School of Information Management

INFO 226 - APPLICATION DEVELOPMENT

Trimester Two, 2015

COURSE OUTLINE

Names and Contact Details

	Staff	Room	Email & Telephone	Office Hours
Course Coordinator and Lecturer	Pedro Antunes	RH526	pedro.antunes@vuw.ac.nz 04 463 5525	Send email to arrange an appointment.
Course Lecturer	Siva Dorairaj		sivadorairaj@gmail.com	Send email to arrange an appointment.
SIM Undergraduate Support team		RH502	simstudents@vuw.ac.nz 04 463 6998	Mon-Fri 10am-4pm or by appointment

Trimester Dates
Teaching Period: Monday 13th July – Friday 16th October

Withdrawal from Course
1. Your fees will be refunded if you withdraw from this course on or before Friday 24th July 2015.
2. The standard last date for withdrawal from this course is Friday 25th September.

After the date stated in 2, 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 or online.

Class Times and Room Numbers

Lecture times	Lecture Room
Friday 10:30 - 11:20	RHLT1

Course Delivery
Teaching and learning will take place in the context of regular classes with discussions moderated through Blackboard and other technologies. Workshops in computing laboratories will provide the required experience with application development frameworks and languages.

Group Work
This course adopts one of the main principles of agile programming: working in pairs. As a popular type of agile programming, the practice of working in pairs increases productivity, agility, creativity, quality, and satisfaction. Specific instructions and recommendations on how to work in pairs will be given to students.

Group work, more specifically working in pairs, is required for all project phases and activities.

Group assessments, referring to assessment items completed by groups and for which group members are all assigned the same mark, will **NOT** be implemented. To comply with Victoria's assessment handbook, all assessment items are individually marked.

More details about group work:
- Groups have 2 members;
- Students are responsible for setting up and managing groups;
- Groups are responsible for planning and coordinating goals, activities and milestones;
- Group composition cannot change during the trimester;
- Even though groups are expected to operate as a group, each member is specifically responsible for specific project items in phase 1 (either user stories or sprint backlog) and phase 2 (either client-side or server-side);
- Individual responsibilities for project items are assigned at the beginning of the trimester and cannot change during the trimester;
- In case students cannot setup a group or fail their responsibilities to the group, work in project phase 2 will be done individually and students will be responsible for both assessment items (client-side and server-side).

Expected Workload
This is a 15-point course. One point should equate to 10 hours of work, which means a total of 150 hours for a 15-point course. Each week, students are expected to spend about:
- 1 hours in the lecture
- 2 hours preparing for the lecture
- 2 hours in the workshop
- 2 hours preparing for the workshop
- 5 hours working on the project

Prescription
An introduction to the use of software languages and tools for rapid application development. The course takes students through the process of translating business requirements, expressed with functional and structural models, into business applications.

Course Learning Objectives

CLO	On completion of this course students should be able to
1	Analyse fundamental programming concepts supported by a programming language
2	Plan business application development from business requirements with functional and structural models
3	Use fundamental data structures and programming constructs to solve business requirements
4	Use modern, object-oriented, software development frameworks and core libraries, with emphasis on user-interface and client functionality, for rapid application development

Course Content
See detailed information in Weekly Schedule.

Readings

The [Microsoft Developer Network](#) website has C# and .NET learning resources. The [w3schools](#) website has also multiple learning resources on HTML, CSS, JavaScripts, and ASP.NET. These online resources should be sufficient to successfully complete the course.

If you are looking for more structured information, most books on C# are suitable. This one provides a business-oriented approach, from beginner to advanced concepts, and therefore is recommended:
- Darie, C., & Watson, K. (2005). Beginning ASP.NET 2.0 E-Commerce in C# 2005: From Novice to Professional. Apress.

