School of Design and Architecture
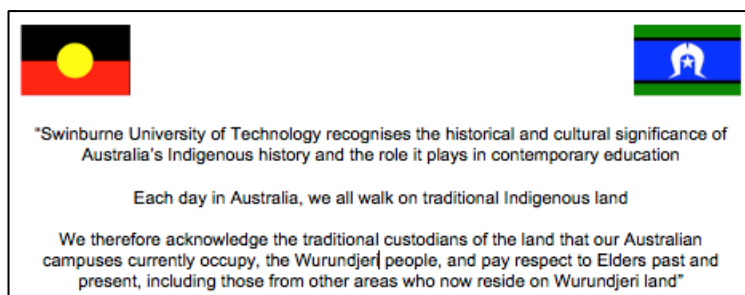
Unit Outline

DDD20022

3D Modelling for Objects and Environments

Semester 1 2023

Please read this Unit Outline carefully. It includes:

PART A   Unit summary

PART B   Your Unit in more detail

PART C   Further information

"Swinburne University of Technology recognises the historical and cultural significance of Australia's Indigenous history and the role it plays in contemporary education

Each day in Australia, we all walk on traditional Indigenous land

We therefore acknowledge the traditional custodians of the land that our Australian campuses currently occupy, the Wurundjeri people, and pay respect to Elders past and present, including those from other areas who now reside on Wurundjeri land"

PART A: Unit Summary

Unit Code(s)	DDD20022
Unit Title	3D Modelling for Objects and Environments
Duration	12 weeks
Total Contact Hours	36 Hours
Requisites:	
Pre-requisites	25 cp
Co-requisites	Nil
Concurrent pre-requisites	Nil
Anti-requisites	Nil
Assumed knowledge	Nil
Credit Points	12.5
Campus/Location	Hawthorn
Mode of Delivery	Integrated digital and on-campus learning
Assessment Summary	Design Brief 1 – Formative assessment throughout the semester based on the performance of tasks Design Brief 2 – Formal assessment at the end of the semester based on a demonstration assessment of a rendered creative work

Aims

This unit of study aims to introduce students to the fundamentals of creating Three-Dimensional Computer Generated Images (3D CGI) .The unit will focus on the introduction of 3D modelling, texturing, lighting and rendering. Teaching of a 3D CGI production workflow in the creation of rendered still images and videos outcomes of CGI objects and environments.

Unit Learning Outcomes

Students who successfully complete this unit can:
1. Identify and analyse key works, designers, reference material and resources in supporting project material.
2. Use language and terminology specific to 3D CGI during the production and presentation of three-dimensional models, objects and environments.
3. Apply appropriate planning and management strategies to design and construct three-dimensional models, objects and environments.
4. Show spatial awareness in the design and construction of three-dimensional models, environments and camera movement.
5. Use design and technical processes to produce a refined three-dimensional environment.

Graduate Attributes

This unit may contribute to the development of the following Swinburne Graduate Attributes:

- Communication 1 - Verbal communication

- Communication 2 - Communicating using different media

- Teamwork 1 - Collaboration and negotiation

- Teamwork 2 - Teamwork roles and processes

- Digital literacies 1 – Information literacy
- Digital Literacies 2 – Technical literacy

Content

- 3D modelling language terms and definitions
- Design and technical processes, pipelines and workflows
- 3D modelling, texturing and lighting tools and techniques
- Cinematography including animated camera techniques
- Rendering and output methods
- Conceptual development
- Environment design and layout
- Spatial thinking and representation
- Interfacing with third party software
- Planning and management strategies

PART B: Your Unit in more detail

Unit Improvements

Feedback provided by previous students through the Student Survey has resulted in improvements that have been made to this unit. Recent improvements include:

Unit Teaching Staff

Name	Role	Room	Phone	Email	Consultation Times
Lucas Licata	Unit Convenor / Lecturer	AMDC 701	92146155	llicata@swin.edu.au	By appointment
Ash Millott	Sessional Lecturer			amillott@swin.edu.au	

