TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI

VICTORIA
UNIVERSITY OF WELLINGTON

School of Information Management

ELCM 353 INTERNET DEVELOPMENT ENVIRONMENTS

Trimester One 2011

COURSE OUTLINE

Names and Contact Details

Role	Name	Room	Phone	E-mail
Course Coordinator	Dr Flavio Ferrarotti	RH527	463 6857	flavio.ferrarotti@vuw.ac.nz
Lecturer	A/Prof Sebastian Link	RH524	463 6813	sebastian.link@vuw.ac.nz
Senior Tutor	Ms Xiaoyi Guan	RH502	463 6998	xiaoyi.guan@vuw.ac.nz

Flavio is a Postdoctoral Fellow at the School of Information Management. His main research interests focus on database systems and their foundations. Flavio has extensive experience in developing Web and e-Commerce applications.

Sebastian is the Associate Professor of e-Commerce at the School of Information Management and also a member of the Centre for Logic, Language and Computation. His main research interests focus on conceptual modelling, database design and theory, XML, and their applications to e-Commerce.

All questions related to the content of this course should be directed to either Flavio or Sebastian. They are happy to answer relevant questions during or after lectures, via e-mail or in face-to-face meetings.

Please contact Xiaoyi if you have any enquiries regarding the administration of this course, including:

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

Questions about software applications and the practical techniques of XML data manipulation and navigation should be directed to the workshop instructors of the course, during the workshop.

Trimester Dates

Monday 28 February – Friday 3 June

Withdrawal from Course

- Your fees will be refunded if you withdraw from this course on or before 11 March 2011.

- The standard last date for withdrawal from this course is 14 May. 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, 1:40pm - 2:30pm,* Government Buildings LT4

- *WORKSHOPS: 2 hours in each of the weeks 2-11, times and venues will be announced on Blackboard during the first week of lectures*

Course Content

A tentative schedule of lectures, readings and assessment components is illustrated in the following table. Notice that the course coordinator reserves the right to make changes during the trimester.

Week Date of Lecture	Lecture	Workshop	Readings
1 01 March	Introduction to XML and the Semantic Web		
2 08 March	XML data and Document Type Declarations	Creating an XML Document	Tutorial 1
3 15 March	XML Schema Languages and Namespaces	Working with Namespaces	Tutorial 2
4 22 March	Navigation in XML documents	Validating an XML Document	Tutorial 3
5 29 March	Querying XML data	Working with Schemas	Tutorial 4
6 05 April	Stylesheets and Transformations	Assignment 1 (due 08/04) / Working with Cascading Stylesheets	Tutorial 5
7 12 April	Class Test / XML processing	Working with XSLT and XPath	Tutorial 6
2 Weeks of Mid-trimester Break			
8 03 May	Semantics of XML data	Creating a Computational Stylesheet	Tutorial 7

9 10 May	Semantic Web Architecture	Creating Element Groups	Tutorial 8
10 17 May	The Resource Description Framework	Using XML as Data Source	Tutorial 9
11 24 May	Storage and Querying of Semantic Web data	Assignment 2 (due 27/05) / Working with the Document Object Model	Tutorial 10
12 31 May	Class Test / Ontologies and the Semantic Web		

Course Learning Objectives

Learning Objective	At the conclusion of this course students should be able to:	Graduate Attribute	Major Attributes
LO1	Read and manipulate XML content.	LG2	MA2
LO2	Apply XML in a modern, complex web-based application.	LG1	MA3
LO3	Use XML based tools.	LG2	MA3
LO4	Compare and contrast technologies for the development of web-based applications.	LG1	MA2, MA6

Course Delivery

The delivery style of this course allows you to put into practice in the workshops the skills you are learning from the tutorials in the prescribed textbook. Students are expected to read the relevant tutorial in advance to each workshop. Workshops should be used to complete the exercises designated by the lab instructor. These exercises will prepare you to solve the case problems included in the two compulsory lab assignments. During the lectures, you will be introduced to the core principles that underlay modern and emerging technologies to develop and deploy e-commerce applications. Two class tests (conducted during lectures L7 and L12) will evaluate your understanding of these principles. Because of the rapidly evolving nature of Internet technologies, much of the material delivered in the lectures cannot be found in textbooks. Therefore, it is fundamentally important for the students to take notes during the lectures.

