

Introduction to Computer Science - Course Outline

COMP 112: 2015 Trimester 1

This outline has not yet been audited. Some details may change

This document sets out the workload and assessment requirements for COMP 112. 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.

COMP 112 introduces a range of important concepts and topics across Computer Science, Software Engineering and Network Engineering. Students will also gain a solid programming skills in object oriented programming. It provides entry to the BSc (Computer Science) and the BE(Hons), for students with basic programming skills

Learning Objectives

By the end of the course, students should be able to

- Understand, design, and construct programs using the Java language, a variety of libraries and an object-oriented design approach.
- Understand a range of fundamental issues and principles across computer science, software engineering, and network engineering.
- Be able to design and construct straightforward relational databases and write programs to interface to the databases.

Copyright: Although students own the copyright of any code that they write for an assignment, the COMP 102 assignments all build on some code that we have provided. This code is copyright by the university. We give you permission to use this code for your assignments, but you are not permitted to post to the web, or distribute in any other way, your answers if they include any of our code. Also, you may not distribute model solutions to anyone other than a student currently in the course. Breaking this rule is a violation of the university's statute on student conduct. If we find that you have distributed our code on the web or by other means, we will seek disciplinary penalties. Don't ruin the course for future students by giving them answers! This objective contributes in particular to the BE graduate attributes 3(b) and 3(f) and the BSc (COMP) graduate attributes 1 and 2.

The course involves a substantial practical component in which you will construct a range of programs to develop your understanding of programming, program design, and computer science concepts. Many of the assignments involve constructing a simple version of a useful computer application.

The course assumes prior knowledge of programming including the use of procedures/methods with parameters, lists or arrays, simple event driven input (eg buttons or mouse input) and simple use of objects and classes.

Course Organisation details

Dates, Times, and Rooms: Lectures, Tutorials, and Laboratories

COMP 112 is a trimester 1 course. The trimester starts on 2 Mar. The examination period at the end of the course is 12 June - 1 July.

There is a weekly timetable on the course website showing the times of the lectures, labs, and tutorial.

Lectures for COMP 112 are:

- Mon, Wed, Fri 13:10 - 14:00 in Hunter Building HULT323

A schedule of lecture topics, readings, and assignment due dates is available online. Copies of the lecture slides will be available via the schedule page.

Each student should attend **two** 1 hour lab sessions, one on Tue @ 10-11, or Tue @ 11-12, and one on Fri @ 9-10 or Fri @ 10-11. You must sign up for the lab sessions on the web: (at <https://signups.victoria.ac.nz/>) (also linked from the course home page).

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.

Withdrawal

The last date for withdrawal from COMP 112 with entitlement to a refund of tuition fees is Fri 13 March. The last date for

withdrawal without being regarded as having failed the course is Fri 15 May -- though later withdrawals may be approved by the Associate Dean in special circumstances.

Textbook and other Materials

There is no assigned textbook for COMP 112, but some students may find the COMP102 textbook useful: *Java Foundations: Introduction to Program Design and Data Structures*, by Lewis, DePasquale, and Chase, 2nd or 3rd Edition, published by Pearson (2010: ISBN 0132128810, 2013: 0133370461). Note that this textbook is also used for COMP103.

Students are not required to have their own computers, but [resources](#) are provided to make it easy for students work on the programming assignments on their own computers.

Workload

In order to maintain satisfactory progress in COMP 112, you should plan on spending at least 10 hours per week on this course. A plausible and approximate breakdown for these hours would be:

- Lectures: 3 hours
- Reading and preparation: 1 hour
- Lab Session: 2 hours
- Further work on the assignment outside the lab session: 4 hours

Some students may require more time than this.

School and Staff

The School of Engineering and Computer Science is located on levels 2 and 3 of the Cotton building and level 2 of the Alan McDiarmid building.

The undergraduate computing labs are mostly on level 2. The School office is on level 3: [Cotton 358](#). The head of the School is in the process of appointment, and the Dean of Engineering is Professor [Dale Carnegie](#).

The course organiser for COMP 112 is

- [David Streader](#)
 - [Cotton 260](#)
 - +64 4 463 5655
 - David.Streader@ecs.vuw.ac.nz

The Senior Tutor is

- [Zarinah Amin](#)
 - [Cotton 343](#)
 - +64 4 463 5936
 - zarinah.amin@ecs.vuw.ac.nz

The staff do not have any fixed office hours. You may go to their office or contact them by email to arrange a meeting.

