Subject Coordinator

Associate Professor Phillip McKerrow
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Location: 3.219

Session: Spring Session, Wollongong
Credit Points: 6
Contact hours per week: 1 hours lecture, 2hour laboratory
Lecture Times & Location: Mon 15:30 16:30 22.G22
Tutorial Day, Time and Location can be found at: http://www.uow.edu.au/student/sols/timetables/index.html

Students should check the subject’s web site regularly as important information, including details of unavoidable changes in assessment requirements will be posted from time to time. Any information posted to the web site is deemed to have been notified to all students.

Content

This subject studies the design, creation and animation of 3D models with a professional 3D modelling tool, such as Lightwave. Model design and creation topics include coordinate frames, solids of revolution, designing objects from a set of 3D primitives, lighting, design for motion, textures, filters, shading, effects, inverse kinematics, rendering and surface modelling. Animation involves the theory of object motion and relative motion between components of an object, the practical problems of rendering images to visualise motion, the creative skills of coordinating image sequences with audio (voice, music and sound effects) and the programming of images and audio into timed sequences to produce movies in multimedia formats, such as MPEG-1 and QuickTime.

Objectives

On successful completion of this subject, students should be able to:
1. Design and implement a 3D model using Lightwave.
2. Demonstrates an understanding of the principles of kinematics and motion control.
3. Analyse the motion of an object and its parts in order to animate a 3D model of it.
4. Explain the relationships between lighting, texture and effects.
5. Describe the coordination of the motion 3D objects with audio to produce realistic animations.
Attendance Requirements

It is the responsibility of students to attend all lectures/tutorials/labs/seminars/practical work for subjects for which you are enrolled.

It should be noted that the amount of time spent on each 6 credit point subject should be at least 12 hours per week, which includes lectures/tutorials/labs etc.

Satisfactory attendance is deemed to be attendance at approximately 80%* of the allocated contact hours. Attendance rolls may be kept for lectures, TUTORIALS and laboratories. If you are present for less than 80%* you need to apply for special consideration, otherwise a fail grade may be recorded.

Students MUST attend their allocated tutorial unless they have the written permission of the subject coordinator.

Method of Presentation

This subject consists of 1 hour lecture, 2 hour laboratory.

Lecture Schedule

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<th>Week</th>
<th>Lecture</th>
<th>Workshop</th>
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<tr>
<td>1</td>
<td>23/07/07 Introduction</td>
<td>No Workshop</td>
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<tr>
<td>2</td>
<td>30/07/07 Animation Process &amp; Principles</td>
<td>3D Overview</td>
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<tr>
<td>3</td>
<td>6/08/07 3D Modeling Principles</td>
<td>3D Modeling Strategies</td>
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<td>4</td>
<td>13/08/07 Animation Proposals</td>
<td>Concept Discussion</td>
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<td>5</td>
<td>20/08/07 Issues of Visual Style</td>
<td>Visual Style Discussion</td>
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<td>6</td>
<td>27/08/07 Surfacing, Lighting &amp; Rendering</td>
<td>Treatment</td>
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<tr>
<td>7</td>
<td>3/09/07 3D Animation 1</td>
<td>Transformations &amp; Key-framing</td>
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<tr>
<td>8</td>
<td>10/09/07 3D Animation 2</td>
<td>Forward Kinematics (Still-Life assignment due)</td>
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<tr>
<td>9</td>
<td>17/09/07 Compositing</td>
<td>Morphing &amp; Inverse Kinematics</td>
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<tr>
<td>10</td>
<td>1/10/07 Public Holiday</td>
<td>Public Holiday</td>
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<tr>
<td>11</td>
<td>8/10/07 Animation Presentations</td>
<td>Production Workshop</td>
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<tr>
<td>12</td>
<td>15/10/07 Animation Presentations</td>
<td>Production Workshop</td>
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<tr>
<td>13</td>
<td>22/10/07 Conclusion</td>
<td>Production Workshop</td>
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Subject Materials


These readings/references are recommended only and are not intended to be an exhaustive list. Students are encouraged to use the library catalogue and databases to locate additional readings.
Assessment
This subject has the following assessment components.

