MONASH University
Information Technology

**FIT2012
Flash animation and applications**

Unit Guide

Semester 1, 2011

Last updated: 27 Feb 2011

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FIT2012 Flash animation and applications - Semester 1, 2011

This unit provides a focus on specialist tools and techniques that are used for developing content-rich interactive multimedia systems using Adobe Flash. This unit will cover fundamental multimedia principles, practical development processes, the integration of mixed-media assets, interactive design and animation for digital media and different technologies for product deployment. Students will create content-rich interactive CD-ROM and Web-based products using industry standard authoring tools and will gain an understanding of the role of digital media within the broader technology environment.

Mode of Delivery

Caulfield (Day)

Contact Hours

2 hrs lectures/wk, 2 hrs laboratories/wk

Workload

Broadly the time required to complete this topic is shown in the following table, but note this is just a rough indication. You may need to spend more time on some activities depending on your background and knowledge. In addition, you need to spend extra time on assignments and review.

Attending lectures and reviewing notes (3 hours)
Doing activities in lab classes (2 hours)
Assigned Homework (2 hours)
Major Project Development (4 1/2 hours)
Contact - i.e: e-mail, consultation, etc. (30 minutes)

Total (12 hours)

Unit Relationships

Prohibitions

FIT1035, IMS2402, MMS2402
This unit is prohibited to all students enrolled in the Bachelor of Information Technology and Systems multimedia development major.

Prerequisites

FIT1012

Chief Examiner

Cheryl Howard

Campus Lecturer

Berwick

Cheryl Howard

Contact hours: By Appointment Only

Caulfield

Cheryl Howard

Contact hours: By Appointment Only

William Lay

Contact hours: By Appointment Only

Ruben Hopmans

Contact hours: By Appointment Only

Tutors

Caulfield

Zenon Charalambous

Contact hours: By Appointment Only

William Lay

Contact hours: By Appointment Only

Ruben Hopmans

Contact hours: By Appointment Only

Learning Objectives

At the completion of this unit students will have -

A theoretical and conceptual understanding of:

- information technology and the software tools as they relate to (and are used in) multimedia systems;
- the Adobe Flash authoring environment for CD-ROM and web based systems development

techniques associated with digital video, images and sound and the appropriate application of these for use in CD-ROM and web development;

- the formal process undertaken for preparing and documenting the various development stages of a multimedia system;
- how to achieve a range of special effects which are commonly required for advanced interactive design in multimedia systems;
- fundamental programming techniques and how to carry this knowledge across multiple languages.

Developed attitudes that enable them to:

- outline strengths and weaknesses of information technology in the context of the development and use of multimedia systems;
- make informed decisions on the most appropriate blend of tools and technologies to support a given multimedia system requirement;
- formulate constructive criticism within the construct of critical analysis.

The skills to:

- apply advanced interactive design techniques to a multimedia system using a time/frame based authoring environments;
- use a blend of industry standard multimedia tools and products;
- further enhance and refine user interface and navigational design and creativity skills in multimedia systems;
- specify an appropriate tool set for developing and supporting advanced features/functionality in a multimedia system.

Demonstrated the teamwork skills necessary to:

- build confidence in formal presentation techniques presenting personal ideas, research concepts and developmental progress;
- discuss and share developmental processes and techniques within an informal populated environment.

Graduate Attributes

Monash prepares its graduates to be:

1. responsible and effective global citizens who:

a. engage in an internationalised world
b. exhibit cross-cultural competence
c. demonstrate ethical values

critical and creative scholars who:

a. produce innovative solutions to problems
b. apply research skills to a range of challenges
c. communicate perceptively and effectively

Assessment Summary

In-semester assessment: 100%

Assessment Task	Value	Due Date
Flash Development Project	70%	By 4pm Friday of the specified week or in scheduled Tutorial times
Assigned Homework	30%	In scheduled Tutorial times

Teaching Approach

The approach to teaching and learning include a weekly two-hour "lectorial" and a two-hour (tutorial/laboratory). The "lectorial" will be used to introduce new concepts and techniques the students are expected to understand and master. They will also provide opportunities for students to work in discussion groups, participate in group activities and examine a variety of sample projects. Additionally, each student should spend a minimum of 8 to 12 hours for personal study every week.

