School of
Engineering and Computer Science
Te Kura Mātai Pūkaha, Pūrorohiko

Prescription

The course will investigate tools, techniques and concepts for building interactive computer games, including software engineering techniques, HCI principles, AI methods and design strategies. The course will be co-taught with Media Design and will involve a substantial group project consisting of students from both disciplines.

Course learning objectives

Students who pass this course should be able to:

1. Understand the range of design skills and activities required to develop computer games, and be able to interact knowledgably with experts with skills complementary to their own. (BSc graduate attributes 2, 5).
2. Apply a variety of programming and software engineering techniques to the design and implementation of computer games. (BSc graduate attribute 1).
3. Use integrated game development tools to build interactive computer games. (BE graduate attributes 1).
4. Work in a team with designers from other disciplines to design, develop, and evaluate an interactive computer game. (BE graduate attribute 5).
5. Reflect on the quality of their work and identify opportunites to learn and improve.

Course content

The course is co-taught with MDDN 321. Lectures will be live-streamed and recorded with those students wanting to participate in-person being part of the interactive lecture format.

There will be online alternatives for all the components of the course for students who cannot attend in-person. The course involves group work, and remote students must be able to participate in the group activities.

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: This course requires access to a computer capable of running Unreal Engine. Android or IOS tablets will not satisfy this requirement.

Withdrawal from Course

Withdrawal dates and process:
https://www.wgtn.ac.nz/students/study/course-additions-withdrawals

Lecturers

Dr Simon McCallum (Coordinator)

simon.mccallum@vuw.ac.nz 04 463 5352

CO 257 Cotton Building (All Blocks), Gate 7, Kelburn Parade, Kelburn

Teaching Format

This course will be offered in-person and online. For students in Wellington, the lectures will have in-person interaction and will be live-streamed and recorded. It will also be possible to take the course entirely online for those who cannot attend on campus.

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

- **Wednesday** 16:10 - 17:00 – LT118, Laby, Kelburn

05 September 2022 - 16 October 2022

- **Wednesday** 16:10 - 17:00 – LT118, Laby, Kelburn

Other Classes

Lab times are 11:30am - 1pm on Monday or Wednesday in Wigan WG401 on Te Aro Campus. COMP313 Students will work with Design students for at least 1 hours per week during these times. The specific hour will be determined by which group you are working with.

Set Texts and Recommended Readings

Required

There are no required texts for this offering.

Recommended

There are no assigned texts for the course. There will be a list of readings and other resources that you

may find helpful, and some Game Development books will be placed on closed reserve in the library.

Mandatory Course Requirements

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

- get at least a '**D**' in the individual assessment component of the group project.

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

There will be three assessed parts in COMP 313.

1. Learning to develop in a game engine (20 hours)
2. Game Development Project (70 hours)
3. Professional Game Development Documentation (30 hours)

Assessment Item	Due Date or Test Date	CLO(s)	Percentage
Assignment 1	end of week 4	CLO: 1,2	30%
Group Project	end of week 12	CLO: 1,2,3	40%
Professional Game Development Documentation	beginning week 14 (week 1 assessment period)	CLO: 1,2,3,4	30%

Penalties

Late submission will incur a penalty of 10% shrinking cap per day (after the available 3 late days) on that assessment item unless previously negotiated. Shrinking cap reduces the maximum mark achievable per day - so for example after 3 days the maximum grade is 70%, but if you are given a 65% your grade will be 65%. This discourages working harder after deadline to get a pass.

Extensions

The course allows 3 late days on individual assignements, which cannot be used on group assignments. Individual extensions will only be granted when it benefits the student and in exceptional personal circumstances. Extensions should be negotiated with the course coordinator before the deadline whenever possible. Documentation (eg, medical certificate) may be required.

Submission & Return

All work 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.

Group Work

A significant part of the course is a group project to design a game and implement a "Proof of Concept".

The groups will either be a mix of Media Design students and Computer Science students or potentially

just Computer Science students, depending on numbers. The assessment will largely be individually-based.

Peer Assessment

There will be peer assessment as part of the individual documentation of the game project, however this will be based on assessment of your feedback to other groups and your response to feedback rather than your peers evaluation directly contributing to your assessment.

Required Equipment

The practical work for the individual and group projects will be done using Unreal Engine , which runs on Windows and OSX. You will be using OSX labs at the School of Design. You may also use your own computers, although this is limited to Windows 7-10 and OSX based machines. There is a free version of Unreal Engine available at https://www.unrealengine.com/en-US/

Workload

In order to maintain satisfactory progress in COMP 313, you should plan to spend ten hours per week on this course; A plausible and approximate breakdown for these hours would be:

- Lectures and labs: 3 hours per week.
- Independent and group work on assignments: 7 hours per week.

Teaching Plan

See https://ecs.wgtn.ac.nz/Courses/COMP313_2022T2/LectureSchedule

Communication of Additional Information

Links to all online material for this course can be accessed at https://ecs.wgtn.ac.nz/Courses/COMP313_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: 25049

Points: 15
Prerequisites: 30 pts from (COMP 261, NWEN 241, 243, SWEN 222, 225)
Duration: 11 July 2022 - 13 November 2022
Starts: Trimester 2
Campus: Kelburn