MMST12019 *3D Animation*
Term 1 - 2019

Profile information current as at 25/04/2024 11:47 am

General Information

Overview
3D graphics are an important element of many films, television programs, games and other digital media projects. This unit provides a practical introduction to 3D modelling and animation. Students learn key concepts associated with 3D space and time, along with skills in modelling, lighting, shading, animation and rendering with 3D graphics software. Together these topics provide a holistic practical and theoretical understanding of the 3D production process. This unit requires access to a computer with a 3D graphics card, an Internet connection and audio capabilities.

Details
Career Level: *Undergraduate*
Unit Level: *Level 2*
Credit Points: *6*
Student Contribution Band: *10*
Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites
Prerequisite: DGTL11001
Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the Assessment Policy and Procedure (Higher Education Coursework).

Offerings For Term 1 - 2019

- Brisbane
- Mackay
- Online
- Rockhampton
- Sydney

Attendance Requirements
All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

Website
This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.

Class and Assessment Overview

Recommended Student Time Commitment

Each 6-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

Class Timetable

Regional Campuses
Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

Metropolitan Campuses
Adelaide, Brisbane, Melbourne, Perth, Sydney

Assessment Overview

1. **Practical and Written Assessment**
Weighting: 45%
2. **Practical and Written Assessment**
Weighting: 55%

Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the University's Grades and Results Policy for more details of interim results and final grades.

CQUniversity Policies

All University policies are available on the CQUniversity Policy site.
You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the CQUniversity Policy site.

Previous Student Feedback

Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

Feedback from Student evaluations

Feedback
Some students expressed a preference for shorter tutorial videos

Recommendation
The hour-long weekly tutorial videos will be broken down into several shorter clips.

Feedback from Student evaluations

Feedback
Some of the images in the study guide are out of date.

Recommendation
Images in the study guide will be checked and updated where necessary.

Feedback from Student evaluations

Feedback
Some students felt that the word limit on the assignment reports were too restrictive

Recommendation
The word limit on the assignment reports will be increased.

Feedback from Student evaluations

Feedback
Assignment 2 does not provide enough information about the video format requirements.

Recommendation
Assignment 2 will be revised to provide more detailed information about the video format requirements.

Unit Learning Outcomes

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

1. understand the computer animation process and associated elements, knowledge and history;
2. understand basic concepts associated with 3D computer graphics such as axes, planes, coordinate systems and views as well as geometrical primitives;
3. demonstrate competence operating with industry-standard 3D graphics software;
4. create, combine and manipulate 3D objects such as primitives, lights and cameras to develop complex models and scenes;
5. use polygon modelling techniques to create 3D character models;
6. use NURBS modelling and subdivision techniques to create 3D complex and organic models;
7. create virtual lighting effects within a 3D scene;
8. use virtual cameras to create shots and to control how an audience views a 3D scene;
9. create and apply shading materials to objects within a 3D scene;
10. create keyframe animations, path animations to move around objects, cameras, lights, etc in a 3D scene;
11. plan, design and establish scenes for short 3D animation pieces such as TV commercials or TV news titles.
12. render 3D scenes to different types of output files matching different broadcasting standards

Alignment of Learning Outcomes, Assessment and Graduate Attributes

— N/A Level | • Introductory Level | • Intermediate Level | • Graduate Level | ◦ Professional Level | ◦ Advanced Level

Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes											
	1	2	3	4	5	6	7	8	9	10	11	12
1 - Practical and Written Assessment - 45%	•	•	•	•	•		•	•	•			•
2 - Practical and Written Assessment - 55%	•	•	•	•	•	•	•	•	•	•	•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes											
	1	2	3	4	5	6	7	8	9	10	11	12
1 - Communication	•	•		•			•	•	•	•	•	•
2 - Problem Solving	•	•	•	•	•	•	•	•	•	•	•	•
3 - Critical Thinking	•	•	•	•	•	•	•	•	•	•	•	•
4 - Information Literacy	•	•	•	•	•	•	•	•	•	•	•	•
5 - Team Work	•	•			•	•		•	•	•	•	•
6 - Information Technology Competence	•	•	•	•	•	•	•	•	•	•	•	•
7 - Cross Cultural Competence	•						•	•	•	•	•	•
8 - Ethical practice	•							•		•	•	•
9 - Social Innovation												
10 - Aboriginal and Torres Strait Islander Cultures												

Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
1 - Practical and Written Assessment - 45%	•	•	•	•		•	•			
2 - Practical and Written Assessment - 55%	•	•	•	•	•	•	•	•		

Textbooks and Resources

Textbooks

There are no required textbooks.

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Adobe Photoshop CC
- Adobe Premiere 1.5 above
- Maya 2017 above

Referencing Style

All submissions for this unit must use the referencing style: Harvard (author-date)
For further information, see the Assessment Tasks.

