COFA
UNSW

SCHOOL OF Media Art

SOMA1651

Analogue and Digital Animation

S1 2009

CONTENTS

COURSE STAFF

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Consultation times: Tuesday 12pm by appointment

Communication details: Email for request for additional consultation

Introduction

What I'm on about is timing. Sure we'll learn a lot of techniques but what drives energy and attention in animation is timing. In all your projects I'll be looking for evidence that you can master some timing skills. If you can your work will immediately have an immediacy and watchability that is hard to define any other way.

To do this we will explore an overview of various animation techniques in traditional film and computer graphic forms as well as ways of combining these various techniques. This sequence of courses encourages experimentation on the part of the student. Such techniques as pixilation, cell animation, smudge animation, computer graphic manipulation of the image, computer animation, cut out techniques, camera techniques; concepts of the frame, and landscape animation are explored.

There is a focus on the development of classic skills and applying them to digital as well as traditional animation. As I said before In particular we will concentrate on timing. It is at the heart of any good communication. In the case of animation it is central to what we do. Because in animation we are working at what I like to refer as a molecular level of video. In this sense the molecule is the frame. Because we are working one frame at a time and therefore sculpt the curves of time in a way that no other art form can.

Structure and Assessment

The course is divided between an assessable projects and tutorials, workshops and lectures in specific techniques and methods. (for a full list of these non assessable components see page 8 Teaching Strategies)

Skill Development Projects (**Projects 1-3)** These projects are devised to give experience in a range of skills and techniques. There are two skill development projects, one timing workshop project and one self devised project. These projects could be produced within the class time at a pass level. However at credit or higher levels will take longer.

Timing Workshop Project (project 4)
This project is a grade that applies to the lecture component of the course and can be adequately produced in class time.

Self Devised Project (PROJECT 5) This project is the chance for you to investigate an approach or technique. You may want to combine several different methods into a personal style. Another option is to develop one of the Skill Development Projects. This will give you the opportunity to concentrate on a smaller number of projects.

Projects
1 Cell project	= 15%
2 Flash vector animation "Dancing Fool"	= 15%
3 Collage project	= 15%
4 Timing Workshop Project	= 15%
5 Self Devised Project	= 40%

COURSE INFORMATION

a)   **Units of Credit: 6**

b)   **Teaching Times and Locations: Tuesday 10am to 1pm F113**

c)   **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.

d)   Parallel Teaching Taught in conjunction with SOMA 9726

e)   Course Aims: Analogue and digital animation skills and methods .

f)   Relationship to other courses Can be done in conjunction with Advanced Animation SOMA2651

g)   Student learning outcomes

By the end of the course students should have

- technical skills in computer software for animation
- practical methods (as in being able to apply technical skills to production and post production situations)
- animation timing skills (applying practical methods to a coherent sequence)
- an understanding and critical appreation of past and current animation practice, methods and techniques

The assessment for this course is ongoing throughout the course and is based on the production of short sequences and in longer more considered works. The shorter works are in practical awareness of process. This takes the form of timing exercises using a technique which yields fast results therefore is useful in developing experimental models for timing. These shorter works are then used as models for developing the skills for the longer works.

As well there is a range of related workshops which run parallel to each exercise and are designed to enhance the awareness of practical skills.

h)   Graduate Attributes Developed in this Course

COFA Graduate Attributes (see	Select the level of FOCUS 0= NONE 1=MINIMAL 2=MINOR 3=MAJOR	Activities / Assessment
Disciplinary knowledge	3	A development of timing skills, artists methods, production models, industry standards and other methods along with methods which can combine in unique ways which is in of itself an animation standard. Assessed through exercises, projects and class discussion.
Communication skills	3	All projects are developed inside production schedules and other methods for the communication of concept through to production. Project markers and mid semester assessment along side individual consultation.
Technical skills	3	Focus on methods yields a technical skill development within an environment where the skills are focused and better developed. Methods include software and hardware training. Assessed through exercises, projects and class discussion.
Critical thinking	2	Discussion on screenings on differences between timing strategies of different artists/directors. Development of narrative skills focused on the effectivness and nature of a scene. Assessed through exercises, projects and class

