MECO319

Modelling and Animation

S1 Day 2014

Dept of Media, Music & Cultural Studies

Contents

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General Information

Unit convenor and teaching staff
Unit Convenor
Eric Valric
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Credit points
3

Prerequisites
39cp

Corequisites

Co-badged status

Unit description
This unit teaches students how to create and animate 3D assets for game design. Students will learn the applied theoretical and technological principles underpinning the practice of 3D modelling and how to export assets into frameworks for game development.

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:

Demonstrate a basic working understanding of Maya's polygon, texturing and animation capabilities for low poly game construction.

Demonstrate understanding of polygonal modelling tools

Develop capability to create and edit polygonal models

Apply creative techniques to create textures for 3D game asset export

Understand and apply lighting principles to assets

Combine theory and practice to produce basic animations

Plan and present ideas in an appropriate manner

Assessment Tasks

Name	Weighting	Due
Texturing Assignment	10%	Week 3
'Make a great white Shark'	30%	In class, week 6
Project Proposal	10%	Week 7
Major Project	50%	Week 13

Texturing Assignment

Due: **Week 3**
Weighting: **10%**

The purpose of this 1 hr test is test students in their basic understanding and implementation of the Maya interface in polygon creation and basic texture mapping.

On successful completion you will be able to:

- Demonstrate a basic working understanding of Maya's polygon, texturing and animation capabilities for low poly game construction.
- Demonstrate understanding of polygonal modelling tools
- Develop capability to create and edit polygonal models

'Make a great white Shark'

Due: **In class, week 6**
Weighting: **30%**

The purpose of this assignment is to advance students in their understanding and implementation of the Maya interface in creating organic shapes, texturing these whilst gaining basic appreciation of the complexity of character animation.

This assessment will be conducted during workshops and delivered in **week 6**.

On successful completion you will be able to:

- Demonstrate understanding of polygonal modelling tools
- Develop capability to create and edit polygonal models
- Apply creative techniques to create textures for 3D game asset export
- Understand and apply lighting principles to assets
- Combine theory and practice to produce basic animations

Project Proposal

Due: **Week 7**
Weighting: **10%**

The purpose of this research is to teach students the importance of research, feasibility and implementation of '**Old Western Town**' or approved equivalent project.

The paper should show research of the project with reference colour examples of the buildings and other assets to be built in Maya. It should also have a time sheet as well as the 3D tools which will be used to create it. It is expected that by week 7 you will have acquired enough understanding of Maya to de-compose a project and analyse it for best time management, implementation and punctual delivery.

On successful completion you will be able to:

- Plan and present ideas in an appropriate manner

Major Project

Due: **Week 13**
Weighting: **50%**

The student (after lecturer approval) will create, deliver their individual 3D project based on an '**Old 1900 Western Town**' theme. It must be exactly as per their delivered research paper in week 7. Any deviation from this, (unless approved by the lecturer) will result in a mark of zero.

On successful completion you will be able to:

- Develop capability to create and edit polygonal models
- Apply creative techniques to create textures for 3D game asset export
- Understand and apply lighting principles to assets
- Combine theory and practice to produce basic animations

Delivery and Resources

Please see Timetables page for timetabling - https://timetables.mq.edu.au/Scientia/Web/index.html

MECO319 will use iLearn, Maya and Apple iMacs.

Unit Schedule

Please see the MECO319 iLearn for the unit schedule.

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central.

Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://mq.edu.au/policy/docs/academic_honesty/policy.html

Assessment Policy http://mq.edu.au/policy/docs/assessment/policy.html

Grading Policy http://mq.edu.au/policy/docs/grading/policy.html

Grade Appeal Policy http://mq.edu.au/policy/docs/gradeappeal/policy.html

Grievance Management Policy http://mq.edu.au/policy/docs/grievance_management/policy.html

Disruption to Studies Policy http://www.mq.edu.au/policy/docs/disruption_studies/policy.html *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the Learning and Teaching Category of Policy Central.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/support/student_conduct/

Late Submissions

Unless an extension is organised with the unit convenor, late submissions will attract a penalty of 10% per day (including weekends).

Student Support

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

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- Workshops
- StudyWise
- Academic Integrity Module for Students
- Ask a Learning Adviser

Student Services and Support

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

IT Help

For help with University computer systems and technology, visit http://informatics.mq.edu.au/help/.

When using the University's IT, you must adhere to the Acceptable Use Policy. The policy applies to all who connect to the MQ network including students.

Graduate Capabilities

Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

Learning outcomes

- Demonstrate a basic working understanding of Maya's polygon, texturing and animation capabilities for low poly game construction.
- Demonstrate understanding of polygonal modelling tools
- Apply creative techniques to create textures for 3D game asset export

Assessment tasks

- Texturing Assignment
- 'Make a great white Shark'
- Project Proposal
- Major Project

Commitment to Continuous Learning

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

Learning outcome

- Demonstrate a basic working understanding of Maya's polygon, texturing and animation capabilities for low poly game construction.

Assessment tasks

- Texturing Assignment
- 'Make a great white Shark'
- Major Project

Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

Learning outcomes

- Demonstrate a basic working understanding of Maya's polygon, texturing and animation capabilities for low poly game construction.
- Demonstrate understanding of polygonal modelling tools
- Develop capability to create and edit polygonal models
- Apply creative techniques to create textures for 3D game asset export
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Assessment tasks

- Texturing Assignment
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- Project Proposal
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Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to

have a level of scientific and information technology literacy.

This graduate capability is supported by:

Learning outcomes

- Demonstrate understanding of polygonal modelling tools
- Apply creative techniques to create textures for 3D game asset export
- Understand and apply lighting principles to assets

Assessment tasks

- Project Proposal
- Major Project

Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

Learning outcomes

- Demonstrate understanding of polygonal modelling tools
- Apply creative techniques to create textures for 3D game asset export
- Understand and apply lighting principles to assets
- Combine theory and practice to produce basic animations
- Plan and present ideas in an appropriate manner

Assessment tasks

- Texturing Assignment
- 'Make a great white Shark'
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Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

Learning outcomes

- Develop capability to create and edit polygonal models

- Apply creative techniques to create textures for 3D game asset export
- Combine theory and practice to produce basic animations
- Plan and present ideas in an appropriate manner

Assessment tasks

- Project Proposal
- Major Project

Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

Learning outcome

- Plan and present ideas in an appropriate manner

Assessment tasks

- Project Proposal
- Major Project

Engaged and Ethical Local and Global citizens

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

Learning outcome

- Plan and present ideas in an appropriate manner

Assessment task

- Major Project

Socially and Environmentally Active and Responsible

We want our graduates to be aware of and have respect for self and others; to be able to work with others as a leader and a team player; to have a sense of connectedness with others and

country; and to have a sense of mutual obligation. Our graduates should be informed and active participants in moving society towards sustainability.

This graduate capability is supported by:

Learning outcome

- Plan and present ideas in an appropriate manner

Assessment task

- Major Project