Time management is **always a significant issue** during the development of a long-term project such as this. Many students feel that because the final project is not due until Week 12 they have plenty of time to "get around to working on it". This is not the case, as the students who fail this unit have adopted this attitude, realising their mistake when it's too late to do more than scramble to submit a sub-standard and/or incomplete project on time.

Use the Project Milestones provided as a guide for what you should be doing from week to week and to help you keep on track with your project development throughout the semester. If you also complete all the tutorial and homework tasks you'll have all the tools necessary to create a good Flash project. The supplementary tasks are for those wishing to extend their knowledge and skills but are not necessary to meet the marking criteria of the final project.

Feedback

Our feedback to You

Types of feedback you can expect to receive in this unit are:

- Informal feedback on progress in labs/tutes
- Graded assignments with comments
- Solutions to tutes, labs and assignments

Your feedback to Us

Monash is committed to excellence in education and regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through SETU, Student Evaluation of Teacher and Unit. The University's student evaluation policy requires that every unit is evaluated each year. Students are strongly encouraged to complete the surveys. The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

For more information on Monash's educational strategy, and on student evaluations, see:
http://www.monash.edu.au/about/monash-directions/directions.html

http://www.policy.monash.edu/policy-bank/academic/education/quality/student-evaluation-policy.html

Previous Student Evaluations of this unit

If you wish to view how previous students rated this unit, please go to
https://emuapps.monash.edu.au/unitevaluations/index.jsp

Required Resources

All software required for use in this unit can be accessed from allocated campus laboraties/tutorial rooms.

The software used in this unit consists of:

- Adobe Flash CS5 Professional
- Adobe Photoshop CS5
- Adobe Illustrator CS5

30 Day Trial/Evaluation versions of the named software can be dowloaded for personal use if neccessary from the following websites:

- http://www.adobe.com/

Text Book and Recommended Reading

The **Foundation Flash CS5** textbook chapters are aligned to each week and provide additional information and exercises to help you improve your skills and understanding of the Flash CS5 authoring environment. It is **strongly recommended** that you acquire this book, read through it and do the exercises. The other textbook provides additional information to help you improve your skills and understanding of the ActionScript programming language. It is ***recommend reading only*** if you want to develop your Flash programming skills and knowledge base.

Foundation Flash CS5 for Designers by Tiago Dias and Tom Green, Friends of Ed (2010)

This text focuses on the use of the Flash tools and design techniques that can be applied to them. The exercises provide a wide range of interesting tricks, tips and techniques – more than can be covered by this unit, without getting hindered by the technical aspects of Flash's authoring environment. Working through the exercises of one chapter each week will significantly increase your animation and design skills, and provide you with a solid foundation for the integration of assets with ActionScript 3.0.

Files for the exercises can be downloaded from:
http://www.friendsofed.com/download.html?isbn=1430229942

ActionScript: Your visual blueprint for creating interactive projects in Flash CS4 Professional by Rob Huddleston, Wiley (2009)

Visual learners can get up and running quickly on ActionScript programming skills for Flash CS4+. If you're a programmer who learns best when you see how something is done, this book will have you up and running with ActionScript in no time. Step-by-step, two-page lessons show you the core programming foundations you must master to create rich application and Internet content using the preferred language for working with Flash. The visual approach breaks big topics into bite-sized modules, with high-resolution screen shots to illustrate each task.

Unit Schedule

Week	Date*	Activities	Assessment
0	21/02/11		No formal assessment or activities are undertaken in week 0
1	28/02/11	Overview of the Unit Assignment Overview Development Projects	
2	07/03/11	Project Decomposition Flash Animation Basics	Homework 01
3	14/03/11	ActionScript Basics Introducing Variables & Navigation Structures	Homework 02 Submit completed Project Specification
4	21/03/11	Using Components, Introducing Conditions, Decisions and Data validation	Homework 03
5	28/03/11	Advanced Animation Techniques using Motion Tools and Timers	Homework 04 Demonstrate Component Selection
6	04/04/11	Text, Fonts & Formatting Loading External files (SWF, text & image)	Homework 05 Submit Navigation & Graphic Prototype + Splash Animation
7	11/04/11	Loops, Arrays, Strings & Randoms, Introducing Pseudo-code	Homework 06
8	18/04/11	Movie Clips States, Collision Detection, Keyboard Input	Homework 07 Demonstrate Dynamic Content
		Mid semester break	
9	02/05/11	Using Sound Objects and Video in Flash	Homework 08
10	09/05/11	Publishing CSS, HTML, and introductory XML	Homework 09 Demonstrate Music & SoundFX
11	16/05/11	Optimising Flash for Web and CD Publishing	Homework 10
12	23/05/11	Flash Tricks and Tips Project Wrap-up	Present & Submit completed Project
	30/05/11	SWOT VAC	No formal assessment is undertaken SWOT VAC

*Please note that these dates may only apply to Australian campuses of Monash University. Off-shore students need to check the dates with their unit leader.