Teaching Contacts

Qing Huang Unit Coordinator
q.huang@cqu.edu.au

Schedule

Week 1 - 11 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to 3D animation Interface overview	Interface/preference/project settings	

Week 2 - 18 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
The Interface in depth	Exploring and understanding the Maya Interface/hotbox/operations	

Week 3 - 25 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
NURBS modelling: curves & surface	Creating and editing NURBS curves and surfaces	

Week 4 - 01 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Polygon modelling: tools	Creating/editing polygons	

Week 5 - 08 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Polygon modelling: mapping	Mapping/editing texture on polygons	

Vacation Week - 15 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 22 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Material basics: concepts and tools	Applying materials and textures. Creating shades	A polygon character head and written critique - Friday of Week 6 **A polygon head & report** Due: Week 6 Friday (26 Apr 2019) 11:45 pm AEST

Week 7 - 29 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Lights	Creating/editing lights and effects	

Week 8 - 06 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Cameras	Creating/editing cameras and effects	

Week 9 - 13 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Animation basics: traditions, concepts	Creating/editing Keyframe/path animations	

Week 10 - 20 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Rendering: engines, setting, and delivery	Options, settings, effects, batch rendering	

Week 11 - 27 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
A little extra: Particles and Painting effects.	Creating/Editing particle effects and paint effects.	

Week 12 - 03 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
Review		3D animation commercial and written critique - Friday of Week 12 **3D animation commercial and written critique** Due: Week 12 Friday (7 June 2019) 11:45 pm AEST

Review/Exam Week - 10 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 17 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic

Assessment Tasks

1 A polygon head & report

Assessment Type
Practical and Written Assessment

Task Description
Produce a polygon model of a human or humanoid character head and write a 500-word report. Please refer to the course web site for the detailed assessment criteria.

Assessment Due Date
Week 6 Friday (26 Apr 2019) 11:45 pm AEST

Return Date to Students
Week 8 Friday (10 May 2019)

Weighting
45%

Assessment Criteria
Please refer to the course web site for the detailed assessment criteria.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Go to the course website on Moodle and follow the instruction on the Assessment Submission section.

Learning Outcomes Assessed

- understand the computer animation process and associated elements, knowledge and history;
- understand basic concepts associated with 3D computer graphics such as axes, planes, coordinate systems and views as well as geometrical primitives;
- demonstrate competence operating with industry-standard 3D graphics software;
- create, combine and manipulate 3D objects such as primitives, lights and cameras to develop complex models and scenes;
- use polygon modelling techniques to create 3D character models;
- create virtual lighting effects within a 3D scene;
- use virtual cameras to create shots and to control how an audience views a 3D scene;
- create and apply shading materials to objects within a 3D scene;
- render 3D scenes to different types of output files matching different broadcasting standards

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence
- Cross Cultural Competence

2 3D animation commercial and written critique

Assessment Type
Practical and Written Assessment

Task Description
Create a short 3D animation commercial project by using the knowledge you have learned from the course. Present a 500 word essay that explains the project design choice, process and self-evaluation. Please refer to the course web site for the detailed assessment criteria.

Assessment Due Date
Week 12 Friday (7 June 2019) 11:45 pm AEST

Return Date to Students
Exam Week Friday (21 June 2019)

Weighting
55%

Assessment Criteria
Please refer to the course web site for the detailed assessment criteria.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
The file size of your animation video might be too large for Moodle uploading limit (100Mb). You could submit the assignment by uploading the video to some public domain such as YouTube or Vimeo and include the link in the written critique. And upload only the Maya project file together with the written critique to Moodle.

Learning Outcomes Assessed

- understand the computer animation process and associated elements, knowledge and history;
- understand basic concepts associated with 3D computer graphics such as axes, planes, coordinate systems and views as well as geometrical primitives;
- demonstrate competence operating with industry-standard 3D graphics software;
- create, combine and manipulate 3D objects such as primitives, lights and cameras to develop complex models and scenes;
- use polygon modelling techniques to create 3D character models;
- use NURBS modelling and subdivision techniques to create 3D complex and organic models;
- create virtual lighting effects within a 3D scene;
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- create keyframe animations, path animations to move around objects, cameras, lights, etc in a 3D scene;
- plan, design and establish scenes for short 3D animation pieces such as TV commercials or TV news titles.
- render 3D scenes to different types of output files matching different broadcasting standards

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the **Student Academic Integrity Policy and Procedure**. This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

What is a breach of academic integrity?
A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

Why is academic integrity important?
A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

Where can I get assistance?
For academic advice and guidance, the Academic Learning Centre (ALC) can support you in becoming confident in completing assessments with integrity and of high standard.

What can you do to act with integrity?

Be Honest
If your assessment task is done by someone else, it would be dishonest of you to claim it as your own

Seek Help
If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)

Produce Original Work
Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem