Learning Outcomes and Exam Objectives

Unity Certified
Associate

Unity Associate

Whether you want to get Unity Certified, or just want to learn to make games, we've got you covered!

Unity Associate certification and courseware are for anyone who wants a structured, hands-on, self-study program for learning Unity and game development. With the courseware, you'll build a working game from the ground up using the Zombie Toys assets provided and learn everything you need to be prepared to take the Unity Certified Associate exam.

Learning Outcomes

With **Unity Certified Associate Courseware**, you can learn the Unity platform and game development fundamentals from the trenches by following the production of a working game from concept all the way through to publishing. Unity Certified Associate courseware gives you a structured, self-study program that includes everything you and your students need to succeed:

- 20 chapters of video-rich learning content (199 videos, approximately 19 hours*)
- All Zombie Toys game project exercise files and assets you or your students will need to follow along in Unity

Focus on the essentials. Learn about the job roles and skills most essential to game production, and gain Unity experience that directly maps to preparation for the Unity Certified Associate Exam.

Build a working game. Develop an end-to-end understanding of game production with Unity by building Zombie Toys, a third-person, 3D, survival arcade game. Learn hands-on as you execute game development tasks along with the videos—from importing assets, to scripting behavior, to building the game for publication.

Chapter	Title	Learning Outcomes
1	Welcome to Unity!	Differentiate Unity services Differentiate video game production practices Distinguish console hardware Distinguish production talent roles and responsibilities Distinguish video game design elements Distinguish video game genres Distinguish video game production practices Distinguish video game types Examine Unity services Explain Unity services Identify production phases by criteria Identify video game production practices Implement Unity services Know video game controls Know video game design principles Know video game industry terms Recognize Unity services Summarize Unity services Understand model asset optimization Understand the Unity Asset Store Understand video game art principles Understand video game industry practices Understand video game industry terminology
2	Exploring the Unity User Interface	Distinguish the Hierarchy Window Distinguish Unity editors Distinguish Unity views Distinguish Unity windows Know the Project View Window Manage Scene files Navigate the Scene View Window Reorganize the Unity interface Understand Tags Understand the Hierarchy Window Understand the Inspector Window Understand the Project View Window Utilize the Inspector Window
3	Using Game Objects and Assets	Define Prefabs Differentiate GameObjects Distinguish components Distinguish Models Examine GameObject components Identify GameObjects Know the Project View Window Manage GameObjects Manage Prefabs Understand GameObject components Understand the Project View Window Utilize Models Utilize the Hierarchy Window Utilize the Toolbar
4	Managing Projects and Assets	Distinguish Models Distinguish Unity views Implement project management settings Organize Unity game projects Understand project management features Understand the Project View Window
5	Preparing Assets for Implementation	Create materials Create textures Evaluate materials and effects Examine material and lighting features Know materials and effects Know model import and export best practices Know modeling best practices Manage materials Manage textures Optimize textures Refine material properties Understand animation best practices Understand material and texturing best practices

Chapter	Title	Learning Outcomes
6	Assembling the Game Level	Distinguish properties Distinguish Rigidbody properties Examine forces on Rigidbody Integrate colliders Know colliders Know Rigidbodies Manipulate colliders Understand Rigidbodies Utilize the Hierarchy Window
7	Lighting in Games	Analyze lighting tools and processes Distinguish light types Examine lighting situtations Know lighting tools and processes Understand lighting tools and processes Understand UI components Understand video game art principles Utilize the Sprite Editor
8	Baking Lighting in Game Production	Distinguish light types Examine lighting situtations Examine lighting tools and processes Know lighting tools and processes Understand lighting tools and processes
9	Animating Game Objects in the Unity Editor	Animate game objects Distinguish character animation options Manage animation settings Refine the animation of game objects Understand character animation processes
10	Bringing Animations into the Game	Assess Animator Controllers Examine Animation Types Examine States Examine Transitions Know States Manage Animator Controllers Understand Transitions Utilize States Utilize the Animator Window Utilize Transitions
11	Scripting in Game Development	Assess program code Distinguish programming terms Distinguish variables in code Examine program code Examine raycasts within a scene Execute programming tasks Identify script types Understand layers Understand programming terms Understand raycast parameters Understand raycasts
12	Implementing Navigation and Pathfinding	Understand a NavMesh Understand a NavMesh baking Understand Max Slope Understand obstacle avoidance

