

# School of Engineering and Computer Science

Te Kura Mātai Pūkaha, Pūrorohiko



## Prescription

This course addresses the fundamental programming skills required to process, transform, analyse and present data. The course will explore a range of kinds of data, kinds of analysis and kinds of visualisation that can be performed on the data, and give students expertise in a variety of programming techniques and tools to accomplish this analysis and visualisation. The practical assignments will enable students to develop programming skills that they will be able to apply in many different fields of study. The course does not assume any background in programming.

## Course learning objectives

Students who pass this course will be able to:

1. Understand and create Python programs to perform basic operations on data sets, including statistical summaries and searching according to a criterion.
2. Use basic file and database tools to organise, manage, and store data.
3. Use Python programming tools to create simple visualisations of data in order to enable understanding of data sets and analyses of data.

## Withdrawal from Course

Withdrawal dates and process:

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

## Lecturers

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### Xiaoying Gao (Coordinator)

Xiaoying.Gao@vuw.ac.nz

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### Marcus Frean

Marcus.Frean@vuw.ac.nz 04 4635672

337 Cotton, Kelburn

## Teaching Format

The course will involve lectures to present key ideas, demonstrate programming techniques, and review student work. The labs will explore the material from the lectures and online material and develop the

skills needed to work on the assignments. Students will also need to work on assignments outside the scheduled lab sessions.

## Student feedback

Student feedback on University courses may be found at: [www.cad.vuw.ac.nz/feedback/feedback\\_display.php](http://www.cad.vuw.ac.nz/feedback/feedback_display.php)

## Dates (trimester, teaching & break dates)

- Teaching: 08 July 2019 - 13 October 2019
- Break: 19 August 2019 - 01 September 2019
- Study period: 14 October 2019 - 17 October 2019
- Exam period: 18 October 2019 - 09 November 2019

## Class Times and Room Numbers

### 08 July 2019 - 18 August 2019

- **Monday** 16:10 - 17:00 – LT102, Maclaurin, Kelburn
- **Tuesday** 16:10 - 17:00 – LT102, Maclaurin, Kelburn
- **Thursday** 16:10 - 17:00 – LT102, Maclaurin, Kelburn

### 02 September 2019 - 13 October 2019

- **Monday** 16:10 - 17:00 – LT102, Maclaurin, Kelburn
- **Tuesday** 16:10 - 17:00 – LT102, Maclaurin, Kelburn
- **Thursday** 16:10 - 17:00 – LT102, Maclaurin, Kelburn

## Other Classes

There will be two labs each week and the students need to sign up.

- Lab A: choose one of Tue 11-12, 12-1, 3-4, Wed 11-12 at CO219
- Lab B: choose one of Wed 4-5, Thu 11-12, 12-1, Fri 12-1 at CO219

The labs start in the second week of the trimester. You must sign up for a lab session on the web: (at <https://www.victoria.ac.nz/students/study/timetables/tutorial-sign-up> ) (also linked from the course home page).

We will also run help desks from the second week of the course. The details for all of these are available on the [weekly timetable page](#).

## Set Texts and Recommended Readings

### Required

The textbook is intended to be a resource and to provide you with explanations that will complement the lectures.

The textbook for COMP 132 is:

- *Python for Data Analysis, Data wrangling with pandas, numpy and lpython*, by Wes McKinney, 2nd Edition, published by O'Reilly (2018: ISBN 9781491957660).

# Mandatory Course Requirements

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

- submit reasonable attempts for at least 4 assignments. A "reasonable attempt" is a D (40%) or better.

*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

Assessment Item	Due Date or Test Date	CLO(s)	Percentage
6 fortnightly assignments (10 hours each, including lab time)	Friday 5pm	CLO: 1,2,3	20%
Test (50 minutes)	Week 7	CLO: 1,2,3	20%
Exam (2 hours)	TBC	CLO: 1,2,3	60%

## Penalties

3 LATE DAYS POLICY for Assignments. Each student will have 3 "late days" which you may choose to use for any assignment or assignments during the course. There will be no penalty applied for these late days. You do not need to apply for these - any late days you have left will be automatically applied to assignments that you submit late.

Any late assignments submitted after you run out the 3 days will generally not be marked, unless you have made arrangements on the basis of exceptional circumstances with the lecturer.

## 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 (eg, medical certificate) may be required.

## Submission & Return

All work must 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.

Assignments are due Friday 5pm, and you have about two weeks to finish each assignment. You should target to finish at about noon time. We strongly advise you **NOT** to leave the assignments to the last minute, since there may not be any help available near the submission deadline.

When you have completed them, the assignments should be **submitted via the online submission system**. This means that you can submit assignments from the ECS labs or from a computer at home (or anywhere on the internet). You may resubmit as many times as you wish, *but the most recent submission of a file will be marked*. (You'll learn about how to submit assignments using a web browser in the first assignment).

## Group Work

We encourage you to discuss the assignments in small groups in the labs.

Students are allowed to work in pairs for the first question in the assignments. (Note: This is allowed for the first question only!) As long as you both include the name of the person you worked with on your assignment, you and your partner may each submit the same answer for the first question. You must do the other questions of the assignment yourself, and you may not work on shared code in groups of more than two. Make sure you read the section on plagiarism.

You may choose a partner yourself, and you do not have to have the same partner (or any partner) for all the assignments. When choosing a partner, find someone with a similar level of confidence as yourself - working with a partner who is much more confident about programming than you will probably not help you to learn the material.

## Required Equipment

Students are not required to have their own computers, but it helps and the first assignment provides information on how to work on the programming assignments on their own computers.

## Workload

Although the workload will vary from week to week, you should expect to spend approximately 10 hours per week on the course to give a total of 150 hours study time for the course. To work on your assignments beyond the scheduled lab times, you may use any of the ECS computing labs on the second floor of Cotton at any time, unless they are booked for another class. You may also use your own computer.

## Teaching Plan

See: [https://ecs.victoria.ac.nz/Courses/COMP132\\_2019T2/CourseSchedule](https://ecs.victoria.ac.nz/Courses/COMP132_2019T2/CourseSchedule)

## Communication of Additional Information

All online material for this course can be accessed at [https://ecs.victoria.ac.nz/Courses/COMP132\\_2019T2/](https://ecs.victoria.ac.nz/Courses/COMP132_2019T2/)

## Links to General Course Information

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

- University structure: <https://www.victoria.ac.nz/about/governance/structure>
- VUWSA: <http://www.vuwsa.org.nz>

**Offering CRN:** [30095](#)

**Points:** 15

**Duration:** 08 July 2019 - 10 November 2019

**Starts:** Trimester 2

**Campus:** Kelburn