



SCHOOL OF MEDIA ARTS

SOMA4609

# 3D Modelling and Animation 3

Session one 2009

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## Course staff

Course Coordinator:	Steve Weymouth
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*Consultation times are normally by appointment. Please contact the relevant tutor to arrange a suitable time.*

**Units of Credit:** 6

**Teaching Time and Location:** Wednesday 3pm - 6pm room F111

**Contact hours per week\*:** 3

*\*Please note that the expectation of time in this course is more than contact hours. The University has expectations of a total load of 25 – 30 hours per unit of credit. This means that you should spend no less than 8-9 hours per week on average on class work in addition to your timetabled hours.*

### Course Aims:

**3D3 Character Animation** will explore complex character animation skills including planning, acting and the use of reference material. This course will help develop effective character animation skills including body movement, facial animation and lip-syncing based on traditional animation skills and principles.

*This is an advanced course that focuses on character animation and assumes prior knowledge of 3D CGI that builds upon the skills developed in SOMA3609 - 3D2 Short Animation production.*

### Relationship to other courses:

**3D3** is an advance course that assumes prior knowledge of 3D CGI and builds upon the skills developed in 3D2 (SOMA3609).

### Student learning outcomes:

By the end of this course you will be able to plan and illustrate effective character control through the control of body, facial and lip-sync animation.

### Graduate attributes developed in this course:

This course actively integrates, encourages and promotes the College of Fine Arts (COFA) and wider UNSW graduate attributes. You can read what they are here; <http://www.cofa.unsw.edu.au/staff/learningteaching/policyguides/graduateattributes.html>

### Approach to learning and teaching:

Teaching on this course has been informed by professional working practice. Students are actively encouraged to develop professional methodologies and approaches to problem solving.

### Teaching strategies:

Teaching on this course will take the form of instructional tutorials and practical demonstrations.

## Assessments

Assessments will be based on two major projects accompanied by their respective journal\*

**Project 1:** Character body action

**Project 2:** Character facial, lip-sync and body action

### \*Journal

A journal is a process diary that reflects your problem solving approach and learning experience, it should evidence the development of your project along with all related research.

This subject requires that you keep a regular journal of your progress. The school provides online journals ('blogs') that should be used as your primary documentation. If this format is not suitable please consult with your tutor

**Staff regularly read online journals to verify student activity and to read updates.**

For more information see the PDF 'Online Services for Media Arts' in the subject folder, or go to <http://soma-blogs.cofa.unsw.edu.au/about/>

Discussion is essential both in class and via the Omnium website for this subject. Students should visit their online discussion regularly for news updates, recorded lectures and useful links to share along with general help and information with other students.

Some project tasks requires that you upload your video to the UNSW-TV server. This works like YouTube, but has higher quality and protects your privacy.

For more information about UNSW-TV see the PDF 'Online Services for Media Arts' in the subject folder, or browse 'soma-blogs' from any COFA computer.

## Assessment Criteria

Each project will be given to you in a separate briefing document. Make sure you read the document THOROUGHLY; a common cause of students failing or not gaining high marks is often that they have failed to read the brief.

Detailed assessment criteria will be included in the briefing documents, but usually you will be assessed on

1. Originality of your idea and thoroughness of research
2. Aesthetic and process - how it looks and how you got there
3. Overall quality and standard of the delivered work

### Breakdown of Marks

<b>Project 1:</b>	<b>30%</b>
<b>Project 2:</b>	<b>30%</b>
<b>Project journal:</b>	<b>20%</b>
<b>Class participation</b>	<b>20%*</b>

**Class participation relates to your general level of engagement, your overall fulfillment of homework activities and outside class work related to the course.**

**NOTE! ANY** evidence of 3D projects being produced as a result of cracked or illegal software **WILL RESULT IN AN INSTANT FAIL**. It is expected that you use the schools labs and legal software only.

### **Penalty for late delivery of assignments**

Late delivery of work either presentations, projects or logbooks will incur a penalty of ten percent (10%) per day.

