



School of Information Management

## ELCM 351

# Advanced Internet Design and Development

Trimester 1 2005

## COURSE OUTLINE

### Contact Details

Course coordinator: **Mark Moorhouse** Room **EA232** Phone 463-5504

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Office hours: 3 to 5 pm Tuesdays and Wednesdays

Senior Tutor: **Allan Sylvester** Room **EA110** Phone 463-6659

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Office hours: Tuesdays 10 to 12, Thursdays 3 to 5

### Class Times and Room Numbers

**Lectures:** Tuesdays 12:00 to 2:00 pm, in HM LT105

**Workshops:** In the MY211 lab. A booking system will be set up on Blackboard, early in the first week, to allow you to select a total of 4 hours attendance times (two 2-hour slots) during the times that this room is reserved for our use:

Wednesdays: from 9 am to 5 pm;

Thursdays and Fridays: from 1 pm to 5 pm.

*Note:* Workshops start in the *first* week, from Wednesday 23 February. The booking system for lab MY211 will be set up by Monday of that week.

## Course Objectives

Students completing this course should be able to:

1. Understand how dynamic and interactive graphics on the client computer can enrich the web browsing experience, and can convert what would otherwise be static text and pictures into a small but useful internet application.
2. Produce scripted, interactive vector graphics using Macromedia Flash MX 2004
3. Produce scripted, interactive vector graphics using Scalable Vector Graphics (SVG)
4. Download XML-formatted data from the server, for display or use on the client computer within a Flash or SVG application.
5. Produce a small web application, in which interactive, vector graphics, produced either as Flash SWF or as SVG files, including script, are embedded within HTML documents.

## Course Content

### Lecture and Workshop Schedule

Although we intend to follow the schedule as shown, variations could occur. Any timetable changes will be notified on Blackboard.

The MY211 lab is reserved for this course on Wednesdays (9 to 5), and on Thursday and Friday afternoons (1 to 5). Please come at your booked times; at other times you cannot be guaranteed a seat or a tutor.

| <b>Week starting Monday</b> | <b>Lectures (Tuesday: 12 to 2 pm)<br/>Topics (subject to change)</b>   | <b>Workshops and Assignments<br/>(Wed, Thur, Fri)</b>            |
|-----------------------------|--|--|
| <b>Wk 1<br/>21 / 2</b>      | Intro. to Flash MX 2004 ActionScript/JavaScript: basic syntax, data types, variables, etc. Scripting Button events   | Workshop 1 (Flash):  |
| <b>Wk 2<br/>28 / 3</b>      | Flash. AS/JS continued: conditional and loop statements. Arrays. More on buttons and their events. Movie Clips, their properties, methods and events.                                    | Workshop 2 (Flash)<br><b>Assignment 1 released (Flash)</b>       |
| <b>Wk 3<br/>7 / 3</b>       | AS/JS continued: Objects, properties, methods.<br>Flash. Creating movie clip symbol instances at run time. Advanced text formatting and HTML text  | Workshop 3 (Flash)   |
| <b>Wk 4<br/>14 / 3</b>      | Flash. Creating empty movie clips at run time. Flash drawing API<br>Getting external data. Incorporating sound files.  | Workshop 4 (Flash)   |
| <b>Wk 5<br/>21 / 3</b>      | Flash. Programming AS2 classes. Including .AS files More on getting and using external data. Storing data locally (SharedObject). Stage and ContextMenu classes. Using V2 UI components. | <b>Mon 21 / 3: Assignment 1 due</b><br>Workshop 5 (Flash)        |
| Easter break (two weeks)    |  |  |
| <b>Wk 6<br/>11 / 4</b>      | Flash. Publishing as SWF files and HTML docs. More on UI components. <i>Briefly</i> : Uploading form data and XML data to server.  | <b>Assignment 2 released (Flash / SVG)</b><br>Workshop 6 (Flash) |

| <b>Week starting Monday</b> | <b>Lectures (Tuesday: 12 to 2 pm)<br/>Topics (subject to change)</b>  | <b>Workshops and Assignments (Wed, Thur, Fri)</b>                                      |
|-----------------------------|---|--|
| <b>Wk 7<br/>18 / 4</b>      | Introduction to Scalable Vector Graphics (SVG / XML) and scripting ( ECMAScript.) Elements and attributes. Basic shapes and text<br>Handling mouse events.  | Workshop 7 (SVG)   |
| <b>Wk 8<br/>25 / 4</b>      | SVG: Stroke and fill properties. Polygons, polylines, linear paths<br>Scripting the XML DOM. Navigating nodes. Get/set attributes, creating elements, etc   | Workshop 8 (SVG)<br><b>Assignment 3 released (SVG)</b>                                 |
| <b>Wk 9<br/>2 / 5</b>       | SVG: Curved paths. Gradient fills and patterns. Efficient document organization: grouping and reuse of elements: <g>, <use>, <defs><br>Transformations and coordinate systems. Advanced text effects.<br>Advanced mouse events: dragging. | <b>Mon 2 / 5: Assignment 2 due</b><br>Workshop 9 (SVG)<br><b>Project released</b>      |
| <b>Wk 10<br/>9 / 5</b>      | SVG embedded in HTML docs. Making use of HTML input and select controls.<br>Animation, using SMIL and using script. Including sound in SVG.<br>Getting external data, XML and other formats.  | Workshop10 (SVG)   |
| <b>Wk 11<br/>16 / 5</b>     | More on fetching and using external data. Storing user settings locally in cookies. Programming the Adobe ASV context menu.   | Workshop 11 (SVG)  |
| <b>Wk 12<br/>23 / 5</b>     | <i>Very briefly:</i> Server side generation of SVG documents. Server-side form processing. Uploading of XML data.   | <b>Mon 23 / 5: Assignment 3 due</b><br><b>Work on your Web Project, due Mon 6 / 6.</b> |

