

School of Information Management

## **ELCM251 INTRODUCTION TO INTERNET DESIGN AND DEVELOPMENT**

Trimester Two 2011

### **COURSE OUTLINE**

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#### **Names and Contact Details**

| <b>Role</b>        | <b>Name</b>           | <b>Room</b> | <b>Phone</b> | <b>E-mail</b>  |
|--------------------|-----------------------|-------------|--------------|--|
| Course Coordinator | A/Prof Sebastian Link | RH 524      | 463 6813     | <a href="mailto:Sebastian.Link@vuw.ac.nz">Sebastian.Link@vuw.ac.nz</a> |
| Senior Tutor       | Ms Xiaoyi Guan        | RH 502      | 463 6998     | <a href="mailto:Xiaoyi.Guan@vuw.ac.nz">Xiaoyi.Guan@vuw.ac.nz</a>       |

Questions about lecture content or readings should be directed to Sebastian Link. Sebastian will also be happy to answer relevant questions during lectures, via e-mail or in face-to-face meetings. Please contact Xiaoyi Guan if you have any enquiries regarding administration of the course. She is responsible for the day-to-day administration of the course, including:

- record keeping and administrative queries
- assessment queries
- workshop attendance, illness, due dates, etc.

All queries related to assignment submissions, extensions, assignment/test remarking, and lab and workshop allocations should be directed to Xiaoyi Guan in the first instance.

Questions about software applications and the practical techniques of building pages should be directed to the lab instructors/tutors of the course, during the workshop.

#### **Trimester Dates**

Monday 11 July – Friday 14 October

#### **Withdrawal from Course**

1. Your fees will be refunded if you withdraw from this course on or before 22 July 2011.
2. The standard last date for withdrawal from this course is *23 September*. After this date, students forced to withdraw by circumstances beyond their control must apply for permission on an '*Application for Associate Dean's Permission to Withdraw Late*' including supporting documentation

The application form is available from either of the Faculty's Student Customer Service Desks.

## Class Times and Room Numbers

- LECTURES: Tuesdays, 08:30-10:20am, Rutherford House LT2
- WORKSHOPS: 1 hour/week, students will sign up for one slot
  - The individual slot times and venues will be announced on Blackboard.
  - Sign-up for your workshop slot will be available on <https://signups.victoria.ac.nz>

## Course Content

A tentative schedule of lectures and workshops is illustrated in the following table. Note that the course coordinator reserves the right to make changes during the trimester.

| Week/<br>Lecture on:   | Topics and Readings  | Exercises and<br>Project Milestones                      |
|--|--|--|
| 1<br>12 <sup>th</sup> July   | Introduction to the course<br>The Internet and World Wide Web<br>XHTML basics<br><i>Chapters 1 and 2</i> | No workshop  |
| 2<br>19 <sup>th</sup> July   | Configuring colour and text with CSS<br><i>Chapter 3</i>   | Creating your first web page                             |
| 3<br>26 <sup>th</sup> July   | Visual elements and graphics<br><i>Chapter 4</i>   | Adding style to your web page<br>Project: Topic approval |
| 4<br>2 <sup>nd</sup> August  | Web design<br><i>Chapter 5</i>   | Using graphics   |
| 5<br>9 <sup>th</sup> August  | Page layout with CSS<br><i>Chapter 6</i>   | Project:<br>Planning analysis sheet                      |
| 6<br>16 <sup>th</sup> August   | <b>Test 1</b><br>Links and Lists<br><i>Chapter 7</i>   | Multiple column layouts<br>Project: Site map             |
| 2 weeks of mid-trimester break                                       |  |  |
| 7<br>6 <sup>th</sup> September                                       | Tables<br><i>Chapter 8</i>   | Navigation links   |
| 8<br>13 <sup>th</sup> September                                      | XHTML forms<br><i>Chapter 9</i>  | Project:<br>First update meeting                         |
| 9<br>20 <sup>th</sup> September                                      | Web site development,<br>Web multimedia and interactivity<br><i>Chapters 10 and 11</i>                   | Adding tables  |
| 10<br>27 <sup>th</sup> September                                     | Web promotion and JavaScript<br><i>Chapters 13 and 14</i>  | Project:<br>Second update meeting                        |
| 11<br>04 <sup>th</sup> October                                       | Semantic Web and Future Trends   | Form processing<br>Project: Discussion                   |
| 12<br>11 <sup>th</sup> October                                       | <b>Test 2</b><br>E-commerce overview<br><i>Chapter 12</i>  | No workshop  |
| <b>Final web site project due date: 14<sup>th</sup> October, 3pm</b> |  |  |