Announcements and Communication

The main means of communication outside of lecture will be the COMP 112 web area at http://ecs.victoria.ac.nz/Courses/COMP112_2015T1. There you will find, among other things, this document, the course [schedule](#) (with links to copies of the lecture slides), [assignment handouts](#), the [COMP 112 Forum](#), and the assignment submission system. The forum is a web-based bulletin board system. Questions, comments, and responses can be posted to the forum. Staff will read the forum posts and may respond to them. You should make a bookmark to the course home page because you will need to access it frequently.

Assignments and Practical Work.

There will be 7 assignments. There will be one assignment handed out in each of the first four weeks; the other three assignments cover 2-3 weeks each. The course web site has a page listing [the assignments, due dates, and resources](#). The lab assignments will be available from the website.

The first four assignments consist primarily of programming tasks to ensure that you have all the basics of programming in Java. Each assignment will require you to write one or more programs for a variety of applications. The last three assignments are slightly larger programming projects in which you will build applications in the areas of graphics, networking, and databases. The assignments may involve some non-programming components also. The assignments address most of the concepts and techniques that are introduced in the lectures, and they are the most important way of coming to grips with the material in the course. Due dates and how to submit your answers to the assignments are addressed below.

The assignments are intended to take 5-6 hours per week, but the actual time required will vary considerably from student to student. The scheduled lab sessions will help you start the assignments. but **you will definitely need to**

spend more time outside the scheduled sessions. There will be scheduled help-desk times when a tutor is available to answer individual questions about the assignments, and we will also provide on-line helpdesk assistance.

The assignments will all be structured into

- a **Core** part, which represents the minimum that we expect everyone to complete, and will cover the essential concepts and constructs. It is worth up to 65% (which is the top of the C+ grade range)
- a **Completion** part, which extends the Core part and involves more difficult thinking and may cover additional concepts and constructs. We would like to see all students at least attempt the completion. Together with the core, it is worth up to 80%, which is the top of the B+ grade range.
- a **Challenge** part, which usually involves more difficult programming and problem solving and allows the strongest students to demonstrate excellence. This part is required to get a mark in the A range. We do not expect all students to be able to do the challenge within a reasonable time. Do not spend so much time on your assignments that you neglect other parts of the course, or your other courses - they are important also!

Assignment Submission

Each assignment has a due date and time, usually at 23:59 on a Thursday .

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 always overwrite previous submissions* . (You'll learn about how to submit assignments using a web browser in assignment 1).

Assignment Marking and Late Penalties

All the assignments are important for your learning. They will all be marked, and will together contribute a total of 30% to your final grade.

We will attempt to mark the assignments within one week of submission. Your marks and comments on your submission will be accessible via the web: see the links on the [Assignments](#) page.

The **mandatory course requirement** is that that you attain 40% in at least 6 of the lab assignments. For details see below.

Model solutions to the assignments will be made available at the end of the lecture following the submission time. These will allow you to review and assess your own work, and also build on the model solutions for the next assignment. Comparing your work to the provided solutions is an important part of the learning. Note that this means that assignments submitted after the solutions are made available will **generally not be marked**, unless you have made arrangements on the basis of exceptional circumstances with the lecturer or senior tutor.

Getting Help: help desk and online help.

To help you when you are having difficulties with the assignments, we have tutors able to respond to queries via an on-line helpdesk. The online tutor will be responding to queries throughout the week, but we cannot guarantee an immediate reply. There will be a physical helpdesk available in CO 242b at certain times throughout the week; the times will be announced and posted on the course web site once they are determined..

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.

Tests and Exams

There will be one 60 minute in-term test worth 15%, held 6pm - 7pm on

- Wednesday 22 April

You should contact the course organiser or the senior tutor as early as possible if you are not going to be able to attend the test at the scheduled time, or if you missed the test.

There will be a 3 hour exam, worth 55%, held during the exam period (13 Jun - 2 Jul). The [timetable for final examinations](#) will be available from the University web site at some time during the trimester.

No computers, programmable calculators or similar devices will be allowed in the test or final examination. