

School of Engineering and Computer Science

Te Kura Mātai Pūkaha, Pūrorohiko



Prescription

This course introduces the processes, practices, and tools required to engineer medium to large software systems, and to address challenges arising from the emerging complexity of such systems. Topics include software craft, architecture, design, implementation, testing, maintenance, quality assurance, configuration management, build automation and principled use of components and libraries, and open-source development. Practical work will use integrated development environments, automation, and domain specific languages.

Course learning objectives

Students who pass this course should be able to:

1. Demonstrate an understanding of the main issues involved in the engineering of medium to large software systems.
2. Demonstrate competence in software engineering processes, practices, and tools.

Course content

2022: The course is primarily offered in-person, and there are components such as tests, labs, tutorials, and marking sessions which require in-person attendance. There will be remote alternatives for all the components of the course, but these are only available to students studying from outside the Wellington region. The remote option for tests will use a Zoom-based system for online supervision of the tests.

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.

Withdrawal from Course

Withdrawal dates and process:

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

Lecturers

Dr Jens Dietrich (Coordinator)

jens.dietrich@vuw.ac.nz 04 463 9514

Teaching Format

This course will be offered in-person and online. For students in Wellington, there will be a combination of in-person components 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.

During the trimester there will be three lectures and one tutorial per week. There are no regular helpdesks for this course. If they are required they will be scheduled as needed.

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: 28 February 2022 - 03 June 2022
- Break: 11 April 2022 - 24 April 2022
- Study period: 06 June 2022 - 09 June 2022
- Exam period: 10 June 2022 - 25 June 2022

Class Times and Room Numbers

28 February 2022 - 10 April 2022

- **Tuesday** 10:00 - 10:50 – LT102, Maclaurin, Kelburn
- **Thursday** 10:00 - 10:50 – LT323, Hunter, Kelburn
- **Friday** 10:00 - 10:50 – LT323, Hunter, Kelburn

25 April 2022 - 05 June 2022

- **Tuesday** 10:00 - 10:50 – LT102, Maclaurin, Kelburn
- **Thursday** 10:00 - 10:50 – LT323, Hunter, Kelburn
- **Friday** 10:00 - 10:50 – LT323, Hunter, Kelburn

Set Texts and Recommended Readings

Required

There is no set text for this course.

Recommended

Recommended Reading will be available via the Talis Aspire system.

Mandatory Course Requirements

There are no mandatory course requirements for this 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

This course will be assessed via three individual projects (Assignments 1, 2 and 3) and a test:

Assessment Item	Due Date or Test Date	CLO(s)	Percentage
Assignment 1 (25 hours)	1/4/2022	CLO: 1,2	25%
Assignment 2 (25 hours)	6/5/2022	CLO: 1,2	25%
Assignment 3 (25 hours)	1/6/2022	CLO: 1,2	30%
Test (2 hours, during assessment period)		CLO: 1,2	20%

Penalties

Late submissions will incur an automatic penalty of 10% of the final mark per day.

Extensions

Students have four slip days across the course that will be granted automatically.

Work submitted after slip days without an extension may be marked pass/fail.

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

Submission & Return

All work should be 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

Marking criteria will vary for each assessment component and will form part of the course and project descriptions.

Workload

In order to maintain satisfactory progress in SWEN 301, you should plan to spend an average of 10 hours per week on this paper, and 150 hours over the entire course. A plausible and approximate breakdown for these hours would be:

- Lectures and tutorials: 4 hours,
- Readings: 2-3 hours, and
- Assignments and project: 3-4 hours.

Teaching Plan

See: https://ecs.wgtn.ac.nz/Courses/SWEN301_2022T1/LectureSchedule

Communication of Additional Information

The main means of communication outside of lectures will be the SWEN 301 web area at https://ecs.wgtn.ac.nz/Courses/SWEN301_2022T1/. There you will find, among other things, this document, the lecture schedule and assignment handouts, and the SWEN 301 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.

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: [17183](#)

Points: 15

Prerequisites: SWEN 225

Duration: 28 February 2022 - 26 June 2022

Starts: Trimester 1

Campus: Kelburn