

Special Topic: Convex Optimisation - Course Outline

ECEN 426: 2016 Trimester 2

This document sets out the workload and assessment requirements for ECEN 426. It also provides contact information for staff involved in the course. If the contents of this document are altered during the course, you will be advised of the change by an announcement in lectures and/or on the course web site. A printed copy of this document is held in the School Office.

Objectives

By the end of the course, students should be able to perform the following, and in doing so have acquired specific graduate attributes (linked in the electronic copy of this document):

- Demonstrate an understanding of fundamental concepts in convex optimization. [3\(a\)](#) [3\(c\)](#)
- Able to work with the mathematical foundations of convex optimization: convex sets, convex functions, convex optimization, duality. [3\(b\)](#)
- Recognize and formulate convex optimization problems. [3\(b\)](#)
- Solve convex optimization problems by selecting and implementing suitable algorithms. [3\(c\)](#)

All objectives are primarily assessed by a midterm and a final exam, and to a lesser degree by the grades for the written homework assignments. (The main purpose of the assignments is to learn the material.)

Textbook

The textbook for ECEN 426 is:

- S. Boyd and L. Vandenberghe, *Convex Optimization*, Cambridge University press downloadable [here](#)

Lectures, Tutorials, Laboratories, and Practical work

ECEN 426 will have lectures and tutorials, but no laboratories or practical work.

A [schedule](#) of lecture topics, readings, and assignment due dates is available online. The lectures are all held in Von Zedlitz 104. They are on Tuesday, Thursday, Friday 9am - 10am. (Assignments will be discussed on Fridays.)

Assignments and Projects

The course will have weekly problem assignments.

Workload

In order to maintain satisfactory progress in ECEN 426, you should plan to spend an average of at least *10* hours per week on this paper. A plausible and approximate breakdown for these hours would be:

- Lectures and tutorials: 3
- Readings: 3
- Assignments: 4

School of Engineering and Computer Science

The School office is located on level three of the Cotton Building ([Cotton 358](#)).

The notice board for ECEN 426 is located on the second floor of the Cotton Building.

Staff

The course organiser for ECEN 426 is [Bastiaan Kleijn](#). Lecturers will be Bastiaan Kleijn and Sudhir Singh of Callaghan Innovation. Their contact details are:

- [bastiaan.kleijn](mailto:bastiaan.kleijn@ecs.vuw.ac.nz) at the usual address ecs.vuw.ac.nz
 - [Alan MacDiarmid 226](#)
 - +64 4 463 6730

Tutor details

- The course has no tutors

Announcements and Communication

The main means of communication outside of lectures will be the ECEN 426 web area at http://ecs.victoria.ac.nz/Courses/ECEN426_2016T2/. There you will find, among other things, this document, the [lecture schedule](#) and [assignment handouts](#), and the [ECEN 426 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.

Assessment

Your grade for ECEN 426 will be determined based on the following assessment weightings

<u>Item</u>	<u>Weight</u>
Homework	20 %
Midterm	30 %
Final Examination	50 %

Tests and Exams

Description of tests and what to do if you can't attend them

The [timetable for final examinations](#) will be available from the University web site and will be posted on a notice board outside the faculty office. The final examination will be **3** hours long. No computers, electronic calculators or similar device will be allowed in the final examination. Paper non-English to English dictionaries will be permitted. The examination period for trimester 2 is 21 October - 12 November.

Practical Work

The homework will be assigned on a weekly basis.

As we will discuss the homework at the tutorials, late homework will receive zero mark.

Plagiarism

Working Together and Plagiarism

We encourage you to discuss the principles of the course and assignments with other students, to help and seek help with programming details, problems involving the lab machines. However, any work you hand in must be your own work.

The [School policy on Plagiarism](#) (claiming other people's work as your own) is available from the course home page. Please read it. We will penalise anyone we find plagiarising, whether from students currently doing the course, or from other sources. Students who knowingly allow other students to copy their work may also be penalised. If you have had help from someone else (other than a tutor), it is always safe to state the help that you got. For example, if you had help from someone else in writing a component of your code, it is not plagiarism as long as you state (eg, as a comment in the code) who helped you in writing the method.

Mandatory Course Requirements

1. To achieve a passing grade on the final examination

Any student who is concerned that they have been (or might be) unable to meet any of the MCRs because of exceptional personal circumstances, should contact the course coordinator as soon as possible.

Passing ECEN 426

To pass ECEN 426, a student must satisfy mandatory requirements and gain at least a **C-** grade overall.

Withdrawal

The last date for withdrawal from ECEN 426 with entitlement to a refund of tuition fees is Friday 22 July 2016. The last date for withdrawal without being regarded as having failed the course is Friday 23 September 2016 -- though later withdrawals may be approved by the Dean in special circumstances.

Rules & Policies

Find key dates, explanations of grades and other useful information at <http://www.victoria.ac.nz/home/study>.

Find out about academic progress and restricted enrolment at <http://www.victoria.ac.nz/home/study/academic-progress>.

The University's statutes and policies are available at <http://www.victoria.ac.nz/home/about/policy>, except qualification statutes, which are available via the Calendar webpage at <http://www.victoria.ac.nz/home/study/calendar> (See Section C).

Further information about the University's academic processes can be found on the website of the Assistant Vice-Chancellor (Academic) at <http://www.victoria.ac.nz/home/about/avcacademic>

All students are expected to be familiar with the following regulations and policies, which are available from the school web site:

[Grievances](#)

[Student and Staff Conduct](#)

[Meeting the Needs of Students with Disabilities](#)

[Student Support](#)

[Academic Integrity and Plagiarism](#)

[Dates and Deadlines including Withdrawal dates](#)

[School Laboratory Hours and Rules](#)

[Printing Allocations](#)

[Expectations of Students in ECS courses](#)

The School of Engineering and Computer Science strives to anticipate all problems associated with its courses, laboratories and equipment. We hope you will find that your courses meet your expectations of a quality learning experience.

If you think we have overlooked something or would like to make a suggestion feel free to talk to your course organiser or lecturer.

[Course Outline as PDF](#)
