



COMP1170

3D Modelling and Animation

Session 2, In person-scheduled-weekday, North Ryde 2026

School of Computing

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General Information

Unit convenor and teaching staff

Unit Convenor

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4RPD Lvl 3

By appointment only.

Lecturer

Alice Watt-Smith

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Credit points

10

Prerequisites

Corequisites

Co-badged status

Unit description

This unit introduces you to the fundamentals of creating and implementing 3D tech art for real-time use in video games. You will be taught the pipeline and process of creating meshes, materials and animations for use in a 3D game engine, as well as in-engine technical considerations of cameras and lighting. You will be introduced to the requirements and challenges facing technical artists working in the video games industry via the use of relevant software and processes.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: Design, construct and animate 3D models with appropriate topology and rigging using a 3D modelling tool.

ULO2: Apply technical and artistic theory to implementing camera and lighting in the creation of simple scenes to achieve visual effects.

ULO3: Create simple materials and shaders that demonstrate an understanding of the fundamental building blocks of computer graphics, including textures, UVs and normals.

ULO4: Import and transform 3D models and animations from a modelling tool into a 3D game engine.

ULO5: Identify and explain the use of technical art techniques implemented in a 3D scene.

General Assessment Information

Release

3D Environment: To be released no later than 9th August.

Technique Analysis: To be released no later than 6th September.

Dynamic 3D Scene: To be released no later than 4th October.

Requirements to Pass this Unit

To pass this unit you must:

1. Achieve a total mark equal to or greater than 50%.

Late Assessment Submission

Late assessments are not accepted in this unit unless a [Special Consideration](#) has been submitted and approved. Additionally, [Short Extensions](#) are available for all assessments.

Special Consideration

The [Special Consideration Policy](#) aims to support students who have been impacted by short-term circumstances or events that are serious, unavoidable and significantly disruptive, and which may affect their performance in assessment. If you experience circumstances or events that affect your ability to complete the assessments in this unit on time, please inform the convenor and submit a Special Consideration request through <http://connect.mq.edu.au/>.

Assessment Tasks

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
3D Environment	30%	No	30/08/2026	Individual	Yes	Open
Technique Analysis	30%	No	20/09/2026	Individual	Yes	Open

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Dynamic 3D Scene	40%	No	08/11/2026	Individual	Yes	Open

3D Environment

Assessment Type ¹: Creative task

Indicative Time on Task ²: 20 hours

Due: **30/08/2026**

Weighting: **30%**

Groupwork/Individual: Individual

Short extension ³: Yes

AI Approach: Open

You will create a small 3D scene using 3D computer graphics and game development tools, based on a provided specification. At the same time as submitting the scene, you will also submit a video evidencing and discussing your process.

On successful completion you will be able to:

- Design, construct and animate 3D models with appropriate topology and rigging using a 3D modelling tool.
- Create simple materials and shaders that demonstrate an understanding of the fundamental building blocks of computer graphics, including textures, UVs and normals.
- Import and transform 3D models and animations from a modelling tool into a 3D game engine.

Technique Analysis

Assessment Type ¹: Written Submission

Indicative Time on Task ²: 30 hours

Due: **20/09/2026**

Weighting: **30%**

Groupwork/Individual: Individual

Short extension ³: Yes

AI Approach: Open

You will analyse a scene, level, or other small section of a video game. You must identify, analyse and contextualise technical art techniques and methods used in the creation of the scene in a written report.

On successful completion you will be able to:

- Identify and explain the use of technical art techniques implemented in a 3D scene.

Dynamic 3D Scene

Assessment Type ¹: Creative task

Indicative Time on Task ²: 38 hours

Due: **08/11/2026**

Weighting: **40%**

Groupwork/Individual: Individual

Short extension ³: Yes

AI Approach: Open

You will create a scene featuring a rigged and animated character/object, using 3D computer graphics and game development tools, based on a provided specification. At the same time as submitting your scene, you will also submit a multimodal report evidencing and discussing your process.