Here are some other examples that can be found in the library:
- Beginning ASP.NET 3.5 in C# 2008 From Novice to Professional by Matthew MacDonald
- Illustrated C# 2008 by Daniel Solis
- Accelerated C# 2008 by Trey Nash
- Beginning C# 2008 From Novice to Professional by Christian Gross

Materials and Equipment

Students should use the computer labs provided by SIM for this course. The software tools you need to complete workshops and assignments are provided in the computer labs. The times for the main SIM labs (level 100-300) are: MY labs, 7 days 8am-8pm; RW labs, idem, except Fridays, 8am-6pm, Sundays, 1pm-5pm, and Saturdays closed. The RW labs are dictated by the building access (commerce library hours).

The software tools adopted by this course are:
- Microsoft Visual Studio 2012

NOTE: VUW cannot support your personal computer or any course related software installed on it even if it is supplied by VUW. If you do work on your own computer you must be able to independently solve any installation or execution problems. Furthermore, assignments must be compatible with the software tools installed in SIM's labs.

Assessment

The Assessment Handbook will apply to all VUW courses: see
http://www.victoria.ac.nz/documents/policy/staff-policy/assessment-handbook.pdf.

Assessment overview

Item [1]		Expected workload	Marks	CLO
Project Phase 1	User stories / sprint backlog	12 hours	20%	3, 4
Project Phase 2	Client-side / server-side	20 hours	40%	3, 4
	Demo	4 hours	10%	3, 4
Tests			15%+15%	1, 2

NOTES: 1) Due dates are described in the Weekly Schedule.

Tests. The tests are intended to evaluate theoretical knowledge related to topics discussed in lectures and application development in general.

Project. The project is intended to develop practical knowledge about application development using development platforms and frameworks.

Grading Assignments
The grading of project assignments will follow the mark allocation scheme described in the assignment handouts.

Feedback
The assessment feedback will mainly consist of pre-formatted/generic feedback comments.

Scaling
To obtain a fair and consistent distribution of marks relative to assessment difficulty, scaling of marks (up or down) may be employed on some or all assessment items.

Extensions
Familiarise yourself with the assessment handbook regarding extensions. Extensions can only be granted in accordance to the conditions expressed in section 3.2.1 and further discussed in section 8.

Personal extensions are granted only in special circumstances and supporting evidence such as a medical certificate may be requested by the course coordinator or SIM undergraduate support team.

Non-extendable assessments. For some work, such as: lab projects, case discussion preparation, and tutorial preparation there is no possibility of late submission as the opportunity for the work to be completed has already passed.

Penalties
The penalty for late submission of work without a prior extension arrangement is a reduction of 10% of the available marks each calendar day, starting from the due date and time, up to 5 days after the due date. At the course coordinator's discretion, work handed in after 5 days may be assessed and feedback provided, but no grade will be assigned.

Submissions <u>must</u> follow the specific instructions provided on Blackboard regarding: 1) repository where to upload electronic documents; 2) format of electronic documents; and 3) compatibility with software installed in SIM's labs. Failure to comply with these instructions will result in the inability to mark an assignment. At the course coordinator's discretion, corrections may be requested/supplied after the deadlines, but they will result in a penalty of reduction of 10% of the available marks.

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 submitted to Turnitin. A copy of submitted materials will be retained 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.

Important Notes
- Do not leave submitting your assignments to the last minute. Technology problems do occur, especially on the day an assignment is due. <u>Extensions will not be granted due to problems with submitting work</u>.
- You are expected to back up your work. From time to time computer files are lost, computers crash, etc., so it is critical that you frequently back up your important files.
- You are encouraged to use on-line resources to help you learn and develop your assignments. However, when you include other's work within your own work, you must acknowledge the source you used. You can place that acknowledgement in a comment within your work. If you do not acknowledge the contribution of others to your work then you have plagiarised that work and will be penalised according to the University Statute on student conduct.

Mandatory Course Requirements
In addition to obtaining an overall course mark of 50 or better, students must
1)   Attend at least <u>six workshops</u> and get a sign-off.