## Course Learning Objectives

This course provides an introduction to the principles, theories, technologies and applications of E-commerce application design and development. The course gives students an initial experience in designing and developing practical end-to-end Web-based information systems appropriate for supporting modern e-businesses. More specifically, the learning objectives of ELCM 251 are related to the FCA graduate attributes and ELCM Major attributes as follows:

| Learning Objective | On completion of this course, students will be able to:                             | Graduate Attributes | Major Attributes |
|--------------------|---|---------------------|------------------|
| LO1                | explain the opportunities the Internet offers to conduct successful e-business      | LG2,<br>LG5         | MA1,<br>MA2      |
| LO2                | assess the suitability of various design principles for Web applications            | LG1,<br>LG5         | MA2,<br>MA3      |
| LO3                | apply the skills necessary for large-scale project development on the Web           | LG1,<br>LG4         | MA2,<br>MA3      |
| LO4                | apply the technologies required to design and develop Web-based information systems | LG1,<br>LG5         | MA1-<br>MA4      |
| LO5                | develop, test and deploy elementary Web applications                                | LG1                 | MA3              |
| LO6                | interpret the basic risks of conducting business on the Internet                    | LG1,<br>LG2         | MA6              |
| LO7                | discuss future trends in modern e-business application development                  | LG2,<br>LG4         | MA5,<br>MA7      |

## Course Delivery

### *Lectures and Exercises:*

Students are expected to prepare for lectures by reading the relevant book chapters in advance. The chapters are expected to be reviewed again after the lectures. Each chapter of the textbook contains review questions, exercises to apply your knowledge, and hands-on exercises. It is recommended to attempt solutions to all of these. This will result in an excellent preparation for the tests, workshop exercises and web site project. Furthermore, the knowledge can be deepened by answering the questions in the Web Research and Focus on Web Design questions at the end of each chapter.

### *Workshops:*

Students are expected to complete the weekly workshop exercises by applying the theories and concepts taught during lectures. Feedback for these exercises from workshop supervisors and fellow students will help them to advance and complete the website project of their choice. The website project aims at testing the students' abilities in designing, developing, and publishing a website using recommended design practices.

### *Tests:*

The two class tests (conducted during the first hour of lectures in week 6 and 12, respectively) evaluate the students' understanding of the principles, theories and technologies of Web application design and development. There is no final exam.

## Expected Workload

Students are expected to devote a minimum of 12 hours a week to this course. This is an average, and the workload is likely to vary from week to week during the trimester. As a guide you may choose to spend the following time on the following course components:

|   |         |
|---|---------|
| Lectures                                      | 2 hours |
| Workshops                                     | 1 hour  |
| Reading and understanding notes and materials | 4 hours |
| Exercises and website project                 | 5 hours |

Attendance of all lectures and workshops will enhance your ability to gain the minimum amount of marks required to pass the course.

## Group Work

There is no group work and all assessments are based on individual work. However, students are encouraged to form study groups to exchange their understanding of the course contents and to provide feedback to the website projects.

## Readings

The following textbook is mandatory to buy:

Terry Felke-Morris (2011). *Web Development and Design Foundations with XHTML: International Version*. Edition 5. Pearson. ISBN-13: 9780137052752. ISBN-10: 0137052758.

The following reference is an in-depth study of E-commerce applications. The book contains material that is beyond the scope of this introductory course, but is an excellent source for continued and deeper studies on this subject:

Craig D. Knuckles, David S. Yuen (2004). *Web Applications: Concepts & Real World Design*. John Wiley. ISBN: 0471204587.

## Materials and Equipment

For the workshops students are expected to

- have a valid computer account, and
- bring a storage device to save all their course work.

The two class tests will be conducted during the first hour of the lectures in week 6 and week 12, respectively. For the class tests no calculators and no study material is permitted. However, for each test each student is permitted to prepare a single, handwritten DIN-A4 sheet with notes on only one page.

