Software Engineering Analysis - Course Outline
SWEN 223: 2012 Trimester 1

This document sets out the workload and assessment requirements for SWEN 223. It also provides contact information for staff involved in the course. If the contents of this document are altered during the course, you will be advised of the change by an announcement in lectures and/or on the course web site. A printed copy of this document is held in the School Office.

The Course

SWEN 223 builds on SWEN 102, expanding on modelling within the analysis and design phases of software projects. The course addresses the nature of software engineering and will look at all software development phases. Each phase is supported with a corresponding subset of relevant diagram notations which are taken from the Unified Modeling Language (UML). The course expands your modelling skills, and establishes proficiency in the use of the Unified Modeling Language and a corresponding CASE tool.

Prerequisites

The prerequisites for SWEN 223 are COMP 103 and SWEN 102. It is restricted against INFO 222 and INFO 332.

Objectives

By the end of the course, you should be able to:
- understand the nature of software engineering.
- understand the role and relationships of phases in software development.
- be aware of the importance of extensible designs.
- be able to create extensible and reusable designs.
- have mastered the use and construction of a range of UML diagrams.
- understand the role and usage of OCL

You will use a CASE tool to create advanced UML diagrams from informal specifications and thus develop your practical modelling skills (BE graduate attributes 3(f) and 3(c)).

A set of assignments will allow you to practice the practical aspects of these topics, and help you to understand the basic concepts. A team project involving the creation of a report and presentation will further develop your communications skills (BE graduate attribute 2(b)).

A final exam will assess your understanding of the topics of the course.

Textbook
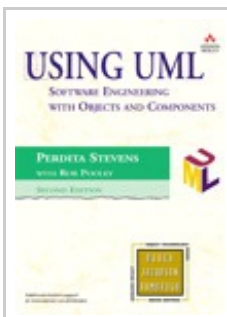
Perdita Stevens with Rob Pooley
Using UML: Software Engineering with Objects and Components, 2/E
Addison-Wesley, 2006.
ISBN 0321269675.

This text covers most of the relevant material. We will not cover everything in the text, and some material covered in lectures is not in the text book. However, it will be a useful resource for the course.

Lectures, Tutorials, and Practical work

Lectures for SWEN 223 take place:
- **Monday, Tuesday, 1510-1600**
  in Cotton LT122.
- **Friday, 1510-1600**

in Cotton LT122 for tutorials and project presentations and
in Cotton CO238 for laboratory sessions.

Lectures will discuss material beyond the slide copies and tutorials will aim to reinforce learning through problem solving exercises and allowing more open discussions. Although attendance is not compulsory it is strongly recommended.

We will usually hand out copies of the lecture slides, though we cannot guarantee to always have them ready for the lecture. It will always be possible to download slides from the schedule of lecture topics.

Assignments and Projects

There will be a set of five assignments which are aimed at developing your modelling skills and deepening your knowledge about UML diagrams.

No.	Title	Due Date
1	Requirements - Functionality	06/04/2012
2	Requirements - Behaviour	27/04/2012
3	Design Structure	11/05/2012
4	Dynamics - State	18/05/2012
5	Dynamics - Sequence	25/05/2012

Use the electronic submission system to submit your work.

Admissible file formats are (in the order of preference): PDF document, PNG image, or a Postscript document (.PS).

Late submissions (arriving after midnight of the respective hand-in day specified) will only be accepted in exceptional circumstances and after prior consultation with the course coordinator. All five assignments contribute to the overall course grade. It is a *mandatory requirement* to submit reasonable attempts at solving the assignments for **three** (3) out of the **five** (5) assignments. Instructions for assignments will be provided in lectures and on the course web site.

You will prepare a project report on a software engineering related topic which will help you to understand the nature of software engineering. The deadline for handing in the research report and the presentation is the 18/05/2012. Submit files using Word/Powerpoint, Open Office, or PDF format.

Workload

In order to maintain satisfactory progress in SWEN 223, you should plan to spend an average of at least 10 hours per week on this paper. An approximate breakdown for these hours is:

Activity	Time
Lectures, tutorials and laboratories	3 hours
Readings, revision and preparation	1 hours
Assignments	3 hours
Research Project	3 hours

Some students will need less time than this; others will need more.