Assessment Policy

To pass a unit which includes an examination as part of the assessment a student must obtain:

- 40% or more in the unit's examination, and
- 40% or more in the unit's total non-examination assessment, and
- an overall unit mark of 50% or more.

If a student does not achieve 40% or more in the unit examination or the unit non-examination total assessment, and the total mark for the unit is greater than 50% then a mark of no greater than 49-N will be recorded for the unit

Assessment Tasks

Participation

- **Assessment task 1**

   Title:
   Flash Development Project
   Description:
   The practical project will be based on the Flash CS5 authoring environment covered during the semester.

   From the following project scenarios, select one to develop for you major assessment task. It is important that you select carefully because the Project Design Specifications will be required by **Week 3** and a complete navigational and graphical prototype will be required by **Week 6**. This is to ensure that you have an appropriate amount of time to implement the development and programming aspects of the project, and to assist with your time management over the semester.

   - ◆ Variation on a "Whack-a-Mole" Game
   - ◆ A Choose Your Own Adventure Story (CYOA) or Graphic Novel
   - ◆ A web-based portfolio

   The **Project Design Specification** documentation is designed to outline and organise the development process of the project. Appropriate headings are provided as a guide to what you should include in the design specifications for your selected project. Be aware that part of your final assessment will include how well you develop your project in accordance to what you stipulate in this document. In other words, a small but completed project will score very well as opposed to a large incomplete one!

   The **Navigation/GUI Prototype** will demonstrate how you have structured your project and show the majority of your interface design. The project components DO NOT have to function for this prototype as dummy data and/or game components can be used to show the overall look-and-feel of the interface layout and design. The prototype should include a clearly defined internal structure on the time line (as demonstrated in tutorials), clearly show the main screen elements of the project, and an example of each major screen of the project. [NOTE: the individual screen elements are only there to show their position on the screen and DO NOT have to function at this stage. All that is required is a complete screen layout with appropriate design suited to the project you are developing.

   The final part of this assessment is the submission of a **functional project**, developed according to the project specification documents submitted in Week 3. Each scenario includes 4 common components for must also be successfully integrated into the final project. These will also be covered in the weekly tutorial tasks conducted throughout the semester and will be assessed separately but are an integral part of your final mark. These components cover the basic functions or features required to make the project have at least an elementary level of interaction. Additionally, you must successfully integrate the 3 project enhancements as described under the individual project scenarios. These enhancements cover a range of graphic, animation, audio and programming

options to allow students to target their strengths and apply them accordingly.

Weekly tasks will be available to download from MOODLE. It is expected that students will download the materials relevant to each week's activity. Working through each activity will give students an understanding of various techniques and their suggested application, however, it will be up the each individual student to determine how to best implement these techniques to best suit their chosen project.

Weighting:

70%

Criteria for assessment:

The **practical project** will be developed in the Flash CS5 authoring environment using techniques covered during the semester. The practical project will be worth 70% of the final grade and will be marked out of 100. The marks for the project will be assigned as follows:

Project Design (45)

25   Project Design Specification Document submitted in **Week 3**. For more detailed information see Section 2: Project Design Specification below.

20   Navigation/Graphic Prototype submitted in **Week 6**. This will demonstrate how you have structured your project and show the majority of your interface design. The navigational elements and the "splash" animation must be functional. However, the other project elements DO NOT have to be fully functional for this prototype but MUST be included as "dummy data" to show the overall look-and-feel of the project layout and design.

Project Implementation (55)

16   Successful integration of the 4 common project requirements (4 requirements x 4 marks each). These will also be covered in the weekly tutorial and homework tasks conducted throughout the semester. These are the basic functions or features required to make the project have at least an elementary level of interaction (see also: Section 4).

30   Successful integration of the 3 project enhancements in the final project (3 enhancements x 10 marks each). These will also be linked to the weekly tutorial and homework tasks. These enhancements cover a range of graphic, animation, audio and programming options, allowing students to target their strengths and apply them accordingly. The criteria for successful implementation is the enhancement working without error, logical and efficient coding with all extraneous code eliminated, and appropriate application of good programming practices (ie: use of commenting, appropriate naming conventions, meaningful variable and function names, code re-usability, etc.).