## Assessment Requirements

The assessment is based on the on the following individual components:

| Assessment component | Date due                                     | Learning objectives | Contribution to final grade |
|----------------------|--|---------------------|-----------------------------|
| Test 1               | Tue, 16 <sup>th</sup> August, 08:30-09:20am  | LO1, LO2, LO3, LO7  | 30%                         |
| Test 2               | Tue, 11 <sup>th</sup> October, 08:30-09:20am | LO2, LO3, LO6, LO7  | 30%                         |
| Web site project     | Fri, 14 <sup>th</sup> October, 3pm           | LO2, LO3, LO4, LO5  | 40%                         |

*There is no final exam.*

For the two *tests* all material covered up to the relevant week may be assessed, unless stated otherwise. Details will be advised closer to the date. For the *web site project* students will design and develop a web site using recommended design practices. The topic of the web site will be chosen by the student. Details of the requirements of this project will be made available shortly after the commencement of the course. Below you can find the guidance rubrics associated with each assessment component.

| Class Test 1 Rubric – 30% contribution towards overall assessment                        |   |  |  |
|--|---|--|--|
| Aspect/Weight  | Exemplary   | Satisfactory   | Unsatisfactory   |
| The Internet and World Wide Web<br><br>XHTML basics<br><br><b>LO1, LO7</b><br>20% weight | Full ability to recall and comprehend, and good ability to apply the ideas around the Internet and WWW, their organization, protocols, networks, trends, ethical use and models, and the basics of the XHTML language, i.e. tags, DTDs, and Web page anatomy. | Sufficient ability to recall and comprehend, and basic ability to apply the ideas around the Internet and WWW, their organization, protocols, networks, trends, ethical use and models, and the basics of the XHTML language, i.e. tags, DTDs, and Web page anatomy. | Insufficient ability to recall, comprehend or apply the ideas around the Internet and WWW, their organization, protocols, networks, trends, ethical use and models, and the basics of the XHTML language, i.e. tags, DTDs, and Web page anatomy. |
| Configuring colour and text with CSS<br><br><b>LO2, LO3</b><br>20% weight                | Full ability to recall and comprehend, and good ability to apply cascading style sheets to configure colour and text properties, and inline, external and embedded styles.  | Sufficient ability to recall and comprehend, and basic ability to apply cascading style sheets to configure colour and text properties, and inline, external and embedded styles.  | Insufficient ability to recall, comprehend or apply cascading style sheets to configure colour and text properties, and inline, external and embedded styles.  |
| Visual elements and graphics<br><br><b>LO2, LO3</b><br>20% weight                        | Full ability to recall and comprehend, and good ability to apply guidelines for the appropriate use of graphics and images.   | Sufficient ability to recall and comprehend, and basic ability to apply guidelines for the appropriate use of graphics and images.   | Insufficient ability to recall, comprehend or apply guidelines for the appropriate use of graphics and images.   |
| Web design<br><br><b>LO2, LO3</b><br>20% weight  | Full ability to recall and comprehend, and good ability to apply principles and guidelines for Web site organization, accessibility and Web page design.  | Sufficient ability to recall and comprehend, and basic ability to apply principles and guidelines for Web site organization, accessibility and Web page design.  | Insufficient ability to recall, comprehend apply principles and guidelines for Web site organization, accessibility and Web page design.   |
| Page layouts<br><br><b>LO2, LO3</b>  | Full ability to recall and comprehend, and good ability to apply cascading style sheets for Web page layout, including the CSS  | Full ability to recall and comprehend, and good ability to apply cascading style sheets for Web page layout, including the CSS   | Insufficient ability to recall, comprehend or apply cascading style sheets for Web page layout, including the CSS  |