Working Together and Plagiarism

We encourage you to discuss the principles of the course and assignments with other students, to help and seek help with programming details, problems involving the lab machines. However, any work you hand in must be your own work.

Please read the School Policy on Plagiarism. We will penalise anyone we find plagiarising, whether from students currently doing the course, or from other sources. Students who knowingly allow other students to copy their work may also be penalised. If you have had help from someone else (other than a tutor), it is always safe to state the help that you got. For example, if a student had help from someone else with some detail, it is not plagiarism as long as the student states who provided help regarding that detail.

Note that the purpose of the project and assignments is for students to learn. They are worth only a small fraction of the assessment, and by cheating students would harm mostly themselves as they would deprived themselves from benefiting from the learning opportunity.

Passing SWEN 223

To pass SWEN 223 you must meet the mandatory requirements and gain at least an average of **C** over all the assessment.

Mandatory Requirements

Because SWEN 223 aims to develop practical competence, a student must demonstrate adequate mastery of the practical work in order to pass the course. A student must therefore,

- submit reasonable attempts for at least **three** (3) out of the **five** (5) assignments.

Note that submitting less than five assignments and/or not submitting project deliverables will have an effect on the overall grade and makes it harder for us to favourably consider border line cases.

Assessment Weightings

Your grade for SWEN 223 will be determined based on the following assessment weightings:

Item	Weight
Five Marked Assignments	10% (2% each)
Research Project	15%
Final Examination (2 hours)	75%

Exam

There will be a 2 hour final exam in the official examination period 15 June - 4 July. The timetable for final examinations will be posted on the notice board outside the faculty office.

No computers, or programmable electronic calculators or similar devices will be allowed. Non-electronic foreign language dictionaries will be allowed.

Withdrawal

The last date for withdrawal from SWEN 223 with entitlement to a refund of tuition fees is Friday 16 March 2012. The last date for withdrawal without being regarded as having failed the course is Friday 18 May 2012 -- though later withdrawals may be approved by the Dean in special circumstances. Where applicable, you may want to consult the StudyLink rules about failing courses.

Additional Information

Staff

Thomas Kühne	Muhammad Mahmood	Tim Jones	Joshua Scott
Coordinator	Tutor	Tutor	Class Representative
CO 233			
04 463 5443			

Announcements and Communication

The main means of communication outside of lectures will be the web pages at http://ecs.victoria.ac.nz/Courses/SWEN223_2012T1/. There you will find, among other things, this document, the lecture schedule, assignments, project description and the SWEN 223 Forum. Questions and comments can be posted to this web-based bulletin board system, and staff will read these posts and frequently respond to them.

School of Engineering and Computer Science

The School office is located on level three of the Cotton Building (Cotton 358).

Computing Facilities

Our network of Unix NetBSD workstations (and some Apple machines) is available for practical assignment work. The laboratories are open from 7am to 7pm on weekdays. In addition, students may use their student card to access the labs after 7pm weekdays and in the weekends. The door that allows after hour access to the Cotton Building is at the west side by the security office.

Using one's own computer

If you have access to a computer outside the labs, you may use it to work on the assignments, but you will need to install an appropriate CASE tool, such as ArgoUML yourself.

Please note that we do not have the resources to provide assistance if you have difficulties with a computer at home. We can only answer questions about the assignments and the workstations in the laboratories. Note also that we cannot offer you any help with choosing, setting up, or fixing your own computer system, other than the general advice that we provide on the website.

Rules & Policies

Bachelor of Engineering students should be aware that copies of their assessed work may be retained for inspection by an accreditation panel.

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

The University's statutes and policies are available at 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 (See Section C).

Further information about the University's academic processes can be found on the website of the Assistant Vice-Chancellor (Academic) at http://www.victoria.ac.nz/home/about/avcacademic

All students are expected to be familiar with the following regulations and policies, which are available from the school web site:

Grievances
Student and Staff Conduct
Meeting the Needs of Students with Disabilities
Student Support
Academic Integrity and Plagiarism
Dates and Deadlines including Withdrawal dates
School Laboratory Hours and Rules
Printing Allocations
Expectations of Students in ECS courses

The School of Engineering and Computer Science strives to anticipate all problems associated with its courses, laboratories and equipment. We hope you will find that your courses meet your expectations of a quality learning experience.

If you think we have overlooked something or would like to make a suggestion feel free to talk to your course organiser or lecturer.