Expected Workload

You are expected to devote a minimum of 11 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	1 hours
Workshops	2 hours
Reading & Understanding Course Notes and Reading Material	4 hours
Exercises & Assignments	4 hours
	11 hours

Note that students are expected to attend all lectures. Failure to do so will, most likely, limit your ability to perform well in any of the assessment components.

Readings

The following textbook is mandatory to buy (available at Vicbooks www.vicbooks.co.nz):

Patrick Carey (2007). *New Perspectives on XML.* 2nd Edition. Comprehensive.
ISBN-13: 978-1-4188-6064-6

Materials and Equipment

Workshops and Assignments: Students are expected to prepare for workshops by reading the relevant book tutorial in advance. You are expected to have read the relevant tutorial and the designated exercises prior to the allocated workshop time so that work can start as soon as you arrive. Please double-check that you do have a valid computer account.

Assessment Requirements

The assessment is based on the following individual components:

Assessment Component	Date and Time	Learning Objectives	Contribution to Final Grade
Assignment 1	08 April, 5pm (due)	LO1, LO2, LO3	20.00%
Class Test 1	12 April, 1:40pm	LO1, LO2, LO4	30.00%
Assignment 2	27 May, 5pm (due)	LO1, LO2, LO3	20.00%
Class Test 2	31 May, 1:40pm	LO1, LO2, LO4	30.00%
			100.00%

Below you can find the guidance rubrics associated with each assessment component.

Marking Rubric for Class Test 1

Topic	Assessment		
	Exemplary	Satisfactory	Unsatisfactory
XML data and Document Type Declarations	Full abilities to recall and comprehend, and good ability to apply semi-structure data and XML, DTDs, and attributes and elements.	Sufficient abilities to recall and comprehend, and basic ability to apply semi-structure data and XML, DTDs, and attributes and elements.	Insufficient abilities to recall, comprehend, or apply semi-structure data and XML, DTDs, and attributes and elements.
XML Schema Languages and Namespaces	Full abilities to recall and comprehend, and good ability to apply the notion of XML schema, the concept of validation, and the process of combining XML vocabularies.	Sufficient abilities to recall and comprehend, and basic ability to apply the notion of XML schema, the concept of validation, and the process of combining XML vocabularies.	Insufficient abilities to recall, comprehend, or apply the notion of XML schema, the concept of validation, and the process of combining XML vocabularies.

Navigation in XML documents	Full abilities to recall and comprehend, and good ability to apply XPath navigation and node selection in trees.	Sufficient abilities to recall and comprehend, and basic ability to apply XPath navigation and node selection in trees.	Insufficient abilities to recall, comprehend, or apply XPath navigation and node selection in trees.
Querying XML data	Full abilities to recall and comprehend, and good ability to apply FLWR expressions and XQuery layout of query answers.	Sufficient abilities to recall and comprehend, and basic ability to apply FLWR expressions and XQuery layout of query answers.	Insufficient abilities to recall, comprehend, or apply FLWR expressions and XQuery layout of query answers.
Stylesheets and Transformations	Full abilities to recall and comprehend, and good ability to apply XSLT conditions, predicates and functions.	Sufficient abilities to recall and comprehend, and basic ability to apply XSLT conditions, predicates and functions.	Insufficient abilities to recall, comprehend, or apply XSLT conditions, predicates and functions.

Marking Rubric for Class Test 2

Topic	Assessment		
	Exemplary	Satisfactory	Unsatisfactory
Semantics of XML Data	Full abilities to recall and comprehend, and good ability to apply keys, in particular, IDs and IDREFs.	Sufficient abilities to recall and comprehend, and basic ability to apply keys, in particular, IDs and IDREFs.	Insufficient abilities to recall, comprehend, or apply keys.
Semantic Web Architecture	Full abilities to recall and comprehend the anatomy of the semantic web layers, the shortcomings of the syntactic web and the advantages of the semantic web.	Sufficient abilities to recall and comprehend the anatomy of the semantic web layers, the shortcomings of the syntactic web and the advantages of the semantic web.	Insufficient abilities to recall or comprehend the anatomy of the semantic web layers, the shortcomings of the syntactic web and the advantages of the semantic web.
The Resource Description Framework	Full abilities to recall and comprehend, and good ability to apply the concepts of RDF data, triplets and RDF schema.	Sufficient abilities to recall and comprehend, and basic ability to apply the concepts of RDF data, triplets and RDF schema.	Insufficient abilities to recall, comprehend, or apply the concepts of RDF data, triplets and RDF schema.
Storage and Querying of Semantic Web Data	Full abilities to recall and comprehend, and good ability to apply SPARQL, in particular patterns and filters.	Sufficient abilities to recall and comprehend, and basic ability to apply SPARQL, in particular patterns and filters.	Insufficient abilities to recall, comprehend, or apply SPARQL.

