

School of Information Management

INFO 386 INFORMATION TECHNOLOGY ARCHITECTURE

Trimester 1, 2016

COURSE OUTLINE

Prescription

This course examines conceptual and physical building blocks of current information and communication infrastructures, including distributed, mobile, pervasive and cloud solutions. It assesses the Internet as a common platform for developing business applications, and uses advanced software tools to enable students to model and design IT architectures.

Course Learning Objectives

1	Define the role and structure of the Internet as an IT infrastructure component
2	Identify standards necessary to enable communication between distributed, mobile, pervasive and cloud application components
3	Evaluate the opportunities and problems that different IT architectures, models and topologies create for organisations
4	Use modelling techniques and software tools for IT architecture
5	Design IT architectures for various business cases.

Course Content

Week	Topics	Workshops
1 (29/2)	Intro to systems architecture and the course	
2 (7/3)	Automation, generalization and architecture frameworks	
3 (14/3)	Digital electronics, computer organization and operating systems	1. Set up your RasPi and get familiar with the operating system.
4 (21/3)	Clients, servers and middleware Assignment 1 - available	2. Network your RasPi using Wi-Fi to access the Internet.
Easter Break		
5 (4/4)	Storage and data structures	3. Installing and configuring apps on your RasPi, manage the file system.
6 (11/4)	Device drivers, peripherals,	4. Setup Apache web server on your RasPi.
7 (18/4)	Audio and video	5. Install a Database on your RasPi.
Mid-Term Break		
8 (2/5)	Programming environments Assignment 1 due Friday 6 th May	6. Stream content on your RasPi.
9 (9/5)	Design patterns for IT architecture	7. Install PHP on your RasPi.
10 (16/5)	Technology procurement and systems lifecycle planning	8. Securing and hardening your RasPi.
11 (23/5)	Guest (Hardware hacking) & summary	
12 (30/5)	In-class test	

Trimester Dates

From Monday 29th February to Friday 3rd June

Withdrawal from Course

1. Your fees will be refunded if you withdraw from this course on or before Friday 11th March 2016.
2. The standard last date for withdrawal from this course is Friday 13th May 2016. 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](#).

Names and Contact Details

	Staff	Contact Details	Room	Office Hours
Course Coordinator & Lecturer	Dr Allan Sylvester	allan.sylvester@vuw.ac.nz (preferred)	RH501	Check Blackboard for office hours
SIM Undergraduate Support Team	Anette Klaassen Duncan Inkster	simstudents@vuw.ac.nz 04 463 6998	RH 521	Mon-Fri 10am-4pm or by appointment

Class Times and Room Numbers

Class	Day	Start	Finish	Location
Workshops	Sign up in Week 1			
Lecture/Seminar	Monday	14:40	16:30	GBLT1

Workshop Signups

Sign up via myAllocator <https://student-sa.victoria.ac.nz/>

Course Delivery

This course is delivered via interactive seminar style lectures; practical workshops and self directed study and exploration. Attendance in person is strongly advised because much of the learning takes place through participation in activities.

The course uses some hardware and software you might not be comfortable with. This is by-design; don't worry if it all seems strange at first. You will need to take the time to experiment and explore your Raspberry Pi as a technology learning exercise. When you wrangle hardware things rarely go smoothly, you need to be prepared to make (a lot of) mistakes and persevere to understand what the technology is doing. One of the best ways to learn is to help others in the class.

Textbook

Online reading materials, class slides and videos will be linked through Blackboard.

Expected Workload

This is a 15-point course. One point equate to 10 hours of work, or 150 hours for a 15-point course. You are expected to attend all course sessions, read assigned materials, and contribute to class and workshops. You are expected to spend 3 hours in class and about 7 hours preparing for class. average (additional time of about 30 hours spread over the trimester will be required for completion of the course assignments).

Assessment

Assessment	Description	Learning objectives	Weight
Workshops 2 to 8. Complete online quiz and get signed off by lab instructor.	Demonstrate understanding of technology configuration.	1,2,3	35% (7x5%)
Architecture analysis assignment (Due 6 th May)	Apply IT architecture knowledge to prepare a candidate design.	1,2,4,5	35%
Final Test (In class 30 th May)	All aspects of the course	All	30%

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

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

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.

Extensions

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.

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.

Materials and Equipment

See blackboard for details of the Raspberry Pi kit that you need to obtain for workshops.

Student Feedback

Note that this a new course and consequently no student feedback from past courses is available. Student feedback on University courses may be found at: www.cad.vuw.ac.nz/feedback/feedback_display.php

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

Blackboard, class sessions and workshops are the main ways of engaging with this course.

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.
