



COURSE OUTLINE

SGD230 Game Art: Virtual Environments

Course Coordinator: Justin Carter (jcarter3@usc.edu.au) **School:** School of Business and Creative Industries

2021 | Semester 1

USC Sunshine Coast

ON CAMPUS

Most of your course is on campus but you may be able to do some components of this course online.

Online

ONLINE 1

You can do this course without coming onto campus.

Please go to the USC website for up to date information on the teaching sessions and campuses where this course is usually offered.

1. What is this course about?

1.1. Description

This course provides a strong foundation in the concepts and practices associated with the creation of immersive 3D worlds for games, virtual production, virtual reality and augmented reality. Creating 3D virtual environments requires an understanding of the skills and knowledge associated with real-time production and asset creation for use in real-time 3D engines. You will design, develop and critique a 3D virtual environment, acquiring both the theoretical and the practical knowledge and skills required.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
ON CAMPUS			
Lecture – 1 hour online lecture content for 12 weeks (or equivalent).	1hr	Week 1	12 times
Laboratory – On campus laboratory for 12 weeks (or equivalent).	2hrs	Week 2	12 times
ONLINE 1			
Online – 3 hours online content for 12 weeks (or equivalent).	3hrs	Week 1	12 times

1.3. Course Topics

- Ideation - Concept Development
- Level Planning and Design
- 3D Modelling for Real-Time
- Texturing for Real-Time
- Terrain Creation
- Environment Detail
- Environment Lighting and Sound
- Particles and Post Processing
- Optimisation and Future Environments

2. What level is this course?

200 Level (Developing)

Building on and expanding the scope of introductory knowledge and skills, developing breadth or depth and applying knowledge and skills in a new context. May require pre-requisites where discipline specific introductory knowledge or skills is necessary. Normally, undertaken in the second or third full-time year of an undergraduate programs.

3. What is the unit value of this course?

12 units

4. How does this course contribute to my learning?

COURSE LEARNING OUTCOMES	GRADUATE QUALITIES
On successful completion of this course, you should be able to...	Completing these tasks successfully will contribute to you becoming...
1 Describe and explain the technical, creative and aesthetic decision making processes associated with the design process to a technical audience.	Creative and critical thinker
2 Reflect on how an audience would perceive the assets in a real-time application, in terms of ethical issues.	Ethical
3 Critically reflect on practice during the design and creation of an immersive virtual environment	Empowered
4 Apply 2D or 3D design skills to create assets useful in 3D digital environments.	Empowered

5. Am I eligible to enrol in this course?

Refer to the [USC Glossary of terms](#) for definitions of “pre-requisites, co-requisites and anti-requisites”.

5.1. Pre-requisites

Not applicable

5.2. Co-requisites

Not applicable

5.3. Anti-requisites

Not applicable

5.4. Specific assumed prior knowledge and skills (where applicable)

It is assumed that a student will know how to Polygon Model in Maya or 3D Studio Max. It is assumed that you will have an understanding of Photoshop. Both of these basic skills are taught in SGD101 or DES232.

6. How am I going to be assessed?

6.1. Grading Scale

Standard Grading (GRD)

High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL).

6.2. Details of early feedback on progress

In each tutorial, feedback is given to each student when they show their progress of their assessments to the tutor.

6.3. Assessment tasks

DELIVERY MODE	TASK NO.	ASSESSMENT PRODUCT	INDIVIDUAL OR GROUP	WEIGHTING %	WHAT IS THE DURATION / LENGTH?	WHEN SHOULD I SUBMIT?	WHERE SHOULD I SUBMIT IT?
All	1	Artefact - Creative, and Written Piece	Individual	30%	1,000 words	Week 5	Online Assignment Submission
All	2	Artefact - Creative, and Written Piece	Individual	30%	1,000 words	Week 9	Online Assignment Submission
All	3	Artefact - Creative, and Written Piece	Individual	40%	1,000 words	Week 13	Online Assignment Submission

All - Assessment Task 1: Virtual Environment preparation A

GOAL:	This task is designed to model the industry practice of the production of virtual environments and assets. You will produce an environment map and design a library of assets used within the environment.																			
PRODUCT:	Artefact - Creative, and Written Piece																			
FORMAT:	<p>This task has 3 key parts:</p> <p>a) You will create a sketch/drawing of the "master map" of your entire Virtual Environment.</p> <p>b) You will model (3D) or draw (2D) a Library of Assets used in the Virtual Environment.</p> <p>c) You will write a reflective report that discusses your design and thinking processes. The report template can be found on Blackboard.</p>																			
CRITERIA:	<table border="1"> <thead> <tr> <th>No.</th> <th>Learning Outcome assessed</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Quality of design.</td> </tr> <tr> <td>2</td> <td>Creative and aesthetic choices.</td> </tr> <tr> <td>3</td> <td>Consistency - all assets of equal quality.</td> </tr> <tr> <td>4</td> <td>Description of decision making processes.</td> </tr> <tr> <td>5</td> <td>Technical language used.</td> </tr> <tr> <td>6</td> <td>Ethical considerations on audience.</td> </tr> <tr> <td>7</td> <td>Clarity of writing.</td> </tr> <tr> <td>8</td> <td>Assessment criteria are mapped to the course learning outcomes.</td> </tr> </tbody> </table>	No.	Learning Outcome assessed	1	Quality of design.	2	Creative and aesthetic choices.	3	Consistency - all assets of equal quality.	4	Description of decision making processes.	5	Technical language used.	6	Ethical considerations on audience.	7	Clarity of writing.	8	Assessment criteria are mapped to the course learning outcomes.	<p>1 2 3 4</p>
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All - Assessment Task 2: Virtual Environment preparation B

GOAL:	This task further develops your environment that you designed for preparation A. You will design and begin to develop a terrain and assets for use within your environment.
PRODUCT:	Artefact - Creative, and Written Piece
FORMAT:	This task has 3 parts: a) You will design create and UV map/texture assets. b) You will export your Library of Assets for us in a terrain. c) You will write a reflective report that discusses your design and thinking processes. The report template can be found on Blackboard.

