

Programming Languages - Course Outline

COMP 304: 2014 Trimester 1

This document sets out the workload and assessment requirements for COMP 304. 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.

The Course

COMP 304 will broaden your knowledge about programming languages by introducing you to functional and logic programming. These programming paradigms are very different from the imperative underpinning of the programming languages discussed at levels 100 and 200. Understanding these paradigms and their associated programming techniques and idiomatic usages will not only put you into a better position to evaluate language designs but also will allow you to use a number of these techniques in conventional programming languages. COMP 304 also looks at the history of programming languages, enabling you to place the discussed programming languages into their respective context and thus obtain a broader perspective.

Prerequisites

The prerequisites for COMP 304 are:

- COMP 261 or SWEN 221 or NWEN 241
- SWEN 224
- MATH 161 or MATH 114.

Objectives

By the end of the course, you should be able to:

- understand and describe the underlying principles of a variety of programming languages.
- read, design and write programs in a functional programming language.
- read, design and write programs in a logic programming language.
- understand the various advantages and disadvantages of the imperative, functional, and logic paradigms.
- (-> BE graduate attributes [3\(c\)](#) and [3\(f\)](#) / BSc graduate attributes [1](#) and [4](#))

A set of assignments will allow you to practice the practical aspects of these topics, and help you to understand the basic concepts. The final examination will assess your understanding of the topics of the course.

Trimester Dates and Lecture Times

Comp304 is a trimester 1 course. The trimester starts on Monday 3rd March. The examination period at the end of the course is 13 June - 2 July,

Lectures and Tutorials

Lectures for COMP 304 take place:

Tue 1410 - 1500 Hugh Mackenzie [Kelburn]LT103
Wed 1410 - 1500 Alan MacDiarmid Building [Kelburn]LT105
Fri 1410 - 1500 Murphy [Kelburn]LT101

- **Tuesday 14.10-15.00**
Hugh Mackenzie [Kelburn]LT103
- **Wednesday, 14.10-15.00**
Alan MacDiarmid Building [Kelburn]LT105
- **Friday, 14.10-15.00**
Murphy [Kelburn]LT101, will be used for tutorials.

Lectures will discuss material beyond the slide copies and tutorials will aim to reinforce learning through problem solving exercises and allowing more open discussions. Although attendance is not compulsory it is strongly recommended.

We will usually hand out copies of the lecture slides. though we cannot guarantee to always have them ready for the

lecture. It will always be possible to download slides from the [schedule of lecture topics](#).

Assignments

There will be a set of assignments which are aimed at developing your programming skills and deepening your knowledge about functional and logic programming.

No.	Title	Due Date
1	Functional Programming 1	31/03/2014
2	Functional Programming 2	22/04/2014
3	Logic Programming 1	23/05/2014
4	Logic Programming 2	06/06/2014

Use the [electronic submission system](#) to submit your work.

Late submissions (unless there is an explicit earlier submission deadline this means arriving after midnight of the respective hand-in day specified) will only be accepted in exceptional circumstances and after prior consultation with the course coordinator. Instructions for assignments will be provided in lectures and on the course web site.

Lecture Summaries

You will be required to write at least one lecture summary during the course. This will need to be posted on the course forum before the given due date. The summary will need to review the content of the content of the lecture in your own words. It is allowed to raise questions and be uncertain, as long as it explain why there is uncertainty.

Workload

In order to maintain satisfactory progress in COMP 304, you should plan to spend an average of at least 10 hours per week on this paper. An approximate breakdown for these hours is:

Activity	Time
Lectures, tutorials and laboratories	3 hours
Readings, revision and preparation	2 hours
Assignments	5 hours

Some students will need less time than this; others will need more.

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.

Please read the [School Policy on Plagiarism](#). 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 a student had help from someone else with some detail, it is not plagiarism as long as the student states who provided help regarding that detail.

Passing COMP 304

To pass COMP 304 you must meet the mandatory requirements and gain at least an average of **C**-over all the assessment.

Your grade for COMP 304 will be determined based on the following assessment weightings:

Item	Weight
Marked Assignments	30% (4*7.5%)
Final Examination (3 hours)	70%

Mandatory Requirements

- You must complete a good attempt at your assigned lecture summaries, and post them on the forum before the due date.
- You must gain at least a **D** grade in the final exam.

- You must submit all 4 assignments.

Exam

There will also be a 3 hour final exam in the official examination period 13 June - 2 July. The [timetable for final examinations](#) will be posted on the notice board outside the faculty office.

No computers, or programmable electronic calculators or similar devices will be allowed. Non-electronic foreign language dictionaries will be allowed.

Withdrawal

The last date for withdrawal from COMP 304 with entitlement to a refund of tuition fees is Friday 14 March 2014. The last date for withdrawal without being regarded as having failed the course is Friday 16 May 2014, though later withdrawals may be approved by the Dean in special circumstances. Where applicable, you may want to consult the StudyLink rules about failing courses.

Additional Information

Textbook

There is no official course textbook. The notes covers the material of the course, however we suggest the following [free on line haskell book](#)

Staff

- Marco Servetto (room: CO258 tel:044635820 mail: marco.servetto@ecs.vuw.ac.nz)
- Roman Klapaukh (room: CO254 tel:04 44635233 mail: roman.klapaukh@ecs.vuw.ac.nz)
- Office Hours: *by email appointment*

Class Representative

- Tim Kelly (mail: kellytim@myvuw.ac.nz)

Announcements and Communication

The main means of communication outside of lectures will be the web pages at http://ecs.victoria.ac.nz/Courses/COMP304_2014T1/. There you will find, among other things, this document, the [lecture schedule](#), [assignments](#) and the COMP 304Forum. Questions and comments can be posted to this web-based bulletin board system, and staff will read these posts and frequently respond to them.

School of Engineering and Computer Science

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

Computing Facilities

Our network of Unix NetBSD workstations (and some Apple machines) is available for practical assignment work. The laboratories are open from 7am to 7pm on weekdays. In addition, students may use their student card to access the labs after 7pm weekdays and in the weekends. The door that allows after hour access to the Cotton Building is at the west side by the security office.

Using one's own computer

If you have access to a computer outside the labs, you may use it to work on the assignments, but you will need to install any appropriate software yourself.

Please note that we do not have the resources to provide assistance if you have difficulties with a computer at home. We can only answer questions about the assignments and the workstations in the laboratories. Note also that we cannot offer you any help with choosing, setting up, or fixing your own computer system, other than the general advice that we provide on the website.

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](#)
