

Introduction to Software Modelling - Course Outline

SWEN 102: 2012 Trimester 2

This document sets out the workload and assessment requirements for SWEN 102. 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 first meeting for this course will be on Monday 16 July. The teaching term runs from 16 Jul - 19 Oct 2012.

Objectives

By the end of the course, students should be able to:

1. Explain the relationship between models, software, and the real world. (1(a))
2. Describe software systems in terms of models other than code. (3(a),3(c))
3. Translate informal descriptions of software systems into structured textual and graphical models. (2(b),3(a),3(c))
4. Create well-formed engineering models in informal notations and formal languages. (3(a),3(c))
5. Manipulate, analyse, and verify properties of these models, both by hand and with tool support. (3(a),3(c),3(f))
6. Evaluate the qualities of models and software systems. (3(a),3(c),3(d))

Objectives 1, 2, and 6 are addressed in all parts of the course. The first half of the course (and mid-term test) will also address objectives 3 and 4; the second half will also address object 5; and the exam and assignments will address all objectives of the course.

SWEN 102 is part of the Engineering program at Victoria University of Wellington. BE students are expected to exhibit a number of graduate attributes upon graduation. These course objectives contribute to the graduate attributes as indicated above. A full table of these attributes is available at [Graduate Attributes](#).

Textbook

The recommending text for SWEN 102 is: *UML in Practice: The Art of Modeling Software Systems Demonstrated through Worked Examples and Solutions* by Pascal Roques

Lectures, Tutorials, Laboratories, and Practical work

A [schedule](#) of lecture topics, readings, and assignment due dates is available online. A summary of the main topics:

Topic	Lectures
Requirements	2
Use Cases	4
Class Diagrams	4
Alloy	8
State Machines	2

Lectures for SWEN 102 are: *Monday and Wednesday 12:00-12:50 in Cotton LT122.*

An additional tutorial may be scheduled on Friday 12:00-12:50 in Cotton LT122.

Labs will take place in the Engineering Laboratory, Cotton CO145. You must enroll in a lab session in the first week of the course and will remain in that session throughout the course.

Assignments and Projects

The practical work for the course consists of individual assignments and group work laboratory sessions. Each lab and assignment will explore different aspects of the material presented in the lectures. The labs and assignments will involve a mixture of written work and formal modeling. All assessment items are mandatory: practical work underpins this course, since it is essential for a proper understanding of the material.

Every student in SWEN 102 is required to attend a two-hour laboratory once every week. You will be assigned to a

laboratory session in the first lecture of the course, and must attend that session throughout the course. In your first session you will be assigned to a table group, and you must remain in that table group throughout the course. The lab schedule will be posted on the course web site. For any problems with laboratories, please contact the course co-ordinator. If you are unable to attend your assigned laboratory due to illness or other extraordinary circumstances, again contact the course co-ordinator as soon as possible.

If you have access to a computer outside the labs, you may use it to work on laboratories, but you will need to acquire your own software. Please note that we do not have the resources to provide assistance if you have difficulties with a computer at home -- the tutors can only answer questions about the laboratories 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.

Workload

SWEN102 is an 15 point course. In order to maintain satisfactory progress in SWEN 102, you should plan to spend an average of at least 10 hours per week on this paper. A plausible and approximate breakdown for these hours would be:

- Lectures and tutorials: 2
- Labs: 2
- Readings and Lab preparation: 2
- Assignments: 3

School of Engineering and Computer Science

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

Staff

The course organiser for SWEN 102 is [James Noble](#). The lecturers for the course are [James Noble](#) and [Macro Servetto](#). Their contact details are:

- *James Noble*
- [Cotton 234](#)
- +64 4 463 6376
- kjx@ecs.vuw.ac.nz

- *Marco Servetto*
- [Cotton 258](#)
- +64 4 463 5820
- marco.servetto@ecs.vuw.ac.nz

Senior Tutor

The senior tutor is Tim Jones.