|   |   |  |   |
|---|---|--|---|
| 20% weight  | Box model.  | Box model.   | Box model.  |
| <b>Class Test 2 Rubric – 30% towards overall assessment</b>           |   |  |   |
| <i>Aspect/Weight</i>  | <i>Exemplary</i>  | <i>Satisfactory</i>  | <i>Unsatisfactory</i>   |
| Links and Lists<br><b>LO2, LO3, LO7</b><br>20% weight                 | Full ability to recall and comprehend, and good ability to apply the concepts of hyperlinks, navigation layout lists, and CSS pseudo-classes, specifically for mobile Web design.                 | Sufficient ability to recall and comprehend, and basic ability to apply hyperlinks, navigation layout lists, and CSS pseudo-classes, specifically for mobile Web design.                                 | Insufficient ability to recall, comprehend or apply hyperlinks, navigation layout lists, and CSS pseudo-classes, specifically for mobile Web design.                                |
| XHTML Tables<br><b>LO2, LO3, LO6,</b><br>20% weight                   | Full ability to recall and comprehend, and good ability to create accessible XHTML tables to format data, and apply CSS to format XHTML tables.   | Sufficient ability to recall and comprehend, and basic ability to create accessible XHTML tables to format data, and apply CSS to format XHTML tables.   | Insufficient ability to recall, comprehend or create accessible XHTML tables to format data, and apply CSS to format XHTML tables.  |
| XHTML Forms<br><b>LO2, LO3</b><br>20% weight                          | Full ability to recall and comprehend, and good ability to create accessible XHTML forms, apply CSS to style forms, and invoke server-side processing.  | Sufficient ability to recall and comprehend, and basic ability to create accessible XHTML forms, apply CSS to style forms, and invoke server-side processing.  | Insufficient ability to recall, comprehend or create accessible XHTML forms, or apply CSS to style forms, or invoke server-side processing.   |
| Multimedia & Interactivity<br><b>LO2, LO3, LO6, LO7</b><br>20% weight | Full ability to recall and comprehend, and good ability to make appropriate use of sound and video on Web sites, and apply technologies such as JavaScript, Java Applets, Flash, DHTML, and Ajax. | Sufficient ability to recall and comprehend, and basic ability to make appropriate use of sound and video on Web sites, and apply technologies such as JavaScript, Java Applets, Flash, DHTML, and Ajax. | Insufficient ability to recall, comprehend or make appropriate use of sound and video on Web sites, nor apply technologies such as JavaScript, Java Applets, Flash, DHTML, or Ajax. |
| Web promotion<br><b>LO3, LO6, LO7</b><br>20% weight                   | Full ability to recall and comprehend, and good ability to design search-engine friendly Web sites, and apply Web promotion activities.   | Sufficient ability to recall and comprehend, and basic ability to design search-engine friendly Web sites, and apply Web promotion activities.   | Insufficient ability to recall, comprehend or design search-engine friendly Web sites, nor apply Web promotion activities.  |

|   |  |   |  |
|---|--|---|--|
| <b>Project Thread Rubric – 40% towards overall assessment</b> |  |   |  |
| <i>Aspect/Weight</i>  | <i>Exemplary</i>   | <i>Satisfactory</i>   | <i>Unsatisfactory</i>  |
| Functionality of Web site<br><b>LO3, LO5</b><br>30% weight    | Ability to soundly and creatively apply XHTML and CSS techniques                         | Ability to soundly apply XHTML & CSS techniques required                    | Inability to soundly apply HTML and CSS techniques required                                |
| XHTML & CSS Code Quality<br><b>LO4, LO5</b><br>20% weight     | Ability to soundly and creatively write valid and innovative XHTML and CSS code required | Ability to soundly write valid XHTML and CSS code required                  | Inability to soundly write valid XHTML or CSS code required                                |
| Accessibility of Web site<br><b>LO2, LO5</b><br>20% weight    | Ability to soundly and creatively equip Web site features with full accessibility        | Ability to soundly equip Web site features with most accessibility features | Inability to soundly equip Web site features with sufficiently many accessibility features |
| Design of Web site<br><b>LO3, LO5</b>                         | Ability to soundly and creatively apply Web page and Web site design principles          | Ability to soundly apply Web page and Web site design principles            | Inability to soundly apply Web page or Web site design principles                          |

|                          |   |   |   |
|--------------------------|---|---|---|
| 15% weight               |   |   |   |
| Documentation provided   | Ability to provide sound, effective and creative documentation for the Web site, including milestone items and comments on code | Ability to provide sound and effective documentation for the Web site, including milestone items and comments on code | Inability to provide sound and effective documentation for the Web site, including milestone items and comments on code |
| <b>LO5</b><br>15% weight |   |   |   |

### Quality Assurance Note

Your assessed work may also be used for quality assurance purposes, such as to assess the level of achievement of learning objectives as required for accreditation and audit purposes. The findings may be used to inform changes aimed at improving the quality of FCA programmes. All material used for such processes will be treated as confidential, and the outcome will not affect your grade for the course.

### **Penalties**

In fairness to other students, work submitted after the deadline will incur a 10% penalty (of the marks achieved for the assignment) for each day (within 24 hours) late. In the event of bereavement or prolonged illness affecting your ability to meet the deadline, discuss your situation with the course coordinator as soon as you are able to. You must verify your claim, e.g., produce a medical certificate. By doing so, you agree to the course coordinator seeking verification of your documentation. Extensions will only be granted under these conditions.