Workshops
- You will attend weekly workshops where you gain practical knowledge on application development necessary to work on assignments.
- Workshops are not marked, but as stated above you are required to attend a minimum number of workshops and get a sign-off.
- You are expected to work on the workshop exercises in your own time <u>before the scheduled workshop time</u>. The workshop sessions only allow time for discussing problems and getting feedback.
- Please note that workshops are also particularly important to get critical comments and suggestions on how to improve the quality of your assignments.
- You are also expected to learn for yourself how to use the software tools adopted by this course.
- <u>You must sign up</u> for workshops by via https://signups.victoria.ac.nz/. The deadline for sign up is specified in the Weekly Schedule and announced on Blackboard.

- When you have completed your participation in a workshop, a tutor will record a sign-off. Do not forget that you need to collect sign-offs.

If you cannot complete an assignment or sit a test or examination, refer to
www.victoria.ac.nz/home/study/exams-and-assessments/aegrotat

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

Email may also be used as a form of communication; hence it is vital that students check their email regularly. The University has provided each student with a student email address and all email correspondence will be sent to that email address. Should a student forward his/her email to another email provider, it is her/his responsibility to ensure that that forwarded mailbox is capable of receiving the emails. Students must check their student records and ensure the appropriate email address is set. You can do this through My Victoria → Student records. Not receiving an email will not be a valid excuse for missing information.

Email should not be used to ask questions about the course. The Discussion Forum is a very useful tool to raise questions about the course, since other students can also see your question and the responses to it.
- Make sure you regularly check the Discussion Forum to see what has been asked and what has been answered.
- If you do not find the answer to your query, post your question on the Discussion Forum.
- If you think you know the answer to some other student's question, do not hesitate to post a response.
- Make sure that all questions are relevant to the course.
- The use of appropriate language is expected at all times. All students are expected to respect one another while using the Discussion Forum.

Student Feedback

Student feedback on University courses may be found at
www.cad.vuw.ac.nz/feedback/feedback_display.php

Link to General Information

For general information about course-related matters, go to
http://www.victoria.ac.nz/vbs/studenthelp/general-course-information

Note to Students

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 academic audit. The findings may be used to inform changes aimed at improving the quality of VBS programmes. All material used for such processes will be treated as confidential, and the outcome will not affect your grade for the course.

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Weekly Schedule

Lectures (weeks)	
1	Introduction. Traditional development processes
2	Agile methods, working in pairs
3	Development environments and frameworks, Visual Studio and ASP.NET
4	Hypermedia concepts: static web resources, hyperlinks, resource locators, markup languages
5	Internet concepts: end-to-end connectivity, data communication, naming
6	Web architecture: dynamic web resources, client-server model, web services, service-oriented architectures
7	(Test 1, details below)
8	Client side: forms, client-side scripts
9	Server side: class libraries
10	Encoding documents: markup and content
11	Document objects: nodes, tree structure
12	(Test 2, details below)

Workshops (weeks)	
1	(None)
2	Groups' setup. Agile methods. User stories. Sprint backlog
3	ASP.NET: Controls, basic web design, master pages
4	C#: variables, constants, assignments, arithmetic operators, type conversions, precedence rules
5	C#: conditions, expressions, if statement, switch statement, while loop, do-while loop, for loop
6	ASP.NET: events, event handlers, postbacks, page events
7	ASP.NET: validation, validation controls, exceptions, exception handling
8	ASP.NET: managing pages, session variables, cookies
9	C#: classes, properties, methods, constructors, inheritance
10	C#: arrays, dynamic arrays
11	C#: files, streams
12	(None, demos will be scheduled during this week)

Important milestones (weeks)		Details (more specific instructions available on Blackboard)
1		
2		
3		
4	Submit User stories / sprint backlog	By Sunday, **9 Aug** (23:59).
5		
6		
7	Test 1 (topics discussed in lectures 1-6)	Friday **11 Sep** (10:30, unless a room is not available).
8		
9		
10		
11	Submit Client-side / Server-side	By Sunday, **11 Oct** (23:59).
12	Test 2 (C# and ASP.NET)	Friday **16 Oct** (10:30, unless a room is not available)
	Demo the project	Demos take about 20 min. and are scheduled throughout the last week of the trimester