Learning and Teaching Structure

Category	Activity	Total Hours	Hours per Week	Teaching Period Weeks
On-campus	Class	36	12 weeks	Other Studio class
Online	Learning activities	24	12 weeks	Online video Tutorials, Readings
Unspecified	Independent	90	13 weeks	Independent study, Assignment preparation

Week by Week Schedule

Week	Week Beginning	Teaching and Learning Activity	Student Task or Assessment

1	Feb 26	Unit Introduction	
2	Mar 6	Box Modelling	Polygon Pet
3	Mar 13	Blocking-in an Environment	3D Environment Pitch
4	Mar 20	Additional Modelling Tools	3D block in
5	Mar 27	Modelling with curves and deformers	
6	Apr 3	Rendering AO & Wireframe	
	Apr 10		3D environment Wireframe
7	Apr 17	Lighting	
8	Apr 24	Introduction to texturing	Concept design
9	May 1	UV mapping	
10	May 8	Texturing and light workshop - Group work	Draft Lighting & Material Render
11	May 15	Camera Animation	
12	May 22	Presentations	Final outcomes
	Jun 4		Final submission

Assessment

a) Assessment Overview

Tasks and Details	Individual or Group	Weighting	Unit Learning Outcomes that this assessment task relates to	Assessment Due Date
1. Design Brief 1	Individual	50%	1, 2, 3, 4, 5	End of week 6
2. Design Brief 2	Individual	50%	1, 2, 3	End of week 13

b) Minimum requirements to pass this Unit

To pass this unit, you must:
- achieve an overall mark for the unit of 50% or more

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c) Submission Requirements

Assignments and other assessments are generally submitted online through the Canvas assessment submission system which integrates with the Turnitin plagiarism checking service.

Please ensure you keep a copy of all assessments that are submitted.

In cases where a hard copy submission is required an Assessment Cover Sheet must be submitted with your assignment. The standard Assessment Cover Sheet is available from the Submitting work webpage or www.swinburne.edu.au/studentforms/

d) Extensions and Late Submission

Please message the unit convenor (Lucas Licata) via canvas with a valid reason for an extension before the due date.

A three-day extension may be granted without evidence with a valid reason, for a week extension, please provide evidence.

If you need more time than a week or the issues are ongoing, please apply for Special consideration via the Swinburne website

Late Submissions - Unless an extension has been approved, late submissions will result in a penalty. You will be penalised 10% of your achieved mark for each working day the task is late, up to a maximum of 5 working days. After 5 working days, a zero result will be recorded.

PART C: FURTHER INFORMATION

For further information on any of these topics, refer to Swinburne's Student webpage http://www.swinburne.edu.au/student/

Student behaviour and wellbeing

All students are expected to: act with integrity, honesty and fairness; be inclusive, ethical and respectful of others; and appropriately use University resources, information, equipment and facilities. All students are expected to contribute to creating a work and study environment that is safe and free from bullying, violence, discrimination, sexual harassment, vilification and other forms of unacceptable behaviour.

The Student Charter describes what students can reasonably expect from Swinburne in order to enjoy a quality learning experience. The Charter also sets out what is expected of students with regards to your studies and the way you conduct yourself towards other people and property.

You are expected to familiarise yourself with University regulations and policies and are obliged to abide by these, including the Student Academic Misconduct Regulations, Student General Misconduct Regulations and the People, Culture and Integrity Policy. Any student found to be in breach of these may be subject to disciplinary processes.

Examples of expected behaviours are:

- conducting yourself in teaching areas in a manner that is professional and not disruptive to others
- following specific safety procedures in Swinburne laboratories, such as wearing appropriate footwear and safety equipment, not acting in a manner which is dangerous or disruptive (e.g. playing computer games), and not bringing in food or drink
- following emergency and evacuation procedures and following instructions given by staff/wardens in an emergency response

Canvas

You should regularly access the Swinburne learning management system, Canvas, which is available via the Current Students webpage or https://swinburne.instructure.com/ Canvas is updated regularly with important unit information and communications.