		discussion.
Group skills	2	Series of timing exercises and one project where each animated element must work inside the whole production. Assessed through exercises, projects and class discussion.
Social awareness	1	Develops social critical thinking of the dynamics of interpersonal power in social interactions. Group exercises and projects.
Ethical understanding	1	The power relationships inherent in the status exercises reflect relationship dynamics and responsibilities inherent in understanding these relationships.
Information Literacy	2	Develops analyses of modes of delivery in internet animation. Lectures on the development of digital standards and their various uses. Discussions of Assessment of project exercises
Entrepreneurial skills	2	Investigates new and emerging animation/video forms inherent in new economies. Class discussion and production plans

i)   Approach to learning and teaching
The course is designed to create experiences which physically locate the understanding of a particular discipline or element by direct involvement.

This direct approach is also backed up with information on current practice and critical perspectives.
Further it has been written and researched with the aim of creating work methods which yield a result and provide a framework for further development and experimentation.
As lecturers in Time Based Art area, we collaborate with each student to facilitate their involvement as emerging artists and practioner by consultation and class discussions.

j)   Teaching Strategies:

The course has several units that are aligned to the requirements of each project.

These units are

Timing Workshops
Short instructional exercises that are done in class time in order to develop an understanding of particular timing issues.

Method Lectures
Short exercises working individually being guided through a method of combining techniques and producing work.

Materials Workshops
Short one week exercises working in groups with different materials experimenting with different work methods and techniques.

Software Tutorials
Guided lab work on work methods and pathways through a particular software. Note I do not try to train you in the software which wouls take the entire time of the course.

Individual consultation on your projects

In general
These skills are by nature experiential and there is no correct approach as such, however it would be wise to consider the value of fully participating and researching the full potential of a particular approach. The exercises comprise roughly half the grade of the course.
For many of the exercises we will be working directly with materials capturing stills and applying digital compositing and animation to these works.
I will be not so much training you in s particular software, however we will learn a series of pathways or work methods in particular software which will get you a very good start in that software. For the most part we will be using Flash and After Effects. However we will also do a simple 3D project in Maya.

Lectures which inform students of practices of several disciplines and production methods. The theory and practice is combined in the workshops. The methods are then developed in relationship to the project requirements.

Scripts and other working documents such as storyboards and backgrounds and production schedules are encouraged in the project course. And are compulsory in the self-devised project.

Software Tutorials
- 1Flash/ vector animation
- 2 Flash drawing methods
- 3 Flash animation forms
- 5AfterEffects/ introduction – collage animation

Materials Workshops
- continious draw
- light table
- light drawing/tracing
-

Writing/preparing
- structure / scene
- character
- action
- interactions / status

Timing Forces workshop
- rhythm
- momentum
- inertia
- friction
- reaction

Timing Forms workshop
narrative
- gesture
- action
- repression
- expressions
- situation
- infulence

non narrative
- form & shape
- pattern
- direction
- cycle
- force
- size
- scale

Definitions

Mediums
Software – Stop frame – Cell – Sound

Techniques
Continuous draw – flat art/collage – sync dialogue – sound spotting - time lapse

ASSESSMENT

In all the projects I'll be looking for evidence of the development of timing skills.

Cell project	= 15%
Flash vector animation "Dancing Fool"	= 15%
Collage project	= 15%
Timing Workshop Project	= 15%
Self Devised Project	= 40%

ACADEMIC HONESTY AND PLAGIARISM

What is Plagiarism?

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

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.

COURSE SCHEDULE

Week 1 09/03/09 Cell Project
We work on paper that is **1/2 A4 and using it horizontally** the subject is an alien figure walking (we see them as if the camera is tracking along beside them). So the figure always remains in the centre of the paper. **It is facing the left side of the frame**. First part of the exercise it to design a creature then to draw a series of frames of a walk ending up so the last frame is almost identical. to the first. This is what is known as a walk cycle. Later we will give a photocopy our first cell to the person above us in the role. We will then turn our last frame into the first frame of the next person over several frames. (The last person on the role gets the first persons drawing) This gives us a big looping animation.
Please draw with a .5 Artline pen or equivalent thickness. This is important.

