

**Subject & Assessment Guide**

Cross-platform Development

CIP Code 11.0804

Advanced Diploma of Professional Game Development

Programming

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## Subject Overview

### Subject Description

This subject is designed to give you a working knowledge of the Unity 3D game engine, as well as an understanding of the process of cross platform development. There are a lot of concerns involved in porting a game, many of them are non-obvious. While modern pre-packaged engines can take a lot of the grunt-work out of the process, there are still many steps involved in getting a game to run on multiple platforms. This subject guides students through the process of developing simple games within Unity3D, while highlighting points during development where cross platform concerns occur.

### Industry Relevance

Many games are released on multiple platforms. Pre-packaged engines such as Unity3D dramatically simplify the process. However even when using larger engines, there are many hurdles to, and considerations with, getting the same game running on multiple platforms.

The Unity3D game engine is a widely used 3D game engine. It has powered thousands of games and is constantly being updated to add new features.

### Assumed Knowledge

* Introductory knowledge of C#

## Assessment Criteria

### Assessment Description

***Assessment Milestones***

#### Please refer to your Class Schedule for actual dates on your campus

#### General Description

Throughout the instruction period, you will be required to participate in a variety of activities to fully satisfy the assessment requirements. These activities occur throughout the stages outlined below.

Your instructor may provide a *technical specification(s)* that elaborate on the requirements outlined below. These requirements need to be satisfied prior to the conclusion of the instruction period. You may utilize pre-approved templates provided by your instructor or request approval for alternative materials for your assessment.

You may supply additional, or alternative, evidence of competency as agreed on by your instructor.

#### Evidence Specifications

This is the specific evidence you must prepare for and present by your assessment milestone to demonstrate you have competency in the above knowledge and skills. The evidence must conform to all the specific requirements listed in the table below.  You may present additional, or other evidence of competency, but this should be as a result of individual negotiation with your teacher.

#### Your Roles and Responsibilities as a Candidate

* Understand and feel comfortable with the assessment process
* Know what evidence you must provide during your assessment
* Take an active part in the assessment process
* Be ready for the assessment at the nominated time

This table defines the individual requirements for each part of the assessment criteria. Please refer to provided subject assessment documentation for any additional requirements.

|  |
| --- |
| Assessment and Competency Requirements |
| ***Skill Development Progress Checks***  You should complete, until fully correct, any progress checks and formative assessment requirements as approved by your instructor. |
| Submission Repository You should provide repositories of your work that meets all requirements as approved by your instructor. These submissions should also include materials associated with and be pursuant of your *project proposal document(s)* and the *technical specification document(s).* |
| Project Proposal You should submit a completed *project proposal document(s)* that addresses each of the requirements as specified in the *technical specification document(s).* |
| Release Deliverable You should submit the *release deliverable(s)* that execute without error and fully demonstrates all features as required in the *technical specification document(s).* The deliverable(s) should be packaged in a manner approved by your instructor. |
| Production Documentation You should submit documentation of your work throughout the development of the project that shows evidence of planning and execution in a format as agreed on by your instructor. You should utilize production methodologies as approved by your instructor. |
| Post Mortem Analysis You should submit a completed *post-mortem document(s)* in a format approved by your instructor. |

### Assessment Instructions for Candidate

#### METHOD OF ASSESSMENT

Assessment is a cumulative process which takes place throughout a subject. A ‘competent’ or ‘not yet competent’ decision is generally made at the end of a subject. Your assessment will be conducted by an official AIE qualified assessor. This may be someone other than your teacher. The evidence you must prepare and present is described

above in this assessment criteria document. This evidence has been mapped to the units of competency listed at the beginning of this document. Assessments will be conducted on a specific milestone recorded above in this assessment guide document.

#### ASSESSMENT CONDITIONS

Formative assessment takes place as your teacher observes the development of your work throughout the subject and, although the assessor is likely to be aware of the evidence you are submitting, it is your responsibility to be prepared for the interview where a competency judgement is made (summative assessment). Forgetting something, or making a small mistake at the time of the milestone assessment, can be corrected. However, the assessor may choose to assess other candidates who are better prepared and return to you if time permits.

Upon completion of the assessment you will be issued with feedback and a record of the summative assessment and acknowledge that you have received the result. If you are absent for the nominated assessment milestone (without prior agreement or a sufficiently documented reason) you will be assessed as not yet competent.

#### GRADING

The assessment you are undertaking will be graded as either *competent* or *not* *yet competent*.

#### REASSESSMENT PROCESS

If you are assessed as being not yet competent you will receive clear, written and oral feedback on what you will need to do to achieve competence. You will be given a reassessment milestone no more than one (1) week later to prepare your evidence. If you are unsuccessful after your reassessment, you may be asked to attend a meeting with your Head of School to discuss your progress or any support you may need and further opportunities to gain competency.

#### REASONABLE ADJUSTMENTS

We recognise the need to make reasonable adjustments within our assessment and learning environments to meet your individual needs. If you need to speak confidentially to someone about your individual needs, please contact your teacher.

#### FURTHER INFORMATION

For further information about assessment and support at AIE, please refer to the assessment and course progress sections of your student handbook.

## Software

### Core

The following software is required for successfully partaking in this subject.

***Microsoft Visual Studio***

Microsoft’s Visual Studio is the recommend IDE for this subject. Other IDEs may be employed if desired as the content of this subject is designed to be cross-platform and IDE agnostic though we cannot guarantee that all subject material will operate as intended on other IDEs and platforms.

* <https://www.visualstudio.com/vs/>

***Unity3D***

Unity3D is a widely used 3D game engine. It has powered many financially and critically successful games. It has a wide array of features that aid with development, especially for a small team. Games made with Unity can be built to a large array of devices.

* [http://unity3d.com/](http://unity3d.com/%20)

## References and additional material

#### Cross Platform Development

* Unity3D tutorial pages <https://unity3d.com/learn/tutorials>
* Unity3D Manual <http://docs.unity3d.com/Manual/index.html>
* Unity3D Scripting Reference <http://docs.unity3d.com/ScriptReference/index.html>