
SCSSE

**School of Computer Science and Software Engineering
Faculty of Informatics**

**CSCI236 3D Modelling and Animation
Subject Outline
Spring Session 2009/Summer Session 2010**

Head of School –Willy Susilo, Student Resource Centre, Tel: (02) 4221 3606

GENERAL INFORMATION

Subject Coordinator

Telephone Number:	Dr Ian Piper 02 4221 3157
Email:	ian@uow.edu.au
Location:	3.103

Dr Piper's consultation times during session:

Day	Time
Thursday	11:30 – 13:30
Friday	08:30 – 10:30

Lecturer

Telephone Number:	Mr Peter Castle 02 4221 3837
Email:	peter_castle@uow.edu.au
Location:	3.102

Mr Castle's consultation times during session:

Day	Time
Tuesday	08:30 – 10:30
Friday	08:30 – 10:30

Subject Organisation

Session:	Spring 2009/Summer 2010, Wollongong Campus
Credit Points	6 credit points
Contact hours per week:	3hr lecture, 2hr lab
Lecture Times & Location:	14:30 –17:30 Fri, 3-121
Tutorial Day, Time and Location can be found at:	http://www.uow.edu.au/student/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 via e-Learning space <http://www.uow.edu.au/student/>. Any information posted to the web site is deemed to have been notified to all students.

Subject Description

This subject provides students with a hands-on introduction to the use of computers for developing models of three-dimensional objects and viewing them in 3D as still images and animations. Topics covered include basic modelling primitives, from polygons to spline surfaces; tools to modify simple objects; surfacing concepts such as textures and bump maps; basic lighting of scenes; the animation process including key frames, articulated structures, camera movement and morphing; lighting effects such as volumetrics and radiosity. The subject uses the industry standard software package LightWave.

Subject Objectives

A student who successfully completes this subject should be able to:

- (i) understand the basic concepts of modelling and animating three-dimensional scenes;
- (ii) take an object, whether real or imagined, and build a geometric model of the object in the computer;
- (iii) choose suitable colours and textures to provide a realistic appearance of the model; set up lighting and camera to display a still image of the model;
- (iv) set up the motion of objects, cameras and lights to generate an animation of a scene;
- (v) use lighting effects to enhance the scene;

Graduate Qualities

This subject will continue to the following graduate qualities:

Informed
Independent Learners
Problem Solvers
Innovation & Design

Further information can be found at:

<http://www.uow.edu.au/informatics/scsse/current/SubjectInformation/UOW049401.html>

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 by the University, to be attendance at approximately 80% of the allocated contact hours.

Method of Presentation:

In order to maximize learning outcomes, it is strongly recommended that students attend all lectures.

This subject is built around the LightWave 3D modeling and animation package. Students **must** use this package for the development of all assessable materials.

During Spring Session, lectures will comprise the content of this subject plus explanations and illustrations. Assignments will be introduced and discussed in lectures. Assignments and the associated laboratories will relate to the lecture topics. Laboratories start from week two. Satisfactory attendance at lectures and laboratories is a requirement for the successful completion of this subject. Satisfactory attendance is deemed to be attendance at approximately 80% of the allocated contact hours. Attendance rolls may be kept for lectures and laboratories, however, attendance per se is not a component of assessment. It should be noted that the software tools used in this subject are copyright and hardware protected and, therefore, students will not be readily able to complete assignments without access to laboratory computers.

Summer Session provides students with the opportunity to apply the knowledge and skills they have acquired during Spring Session to two major projects: a still image and an animation sequence. Facilities will be available along with consultation time during the session. There are no attendance requirements for this session but ample laboratory access will be made available.

Lecture Schedule:

A proposed Lecture schedule for the subject is as follows:

Week	Topic	Assignment Due Dates
1	Introduction to LightWave; Polygonal Modeling	
2	More Polygonal Modelling including text and CSG	
3	Advanced Modelling; 2d to 3d construction	Assignment 1
4	Modelling of Organic Objects	Assignment 2
5	Introduction to lighting, rendering and animation	Assignment 3
6	Lighting and camera models; Rendering	
7	Keyframe animation and motion paths	Assignment 4
8	Surfaces and texturing	Assignment 5
9	Advanced animation, plugins and expressions	Assignment 6
10	Advanced lighting and particle systems	Assignment 7
11	Kinematics and bones	Assignment 8
12	Animating Figures; Fibres	Assignment 9
13	Various Topics and Review	Assignment 10

Changes to the above schedule will be posted via e-Learning space <http://www.uow.edu.au/student/>. Any information posted to the web site is deemed to have been notified to all students.

Subject Materials:

Any 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

This subject has no set texts or references. There are many texts on modelling and animation but most refer to specific software tools, including LightWave. Electronic copies of the manual for the software being used in this subject are available.

