

SWEN423 - Object-Oriented Paradigms - 2016 - Trimester 1

This document sets out the workload and assessment requirements for SWEN423. 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 popularity of the object-oriented term has grown so much that the phrase object-oriented has become something of a catch-phrase for all that is good in Computing, expanding out of the programming language field and influencing (as an example) software engineering and databases.

This course attempts to obtain a deep understanding of object oriented concepts and to examine various application of object oriented methodologies. We will read and discuss papers about different topics within OO, including inheritance and method dispatch techniques, reasoning and typing techniques, frameworks and library design and language evolution.

Objectives

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

1. describe what it might mean to label something with the phrase object-oriented, (BE Attribute 2(b))
2. describe common object-oriented analysis and design techniques, (BE Attribute 3(b))
3. understand and describe concrete object-oriented designs, (BE Attribute 3(b))
4. compare different object-oriented programming languages (BE Attribute 3(b))
5. discuss, describe, and evaluate the applicability of those techniques, designs, and languages (BE Attribute 3(e))
6. have a good background for beginning research on a topic in this area. (BE Attribute 3(d))

To meet these objectives, we will be reading and discussing papers from the research literature, and write in the appropriate style for submitting research in this area.

This is a research introductory course.

Brief Outline of Course Content

We will read and discuss literature on the following topics:

- Object-Oriented Programming Languages
- Object-Oriented Design
- Frameworks and Patterns
- Agile Development
- Aspect-Oriented Programming
- Other advanced research topics

Textbook

A copy of the SWEN 423 course notes must be obtained. It will be made available for free during one of the first lectures.

Lectures, Tutorials, Laboratories, and Practical work

A schedule of lecture topics, readings, and assignment due dates is available online

Lectures are:

Monday and Wednesday 14.10 - 15.00, on Monday in 14 Kelburn Pde Room 101, on Wednesday in 83 Fairlie Tce Room 201.

There are no labs, tutorials, or help desks, however the forum is a fundamental tool used in this course to provide help and clarifications.

Assignments and Projects

The course will have two Assignments that must be submitted electronically as pdf files. A short Paper Reports must be submitted at every lecture. All course assessment contributes to all objectives.

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

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 online plagiarism prevention tool which identifies material that may have been copied from other sources including the Internet, books, journals, periodicals or the work of other students. Turnitin is used to assist academic staff in detecting misreferencing, misquotation, and the inclusion of unattributed material, which may be forms of cheating or plagiarism. At the discretion of the head of School, handwritten work may be copy typed by the School and subject to checking by Turnitin. You are strongly advised to check with your tutor or the course coordinator if you are uncertain about how to use and cite material from other sources. 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.

Workload

In order to maintain satisfactory progress in SWEN 423, you should plan to spend an average of 10 hours per week on this paper. A plausible and approximate breakdown for these hours would be:

- Lectures: 2 hours per week
- Readings: 3 hours per lecture
- Assignments: 2 hours per week

Achieving a high mark may require more workload

School of Engineering and Computer Science

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

The notice board for SWEN 423 is located on the second floor of the Cotton Building.

Staff

The course organiser and the lecturer for SWEN 423 is [Marco Servetto](#). His contact details are:

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

The class rep. will be chosen after the course start.

Announcements and Communication

The main means of communication outside of lectures will be the SWEN 423 web area at http://ecs.victoria.ac.nz/Courses/SWEN423_2016T1/. There you will find, among other things, this document, the [lecture schedule](#) and [assignment handouts](#), and the [SWEN 423 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.

Trimester Dates and Lecture Times

SWEN 423 is a trimester 1 course. The trimester starts on Monday 29nd February. The examination period at the end of the course is 10 June - 29 June,

Assessment

Your grade for SWEN 423 will be determined based on the following assessment weightings:

<u>Item</u>	<u>Weight</u>
Assignment one	20%
Assignment two	20%
Final Examination	60%

Tests and Exams

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. This exam is an open book exam and you are allowed to bring all your paper notes. 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 1 is 10

Practical Work

Item	Due
Assignment One	5 April 11.59 pm
Assignment Two	17 May 11.59 pm
Paper Summaries	at the beginning of every lecture + posted on forum
Final Examination	TBA in the exam period

Your assignment essays (Assignment One and Assignment Two) should be approximately 3000 words long, and should cite sources appropriately, both from course material and from your own reading. Any material over the word limit may not be read, and (as a consequence) essays that exceed the word limit are unlikely to be marked as well as those which keep within the word limit.

Your assignment essays are due at 11:59pm on the due date. Your essay should be submitted electronically via submission system.

Due dates are hard deadlines. **Late essays will be penalised.** The penalty is 10% per week day after the deadline and essays more than three days late may not be marked, *unless prior agreement with the course coordinator has been made at least 24 hours in advance with respect to the corresponding due date.* 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. 80% of Paper Summaries satisfactory and submitted on time
2. Achieve at least a **D** grade on the final exam

Passing SWEN 423

To pass SWEN 423, a student must satisfy mandatory requirements and gain at least a **C-** grade overall.

Withdrawal

The last date for withdrawal from SWEN 423 with entitlement to a refund of tuition fees is Friday 11 March 2016, *if you have a student loan, you should check with StudyLink as to their rules on withdrawing from courses.* The last date for withdrawal without being regarded as having failed the course is Friday 13 May 2016 -- 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.

[Course Outline as PDF](#)