Chapter	Title	Learning Outcomes
13	Building the Player and Allies	Create allies Create players Implement a game manager Implement a player controller Manage cameras
14	Building the Enemies	Create enemies Design enemy behaviors Evaluate enemy behaviors Integrate enemies into a game Manage enemies
15	Creating Particle Systems	Distinguish Image Effects Distinguish particle options Evaluate materials and effects Produce particle effect results Understand materials and effects
16	Adding Audio to Game Levels	Control Audio Properties Enable Audio Properties Examine Audio Properties Identify Audio Clips Identify Audio Effects List Audio Clips Manage Audio Clips Understand Audio Properties
17	Building the Camera and Player Selection System	Configure cameras Evaluate camera choices Evaluate player behaviors Examine player behaviors Integrate character selections Refine player settings
18	Designing User Interfaces for Games	Administer pivots and anchors Demonstrate text properties Distinguish button properties Distinguish render modes Distinguish UI components Evaluate UI features Examine Rect Transforms Know anchor points Understand button properties Understand UI components
19	Building and Deploying the Game	Administer Unity Cloud Build tools Build a game Distinguish console hardware Refine build settings Understand the build process
20	Preparing for Mobile Deployment	Distinguish build platforms Evaluate mobile publishing choices Examine mobile publishing options Manage game settings for mobile publishing Understand mobile development procedures

Exam Objectives

The **Unity Certified Associate exam** is made up of 100 questions over 16 topic areas. Question formats include multiple choice, hot-spot, drag-and-drop, and matching. The following pages include a detailed outline of the topics covered on the exam.

Module	Topic	Sub-topic	Certification Objectives
Animation	Animator System	Animator Controller Asset	Examine the Animator Controller Apply an Animator Controller to a GameObject Create an Animator Controller
		States	Define parameter types Differentiate animation states Create a new animation state Implement the Any State
		Transitions	Explain transition conditions Differentiate transition properties Create transitions
Asset Management	Assets	Audio Clips	List compression formats
		Default GameObjects	Differentiate GameObjects by their appearance Identify GameObjects within a scene Identify script types
		Models	Differentiate import file formats
		Prefabs	Define a Prefab Create a Prefab
		Scene File	Load a Scene Save a Scene
	Sprites	Sprite Editor	Modify Sprites
Audio	Audio Mixer	Audio Effects	Describe various Audio Effects
	Audio Reverb Zone	Presets	Differentiate audio properties
	Audio Source	Audio Properties	Explain audio options Explain the Doppler effect Activate audio source looping Modify the volume of an audio source Locate Audio clips
Editor Interface	Editor Customization	Layouts	Customize the Unity interface Differentiate Unity Editors
	Views	Asset Store	Explain the benefits of the Asset Store
		Console	Differentiate the Console Window
		Hierarchy	Explain the purpose of the Hierarchy Window Differentiate the Hierarchy Window Utilize the Hierarchy Window Create empty GameObjects Parent objects
		Inspector	Explain the functionality of the Inspector Window Reset components
		Project	Explain the functionality of the Project View Window Identify UI functionality in the Project View Window Identify an empty Prefab Focus the Scene View Camera
		Scene	Differentiate the Project View Window Use the Zoom Tool Orbit the Camera
		Toolbar	Modify Gizmos
Employment Preparedness	Collaboration Skills	Providing Critique	Define "critique" in the context of video game development
	Employment Responsibilities	Company Confidentiality	Explain the purpose of the Non-Disclosure Agreement (NDA) Explain the concept of "intellectual property" (IP)