Lecture notes will appear on the subject web page but in no way represent a substitute for lecture attendance.

Assessment:

This subject has the following assessment components.

ASSESSMENT ITEMS & FORMAT	% OF FINAL MARK	DUE DATE
Laboratory Assignments	10@4% (40%)	As shown above
Formal Examination	10%	Spring Session Formal Examination Period
Preliminary Design	10%	End of Spring Examination Period
Major Modelling Assignment	20%	Penultimate University day before Christmas
Major Animation Assignment	20%	Last University Day in January

Notes on Assessment:

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

Laboratory assignments will be submitted electronically using the submit system. Marks will be available on the web.

The major assignments will be submitted on CD/DVD-ROM. More details regarding major assignment requirements will be provided midway through Spring Session. Because of the frequency of lab assignments, late submissions will not normally be accepted. Students with genuine reasons for missing submission due dates may receive consideration.

The formal examination focuses on the theoretical content of this subject. The other assessment tasks are competency-based.

To be eligible for a Pass in this subject a student must achieve a mark of at least 16 (40%) in the Laboratory Assignments. Students who fail to achieve this minimum mark & would have otherwise passed will be given a TF (Technical Fail) for this subject.

Tutorial/Lab Closure Policy

If for any reason, the number of students in a tutorial or lab falls below a sustainable enrolment level, as determined by the Head of School, tutorials/labs offered for that subject may be collapsed or deleted.

You will have to attend the new tutorials/lab if this closure affects the one you are attending.

We will endeavour to make this decision no later than Week 4 of session.

Supplementary Exams

Supplementary Exams will be dealt with in accordance with student academic consideration policy (<http://www.uow.edu.au/about/policy/studentacademicconsiderationpolicy.pdf>) 9.2 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.

Student Academic 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 student academic consideration in order to complete all assessable work.

The University applies strict criteria to the granting of student academic consideration. Before applying for student academic consideration, students should carefully read the University's policy which can be found at: <http://www.uow.edu.au/about/policy/studentacademicconsiderationpolicy.pdf>.

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.

Students must remember that:

Plagiarism will not be tolerated.

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 University Handbook under University Policy Directory 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. (<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 judgment of the lecturer and can only review the grievance to ensure proper procedure has been followed.

Relevant University Policies, procedures and students services:

For more information students must refer to the Faculty handbook, online references or consult the UOW policy in full at <http://www.uow.edu.au/handbook/courserules/studacgrievpol.html> which contains a range of policies on educational issues and student matters.

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

Code of Practice - Teaching and Assessment http://www.uow.edu.au/handbook/codesofprac/teaching_code.pdf	Code of Practice - Students http://www.uow.edu.au/handbook/codesofprac/cop_students.html
Code of Practice-Honours http://www.uow.edu.au/handbook/CodeofPractice-Honours.pdf	Acknowledgement Practice Plagiarism will not be tolerated: http://www.uow.edu.au/handbook/courserules/plagiarism.html
Key Dates http://www.uow.edu.au/student/dates.html	Student Academic Consideration Policy: http://www.uow.edu.au/about/policy/studentacademicconsiderationpolicy.pdf
Course Progress Requirements: http://www.uow.edu.au/student/mrp/index.html	Graduate Qualities Policy: http://www.uow.edu.au/about/teaching/qualities/index.html#_The new UOW
Academic Grievance Policy (Coursework and honours students) http://www.uow.edu.au/handbook/courserules/studacgrievpol.html	Non-Discriminatory Language Practice and Presentation http://staff.uow.edu.au/eed/nondiscrimlanguage.html
Occupational Health and Safety http://staff.uow.edu.au/ohs/commitment/ohspolicy/index.html	Ownership of Work & Intellectual Property Policy: http://www.uow.edu.au/handbook/generalcourserules/UOW028651.html
Human Research Ethics Committee: http://www.uow.edu.au/research/rso/ethics/human/	Rules for student conduct: http://www.uow.edu.au/handbook/generalrules/StudentConductRules.pdf
Independent Learners' Introductory Program http://www.uow.edu.au/student/attributes/ilip/	Informatics Faculty Librarian, Ms Annette Meldrum, phone: 4221 4637, email: ameldrum@uow.edu.au
Student Support Services: http://www.uow.edu.au/student/services/ Informatics Faculty SEDLO (Student Equity and Diversity Liaison Officers) Virginie Schmelitschek, phone 4221 3833, virginie@uow.edu.au	SCSSE Internet Access & Student Resource Centre http://www.uow.edu.au/informatics/common/uow024466.html
SCSSE Computer Usage Rules http://www.uow.edu.au/informatics/common/uow024457.html	SCSSE Subject Outlines http://www.uow.edu.au/informatics/scsse/current