

Design Patterns - Course Outline

SWEN 425: 2016 Trimester 2

This document sets out the workload and assessment requirements for SWEN 425. 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.

Objectives

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

1. Describe and evaluate Object-Oriented Design patterns (BE Attributes [2\(b\)](#), [3\(e\)](#)).
2. Construct, deconstruct, and evaluate designs in terms of patterns (BE Attributes [3\(b\)](#), [3\(d\)](#)).
3. Write clearly and think critically about software design (BE Attribute [2\(b\)](#)).

Textbook

The textbook for SWEN 425 is: *Gamma, Helm, Johnson, Vlissides, 'Design Patterns', Addison-Wesley, 1995*. The textbook is an essential component of the course.

Lectures, Tutorials, Laboratories, and Practical work

A [schedule](#) of lecture topics, and readings, will be updated as the course progresses.

Meetings for SWEN 425 are scheduled for: *Tue and Thu 9:00-9:50*, and *Fri 14:10-15:00* in Murphy 105.

The first meeting for this course will be on Tuesday 12 July. The teaching term runs from 11 Jul - 14 Oct 2016. There will be no classes on the second week, Tuesday and Thursday of the third week, and in the last two weeks.

There are no timetabled tutorials, labs, or help desks, but there may be an exam review on the final Friday of the term if requested by the students.

Assignments

There will be three assignments that must be submitted using the online submission system.

The first assignment will be due on Monday of the fourth week; the second will be due on the first Monday back from the mid-term break; and the third will be due on the penultimate Friday of the teaching term. The assignments must be submitted as a PDF, no later than 4 AM the morning after the due date using the online submission system. Late assignments (without prior notice or reasonable excuse) may be penalised by up to one grade step per day. All assignments and the exam relate to all course objectives.

Workload

In order to maintain satisfactory progress in SWEN 425, 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:

- Course meetings: 3
- Readings: 3
- Assignments: 4

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 425 is [Timothy Jones](#).

- [Cotton 254](#)
- tim@ecs.vuw.ac.nz

The class rep is Glen Peek.

- peekglen@ecs.vuw.ac.nz

Announcements and Communication

The main means of communication outside of lecture will be the SWEN 425 web area at http://ecs.victoria.ac.nz/Courses/SWEN425_2016T2/. There you will find, among other things, this document, the [lecture schedule](#) and [assignment handouts](#). Important announcements will also be emailed to the class. You can use the [forum](#) to communicate with other students taking the course.

Assessment

Your grade for SWEN 425 will be determined based on the following assessment weightings:

<u>Item</u>	<u>Weight</u>	<u>Description</u>
Assignment 1	10%	Investigate design patterns and anti-patterns in a programming language of your choice. Up to 5 pages, CRPIT format, due 8 August.
Assignment 2	20%	Modernise a Gang of Four pattern. Up to 8 pages, CRPIT format, due 12 September.
Assignment 3	20%	EITHER Motivate and evaluate a combination of several design patterns OR A case study of an existing system and how it uses patterns. Up to 10 pages, CRPIT format, due 7 October.
Final Examination	50%	Open book.

All items of assessment contribute to all objectives and their BE graduate attributes ([2\(b\)](#), [3\(b\)](#), [3\(d\)](#), [3\(e\)](#)).

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. The study and examination period for trimester T2 is 21 October - 12 November.

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

- Achieve at least a D grade in the second and third assignments, and in the exam.

Passing SWEN 425

To pass SWEN 425, a student must satisfy mandatory requirements and gain at least a **C** grade overall.

Withdrawal

The last date for withdrawal from SWEN 425 with entitlement to a refund of tuition fees is Friday 22 July. The last date for withdrawal without being regarded as having failed the course is Friday 23 September -- though later withdrawals may be approved by the Associate 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](#)
