FIT1035
Digital media authoring

Unit Guide

Semester 1, 2011

The information contained in this unit guide is correct at time of publication. The University has the right to change any of the elements contained in this document at any time.

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Table of Contents

FIT1035 Digital media authoring - 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 and best practice theory, the application of practical development processes, the integration of mixed-media assets, interactive design and ActionScript programming for digital media and different technologies for product deployment. Students will create content-rich interactive applications and/or web-based products using an industry standard authoring tool, Adobe Flash, and will gain an understanding of the role of digital media within the broader technology environment.

Mode of Delivery

Berwick (Day)

Contact Hours

2 hrs lectures/week, 2 hrs tutorials/week

Workload

Unit Relationships

Prohibitions

MMS2402, FIT2012, FIT9028

Prerequisites

FIT1002

Chief Examiner

Cheryl Howard

Campus Lecturer

Berwick

Cheryl Howard

Contact hours: By Appointment only

Michael Morgan

Contact hours: By Appointment only

Tutors

Berwick

Cheryl Howard

Contact hours: By Appointment only

Michael Morgan

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, specifically using the Adobe Flash authoring environment for application and web-based systems development;
- the formal process undertaken for preparing and documenting the various development stages of a multimedia system;
- techniques associated with digital video, animation, images and sound and the appropriate application of these for use in application and web development using a range of special effects which are commonly required for advanced interactive design in multimedia systems;
- how to extend fundamental programming techniques and apply this knowledge across multiple languages.

Developed analytical skills that enable them to:

- outline strengths and weaknesses of information technology in the context of the development and use of multimedia systems;
- formulate constructive criticism within the construct of critical analysis to make informed decisions on the most appropriate blend of tools and technologies to support a given multimedia system requirement;
- specify an appropriate tool set for developing and supporting advanced features/functionality in a multimedia system.

Developed practical skills that enable them to:

- apply advanced interactive design techniques to a multimedia system using a time- frame-based authoring environments;
- further enhance and refine user interface and navigational design and creativity skills in multimedia systems;
- write code to assist in advanced system interaction with the programming language ActionScript.

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

Examination (3 hours): 40%; In-semester assessment: 60%

Assessment Task	Value	Due Date
Flash Game Development Project	40%	By 4pm Friday of the specified week
Assigned Homework	20%	In scheduled Tutorial times
Examination 1	40%	To be advised

Teaching Approach

- **Lecture and tutorials or problem classes**
  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.
- **Peer assisted learning**
  This semester will see the introduction of students using PeerWise which supports students in the creation, sharing, evaluation and discussion of assessment questions. Students use PeerWise to

create and to explain their understanding of course related assessment questions, and to answer and discuss questions created by their peers.

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
- Quiz results
- 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

Recommended Resources

Textbook & Recommended Reading

The **ActionScript: Visual Blueprint** textbook chapters are aligned to each week and provide additional information to help you improve your skills and knowledge of the Flash CS5 programming language. It is **strongly recommended** that you acquire this book as a reference to assist your project development. The other textbook provides additional information to help you improve your skills and knowledge of the Flash authoring environment. It is *recommend reading only* if you want to develop your Flash animation skills and general knowledge base.

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.

Foundation Flash CS5 for Designers by Tom Green and Tiago Dias, 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

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 Using Flash Symbols Flash animation basics	Homework 01
3	14/03/11	ActionScript basics Variables, conditions, etc Navigation structures	Homework 02 Submit completed Project Specification
4	21/03/11	Introducing pseudo-code, custom classes, display list	Homework 03
5	28/03/11	Multiple classes, decisions (if/switch), dispatch events, maths functions	Homework 04 Add Peerwise Q&A
6	04/04/11	Loops, arrays, data objects, saving data with shared objects, coding with âsnippetsâ	Homework 05
7	11/04/11	Movie clips states, timers and scripted animation, using custom cursors	Homework 06 Submit Navigation & Graphic Prototype + Splash Animation
8	18/04/11	Keyboard input, collision detection and inheritance	Homework 07 Add Peerwise Q&A
		Mid semester break	
9	02/05/11	Using sound objects and video in flash	Homework 08
10	09/05/11	Strings, loading external files (swf, xml, text), formatting text	Homework 09
11	16/05/11	Integrating other APIs in Flash (Google Maps)	Homework 10 Add Peerwise Q&A
12	23/05/11	Flash tricks and tips Project wrap-up Exam Preparation	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 Game Development Project
    Description:
    The development of this project will be over the semester with 3 major development milestones – the Design Specification Document, the GUI Prototype and the Final Project. It is important that you read this document carefully because the Project Design Specifications will be required by **Week 3** and a complete GUI prototype will be required by **Week 7**. 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 "Space Invaders" Style Game