*I.e. a project may be worth 35% of the total semester mark. If the project is one day late it will lose 10% of 35% (3.5) for each and every day that the project is late. Extensions will be granted for exceptional circumstances only and will need to be backed up with doctors' certificates or a report from the school councilor.*

## Computing Requirements

Students are expected to complete their course work on the universities lab computers using the licensed Maya software provided. Some study and reference can be made using a free download version of Maya personal learning edition (PLE) on personal computers. However, be aware that any work produced using PLE cannot be transferred and opened on the university computers due to the nature of the free software.

## SAFETY INFORMATION

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You have a responsibility to not do anything that risks the safety or health of your fellow students and also staff.

This will involve informing your lecturer of any safety risks you become aware of, and also following the directions of staff in relation to such issues as equipment usage, and safety equipment and clothing.

You are responsible for:

- adhering to UNSW and COFA OHS policies and procedures,
- following instructions on safe work methods,
- promptly reporting hazards or accidents
- ensuring your conduct does not endanger others.

### Emergencies and evacuation

In case of emergency you should follow the instructions on the emergency procedures displays, which are located on each level.

**The emergency phone number is 9385-6666 (not 000).**

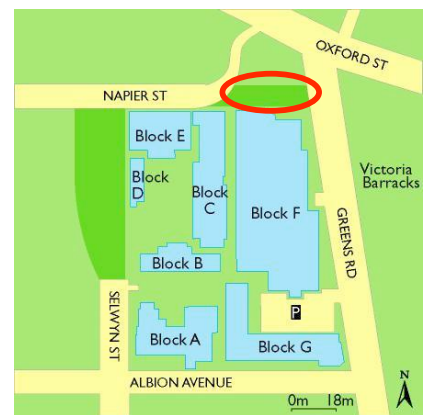
During evacuations always follow the directions given by fire wardens and proceed to the emergency assembly area, which is in front of the campus art store (red oval on diagram).

### First aid information

If you are injured or are hurt in any way inform your supervisor. All accidents and incidents must be reported. The names and contact details of first aid officers on campus are displayed on the green and white first aid posters. Security staff are also trained first aid officers.

### Electrical safety

Students should ensure that any portable electrical equipment they bring onto the campus (such as laptop computer power supplies) are tested and tagged. Such equipment will not be able to be used on campus if not tagged. Testing can be done at the Resource Centre.



## ACADEMIC HONESTY AND PLAGIARISM

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### **What is Plagiarism?**

Plagiarism is taking the ideas or words of others and passing them off as your own.

Plagiarism can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. Plagiarism can have serious consequences, so it is important that students be aware of what it is, and how to avoid it.

It is also plagiarism to claim credit for a proportion a work contributed to a group assessment item that is greater than that actually contributed, to submit an assessment item that has already been submitted for academic credit elsewhere, or to knowingly permit your work to be copied by another student.

There are very serious penalties for plagiarism, ranging from re-submission, reduction of marks (including to zero), failure of the course, and exclusion from the university.

The Learning Centre website has a lot of useful information. See [www.lc.unsw.edu.au/plagiarism](http://www.lc.unsw.edu.au/plagiarism).

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# Course schedule

## Week by week dates (Mondays) 2009

<b>Week 1</b>	<b>March 9<sup>th</sup></b>
<b><i>Tutorial</i></b>	Subject Outline and Assessment Policy plus Animation refresh and animation planning
<b>Week 2</b>	<b>March 16<sup>th</sup></b>
<b><i>Tutorial</i></b>	Character Animation 1 – Pose to pose, key poses, lines-of-action, exaggeration, staging, silhouette and the character bible
<b>Week 3</b>	<b>March 23<sup>rd</sup></b>
<b><i>Tutorial</i></b>	Character Animation 1 – Breakdowns and in-betweens, acting, timing, anticipation and follow through
<b>Week 4</b>	<b>March 30<sup>th</sup></b>
<b><i>Tutorial</i></b>	Character Animation 1 – Overlapping action, secondary animation, moving holds, twinning and arcs
<b>Week 5</b>	<b>April 6<sup>th</sup></b>
<b><i>Tutorial</i></b>	Character Animation 1 – Contrast, energy, pace and motion pathologies
<b>Mid-Session Break</b>	
<b>Week 6</b>	<b>April 20<sup>th</sup></b>
<b><i>Tutorial</i></b>	Project 1 due – Character body action
<b>Week 7</b>	<b>April 27<sup>th</sup></b>
<b><i>Tutorial</i></b>	Facial Animation - Lip – sync