<table>
<thead>
<tr>
<th>Assessment Items &amp; Format</th>
<th>Percentage of Final Mark</th>
<th>Due Date</th>
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<tr>
<td>Animation Proposal</td>
<td>20%</td>
<td>Workshop of week 6</td>
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<tr>
<td>Render Studies</td>
<td>25%</td>
<td>Workshop of week 8</td>
</tr>
<tr>
<td>Animation Presentation</td>
<td>15%</td>
<td>Lecture of weeks 11 &amp; 12</td>
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<tr>
<td>Animation Project</td>
<td>40%</td>
<td>Friday of Week 14 by 5pm</td>
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Notes on Assessment

Unless otherwise notified by the subject coordinator, all written assignments must be submitted electronically.

All assignments are expected to be completed independently. Plagiarism may result in a FAIL grade being recorded for that assignment.

Penalties for late submission of Assessment Items
Penalties apply to all late work, except if special consideration has been granted. Late submissions will attract a penalty of 10% of the assessment mark per day including weekends. Work more than 7 days late will be awarded a mark of zero.

Assessment Overview
A major part of the assessment for this subject relates to an overall group task. Working in groups you will produce a minute long animation on one of the following three themes:

1. Unbreakable
2. Fast & Slow
3. Haunted

You are free to interpret these themes in whatever way seems interesting and appropriate. You may wish, for instance, to produce a standard narrative 3D animation or you may wish to produce an abstract version. You may opt for a photo-realistic style or a cell-shaded one. These issues of creative concept and style are for each group to determine. Once you have made decisions in this regard, you will need to develop a detailed group proposal (assignment 1) and allocate animation responsibilities within each group. Responsibilities may include the following:

- Modeling
- Surfacing and Lighting
- Animation
- Editing
- Group Management

Note that it will be important that you clearly distinguish areas of individual responsibility for each assignment as your marks will be 50% determined by individual contribution and 50% by the quality of the overall group work.

1. Animation Proposal 20% (due week 5)

This is a written document that sets forth your plans for the animation. It should include the following:

- Short summary of your creative concept
- Detailed treatment explaining your concept in depth and including relevant sketches and storyboards. Your treatment should included a discussion of your intended visual style
- Indication of group roles and responsibilities
- Indication of individual contributions to proposal
Here are the criteria for assessing your proposals:

- Quality of the creative concept
- Quality of the detailed explanation of concept
- Quality of written expression
- Quality of the visual sketches and storyboard

2. **Render Studies** 25% (due week 8)

Working individually, produce a series of six still image renders of an object in a scene. It should be submitted as a paper hard copy. The object and scene should relate logically to the intended group animation project, providing a clear indication of your conception of the overall visual style of the animation project.

Render Studies should be 720 * 576 (PAL video resolution) jpegs. Please submit into the assignment electronic drop box.

Here are the criteria for assessing your render studies:

- Quality of the creative vision
- Quality of the modeling
- Quality of the surfacing
- Quality of lighting and cinematography (framing & composition)
- Quality of the rendering

3. **Animation Presentation** 15% (due in week 11 or 12)

This group presentation aims to explain the stylistic choices that you have made in your animation project in relation to the tradition of 2D and 3D animation. Groups are expected to refer to specific animation examples and to be as clear as possible about specific relevant stylistic features.

Presentations will be delivered in the lectures of weeks 11, and 12 and should run for 15-20 minutes each. Be careful not to show extended examples. Show only enough to make your point.

Here are the criteria for assessing your animation presentations:

- Demonstrated research into relevant animation traditions
- Quality of the stylistic analysis and discussion
- Effective use of examples to clarify points
- Clear indication of how stylistic traditions have shaped your work
- Quality of the group presentation effort

4. **Animation Project** 40% (due throughout semester)

This is your final group animation project. See the assessment overview (above) for a description of the overall task.

The minute long animation should be produced in the following format: 720 * 576 PAL (25 frames per second). It should be submitted on a CD or DVD. The latter is the preferred option (in MPEG2 format).

Group members are required to submit an individual 1000 word reflective report, discussing their own contributions to the project and assessing the quality of the finished animation in terms of their overall conceptual and stylistic aims.