- *Timothy Jones*
- [Cotton 254](#)
- +64 4 463 8485
- tim@ecs.vuw.ac.nz

Announcements and Communication

Important announcements for the course will be made at lectures, emailed to the course mailing list and posted on the course web site at http://ecs.victoria.ac.nz/Courses/SWEN102_2012T2/. We will assume that all students attend all lectures and check the web site and their ECS email at least three times a week. On the web site you will find, among other things, this document, the [course schedule](#), and the [SWEN 102 Forum](#). The forum is a web-based bulletin board system. Questions and comments can be posted to the forum, and staff will read these posts and frequently respond to them.

Resources

During the course, students may wish to scan in material they have written or drawn by hand. Scanners are available at the University Library, and also within ECS. A scanner is located on level 2 of the Cotton building, outside room CO258. To use this scanner, students should select "email", and enter their email address using the "keyboard" function.

Assessment

Your grade for SWEN 102 will be determined through group work laboratories, individual assignments, a mid-term test and a final examination. Group work in all laboratories. and all individual assignments. will be marked. The test and exam

will assess your understanding of the material presented in lectures, while the laboratory and assignment work will assess your ability to apply the techniques in practice.

The weighting of the assessment items will be as follows:

Item	Weight
Group labs	15%
Individual Assignments	20%
Mid-term test	15%
Final Examination	50%

Tests and Exams

The mid-term test will be held 10th September 2012 (**TO BE CONFIRMED**) during lecture time. No computers, electronic calculators or similar device will be allowed. Paper non-English to English dictionaries will be permitted. If you cannot attend the test, please advise the course co-ordinator well in advance.

The timetable for final examinations will be available from the University web site and will be posted on a notice board outside the faculty office. The final examination will be three hours long. No computers, electronic calculators or similar device will be allowed in the final examination. Paper non-English to English dictionaries will be permitted. The examination period for trimester 2 is 26 Oct - 17 Nov.

Practical Work

The laboratory work will be marked in the laboratory sessions, and includes 'lab prework':

- 0: not attended
- E: attended without prework
- D: prework, but no contribution in lab
- C: prework and some contribution in lab
- B: prework and good lab contribution
- A: excellent prework and/or lab contribution

Due dates for individual assignments are:

- Sunday 5th August @ 23:59pm
- Sunday 19th August @ 23:59pm
- Sunday 23rd Sept @ 23:59pm
- Sunday 7th Oct @ 23:59pm
- Friday 19th Oct @ 23:59pm

The individual assignments will be marked out of 50. Marks will be awarded for correct answers, and also for clear and effective communication. For example, messy and/or illegible diagrams will be marked down. Each individual assignment should be handed in on the dates specified in the Schedule by midnight. Submission should be made via the online submission system (found on the course homepage). Unless prior agreement with the course co-ordinator has been made at least 24 hours in advance, late submissions will be penalised one grade step of their mark for every day overdue. After 5 days zero marks will be awarded. Approval for late submission will only be given in exceptional circumstances.

Plagiarism

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.

The School policy on Plagiarism (claiming other people's work as your own) is available from the course home page. Please read it. 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 you had help from someone else in writing a component of your code, it is not plagiarism as long as you state (eg, as a comment in the code) who helped you in writing the method.

Mandatory Requirements

1. All assessment items are mandatory
2. You must obtain an average grade of at least D for your individual assignments.
3. You must obtain an average grade of at least D for your laboratory work.

4. You must attend at least 8 (out of 11) lab sessions.
5. You must also achieve at least a D grade in the final exam.

Passing SWEN 102

To pass SWEN 102, a student must satisfy mandatory requirements and gain at least a **C** grade overall.

Withdrawal

The last date for withdrawal from SWEN 102 with entitlement to a refund of tuition fees is Friday 27 July 2012. The last date for withdrawal without being regarded as having failed the course is Friday 28 Sept 2012 -- though later withdrawals may be approved by the Dean in special circumstances.

Rules & Policies

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.