CRITERIA:	No.	Learning Outcome assessed
	1	Creative and aesthetic choices
	2	Consistency - all assets of equal quality
	3	All assets prepared to technical specifications
	4	Description of decision making processes
	5	Technical language used
	6	Ethical considerations on audience
	7	Clarity of writing

All - Assessment Task 3: Virtual Environment Assembly

GOAL:	This is a culminating task. You will bring the learning from Task 1 and 2 and then create a compilation of the library of assets into a virtual environment. This is a professional level project and will allow you to demonstrate both your skills and knowledge of the development of virtual environments.	
PRODUCT:	Artefact - Creative, and Written Piece	
FORMAT:	This task has 2 parts: a) You will assemble your Library of assets into an approved Real-time Game Engine. b) You will write a reflective report discussing your design and thinking processes. The report template can be found on Blackboard.	
CRITERIA:	No.	Learning Outcome assessed
	1	Creative and aesthetic choices.
	2	Assembly of individual Assets in the Library into a cohesive finished product.
	3	Adherence to the original Environment map's layout and design.
	4	Description of decision making processes.
	5	Technical language used.
	6	Ethical considerations on audience.
	7	Clarity of writing.

7. Directed study hours

A 12-unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Directed study hours may vary by location. Student workload is calculated at 12.5 learning hours per one unit.

8. What resources do I need to undertake this course?

Please note: Course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Blackboard site– Please log in as soon as possible.

8.1. Prescribed text(s) or course reader

There are no required/recommended resources for this course.

8.2. Specific requirements

This course requires some commercial software or hardware which is provided at USC campuses for student use. If you elect to do this course online, you may either; attend a campus at which it is available, discuss alternative open source solutions with your course coordinator that would enable you to demonstrate the learning outcomes, or if you prefer you may acquire this software and / or hardware at your own expense.

9. How are risks managed in this course?

Health and safety risks for this course have been assessed as low. It is your responsibility to review course material, search online, discuss with lecturers and peers and understand the health and safety risks associated with your specific course of study and to familiarise yourself with the University's general health and safety principles by reviewing the [online induction training for students](#), and following the instructions of the University staff.

10. What administrative information is relevant to this course?

10.1. Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Blackboard, are electronically checked through SafeAssign. This software allows for text comparisons to be made between your submitted assessment item and all other work that SafeAssign has access to.

10.2. Assessment: Additional Requirements

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:

The final mark is in the percentage range 47% to 49.4%

The course is graded using the Standard Grading scale

You have not failed an assessment task in the course due to academic misconduct.

10.3. Assessment: Submission penalties

Late submission of assessment tasks may be penalised at the following maximum rate: - 5% (of the assessment task's identified value) per day for the first two days from the date identified as the due date for the assessment task. - 10% (of the assessment task's identified value) for the third day - 20% (of the assessment task's identified value) for the fourth day and subsequent days up to and including seven days from the date identified as the due date for the assessment task. - A result of zero is awarded for an assessment task submitted after seven days from the date identified as the due date for the assessment task. Weekdays and weekends are included in the calculation of days late. To request an extension you must contact your course coordinator to negotiate an outcome.

10.4. Study help

For help with course-specific advice, for example what information to include in your assessment, you should first contact your tutor, then your course coordinator, if needed.

If you require additional assistance, the Learning Advisers are trained professionals who are ready to help you develop a wide range of academic skills. Visit the [Learning Advisers](#) web page for more information, or contact Student Central for further assistance: +61 7 5430 2890 or studentcentral@usc.edu.au.

10.5. Wellbeing Services

Student Wellbeing provide free and confidential counselling on a wide range of personal, academic, social and psychological matters, to foster positive mental health and wellbeing for your academic success.

To book a confidential appointment go to [Student Hub](#), email studentwellbeing@usc.edu.au or call 07 5430 1226.

10.6. AccessAbility Services

Ability Advisers ensure equal access to all aspects of university life. If your studies are affected by a disability, learning disorder mental health issue, injury or illness, or you are a primary carer for someone with a disability or who is considered frail and aged, [AccessAbility Services](#) can provide access to appropriate reasonable adjustments and practical advice about the support and facilities available to you throughout the University.

To book a confidential appointment go to [Student Hub](#), email AccessAbility@usc.edu.au or call 07 5430 2890.

10.7. Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Administration of Central Examinations
- Deferred Examinations
- Student Academic Misconduct
- Students with a Disability

Visit the USC website: <http://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching>

10.8. General Enquiries

In person:

- **USC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- **USC Moreton Bay** - Service Centre, Ground Floor, Foundation Building, Gympie Road, Petrie
- **USC SouthBank** - Student Central, Building A4 (SW1), 52 Merivale Street, South Brisbane
- **USC Gympie** - Student Central, 71 Cartwright Road, Gympie
- **USC Fraser Coast** - Student Central, Student Central, Building A, 161 Old Maryborough Rd, Hervey Bay
- **USC Caboolture** - Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture

Tel: +61 7 5430 2890

Email: studentcentral@usc.edu.au