Here are the criteria for assessing your animation projects:

- Quality of the creative concept
- Quality of the visual design
- Quality of the animation
- Quality of the cinematography and editing
- Quality of the group work
- Quality of individual reflective report
Return of Assessments
Assignments will be returned in laboratory classes.

Special Consideration Policy

The School recognises that it has a responsibility to ensure equity and consistency across its subjects for all students. Sometimes, in exceptional circumstances, students need to apply for special consideration in order to complete all assessable work.

The University applies strict criteria to the granting of special consideration. Before applying for special consideration students should carefully read the University’s policy. The policy can be found at:

As an example: If a student requires an extension of time for the completion of an assignment this may be granted in certain circumstances. A request for an extension must be made to the Subject Coordinator via SOLs before the due date.

Scaling

Final results in this subject may be scaled. The scaling method that will be used in this subject is as follows.

If $E$ is the student exam mark, and $A$ is the student assignment mark, the student final mark will be determined as follows:

- if $E \geq 40\%$ of the maximum exam mark: then student final mark is $E + A$;
- if $35\% \leq E < 40\%$ of the maximum exam mark: then student final mark is $\min\{E+A, 47\}$

Additional Information

Students must refer to the Faculty Handbook or online references which contains a range of policies on educational issues and student matters.

Supplementary Exams

Supplementary Exams will be dealt with in accordance with Special Consideration Policy (http://www.uow.edu.au/handbook/courserules/specialconsideration.html ) 6.2 Timing of Supplementary Exams.

While the School normally grants supplementary exams when the student does not sit the standard exam for an acceptable reason, each case will be assessed on its own merit and there is no guarantee a supplementary exam will be granted. If a supplementary exam is granted you will normally be notified via SOLS Mail the time and date of this supplementary exam. You must follow the instructions given in the email message.

Please note that if this is your last session and you are granted a supplementary exam, be aware that your results will not be processed in time to meet the graduation deadline.

Plagiarism

When you submit an assessment task, you are declaring the following

1. It is your own work and you did not collaborate with or copy from others.
2. You have read and understand your responsibilities under the University of Wollongong's policy on plagiarism.
3. You have not plagiarised from published work (including the internet). Where you have used the work from others, you have referenced it in the text and provided a reference list at the end of the assignment.
4. Plagiarism will not be tolerated.
5. Students are responsible for submitting original work for assessment, without plagiarising or cheating, abiding by the University’s policies on Plagiarism as set out in the Calendar under University Policies, and in Faculty handbooks and subject guides. Plagiarism has led to the expulsion from the University.
Student Academic Grievance Policy

The School aims to provide a fair, equitable and productive learning environment for all its students. The Student Academic Grievance Policy seeks to support the achievement of this goal by providing a transparent and consistent process for resolving student academic grievances.

Any student who has a grievance over a result should obtain a Faculty of Informatics Appeal Against Decision or Action Affecting Academic Experience form from the Informatics Student Enquiry Centre or http://www.uow.edu.au/content/groups/public/@web/@inf/@faculty/documents/doc/uow017433.pdf . The student should firstly take the form to the marker/lecturer to discuss the matter and, if the student is still not satisfied, s/he should take the next step as outlined on the form.

Once the grievance has been considered by the Faculty, if the student still feels the situation has not been fully resolved s/he may consult the Dean of Students. However, the Dean of Students can have no input into the academic judgement of the lecturer and can only review the grievance to ensure proper procedure has been followed.

For more information, please consult the UOW policy in full at http://www.uow.edu.au/handbook/courserules/studacgrievpol.html

This outline should be read in conjunction with the following documents:

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<th>Key Dates</th>
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<th>Code of Practice - Students</th>
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<th>Acknowledgement Practice</th>
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<tr>
<td>Plagiarism will not be tolerated</td>
<td><a href="http://www.uow.edu.au/handbook/courserules/plagiarism.html">Link</a></td>
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<tr>
<th>Code of Practice-Honours</th>
<th>Informatics Faculty Librarian, Ms Annette Meldrum, phone: 4221 4637, <a href="mailto:ameldrum@uow.edu.au">ameldrum@uow.edu.au</a></th>
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