    This style of game has the following game play characteristics:

    1. an "invading force" systematically animates across and down the screen, firing "bullets" at the player's "ship"
    2. the player moves their "ship" across the screen using the keyboard or the mouse, firing "bullets" at the "invading force"
    3. if a "bullet" hits an "invader" they die, while "bullets" hitting the player's "ship" either decreases their "shields" or destroys their "ship"
    4. the "invaders" win if they successfully destroy all the player's "ships" or reach the bottom of the screen
    5. the player wins if they successfully destroy all the "invaders"

    However, for your project you will need to create a visual theme in which to play the game (Navigation and GUI Prototype – Week 6), which includes:

    - your own background story for the game that provides an appropriate "rules / how to play" section (eg: as pop-up help) – the game play described above can be added to or modified to suit your story or theme and MUST be included in your

prototype

♦ appropriate player and game animations – you MUST move away from the "Space Invader" theme, by creating your own visual look-and-feel or theme (eg: underwater, sci-fi, cartoon) even though the game play is essentially the same as "Space Invaders" **Note:** the Splash animation must be complete and included in your prototype

♦ appropriate feedback to the player to show the player's current status within the game (eg: name, lives, score, etc.) with at least one example of your player feedback being included in your prototype (eg: display as dummy data for a simulated game in progress)

You will also be required to demonstrate the following:

♦ Basic Program Design – the "names" of these classes will be determined by your visual theme and background story

◊ "Ship" class: This class represents the player's "ship" in the game and includes the characteristics of the "ship".
◊ "Invader" class: This class represents the individuals in the "invading force" in the game and includes the characteristics of the "invader".
◊ "Bullet" class: This class represents the bullets fired from either the "invader" or the "ship".

♦ Test Document classes for the "ship", "invader" and "bullet" classes that demonstrate the various functions and attributes of each class.

♦ Game Document class: This class contains all the game logic including initialising the game objects, checking collisions and handling scoring.

Weighting:
40%

Criteria for assessment:
The **practical game project** will be developed in the Flash CS5 authoring environment using techniques covered during the semester. The practical project will be worth 40% of the final grade and will be marked out of 100. The marks for the assigned game development project are as follows:

Project Design (40)

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

15   Navigation/Graphic Prototype submitted in **Week 7**. This will demonstrate how you have structured your project and show the majority of your interface design. The criteria for this component will include:

♦ the navigational elements and the "splash" animation must be functional – 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

♦ 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

Project Implementation (60)

60   A functional project, including the implementation of the specific project

requirements (developed to at least an Alpha standard) to be submitted in **Week 12**. These requirements will also be linked to the weekly tutorial and homework tasks. The criteria for this component will include:

♦ General Flash Environment Development Criteria (8)

◊ a fully functional Flash movie structure using appropriate timeline structures
◊ all internal and external assets must be organised in a logical structure (eg: using folders, naming, etc.)
◊ successfully integrate and demonstrate various Flash features including animation, appropriate use of different symbol types, application and use of different types of media (eg: text, images, audio), etc.

♦ Broad Programming Criteria (52)

◊ the project working without error demonstrating logical and efficient coding with all extraneous code eliminated
◊ the appropriate application of good programming practices including the use of commenting, appropriate naming conventions, meaningful variable and function names, code re-usability, etc.
◊ the quality of solutions including the effective use of decisions, loops, functions, arrays and object-oriented principles

Due date:
By 4pm Friday of the specified week

• 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 20%.
Weighting:
20%
Criteria for assessment:
Each of the 10 assigned Homework tasks being marked out of 10. The marks for the assigned homework are as follows:

3   meeting all the functional requirements of the task

4   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 with many of these tasks being closely related to the assignment development tasks. 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

- **Examination 1**

Weighting:
> 40%

Length:
> 3 hours

Type (open/closed book):
> Closed book

Electronic devices allowed in the exam:
> None

Remarks:
> The examination has 3 parts:
>
> 1. 10 Peerwise Questions + various Multiple Choice / Definitions / Short Answer question formats drawn from textbooks, lecture / lab notes (30% of total)
> 2. Code Sequencing / Fill in the Blanks / Pseudo-code / Coding question formats scenarios drawn from lab demonstrations and discussions (40% of total)
> 3. Scenario Design and Development questions drawn from principles and practices covered in lectures (30% of total)
>
> Examples of these questions formats will be provided in the final lecture in Week 12 and as quizzes on Moodle throughout the semester.

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-po
- 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.