



Universitas Negeri Surabaya
Faculty of Engineering,
Undergraduate Study Program in Informatics Engineering

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date		
Animation and Game Programming	5520203055		T=3 P=0 ECTS=4.77	5	July 17, 2024		
AUTHORIZATION	SP Developer		Course Cluster Coordinator		Study Program Coordinator		
		Aditya Prapanca, S.T., M.Kom.		
Learning model	Project Based Learning						
Program Learning Outcomes (PLO)	PLO study program that is charged to the course						
	Program Objectives (PO)						
	PLO-PO Matrix						
		P.O					
Short Course Description	Game programming courses are courses that teach students the steps to design and create a game. Designing games is based on understanding the characters that will be used and run in the game, as well as the use of story boards as the plot of a game. Students are also given an understanding of the features in a game as well as the process of creating a game using a programming language so that they can produce an interactive and interesting game.						
	<p>References Main :</p> <ol style="list-style-type: none"> 1. Novak, Jeannie. 2012. Game Development Essentials An Introduction, Third Edition. USA: Delmar, Cengage Learning 2. Chronister, James. 2011. Blender Basics Classroom Tutorial Book, Fourth Edition. Pennsylvania: Central Dauphin School District. 3. Blackman, Sue. 2013. Beginning 3D Game Development with Unity 4 All-in one, multiplatform game development (Technology in Action), Second Edition. New York: Apress. 4. Bruno. 2002. Game Programming All in One. Premier Press 5. Jeff W. Murray. 2013. Game Development for iOS with Unity3D. CRC Press 6. Janine Suvak. Learn Unity3D Programming with UnityScript. Friends of Apress 7. Somon Jackson. 2015 Unity 3D UI Essentials. Packt Publishing Ltd. <p>Supporters:</p>						
Supporting lecturer	Ronggo Alit, M.M., M.T. Martini Dwi Endah Susanti, S.Kom., M.Kom.						
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 animation and games	<ol style="list-style-type: none"> 1.Explain and understand animation and games 2.Explain and understand various examples of animation and games 3.Explain and understand the definition of animation and games 	Criteria: <ol style="list-style-type: none"> 1.False = 0 2.True = 1 	Approach: Scientific Model: Cooperative Method: Discussion, presentation 3 X 50		0%
2	Understand the history of animation and games	<ol style="list-style-type: none"> 1.Explain and understand the history of animation and games 2.Explain and understand the development of animation and games 3.Explain and understand the origins of animation and games 	Criteria: <ol style="list-style-type: none"> 1.true = 1 2.false = 0 	Approach: Scientific Method: Discussion, assignment Model: Cooperative 3 X 50		0%
3	Classification of Animation and Games	<ol style="list-style-type: none"> 1.Explain and understand the classification of animation and games based on genre 2.Explain and understand the classification of animation and games based on the type of platform used 3.Explain and understand the classification of animation and games based on categories 4.Task: provide examples along with the advantages and disadvantages of each classification 	Criteria: <ol style="list-style-type: none"> 1.True = 1 2.false = 0 Form of Assessment : Participatory Activities	Approach: Scientific Method: Discussion, assignment Model: Cooperative 3 X 50		25%
4	Building Character in the Game	<ol style="list-style-type: none"> 1.Explain and understand the characters in the game 2.Explain and understand examples of characters in the game 3.Explains techniques for creating game characters 4.Design game characters 	Criteria: <ol style="list-style-type: none"> 1.True = 1 2.false = 0 	Approach: Scientific Method: Discussion, assignment Model: Practice 3 X 50		0%

5	Story Board Games	<ol style="list-style-type: none"> 1.Explain and understand story board games 2.Explain and understand examples of story board games 3.Design story boards 	Criteria: 1.True = 1 2.False = 0	Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practicum 3 X 50		0%
6	Students know techniques in 3D modeling such as modeling, materials, lighting	Game Assets	Criteria: 1.True = 1 2.False = 0 Form of Assessment : Participatory Activities	Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practicum 3 X 50		25%
7	Game creation tools	<ol style="list-style-type: none"> 1.Explain and understand tools for making games 2.Explain and understand examples of tools for making games 3.Explain and understand the advantages and disadvantages of various tools for making games 4.Task: determine tools to build a game 	Criteria: 1.True = 1 2.false = 0	Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practicum 3 X 50		0%
8	UTS			3 X 50		0%
9	Game graphics	<ol style="list-style-type: none"> 1.Explain and understand graphics in games 2.Explain and understand examples of graphics in games 3.Explain and understand 2D graphics in games 4.Explain and understand 3D graphics in games 5.Designing graphics in game projects 	Criteria: 1.True = 1 2.False = 0	Approach: Scientific Method: Discussion, Task Model: Cooperative 3 X 50		0%

10	Collision Detection	<ol style="list-style-type: none"> 1.Explain and understand collision detection in games 2.Explain and understand examples of collision detection 3.Designing space portioning 4.Designing Bounding Boxes 5.Designing Bounding Spheres 	Criteria: <ol style="list-style-type: none"> 1.True = 1 2.False = 0 	Approach: Scientific Method: Discussion, Assignment Model: Practice 3 X 50			0%
11	Game Handling Inputs	<ol style="list-style-type: none"> 1. Explain and understand input handling in the game 2. Explain and understand examples of input handling 3. Utilizes various types of input handling 	Criteria: True = 1 False = 0 Form of Assessment : Participatory Activities	<ol style="list-style-type: none"> 1. Scientific approach 2. Method: Discussion, Assignment 3. Model: Practice 3 X 50			25%
12	Game Audio	<ol style="list-style-type: none"> 1.Explaining and understanding audio in games 2.Explain and understand audio examples 3.Understand the various audio formats used in games 4.Utilizing various audio techniques in game creation 	Criteria: <ol style="list-style-type: none"> 1.True = 1 2.False = 0 	Approach: Scientific Method: Discussion, Assignment Model: Practice 3 X 50			0%
13	Gaming AI	<ol style="list-style-type: none"> 1.Explaining and understanding AI in games 2.Understand the types of AI used in games 3.Understand the use of AI to produce responsive games 4.Able to use AI to produce intelligent behaviors on npc 	Criteria: <ol style="list-style-type: none"> 1.True = 1 2.False = 0 	Approach: Scientific Method: Discussion, Assignment Model: Practice 3 X 50			0%

14	Game Scripting		1.Explain and understand scripting in the game 2.Understand the function of Microsoft.Net as an intermediary for C# and Unity 3.Reviewing C# 4.Implementing C# in Unity for game creation	Criteria: 1.True = 1 2.False = 0	Approach: Scientific Method: Discussion, Assignment Model: Practice 3 X 50			25%
15	Game GUI	1.	Explain and understand the game GUI 2. Understand different types of game GUIs 3. Able to build game GUI	Criteria: True = 1 False = 0	1. Scientific approach 2. Method: Discussion, Assignment 3. Model: Practice 3 X 50			0%
16								0%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	75%
		75%

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.
- 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.
- 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.
- 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.
- 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.
- Forms of assessment:** test and non-test.
- 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.
- Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
- 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%.
- TM=Face to face, PT=Structured assignments, BM=Independent study.