Module	Topic	Sub-topic	Certification Objectives
Game Art Principles	Character Design	Non-Player Characters (NPCs)	Describe methods to optimize model assets
	Concept Design	Color palette	Summarize how art choices affect mood
		Look-and-feel imagery	Explain the purpose of concept art
	Environment Design	Color palette	Explain the concept of "unifying color"
Game Design Principles	Game Mechanics	Casual Games	Differentiate video game types
		Third Person	Identify video game mechanics Differentiate video game participants
	Genre	Realtime Strategy	Differentiate video game genres
	Platform	Controller	Identify video game controls
Industry Awareness	Employment Trends	Common Job Titles	Differentiate production talent roles and responsibilities
	Industry Trends	Hardware Products	Differentiate console hardware based by feature
	Production Trends	Production Cycles	Match production phases by criteria
Lighting	Global Illumination (GI)	Baked GI	Explain lighting settings
		Baking	Explain Light Baking Explain Lightmaps Explain Generate Lightmap UV settings
	Light Component	Shadows	Assess Shadow types
		Type	Explain Light Intensity Define Culling Mask Differentiate light types by feature Infer lighting settings by visual indicators
Materials and Effects	Effects	Image Effects	Differentiate Image Effects by their result Predict particle option results
	Materials	Standard Shaders	Assess Rendering Modes Match Standard Shader properties by their description Define the Albedo of a material
	Particle System	Emitters	Explain particle system settings Differentiate particle options by their result
Navigation and Pathfinding	Navigation Agents	Obstacle Avoidance	Explain obstacle avoidance using NavMesh agents
	Navigation Baking	Bake Settings	Explain the function of Max Slope
		Navigation	Explain the function of a NavMesh Explain NavMesh baking
Physics	Colliders	3D Capsule	Identify Colliders by their appearance Differentiate properties Transform Colliders Utilize Colliders
	Optimization and Debugging	Raycast	Explain raycast parameters Describe the function of raycasts Assess raycast trajectories
	Rigidbodies	Components	Explain Rigidbodies Locate Rigidbodies Differentiate Rigidbody properties Assess the impact of forces on Rigidbodies

Module	Topic	Sub-topic	Certification Objectives
Programming	Camera API	ScreenPointToRay	Recognize the purpose of existing code
	GameObject	Components	Finalize specific lines of code
	Methods/Functions	Declaration and Use	Explain the purpose of methods Differentiate methods by their result
	MonoBehavior API	Awake	Differentiate methods by their result Recognize methods by their desired result
		Fixed update	Evaluate the effectiveness of specific methods
	Object Oriented Programming	Objects	Recognize class definitions from provided code
	Quaternion	Use of	Explain Quaternions
	Time	DeltaTime	Explain DeltaTime
	Unity Interface	File Management	Differentiate public variable within code Create a new script
	Variables	Floating Point	Recognize and replace variables within code
		Integer	Recognize and replace variables within code
		Vector3	Define variables
Project Management	Game Objects	Layers	Explain the function of Layers
		Tags	Identify the function of Tags
		Transform	Explain the function of GameObject components Recognize GameObject components
		Components	Differentiate components by their properties
Services	Ads	Ad Types	Differentiate Unity Services by a set of features
		Function	Recognize Unity Services from a description
	Analytics	Function	Summarize the benefits of Unity Analytics
		Project ID	Implement Unity Analytics within a game
	Cloud Build	Platforms	Examine the features of Unity Cloud Build
	Collaborate	Function	Describe the requirements for Unity Collaborate
User Interface	Button	Function	Differentiate Button properties
		Interaction	Predict methods called by action
		Transition	Explain Button properties
	Canvas	Coordinates	Differentiate render modes
	Image	Sprites	Differentiate UI components
	Rect Tool	Anchor	Identify anchor points Utilize pivots and anchors
		Rect Transform	Differentiate UI components Assess Rect Transform features Utilize text properties
	Slider	Slider	Describe the function of UI components