Week 2 16/03/09 Flash
Overview of
- Drawing forms and tools
- Paint and Fill tools

- Editing and manipulation of shapes
- Designing with layers
- Animation methods- keyframe animation, motion tweens and shape tweens.

There is no doubt that Flash has had an enormous effect on animation art and industry. A lot of the course will be given over to mastering aspects of Flash. In this first introduction to Flash we will look at the various drawing and painting features and then at the manipulation of these shapes. The focus of these methods is creating images that are going to be practical to animate.
Starting with a simple circle we will add control points and form a character and then go on to look at different ways of moving it.

Project details (This project is due week 14)
The objective is to develop a dance sequence. Obviously this means the timing will be rhythmic. It will be useful to have a piece of music in mind. However any rhythmically timed movement based around a 1/4 second intervals (or sub divisions there of) will be very easy to fit into a huge range of music.

Week 3 23/03/09

Timing Workshop Capture camera
Timing what is possible and what is so hard as to make it impossible. How to work your limitations to your advantage. Our subject is ourselves and how we move. We are looking at the idea of time design. What it is possible to see in what time. Also to establish the notion of weight and momentum.
EXERCISE

We will use a video camera to capture the still frames and 'Quicktime pro to sequence them into a movie.
This project uses stopframe animation of our bodies to create a short sequence that looks at timing as the crutial element in communication. Animation of all the time based arts most relies on timing. So many animations fall into the trap of giving everything the same pace either too fast or even more often too slow. The real secret of animation is to have a rich and varied time map that slows down to capture the weight and impact of an action and speeds up to capture the energy and strength of mass. Timing is also directly related to thought. As a character absorbes the implications of a situation so they slow down to absorb that consequences. Pauses are all you often need to reveal this internal cognition.
Step1
Insert a card into the digital video camera and set the camera onto Card Recording Mode.
Step2
Open the menu and delete the images on the camera.
Step 3
Using the photo button collect the images onto the camera
Step 4
Plug the camera into the computer using the usb cable
Step 5
Create a folder in storage with the project name or your student #
Step 6
Open Quicktime and under the file menu select Open image sequence / navigate to

the folder and select the first image and select open / select 12 frames and press ok. The movie will appear in a player window. Select save.

Methods and techniques.
The basics forms of animation in Flash.

Week 4 30/03/09

Collage Project
Collage animation has a rich history and has roots in Surrealism and many of the early cinema experiments. It was indeed my first introduction to animation. A great deal of animation is done with the
First step is to collect material. You can: 1 scan printed material from books and magazines. 2 download images from the net (**www.google.com** is probably the best, choose images from the search tab) 3 Collect images with a camera. Next we do any adjustments to this image in Photoshop (see digital notes) The first and most basic it to cut the image from its background. We then sequence the images into an animation in Director. or Flash (we will look at both packages in terms of collage animation) Another method is to use 3D software as a 2D animator. This is really only for people who already have 3D experience. It is however the most efficient and flexible.
NOTE
The same technique can be just as easily be applied to artwork you develop yourself.

Week 5 06/04/09
Production consultations

Methods and techniques.
The dynamics of keyframes. How changing the speed of keyframes can fine tune your movement.

Mid Semester break

Week 6 20/04/09
Materials workshop/ Methods and techniques.

Continious draw. This is a class project where we use two different approaches to continious draw technique. The process is to create a sequence by drawing onto a vertical surface then by rubbing out the previous image and redrawing onto the same space. We will use two different methods paper and charcoal and whiteboard and marker.

Project work with individual instructions.

Week 7 27/04/09
Class Tutorial Timing workshop Capture camera
We are going to devise a simple piece of action based around a human moving in a

space. We'll mark out the floor wherever the figure moves. Next we arrange everybody in the class in order of height. Now we slowly take single frames and move through the action changing people every ten frames decreasing to every two frames. The idea is that you have to watch the action closely enough to know how to move; which direction the arms were going in, what the feet were doing. It's like a number of people all sharing the same body.

Project work with individual instructions.

Week 8 04/05/09

Methods and techniques: Sound and dialogue
Simple sound and dialogue editing.
Project work with individual instructions.