Marking Rubric for Lab Assignment 1

Topic	Assessment		
	Exemplary	Satisfactory	Unsatisfactory
Creating an XML Document	Ability to soundly and creatively develop an XML Document.	Ability to soundly develop an XML Document.	Inability to soundly develop an XML Document.
Working with Namespaces	Ability to soundly and creatively combine XML vocabularies in a compound document.	Ability to soundly combine XML vocabularies in a compound document.	Inability to soundly combine XML vocabularies in a compound document.
Validating an XML Document	Ability to soundly and creatively work with Document Type Definitions.	Ability to soundly work with Document Type Definitions.	Inability to soundly work with Document Type Definitions.
Working with Schemas	Ability to soundly and creatively validate documents with XML schema.	Ability to soundly validate documents with XML schema.	Inability to soundly validate documents with XML schema.

Marking Rubric for Lab Assignment 2

Topic	Assessment		
	Exemplary	Satisfactory	Unsatisfactory
Working with XSLT and XPath	Ability to soundly and creatively transform and XML document.	Ability to soundly transform and XML document.	Inability to soundly transform and XML document.
Creating a Computational Stylesheet	Ability to soundly and creatively work with functions, variables, and parameters.	Ability to soundly work with functions, variables, and parameters.	Inability to soundly work with functions, variables, and parameters.
Creating Element Groups	Ability to soundly and creatively work with IDs, Keys, and Groups.	Ability to soundly work with IDs, Keys, and Groups.	Inability to soundly work with IDs, Keys, and Groups.
Using XML as a Data Source	Ability to soundly and creatively bind web elements to XML.	Ability to soundly bind web elements to XML.	Inability to soundly bind web elements to XML.

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.

Examinations

There is no final examination.

Penalties

In fairness to other students, extensions to assignments deadlines are not ordinarily granted. For the same reason, failure to sit the class tests will automatically result in zero marks for the test. In

the event of bereavement or prolonged illness affecting your ability to meet the assignments deadlines or sit the class tests, 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 to the project thread or alternative arrangements for a test 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 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:
- Make sure you consult your personal timetable, 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.
- When 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 that you attend to this early, otherwise you may be allocated to a less desirable time slot.
- If you have any serious problems about the allocations, see the senior tutor.

Mandatory Course Requirements

Students must meet the following requirements in order to pass the course:
- be correctly enrolled in the course, and
- obtain at least 50 percent of the maximum number of available marks.

As pointed out before, your attendance of lectures is required to perform well in all the assessment components of this course.

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.

Use of Turnitin

Student work provided for assessment in this course may be checked for academic integrity by the electronic search engine http://www.turnitin.com Turnitin is an on-line plagiarism prevention tool which compares submitted work with a very large database of existing material. At the discretion of the Head of School, handwritten work may be copy-typed by the School and subject to checking by Turnitin. Turnitin will retain a copy of submitted materials on behalf of the University for detection of future plagiarism, but access to the full text of submissions will not be made available to any other party.

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.
Find out about academic progress and restricted enrolment at
www.victoria.ac.nz/home/study/academic-progress.
The University's statutes and policies are available at www.victoria.ac.nz/home/about/policy, except qualification statutes, which are available via the Calendar webpage at
www.victoria.ac.nz/home/study/calendar (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

AVC (Academic) Website: information including: Conduct, Academic Grievances, Students with Impairments, Student Support
http://www.victoria.ac.nz/home/about_victoria/avcacademic/Publications.aspx

Faculty of Commerce and Administration Offices
http://www.victoria.ac.nz/fca/studenthelp/

Manaaki Pihipihinga Programme
http://www.victoria.ac.nz/st_services/mentoring/