On successful completion you will be able to:

- Design, construct and animate 3D models with appropriate topology and rigging using a 3D modelling tool.
- Apply technical and artistic theory to implementing camera and lighting in the creation of simple scenes to achieve visual effects.
- Create simple materials and shaders that demonstrate an understanding of the fundamental building blocks of computer graphics, including textures, UVs and normals.
- Import and transform 3D models and animations from a modelling tool into a 3D game engine.
- Identify and explain the use of technical art techniques implemented in a 3D scene.

¹ If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- [Academic Success](#) for academic skills support.

² Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation.

³ An automatic short extension is available for some assessments. Apply through the [Service Connect Portal](#).

Delivery and Resources

Week 1 Classes

Both lectures and SGTAs commence in Week 1. See you there!

Methods of Communication

Cohort-wide information will be communicated through iLearn announcements and/or lectures. Class-specific information will be communicated via SGTAs. Individual information will be communicated via student email. Official information will never be distributed through non-official University means, and information will not be repeated (e.g., an announcement made in a lecture cannot reasonably be expected to be stated again in an SGTA).

Students are encouraged to speak to staff in class, as well as posting on the Discussion Forums on iLearn. Individual concerns should be emailed to the UC. Staff will not respond to communication from non-student email addresses.

Use of Generative AI

The use of Generative AI including LLMs and image generators is permitted in this unit where this use does not undermine the Learning Outcomes of the unit and specific assessment tasks. All use of Generative AI must be appropriately acknowledged, evidenced and referenced.

The particularities and affordances of Generative AI usage will vary between assessments. Please consult the assessment specifications of each task for details. Use of Generative AI that does not adhere to assessment-specific details may result in a breach of Academic Integrity.

For more information on the use of Generative AI in your studies, please see the FSE Gen AI module: https://ishare.mq.edu.au/prod/file/c6b0caa4-23dd-4372-b07d-5a03379fc3e8/1/FSE_Gen_AI-module.zip/content/index.html#/

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://policies.mq.edu.au) (<https://policies.mq.edu.au>). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Assessment Procedure](#)
- [Complaints Resolution Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

Students seeking more policy resources can visit [Student Policies](https://students.mq.edu.au/support/study/policies) (<https://students.mq.edu.au/support/study/policies>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit [Policy Central](https://policies.mq.edu.au) (<https://policies.mq.edu.au>) and use the [search tool](#).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/admin/other-resources/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit connect.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe [academic integrity](#) – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free [online writing and maths support](#), [academic skills development](#) and [wellbeing consultations](#).

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

Academic Success

[Academic Success](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Ask a Study Coach](#)
- [Access StudyWISE](#)
- [Upload an assignment to Studiosity](#)
- [Complete the Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

Student Services and Support

Macquarie University offers a range of [Student Support Services](#) including:

- [IT Support](#)
- [Accessibility and disability support](#) with study
- Mental health [support](#)

- [Safety support](#) to respond to bullying, harassment, sexual harassment and sexual assault
- [Social support including information about finances, tenancy and legal issues](#)
- [Student Advocacy](#) provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via the [Service Connect Portal](#), or contact [Service Connect](#).

IT Help

For help with University computer systems and technology, visit <https://students.mq.edu.au/support/technology/service-desk>.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

Changes from Previous Offering

We value student feedback to be able to continually improve the way we offer our units. As such we encourage students to provide constructive feedback via student surveys, to the teaching staff directly, or via the FSE Student Experience & Feedback link in the iLearn page.

Changes made this semester are:

- Integration of Unreal Engine into the 3D Environment assignment.
- Switching the Dynamic 3D Scene assignment from group to individual work.
- Reshuffling and updating content to reflect and serve these changes.

Changes since First Published

Date	Description
14/07/2026	Clarifying GenAI usage and changes to this offering.

Unit information based on version 2026.04 of the [Handbook](#)