9   A functional project, including the integration of the 4 common and 3 specific requirements (developed to at least an Alpha standard) to be submitted in **Week 12**. The criteria for this component will include:

- ♦ Appropriate interface design and theme development including the overall look-and-feel of the project's graphics/interface, consistency of layout and design, presentation and readability of content, and the implementation of Flash features including animation, appropriate use of different symbol types, using different types of media (image/audio), and Flash components (4).
- ♦ The final product is functional and works without error. Items presented within the

project must also function correctly (eg: navigation buttons). Internal and external assets must be organised in a logical structure (eg: using folders, naming, etc.), with appropriate timeline structures implemented (5).

Due date:

By 4pm Friday of the specified week or in scheduled Tutorial times

Remarks:

Full details are available in the "FIT2012 Unit Outline 11-1" document that is available for download from the MOODLE site.

- **Assessment task 2**

Title:

Assigned Homework

Description:

The **Homework** tasks are designed to help students consolidate their understanding of the content delivered in the lectures and tutorials each week. There are 10 assigned Homework tasks worth a total of 30%.

Weighting:

30%

Criteria for assessment:

Each of the 10 assigned Homework tasks will be marked out of 10. The marks for the assigned homework are as follows:

4   meeting all the functional requirements of the task

3   using a methodical approach to development of the task solution

3   the appropriate application of good programming practices (as described above)

Each task is structured so that students can work independently and can be completed in 2-3 hours. Students are expected to show their completed homework to their tutor the following week (eg: Week 1 homework shown in Week 2, etc.) in order to earn the assigned marks. Failure to do this will result in zero marks for the assigned task – be aware that missing several will result in a significant loss of marks to your overall grade.

Due date:

In scheduled Tutorial times

Examinations

Assignment submission

Assignment coversheets are available via "Student Forms" on the Faculty website:
http://www.infotech.monash.edu.au/resources/student/forms/
You MUST submit a completed coversheet with all assignments, ensuring that the plagiarism declaration section is signed.

Extensions and penalties

Submission must be made by the due date otherwise penalties will be enforced.

You must negotiate any extensions formally with your campus unit leader via the in-semester special consideration process:

http://www.infotech.monash.edu.au/resources/student/equity/special-consideration.html.

Returning assignments

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later

Policies

Monash has educational policies, procedures and guidelines, which are designed to ensure that staff and students are aware of the University's academic standards, and to provide advice on how they might uphold them. You can find Monash's Education Policies at:
http://policy.monash.edu.au/policy-bank/academic/education/index.html

Key educational policies include:

- Plagiarism
  (http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-policy.html)
- Assessment
  (http://www.policy.monash.edu/policy-bank/academic/education/assessment/assessment-in-coursework-pc
- Special Consideration
  (http://www.policy.monash.edu/policy-bank/academic/education/assessment/special-consideration-policy.h
- Grading Scale
  (http://www.policy.monash.edu/policy-bank/academic/education/assessment/grading-scale-policy.html)
- Discipline: Student Policy
  (http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-discipline-policy.html)
- Academic Calendar and Semesters (http://www.monash.edu.au/students/key-dates/);
- Orientation and Transition (http://www.infotech.monash.edu.au/resources/student/orientation/); and
- Academic and Administrative Complaints and Grievances Policy
  (http://www.policy.monash.edu/policy-bank/academic/education/management/complaints-grievance-policy.

Student services

The University provides many different kinds of support services for you. Contact your tutor if you need advice and see the range of services available at www.monash.edu.au/students The Monash University Library provides a range of services and resources that enable you to save time and be more effective in your learning and research. Go to http://www.lib.monash.edu.au or the library tab in my.monash portal for more information. Students who have a disability or medical condition are welcome to contact the Disability Liaison Unit to discuss academic support services. Disability Liaison Officers (DLOs) visit all Victorian campuses on a regular basis

- Website: http://adm.monash.edu/sss/equity-diversity/disability-liaison/index.html;
- Telephone: 03 9905 5704 to book an appointment with a DLO;
- Email: dlu@monash.edu
- Drop In: Equity and Diversity Centre, Level 1 Gallery Building (Building 55), Monash University, Clayton Campus.