Communication

All communication will be via your Swinburne email address. If you access your email through a provider other than Swinburne, then it is your responsibility to ensure that your Swinburne email is redirected to your private email address.

Academic Integrity

Academic integrity is about taking responsibility for your learning and submitting work that is honestly your own. It means acknowledging the ideas, contributions and work of others; referencing your sources; contributing fairly to group work; and completing tasks, tests and exams without cheating.

Swinburne University uses the Turnitin system, which helps to identify inadequate citations, poor paraphrasing and unoriginal work in assignments that are submitted via Canvas. Your Unit Convenor will provide further details.

Plagiarising, cheating and seeking an unfair advantage with regards to an exam or assessment are all breaches of academic integrity and treated as academic misconduct.

Plagiarism is submitting or presenting someone else's work as though it is your own without full and appropriate acknowledgement of their ideas and work. Examples include:

- using the whole or part of computer program written by another person as your own
- using the whole or part of somebody else's written work in an essay or other assessable work, including material from a book, journal, newspaper article, a website or database, a set of lecture notes, current or past student's work, or any other person's work
- poorly paraphrasing somebody else's work
- using a musical composition or audio, visual, graphic and photographic work created by another
- using realia created by another person, such as objects, artefacts, costumes, models
- submitting assessments that have been developed by another person or service (paid or unpaid), often referred to as contract cheating
- presenting or submitting assignments or other work in conjunction with another person or group of people when that work should be your own independent work. This is regardless of whether or not it is with the knowledge or consent of the other person(s). Swinburne encourages students to talk to staff, fellow students and other people who may be able to contribute to a student's academic work but where an independent assignment is required, the work must be the student's own
- enabling others to plagiarise or cheat, including letting another student copy your work or by giving access to a draft or completed assignment

The penalties for academic misconduct can be severe, ranging from a zero grade for an assessment task through to expulsion from the unit and, in the extreme, exclusion from Swinburne.

Student support

Swinburne offers a range of services and resources to help you complete your studies successfully. Your Unit Convenor or studentHQ can provide information about the study support and other services available for Swinburne students.

Special consideration

If your studies have been adversely affected due to serious and unavoidable circumstances outside of your control (e.g. severe illness or unavoidable obligation), you may be able to apply for special consideration (SPC).

Applications for Special Consideration will be submitted via the SPC online tool normally no later than 5.00pm on the third working day after the submission/sitting date for the relevant assessment component.

Accessibility needs

Sometimes students with a disability, a mental health or medical condition or significant carer responsibilities require reasonable adjustments to enable full access to and participation in education. Your needs can be addressed by Swinburne's AccessAbility Services by negotiating and distributing an 'Education Access Plan'. The plan makes recommendations to University teaching and examination staff. You must notify AccessAbility Services of your disability or condition within one week after the commencement of your unit to allow the University to make reasonable adjustments.

Review of marks

An independent marker reviews all fail grades for major assessment tasks. In addition, a review of assessment is undertaken if your final result is between 45 and 49 or within 2 marks of any grade threshold.

You can ask the Unit Convenor to check the result for an assessment item or your final result. Your request must be made in writing within 10 working days of receiving the result. The Unit Convenor can discuss the marking criteria with you and check the aggregate marks of assessment components to identify if an error has been made. This is known as local resolution.

If you are dissatisfied with the outcome of the local resolution, you can lodge a formal complaint.

Feedback, complaints and suggestions

In the first instance, discuss any issues with your Unit Convenor. If your concerns are not resolved or you would prefer not to deal with your Unit Convenor, then you can complete a feedback form. See https://www.swinburne.edu.au/corporate/feedback/

Advocacy

Should you require assistance with any academic issues, University statutes, regulations, policies and procedures, you are advised to seek advice from an Independent Advocacy Officer at Swinburne Student Life.

For an appointment, please call 03 9214 5445 or email advocacy@swin.edu.au For more information, please see https://www.swinburne.edu.au/current-students/student-services-support/advocacy/