## Readings

*Required textbook: Flash MX 2004 ActionScript Bible*, by Reinhardt & Lott, Wiley (ISBN 0764543547). Available at Vic Books for about \$90

A list of recommended texts and useful websites will be included on Blackboard, early in the course.

## Materials and Equipment

All required hardware and software will be available in the MY211 lab.

## Assessment Requirements

There will be no examination or tests, just three practical assignments and a major project. All work is to be submitted electronically, by upload to a server. Details on how to submit your work will be given later, on Blackboard.

### Assignment 1:

Worth 15%

A set of elementary practical exercises using **Flash MX** and **ActionScript**

Approximately 3 to 4 hours work, to be done in your own time. The specifications will be released in Week 2, and you will have until the start of Week 5, to finish the job.

Due date: Monday, 21 March at 10pm Objectives: 1, 2

### Assignment 2:

Worth 20%

A set of practical exercises, some using **Flash MX /ActionScript** (advanced) and some using **SVG/ECMAScript** (elementary)

Approximately 4 to 6 hours work, to be done in your own time. The specifications will be released in Week 6, and you will have until the start of Week 9, to finish this assignment.  
Due date: Monday, 2 May at 10pm                      Objectives: 1, 2, 3, 4

**Assignment 3:**

Worth **15%**

A set of advanced practical exercises using **SVG** and **ECMAScript**

Approximately 3 to 4 hours work, to be done in your own time. The specifications will be released in Week 8, and you will have until the start of Week 12, to finish this assignment.  
Due date: Monday, 23 May at 10pm                      Objectives: 1, 3, 4

**Web Project :**

Worth **50%**

Design and program a small **HTML** application that includes interactive vector graphics, using either Flash or SVG, with scripting and some data handling

It will probably take you at least 15 hours. To be done partly during allocated lab time and partly in your own time, over the final 3 weeks, mainly in Week 12. The specifications will be available at the start of Week 10.

Due date: Monday, 6 June at 10pm                      Objectives: All

**Penalties**

For overdue assessments a penalty there is a 10% penalty (of marks gained) per working day late.

**Mandatory Course Requirements**

To pass the course, you must gain at least 50% of the marks overall (weighted average over all assessments.)

**Communication of Additional Information**

Notices relating to this course will be announced on Blackboard or via email. You should log onto Blackboard frequently, preferably every day.

**Workload : Time Requirements**

Each week there will be a lecture (Tuesday 12 to 2) that covers topics to do with interactive vector graphics in Flash (for first six weeks) or in SVG (for last six weeks).

In the latter part of each week (at your appointed times: Wed to Fri) there will be two 2-hour computer lab sessions ("workshops") in MY211. You are expected to work through the workshop programming tasks with the assistance of the lab tutors, when they are available, but also to do additional work on your own: completing the lab exercises and trying some of the examples and exercises in the textbook or from the lectures.

Of the four hours each week of allocated lab time, you can expect to have a tutor attending in the MY211 lab for at least two hours. Details about tutors' hours of duty will be given later on Blackboard

Here is a rough indication of the weekly time required to succeed in this course. Other than the lectures and weekly lab sessions, there are no formal weekly activities. There are no tutorial sessions, just self-paced lab workshops with tutors available to assist individually.

| <b>Weekly Activity</b>  | <b>Approx hours</b> |
|---|---------------------|
| Attend the lecture (Tuesday 12 – 2 pm)  | 2                   |
| Going through the lecture notes and the Flash or SVG example files presented in the lectures (download from W: drive or Blackboard) in your own time            | 1 to 2              |
| Attend the MY211 lab sessions at your booked times on Wednesday, Thursday or Friday. Here you will work through the self-paced programming tasks for that week. | 4                   |
| Reading the suggested chapters of the textbook and trying some of the exercises   | 1.5 to 2            |
| Following suggested links to tutorials, reference sites or examples on the Internet.  | 1 to 1.5            |
| Browsing Blackboard. Keeping up to date with course announcements, downloading files, contributing to the discussion forums.                                    | 0.5                 |

These suggested times are for a normal week. Obviously you will need to spend more time in the days just before an assignment is due. But in the final two weeks, when you are getting progressively more involved in your main project, the lab workshop exercises tail off. In Week 12 there are *no* lab exercises, so you are free to concentrate on finishing the project.