### **Practicum Arrangements**

#### Workshop Allocation Procedure:

Sign-up to your workshop slot will be available on the sign-up system:

<https://signups.victoria.ac.nz>

You must sign up for the workshop sessions yourself in the first week. Please contact Xiaoyi Guan if you have not signed up at that time. You must select a time slot that fits your timetable and enter your name on only one of the lists provided. Once you have been allocated to a workshop, it is your responsibility to know where and when your workshop is scheduled.

#### Hints:

- Ensure to bring your personal timetable with you, so that your selected workshop time does not clash with other classes. It will not be easy to change your selection once accepted.
- If your name appears on more than one workshop list, the Senior Tutor reserves the right to put you in the workshop of her choice.
- The number of students for each workshop slot is limited. Once a list is full, it is removed from circulation. As the names are entered on a first-come-first-served basis, it is strongly recommended to enrol as early as possible, otherwise you may be allocated a less desirable time slot.
- If you have any serious problems about the allocations, see the Senior Tutor.

### Lab Access:

Information Systems and Electronic Commerce students have access to a range of computer lab facilities. This means that you can still undertake this course even if you do not have a computer at home. Like all university students you are able to use any SCS computer lab throughout the University (this includes labs in the Murphy building, the Library and in the Law School) as long as you have a current SCS account. If you do not have a current SCS account, contact either the SCS helpdesk in the library or the Murphy building. In addition, INFO and ELCM students have access to the purpose built school lab MY201. This lab is located on the second floor of the Murphy building. Please note that specialist software found in the SIM labs is not available in all the SCS labs.

There are two kinds of lab access provided for this course:

- **Scheduled workshop sessions:** Workshop supervisors will be in attendance, and formal instruction that is a part of the course requirements will be offered during these scheduled sessions. At other times during the scheduled sessions, you will have the opportunity to work independently, and a workshop supervisor will be available to assist you and to answer questions. This is your main opportunity to obtain technical help. Your workshop supervisors are not obliged to assist you if you have not attended your scheduled sessions. Workshop attendance is not compulsory but will be regularly monitored.
- **Ad-hoc access:** The lab offers 24-hour access via student ID cards unless booked for another class. Students should check the booking schedules on the lab doors before entering a laboratory to ensure they are not interrupting a class and they can finish their work before the next scheduled class. You may be asked to leave by the lab supervisor if the machine you are using is required for a scheduled class.

### **Mandatory Course Requirements**

While attendance of the lectures and workshops is not a mandatory requirement, it will largely facilitate your learning process and help you to perform well in the tests and web site project.

### **Class Representative**

A class representative will be elected in the first class, and that person's name and contact details made available to VUWSA, the Course Coordinator and the class. The class representative provides a communication channel to liaise with the Course Coordinator on behalf of students.

### **Communication of Additional Information**

All formal notices relating to this course will be posted on the Blackboard system

<http://blackboard.vuw.ac.nz>



You are expected to check for announcements on Blackboard on a regular basis. Please contact the Senior Tutor in order to have a user ID and a password to log in.

**For the following important information follow the links provided:**

**Academic Integrity and Plagiarism**

<http://www.victoria.ac.nz/home/study/plagiarism.aspx>

**General University Policies and Statutes**

Find key dates, explanations of grades and other useful information at

[www.victoria.ac.nz/home/study](http://www.victoria.ac.nz/home/study)

Find out about academic progress and restricted enrolment at

<http://www.victoria.ac.nz/home/study/academic-progress.aspx>

The University's statutes and policies are available at [www.victoria.ac.nz/home/about/policy](http://www.victoria.ac.nz/home/about/policy), except qualification statutes, which are available via the Calendar webpage at <http://www.victoria.ac.nz/home/study/calendar.aspx> (See Section C).

Further information about the University's academic processes can be found on the website of the Assistant Vice-Chancellor (Academic) at

[www.victoria.ac.nz/home/about\\_victoria/avcacademic/default.aspx](http://www.victoria.ac.nz/home/about_victoria/avcacademic/default.aspx)

**AVC (Academic) Website: information including: Conduct, Academic Grievances, Students with Impairments, Student Support**

[http://www.victoria.ac.nz/home/about\\_victoria/avcacademic/Publications.aspx](http://www.victoria.ac.nz/home/about_victoria/avcacademic/Publications.aspx)

**Faculty of Commerce and Administration Offices**

<http://www.victoria.ac.nz/fca/studenthelp/>

**Te Pūtahi Atawhai**

**Maori and Pacific Mentoring Programme**

[http://www.victoria.ac.nz/st\\_services/tpa/index.aspx](http://www.victoria.ac.nz/st_services/tpa/index.aspx)