



Prescription

This course develops a strong understanding of object-oriented design. Students will study modelling and programming techniques that support the analysis, design and development of large and maintainable programs. Students will work together in groups on an engineering problem and use a variety of best practices (e.g. Design Patterns) and notations (e.g. UML). Students will use specialized tools to apply these techniques in practical work.

Course learning objectives

Students who pass this course will be able to:

1. Competently analyse a software engineering problem and design and implement a solution, using appropriate tools.
2. Apply correctly a range of techniques and notations for designing extensible and reusable software.
3. Apply correctly techniques for ensuring and assessing the quality of software.
4. Work co-operatively in a team to solve a software engineering problem.

Course content

The course is primarily offered in-person, but there will also be a remote option and there will be online alternatives for all the components of the course for students who cannot attend in-person.

Students taking this course remotely must have access to a computer with camera and microphone and a reliable high speed internet connection that will support real-time video plus audio connections and screen sharing. Students must be able to use Zoom; other communication applications may also be used. A mobile phone connection only is not considered sufficient. The computer must be adequate to support the programming required by the course: almost any modern windows, macintosh, or unix laptop or desktop computer will be sufficient, but an Android or IOS tablet will not.

The course has substantial group work, and remote students will be expected to participate fully in the group work using a variety of communication tools.

If the assessment of the course includes tests, the tests will generally be run in-person on the Kelburn campus. There will be a remote option for students who cannot attend in-person and who have a strong justification (for example, being enrolled from overseas).

The remote test option will use Zoom for online supervision of the tests and you must be able to use Zoom with a camera, microphone, and screen-sharing. Students who will need to use the remote test option must contact the course coordinator in the first two weeks to get permission and make arrangements.

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Withdrawal from Course

Withdrawal dates and process:

<https://www.wgtn.ac.nz/students/study/course-additions-withdrawals>

Lecturers

Thomas Kuehne (Coordinator)

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233 Cotton, Kelburn

Jens Dietrich

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261 Cotton, Kelburn

Teaching Format

This course will be offered in-person and online. For students in Wellington, there will be a combination of in-person components (labs and helpdesks) and web/internet based resources. It will also be possible to take the course entirely online for those who cannot attend on campus, with all the components provided in-person also made available online.

The course will be taught using two lectures per week and five fortnightly two-hour labs. The lectures and lab exercises will prepare students for the assignments and the group project.

Student feedback

Student feedback on University courses may be found at: www.cad.vuw.ac.nz/feedback/feedback_display.php

Dates (trimester, teaching & break dates)

- Teaching: 05 July 2021 - 08 October 2021
- Break: 16 August 2021 - 29 August 2021
- Study period: 11 October 2021 - 14 October 2021
- Exam period: 15 October 2021 - 06 November 2021

Class Times and Room Numbers

05 July 2021 - 15 August 2021

- **Monday** 16:10 - 17:00 – LT101, Maclaurin, Kelburn
- **Wednesday** 16:10 - 17:00 – LT101, Maclaurin, Kelburn
- **Thursday** 16:10 - 17:00 – LT101, Maclaurin, Kelburn

30 August 2021 - 10 October 2021

- **Monday** 16:10 - 17:00 – LT101, Maclaurin, Kelburn
- **Wednesday** 16:10 - 17:00 – LT101, Maclaurin, Kelburn
- **Thursday** 16:10 - 17:00 – LT101, Maclaurin, Kelburn

Other Classes

Five fortnightly two-hour labs.

Set Texts and Recommended Readings

Required

There are no required texts for this offering.

Mandatory Course Requirements

In addition to achieving an overall pass mark of at least 50%, students must:

- make a reasonable attempt on the group project, to demonstrate achievement of all the CLOs of the course.

If you believe that exceptional circumstances may prevent you from meeting the mandatory course requirements, contact the Course Coordinator for advice as soon as possible.

Assessment

Please note the link to the "Academic Integrity and Plagiarism" rules at the bottom of the Course Outline on the SWEN 225 website. You must not use the work of others without attributing it.

Assessment Item	Due Date or Test Date	CLO(s)	Percentage
Five Labs	Week 2, 4, 6, 8, 10	CLO: 1,2	10%
Assignment 1	Week 4	CLO: 1,2,3,4	15%
Assignment 2	Week 6	CLO: 1,2,3,4	15%
Group Project	Week 12	CLO: 1,2,3,4	40%
Test	Week 16	CLO: 1,2,3	20%

Penalties

You have a total of three "slip days" which you may use for any number of late submissions during the course. There will be no penalty applied as long as the sum of delays does not exceed three days. You do **not** need to apply for the use of slip days; any assignments submitted late, will automatically take away the respective amount of slip days from your slip day balance, provided you have any left. The slip days are intended to cover minor illnesses or other personal reasons for being late. You should only ask for extensions in the case of more significant or longer lasting problems (in which case you may need documentation). Once all slip days have been used, no marks will be awarded for any further late submissions.

Extensions

Individual extensions will only be granted in exceptional personal circumstances, and should be negotiated with the course coordinator before the deadline whenever possible. Documentation (e.g., medical certificates) may be required.

Submission & Return

All work (with the exception of some project artefacts) is submitted through the ECS submission system, accessible through the course web pages. Marks and comments will be returned through the ECS

marking system, also available through the course web pages.

Marking Criteria

You may legally use work by others if you attribute it to the original source but the respective components will not count towards assessment grades.

Group Work

Assignments A1 and A2 and the project will be worked on in groups.

Peer Assessment

The group project mark involves a peer assessment component.

Workload

Although the workload will vary from week to week, you should expect to spend approximately 10–12 hours per week on the course to give a total of 150 hours study time for the course.

Teaching Plan

See: https://ecs.wgtn.ac.nz/Courses/SWEN225_2021T2/CourseSchedule

Communication of Additional Information

All online material for this course can be accessed at https://ecs.wgtn.ac.nz/Courses/SWEN225_2021T2/

Links to General Course Information

- Academic Integrity and Plagiarism: <https://www.wgtn.ac.nz/students/study/exams/integrity-plagiarism>
- Academic Progress: <https://www.wgtn.ac.nz/students/study/progress/academic-progress> (including restrictions and non-engagement)
- Dates and deadlines: <https://www.wgtn.ac.nz/students/study/dates>
- Grades: <https://www.wgtn.ac.nz/students/study/progress/grades>
- Special passes: Refer to the Assessment Handbook, at <https://www.wgtn.ac.nz/documents/policy/staff-policy/assessment-handbook.pdf>
- Statutes and policies, e.g. Student Conduct Statute: <https://www.wgtn.ac.nz/about/governance/strategy>
- Student support: <https://www.wgtn.ac.nz/students/support>
- Students with disabilities: https://www.wgtn.ac.nz/st_services/disability/
- Student Charter: <https://www.wgtn.ac.nz/learning-teaching/learning-partnerships/student-charter>
- Terms and Conditions: <https://www.wgtn.ac.nz/study/apply-enrol/terms-conditions/student-contract>
- Turnitin: <http://www.cad.vuw.ac.nz/wiki/index.php/Turnitin>
- University structure: <https://www.wgtn.ac.nz/about/governance/structure>
- VUWSA: <http://www.vuwsa.org.nz>

Offering CRN: **[30043](#)**

Points: 15

Prerequisites: SWEN 221;

Restrictions: SWEN 222

Duration: 05 July 2021 - 07 November 2021

Starts: Trimester 2

Campus: Kelburn