## **General University Policies and Statutes**

Students should familiarise themselves with the University's policies and statutes, particularly those regarding assessment and course of study requirements, and formal academic grievance procedures.

## **Student Conduct and Staff Conduct**

The Statute on Student Conduct together with the Policy on Staff Conduct ensure that members of the University community are able to work, learn, study and participate in the academic and social aspects of the University's life in an atmosphere of safety and respect. The Statute on Student Conduct contains information on what conduct is prohibited and what steps can be taken if there is a complaint. For queries about complaint procedures under the Statute on Student Conduct, contact the Facilitator and Disputes Advisor. This Statute is available in the Faculty Student Administration Office or on the website at: [www.vuw.ac.nz/policy/StudentConduct](http://www.vuw.ac.nz/policy/StudentConduct).

The policy on Staff Conduct can be found on the VUW website at:

[www.vuw.ac.nz/policy/StaffConduct](http://www.vuw.ac.nz/policy/StaffConduct).

## **Academic Grievances**

If you have any academic problems with your course you should talk to the tutor or lecturer concerned or, if you are not satisfied with the result of that meeting, see the Head of School or the Associate Dean (Students) of your Faculty. Class representatives are available to assist you with this process. If, after trying the above channels, you are still unsatisfied, formal grievance procedures can be invoked. These are set out in the Academic Grievances Policy which is published on the VUW website:

[www.vuw.ac.nz/policy/AcademicGrievances](http://www.vuw.ac.nz/policy/AcademicGrievances).

## Academic Integrity and Plagiarism

Academic integrity is about honesty – put simply it means **no cheating**. All members of the University community are responsible for upholding academic integrity, which means staff and students are expected to behave honestly, fairly and with respect for others at all times.

Plagiarism is a form of cheating which undermines academic integrity. Plagiarism is **prohibited** at Victoria.

The University defines plagiarism as follows:

Plagiarism is presenting someone else's work as if it were your own, whether you mean to or not.

*'Someone else's work' means anything that is not your own idea, even if it is presented in your own style. It includes material from books, journals or any other printed source, the work of other students or staff, information from the Internet, software programmes and other electronic material, designs and ideas. It also includes the organization or structuring of any such material.*

### ***Plagiarism is not worth the risk.***

Any enrolled student found guilty of plagiarism will be subject to disciplinary procedures under the Statute on Student Conduct ([www.vuw.ac.nz/policy/studentconduct](http://www.vuw.ac.nz/policy/studentconduct)) and may be penalized severely. Consequences of being found guilty of plagiarism can include:

- an oral or written warning
- suspension from class or university
- cancellation of your mark for an assessment or a fail grade for the course.

*Find out more about plagiarism and how to avoid it, on the University's website at:*  
[www.vuw.ac.nz/home/studying/plagiarism.html](http://www.vuw.ac.nz/home/studying/plagiarism.html).

## Students with Disabilities

The University has a policy of reasonable accommodation of the needs of students with disabilities. The policy aims to give students with disabilities an equal opportunity with all other students to demonstrate their abilities. If you have a disability, impairment or chronic medical condition (temporary, permanent or recurring) that may impact on your ability to participate, learn and/or achieve in lectures and tutorials or in meeting the course requirements, then please contact the Course Coordinator as early in the course as possible. Alternatively you may wish to approach a Student Adviser from Disability Support Services to confidentially discuss your individual needs and the options and support that are available. Disability Support Services are located on Level 1, Robert Stout Building, or phoning 463-6070, email: [disability@vuw.ac.nz](mailto:disability@vuw.ac.nz). The name of your School's Disability Liaison Person can be obtained from the Administrative Assistant or the School Prospectus.

## Student Support

Staff at Victoria want students' learning experiences at the University to be positive. If your academic progress is causing you concern, please contact the relevant Course Co-ordinator, or Associate Dean who will either help you directly or put you in contact with someone who can.

The Student Services Group is also available to provide a variety of support and services. Find out more at [www.vuw.ac.nz/st\\_services/](http://www.vuw.ac.nz/st_services/) or email [student-services@vuw.ac.nz](mailto:student-services@vuw.ac.nz).

VUWSA employs two Education Coordinators who deal with academic problems and provide support, advice and advocacy services, as well as organising class representatives and faculty delegates. The Education Office is located on the ground floor, Student Union Building, phone 463 6983 or 463 6984, email [education@vuwsa.org.nz](mailto:education@vuwsa.org.nz).