

Analogue Circuits and Systems - Course Outline

ECEN 203: 2016 Trimester 1

This document sets out the workload and assessment requirements for ECEN 203. 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:

1. Use a range of circuit analysis techniques to find unknown voltages and currents (BE graduate attribute 3(a))
2. Understand the basic concepts of feedback and its application to amplifier circuits (BE graduate attribute 3(a))
3. Calculate common Laplace transforms from first principles and by using a tables of common transforms and properties (BE graduate attribute 3(a))
4. Produce mathematical models of electronic circuits and electromechanical systems and apply Laplace theory to the analysis of electronic circuits, electromechanical systems and communication systems (BE graduate attribute 3(c) and 3(b))
5. Use the Matlab programming language to solve problems in linear systems and signals (BE graduate attribute 3(f)).

Textbook

There is no required textbook for ECEN 203; however, supplemental reading of a relevant textbook to complement lectures, assignments, and tests is strongly encouraged. Suitable textbooks include:

- * Nilsson & Riedel, Electric Circuits, 9th Edition.
- * Hayt, Kemmerly & Durbin, Engineering Circuit Analysis, 8th Edition.
- * Alexander & Sadiku, Fundamentals of Electric Circuits, 5th Edition.

Course notes will also be available to complement lectures, but are generally not sufficient to replace them.

Lectures, Tutorials, Laboratories, and Practical work

A [schedule](#) of lecture topics, readings, and assignment due dates is available online.

Lectures for ECEN 203 are: Wednesdays and Thursdays 16:10–17:00 in MYLT101.

Problem-solving tutorials, which are an essential part of the course, will be held on Mondays 16:10–17:00 in MYLT101.

Laboratories will be held on Mondays, 12:00–15:00, Wednesdays, 12:00–15:00, and Thursdays, 12:00–15:00 in LB217. See the [list](#) of lab allocations to determine which day to attend.

The course runs from 29 Feb – 23 Mar and from 31 Mar – 22 Apr and from 2 May – 3 Jun 2016.

Tests and Assignments

A large part of this course involves the mastery of skills essential for progression in the ECEN/ELCO specialisation of the BE/BSc degree. Hence much of the assessment will be via fortnightly tests in weeks 3, 5, 9, and 11. The day and time for tests are tentatively scheduled as Tuesdays between 18:00 and 19:00, although this details will be confirmed during week 1. Contact [Ciaran Moore](#) in the first instance if you are unable to attend a test.

Two assignments exploring the application of skills taught in the course (BE Graduate attributes 3(b) and 3(f)) will be given in weeks 4 and 10, and will be due at the end of weeks 6 and 12, respectively. Submission will be via the dropboxes located outside the electronics lab (LB217) on the second floor of the Laby building. Work submitted late will be penalised at 10%/day; work submitted more than a week late will not be marked.

Although all of the assessment for ECEN 203 is individual, students are encouraged to discuss practice problems with their peers and to form study groups as required.

Workload

In order to maintain satisfactory progress in ECEN 203, 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: 1
- Assignments or Labs: 4
- Practice questions: 2

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 203 is located on the second floor of the Cotton Building.

Staff

The course organiser for ECEN 203 is [Ciaran Moore](#). The lecturers for the course are [Ciaran Moore](#) and [Christopher Hollitt](#). Their contact details are:

- Ciaran Moore
- [MacDiarmid 227](#)
- +64 4 463 5233 x8931
- Ciaran.Moore@ecs.vuw.ac.nz

- Christopher Hollitt
- [MacDiarmid 223](#)
- +64 4 463 6965
- Christopher.Hollitt@ecs.vuw.ac.nz
- Office hours: Thursday 2-4pm

The tutors for this course are Hamish Colenso and Farzaneh Fadakar.

The class representative for this course is Charlene Leong, charleneleong@gmail.com.

Announcements and Communication

The main means of communication outside of lectures will be the ECEN 203 web area at http://ecs.victoria.ac.nz/Courses/ECEN203_2016T1/. There you will find, among other things, this document, the [lecture schedule](#) and [assignment handouts](#), and the [ECEN 203 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 203 will be determined based on the following assessment weightings:

Item	Weight	Objective
Tests	4 * 10%	1-3
Assignments	2 * 10%	1, 4, 5
Final Examination	40%	1-3

Bachelor of Engineering students should be aware that copies of their assessed work may be retained for inspection by an IPENZ appointed accreditation panel.

Exam

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. Scientific calculators may be used, but no computers or similar device will be allowed in the final examination. Paper non-English to English dictionaries will be permitted. The examination period for trimester 1 is 10 June - 29 June.

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

There are no mandatory course requirements for ECEN 203.

Passing ECEN 203

To pass ECEN 203, a student must satisfy mandatory requirements and gain at least a **C-** grade overall.

Withdrawal

The last date for withdrawal from ECEN 203 with entitlement to a refund of tuition fees is Friday 11 March 2016. The last date for withdrawal without being regarded as having failed the course is Friday 13 May 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](#)
