applications for learning mathematics (CLO-2) Designing applications for learning mathematics (CLO-2)	Getting to know applications for learning mathematics Designing applications for learning mathematics		2 X 50			0%
10	Getting to know applications for learning mathematics (CLO-2) Designing applications for learning mathematics (CLO-2)	Getting to know applications for learning mathematics Designing applications for learning mathematics		2 X 50			0%
11	Creating applications for learning mathematics using Android (CLO-3)	Creating applications for learning mathematics using Android		2 X 50			0%

12	Creating applications for learning mathematics using Android (CLO-3)	Creating applications for learning mathematics using Android		2 X 50			0%
13	Creating applications for learning mathematics using Android (CLO-3)	Creating applications for learning mathematics using Android		2 X 50			0%
14	Develop project proposal (CLO-4)	Develop creative ideas to create mathematics learning applications. Create applications for mathematics learning		2 X 50			0%
15	Develop project proposal (CLO-4)	Develop creative ideas to create mathematics learning applications. Create applications for mathematics learning		2 X 50			0%
16							0%

Evaluation Percentage Recap: Project Based Learning

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.**