<b>Week 8</b>	<b>May 4<sup>th</sup></b>
<b><i>Tutorial</i></b>	Facial Animation - Lip – sync and facial expressions
<b>Week 9</b>	<b>May 11<sup>th</sup></b>
<b><i>Tutorial</i></b>	Facial Animation – Eyes and brows
<b>Week 10</b>	<b>May 18<sup>th</sup></b>
<b><i>Tutorial</i></b>	Facial Animation – Head tilt
<b>Week 11</b>	<b>May 25<sup>th</sup></b>
<b><i>Tutorial</i></b>	Facial Animation – Project work
<b>Week 12</b>	<b>June 1<sup>st</sup></b>
<b><i>Tutorial</i></b>	Project 2 plus logbook due – Facial and body animation

## **SOMA4609 – References & Further Reading**

*These references cover a range of online and library material. They are by no means exhaustive and are intended as a starting point for your own exploration and research.*

### **Online**

#### **SOMA4609 Student Web Site**

<http://online.cofa.unsw.edu.au/2009s1/soma3610/base/>

#### **Animation principles for 2D and 3D**

12 basic animation principles outlined by one of the top Disney animators', Frank Ollie

<http://www.frankandollie.com/PhysicalAnimation.html>

**John Lasseter** (Toy Story and Pixar) 11 principles of animation, how they apply to 3D CGI

<http://www.anticipation.info/texte/lasseter/principles.html>

### **E-Books**

Title: Ideas for the Animated Short: Finding and Building Stories

Author: Sullivan, Karen; Schumer, Gary; Alexander, Kate

### **Library Resources (Books)**

#### **The Illusion of Life – Thomas Frank and Ollie Johnston**

SQ 741.58/6

*This is THE bible of Disney's golden age animators' and has informed, practical advice on animating.*

#### **The Animator's Survival Kit – Richard Williams**

CFA 778.5347/22

*Many animators' in the industry considered this book to be their bible*

#### **Muybridge's complete human and animal locomotion**

CFAQ 612.760222/1

#### **Acting for Animators – Ed Hooks**

CFA 791.437/313

*Animators need to know a lot about acting, but they don't need to know everything. Acting for Animators sorts out the acting theory that animators need, presenting it in a form and with references that are more relevant to the animators world.*

#### **Stop Starring – Jason Osipa**

CFA 006.696 9

*This book details time saving lip sync methods along with practical facial modelling.*

#### **The Artist's Complete Guide to Facial Expression – Gary Faigin**

CFA 704.942/40

*An artist's illustration of the facial muscles and how they work together to form human facial expressions.*

### **Emotions Revealed – Paul Ekman**

CFA 152.4 19

*Ekman has written many books on human emotion and body language. This book concentrates on the universal facial expressions and how they betray the emotions under the surface. Indispensable information for character animators'*

### **Other Library Resources (DVDs)**

#### **Digital Tutors**

Body Mechanics and animation in Maya (Lifting Heavy Objects, Pushing Heavy Objects and Pulling Heavy Objects)

#### **The Mysterious Geographic Explorations of Jasper Morello**

CFAA 791.4334/17

*An amazing combinations of story telling techniques including 3D CGI, shadow puppets and stop frame.*

#### **Ray Harryhausen (the stop-frame Master)**

*Titles include; The 7<sup>th</sup> Voyage of Sinbad, Jason and the Argonauts, The Golden Voyage of Sinbad, Sinbad and the Eye of the Tiger and the Clash of the Titans.*

