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

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 Marco Servetto (Coordinator)

marco.servetto@vuw.ac.nz   04 463 5820

CO 258 Cotton Building (All Blocks), Gate 7, Kelburn Parade, Kelburn

Dr Craig Anslow

craig.anslow@vuw.ac.nz   04 463 6449

CO 260 Cotton Building (All Blocks), Gate 7, Kelburn Parade, 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.

The course will be taught using two or three lectures per week and five two-hour labs. The lectures and lab exercises will prepare students for the assignment 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: 11 July 2022 - 14 October 2022
- Break: 22 August 2022 - 04 September 2022
- Study period: 17 October 2022 - 20 October 2022
- Exam period: 21 October 2022 - 12 November 2022

Class Times and Room Numbers

11 July 2022 - 21 August 2022
- **Monday** 15:10 - 16:00 – MT228, Student Union, Kelburn
- **Wednesday** 15:10 - 16:00 – MT228, Student Union, Kelburn
- **Friday** 15:10 - 16:00 – MT228, Student Union, Kelburn

05 September 2022 - 16 October 2022
- **Monday** 15:10 - 16:00 – MT228, Student Union, Kelburn
- **Wednesday** 15:10 - 16:00 – MT228, Student Union, Kelburn
- **Friday** 15:10 - 16:00 – MT228, Student Union, Kelburn

Other Classes

Five 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.
- By the end of the course, complete at least 80% of the questions on the Web Assessment Tool (to this aim, completion after the WAT deadline is accepted).
- Acheive at least 40% on the Term test.
- Acheive at least 40% on the Final Test.

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
Web Assessment Tool	Week 2--11	CLO: 1,2,3,4	10%
Five Labs	Week 3, 4, 6, 8, 9	CLO: 1,2	10%
Assignment 1	Week 5	CLO: 1,2,3,4	10%
Term Test	Week 6	CLO: 1,2,3,4	15%
Group Project	Week 11	CLO: 1,2,3,4	30%
Final Test	Week 16	CLO: 1,2,3	25%

Penalties

You have a total of three "slip days" which you may use for late submission for the Assignment and the Group Project 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.

Note: Slip Days can not be used for the Web Assessment Tool (WAT) deadlines

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, or on the Web Assessment Tool. 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

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_2022T2/LectureSchedule

Communication of Additional Information

All online material for this course can be accessed at https://ecs.wgtn.ac.nz/Courses/SWEN225_2022T2/

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-progess (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: 11 July 2022 - 13 November 2022
Starts: Trimester 2
Campus: Kelburn