Week 9   11/05/09

Class excursion in Botanical Gardens
Landscape animation. We will spend the class investigating different landscape techniques. These include Time lapse, stopframe and sequence animation.

Week 10 18/05/09

Timing Workshop Capture camera
Gesture and scene. Develop a gesture and refine it's timing
Project work with individual instructions.

Week 11 25/05/09

Materials workshop/ Methods and techniques
Light drawing. In a dark room we will use a camera with a shutter opening of five seconds which will enable us to draw directly with light.
Project work with individual instructions.

Week 12 01/06/09

Peer review of projects

Week 13 08/06/09

Projects due. Please place in class drop box. For works over 5meg please burn to dvd data disk.

COMPUTING REQUIREMENTS

Software used
Flash, After Effects, Quicktime Pro, Aucicity.

Finished videos should be archived on DVD in both full resolution 720X 576 DV Pal as well as high compression format for streaming.

SAFETY INFORMATION

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.
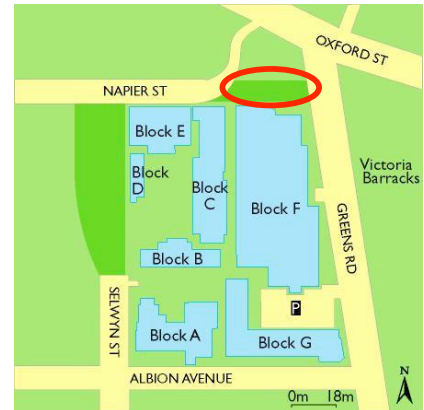
Emergencies and evacuation

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.

RESOURCES FOR STUDENTS

All the books below are available as complete read off the screen manuals Safari Tech Books Online. To get there go to the unsw library site and in the subject guides select Art & Design then select Digital Media then select Databases then Safari Tech Books Online.
http://info.library.unsw.edu.au/web/guides/guides.html will get you as far as the databases but you have to go through the library site in order to be registered.

Editing Techniques with Final Cut Pro
By Michael Wohl
....
Publisher: **Peachpit Press**
Pub Date: **October 22, 2001**
Print ISBN-10: **0-201-73483-4**
Print ISBN-13: **978-0-201-73483-6**

Jerry Hofmann on Final Cut Pro® 4
By Jerry Hofmann
....
Publisher: **New Riders**
Pub Date: **October 20, 2003**
Print ISBN-10: **0-7357-1281-6**
Print ISBN-13: **978-0-7357-1281-2**

Absolute Beginner's Guide to Podcasting
 By George Colombo, Curtis Franklin   Jr.

Essential Blogging

By Cory Doctorow, Rael Dornfest, J. Scott Johnson, Shelley Powers, Benjamin Trott, Mena G. Trott

Other library resources are

Rhizome a site and database that COFA has a subscription to for Media Art internationally.

http://info.library.unsw.edu.au/web/guides/guides.html then select art and design then select Digital media it is under key resources

Links
fine-art.com
Numerous sites of computer artists, arts organisations, galleries and publications.

Eyebeam/Blast
Eyebeam Atelier is a not-for-profit new media arts organization established to provide access, education, and support for students, artists, and the general public in the field of art and technology.

http://www.videohelp.com
Gerat resource of techniques and information in digital and internet video,

9. 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.

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ADMINISTRATIVE MATTERS

You may fail the subject if more than 3 absences are recorded. You must to actively participate in classes and complete all set work. You may fail the subject if you do not submit **all** set work to a satisfactory standard.

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 COFAv 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.

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 www.equity.unsw.edu.au/disabil.html). 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.

Solutions to Problems – Trouble shooters

The Learning Centre
The Learning Centre provides assistance for study-related problems. The COFA Learning Centre is staffed Mondays 11am – 5pm, Tuesdays and Wednesdays 1-5pm. Call in for an appointment or phone 93859539, or to contact the learning centre at Kensington campus ring 93853890.

Student Counsellor

Laura Kampel or Leisel Berling offer counselling on any problems causing distress or concern. For an appointment ring 93850733. Don't wait to contact them until you need support or an application for Special Consideration: counselling is offered to assist you to resolve the problems that are affecting your work.