DGTL12011 *Advanced 3D Animation*
Term 2 - 2017

Profile information current as at 28/04/2024 01:23 am

General Information

Overview
This unit builds on the foundation provided by the prerequisite unit to further develop your skills and knowledge in three-dimensional (3D) animation, particularly character animation. Using industry-standard software tools such as Autodesk Maya, you will gain an understanding of anatomy, motion, weight and timing in animation sequences. You will learn how to model and rig a 3D character with associated controls, and how to create believable character movements with walk cycles and facial animation.

Details
Career Level: *Undergraduate*
Unit Level: *Level 2*
Credit Points: *6*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites
Prerequisite: MMST12019 3D Animation Students who have completed DGTL13004 Advanced 3D Animation and Character Development may not enrol in this unit.
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 2 - 2017

- Brisbane
- Distance
- Mackay
- Rockhampton

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 Assessment**
Weighting: 45%
2. **Practical 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.

Unit Learning Outcomes

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

1. model and rig a 3D character with associated controls
2. apply elements of character animation such as anatomy, motion, weight and timing
3. create believable character movements with walk cycles and facial animation.

Not applicable

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
1 - Practical Assessment - 45%	•	•	
2 - Practical Assessment - 55%	•	•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes		
	1	2	3
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 Assessment - 45%	•	•	•	•		•	•	•		
2 - Practical 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 CC
- Autodesk Maya 2017

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 - 10 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Review of principles: timing and spacing Overview of Maya animation methods and tools	Bouncing ball project revisit; Graph editor, dope sheet, etc.	

Week 2 - 17 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
About animation production: story, plan, budget.	Nonlinear Deformation	

Week 3 - 24 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Human anatomy & Character design	Modelling of whole character body	

Week 4 - 31 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Character rigging and set up in Maya	Joints, IK joints, spline, joints, constrains, etc	

Week 5 - 07 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Character binding and skinning	skin; weight map, binding	

Vacation Week - 14 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 21 Aug 2017		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
MEL scripting introductory	Create customer codes using MEL	**Character development** Due: Week 6 Friday (25 Aug 2017) 11:00 pm AEST
Week 7 - 28 Aug 2017		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Walking and locomotion	Walk cycle 1	
Week 8 - 04 Sep 2017		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Walking and locomotion II	Walk cycle 2	
Week 9 - 11 Sep 2017		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Character animation: straight ahead, pose by pose. Staging. acting, secondary actions, etc.	Forward/Inverse kinematics, More acting	
Week 10 - 18 Sep 2017		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Facial animation	Blending shapes	
Week 11 - 25 Sep 2017		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Speech and phonemes in animation	Lip sync	
Week 12 - 02 Oct 2017		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Wrap up	Staging, lighting, animating & textures, etc	**A single (or more) character animation with humanoid actions** Due: Week 12 Friday (6 Oct 2017) 11:00 pm AEST
Review/Exam Week - 09 Oct 2017		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Exam Week - 16 Oct 2017		
Module/Topic	**Chapter**	**Events and Submissions/Topic**

Assessment Tasks

1 Character development

Assessment Type
Practical Assessment

Task Description
Design and develop a CG (Computer Graphic) character with full body texture ready model and with FK/IK character rigging setups. The character has to be your own design with proper appearance and props if necessary. And it should be rigged and fully functional for your further intended motions.

Assessment Due Date
Week 6 Friday (25 Aug 2017) 11:00 pm AEST

Return Date to Students
Week 8 Friday (8 Sept 2017)

Weighting
45%

Assessment Criteria
Part A: Character development (30 marks)
Structurally appropriate (topology, anatomy, proportion) ***/10 points***
Skeleton structure, character settings are appropriate and functional with all the tool handles necessary (FK/IK handles, customised attributes, etc.)***/10 points***
Character quality: personality, distinctiveness, proper clothes/props (innovation & creativity) ***/10* points**

Part B: Written critique (15 marks)
Discussion and reflection of development process (theoretical, cultural and technical) /***5 points***
Appropriate, clear and proper structured story and actions for the character (storyboard, script and dialogues)***/5 points***
Written skills ***/4 points***
Use of source materials/referencing ***/1 point***

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
You must submit the following file for this assignment: a zip file containing all your Maya project folders and your report.

Learning Outcomes Assessed

- model and rig a 3D character with associated controls
- apply elements of character animation such as anatomy, motion, weight and timing

Graduate Attributes

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

2 A single (or more) character animation with humanoid actions

Assessment Type
Practical Assessment

Task Description
Create a short character animation using the character designed and created in Assignment 1. The character should perform certain humanoid actions such as singing, dancing or playing sport with discernable human acting and personalities.

Assessment Due Date
Week 12 Friday (6 Oct 2017) 11:00 pm AEST

Return Date to Students
Exam Week Friday (20 Oct 2017)

Weighting
55%

Assessment Criteria
Production quality (title, correct video format, resolution, credits, etc.) ***/6 points***
Smooth and convincing action of the character in terms of timing, spacing, staging and acting (including facial animation)***/20 points***
Secondary actions (following through, overlapping, etc.) ***/6 points***
Story telling ability in terms of storyline, camera language and montage ***/10 points***
Visual and audio qualities (lighting, colour, materials and effects) ***/8 points***
Originality, style and creativity (cultural influences and X-factors) ***/5 points***

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
You must submit the following files for this assignment: a zip file (.zip) containing your Maya project files and structure together with your movie file of the animation (.avi, mov, mp4, etc). The resolution should be at least HD_720 (1280x720). If your uploading video file size exceeds 100 mb limitation of Moodle, you could just upload the project zip file and upload your movie version of the animation to some public video domain site such as YouTube or Vimeo and send me the link in a text file for viewing.

Learning Outcomes Assessed

- model and rig a 3D character with associated controls
- apply elements of character animation such as anatomy, motion, weight and timing
- create believable character movements with walk cycles and facial animation.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- 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