#### **Other stop-frame classics**

*Tim Burton: The Nightmare Before Christmas and The Corpse Bride*

#### **Hayao Miyazaki**

*Titles include; Porco Rosso, Laputa, Princess Monoke, Spirited Away, My Neighbor Totoro, Castle Cagliostro, Castle in the Sky, Kiki's Delivery Service and Howl's Moving Castle.*

#### **Pixar and Disney**

*Pixar titles include: Toy Story (1&2), A Bugs Life, Monsters Inc., Finding Nemo and The Incredibles.*

*Disney titles include: Lady and the Tramp, Jungle Book, Snow White, Tron and Fantasia*

#### **Aardman Animations**

*Titles include: The Wrong Trousers, Creature Comforts and The Curse of the Were-Rabbit*

### **Forums, galleries and tutorials**

Keith Lango <http://www.keithlango.com>

Short animations and competitions [www.11secondclub.com](http://www.11secondclub.com)

Animation Watch <http://www.animwatch.com/>

A good source material related to animation <http://www.animationmeat.com/>

### **Electronic Magazines (for tutorials, discussions and much much more)**

Animation World <http://mag.awn.com/>

CG Networks <http://www.cgnetworks.com/>

3D World <http://www.3dworldmag.com/>

## **Continual course improvement**

Periodically student evaluative feedback on the course is gathered, using among other means, UNSW's Course and Teaching Evaluation and Improvement (CATEI) Process. Student feedback is taken seriously, and continual improvements are made to the course based in part on such feedback. Significant changes to the course will be communicated to subsequent cohorts of students taking the course.

## **Administrative Matters**

To qualify for a passing grade you must complete all set work to a satisfactory standard and submitted it on time. Where absences in excess of three classes occur without a doctors' certificate or similar, will result in a fail grade.

You must be punctual and participate in all class activities.

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## Backup All Your Work

**IT IS YOUR RESPONSIBILITY TO BACK UP ALL YOUR WORK!** You will need to purchase some CD-Rs to store files generated during the semester. The machines in the labs no longer have Zip drives but now have CD-burners and Toast software with which to burn CDs. You are advised to purchase your own external Firewire drive if you intend to work extensively with digital media.

**REMEMBER: A hard drive is not a backup** – CDs, DVDs or tapes are the only safe option. You should make two copies and keep them in separate places. Diligently backup all work that is important to you at regular intervals. **Extensions of time for assignments will not be granted if you lose work through software/ hardware /operator error or viruses on personal machines.**

### *Assessment procedure and advice concerning illness or misadventure*

Where, because of illness or misadventure, you cannot hand in an assignment on time, or your work has suffered, you can apply for Special Consideration. For information on Special Consideration (see <https://my.unsw.edu.au/student/atoz/SpecialConsideration.html>).

- Applications for special consideration must be lodged with the COFA Student Centre (within 3 working days of the assessment to which it refers) – applications will **not** be accepted by teaching staff;
- Applying for special consideration does not automatically mean that you will be granted additional assessment or that you will be awarded an amended result;
- If you are making an application for special consideration (through COFA Student Centre) please notify your Lecturer in Charge;
- Please note: a register of applications for Special Consideration is maintained. History of previous applications for Special Consideration is taken into account when considering each case.

## Equity and diversity

Those students who have a disability that requires some adjustment in their teaching or learning environment are encouraged to discuss their study needs with the course convener prior to, or at the commencement of, their course, or with the Equity Officer (Disability) in the Equity and Diversity Unit (9385 4734 or <http://www.studentequity.unsw.edu.au/>).

Issues to be discussed may include access to materials, including Library materials, signers or note-takers, the provision of services and additional exam and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made. Information on designing courses and course outlines that take into account the needs of students with disabilities can be found at:

[www.secretariat.unsw.edu.au/acboardcom/minutes/coe/disabilityguidelines.pdf](http://www.secretariat.unsw.edu.au/acboardcom/minutes/coe/disabilityguidelines.pdf)