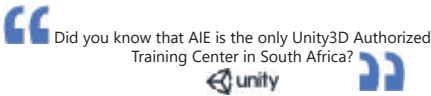


## Overview

A great game designer possesses a combination of **technical knowledge**, **artistic skill** and most importantly, the **ability to communicate and understand people**. They thrive on **new ideas** and are **always thinking** about how users will interact and enjoy the experience that they've created.

The **Games Design and Development with C# & Unity** programme is a unique blend of both **design** and **scripting**, ensuring the game designer has enough knowledge on both. Students will be exposed to **programming in C# scripting**, **game theory** and **development techniques** with the leading gaming engine **Unity 3D** as well as work with the latest **Virtual Reality** technology by developing games compatible various VR hardware



## Features & Benefits

- Learn industry critical software and technology platforms such as **Unity**, **Autodesk Maya** OR **3DS Max**, **Autodesk Mudbox**, **Photoshop** and more to the value of thousands of Rands, a critically advantageous consideration for any employer when considering.
- Get access to the full software suites of **Adobe (for 1 year)**, **Unity3D (for 1 year)**, **Autodesk (for 3 years)** with no limitations and restriction to any functionality, all included in the price.
- Receive student licenses for all software.



- Learn how to sell your skills with our **"Freelancing for Creatives, Designers and Digital Artists, Making Money in the Gig Economy"** module
- No programming background or experience** is required for this programme, you will learn everything you need to know about scripting from the ground up.
- During the program, students will prepare and write the Unity 3D, Maya or Max certification



- Students will work towards compiling a **Portfolio of Evidence** and student **showreel** to allow for early and continuous job application.
- Get a free **Office 365 Education A1 license**, valid for the duration of your studies.
- Job placement assistance through our industry network and online recruitment portal, exclusively available to **Learn3D graduates**. Visit [www.recruitgraduates.co.za](http://www.recruitgraduates.co.za) for more.



## What you get

After finishing this course, you will have a complete understanding of the different steps required to make a game.

- Internationally recognized Autodesk Certificates for all software modules.



- Internationally recognized Unity 3D Certificate
- Autodesk Maya Certified Professional Certification (upon successful completion of the certification)
- Internationally recognized Unity 3D Certification (upon successful completion of the certification)
- Portfolio of Evidence, Show-reel stills and Animation
- Developing a playable game to be presented at the rage expo in October.

For more information, please contact a student advisor:  
Gauteng: 011 262 5115 | Cape Town: 021 202 7890  
info@aie.ac | www.aie.ac

## Duration

### Full Time

- 10 months (3 days a week from 8:30 to 16:00)
- All learning hours are achieved via your study duration at the academy AIE, studio time and project-based assignments.

*\*Sessions will be grouped together to lower cost of traveling, however, in some cases classes may not follow this convention and schedules are subject to change.*

### Online & Part Time

- Part Time** = 10 months (2 Hours on Campus session - 1 x Week @ 18:00 / 6 Hours on Campus session - Every 2nd Saturday @ 08:00)
- Online** = 10 Months (2 Hours/week 18:00 - 20:00)
- All learning hours are obtained through a combination of virtual Q&A classes, pre-recorded video lectures and project-based tasks.

## Mode of Delivery

- Full Time
- Part Time
- Online

## Articulation Options

On successful completion of this qualification, you can articulate into the following:

- National Certificate: IT Systems Development, NQF5 (Web or Software Developer)
- 3D Design Visualization and Animation using 3DS Max & V-Ray

## Admission Requirements

- Computer literacy (hardware functions; operating systems; file management)

# Curriculum

## Business in the Game Industry

In this module students will be introduced to the business side of the game industry. The module will cover the following topics:

- Overview of the gaming industry
- The Indie developer

## Lighting and Cinematic Colour Theory

The student will be introduced to the theory of light and how to use it with cinematic principles. Following this the student will learn how to apply these principles in the Unity game engine. This module will cover the following:

- Basic properties of Light (Reflection, Refraction, Diffusion),
- Attenuation,
- Colour balancing.
- Cinematic lighting setups, colour as focal point and contrast, telling story with light.
- Cinematic colour theory: cool/warm colours, emotion of colour, colour as focal point, colour for depth.
- Creating lights in Unity for game environments.



## Creating Game Assets

This module will introduce the student to the process of creating their own game assets. The following topics are covered in this module:

- Basic modelling techniques and Principles using Maya or 3DsMax
- Sculpting details using Autodesk Mudbox and Pixologic ZBrush
- Optimising models of use in Game engines



## Textures, Maps and UV Mapping

Students will be exposed to the basic principles and workflows of texturing for games using 3DsMax or Maya.

This module will cover:

- Properties of Materials in Unity
- Creating textures with Adobe Photoshop



## Rigging and animation

Students will be exposed to the principles and workflows of creating rigging and animation for games using or Maya as well as creating cinematic camera movement in a game engine.

- Rigging and Animation in or Maya
- Theory and Principles of animation and motion.
- Camera movement in Unity

## Dynamics and Simulation

Students will be taught how to create dynamic simulations in Unity as well as employ particle system for special effects in their scenes

The module will cover:

- Physics and Particles in the Unity game engine

## Projects and assets

In this module students will explore the project interface and will be introduced to the management of assets in the Unity game engine.

Topics covered in this module:

- Understanding the software interface
- Setting up a project,
- Importing and Managing Assets in Unity

## Cameras, User interfaces

This module will introduce the student to the process of setting up views and user interfaces in the Unity Game engine. The topics covered in this module are:

- Creating Interface and 2D assets using Adobe Photoshop
- Setting up 2D interfaces in Unity
- Creating 3D views and Cameras in Unity
- Basic Cut scene setup in Unity

## Game Scripting using C#

This module will introduce the student to the powerful c# language and how it can be used in Unity to script and extend interactions and game logic.

This module will cover the following topics:

- Basics of Programming
- The C# syntax
- Creating and Applying C# scripts in Unity

## Freelancing for Creatives, Designers and Digital Artists

This module will introduce the student to the exciting, tumultuous and ever changing world of freelancing in the creative industry and the burgeoning gig economy.

The module will cover the following topics:

- Introduction to freelancing and exploring different freelancing services
- Exploring freelancing supporting sites and finding the right one for your skillset
- Explore crowdsourcing and finding the right one for your skillset
- The importance of a High-Quality Portfolio Website
- The Importance of a professional online personal and social profile and building of your PERSONAL BRAND

## Career Options

- Game 3D Asset Creator/Modeller
- Environment building
- Developer (Programming)
- Texture artist
- Game mechanic designer
- Indie mobile game development
- Virtual Reality Specialist Consultant

### Other fields where game developers are finding work:

- Film- rapid visualisation and shot planning
- Automobile - Design visualisation
- Architectural - Design visualisation, interactive presentation, virtual reality presentation
- Product and Industrial Design- visualisation and realtime simulation

### Marketing and Commercial:

- Gamification of marketing and client experience
- Training and simulation systems development

## Study Kit

Your study kit is included in your fees and will contain:



- Free WIFI (Unlimited, On Campus only).
- **Student licenses** valid for three years.
- **Adobe Student licence** valid for one year.
- **Autodesk Sketchbook** (free software from Autodesk)
- Art equipment including, 24 Piece Pencil Set, Sketchpad, Notepad, A4 Sketchbook, A4 Day Planner
- Electronic Study Guides
- Orientation kit including: Student Card, Welcome Letter, and Getting Started Guide.
- Access to myAIE student portal and student support team via phone, email and tickets.
- Goggles VR Headset

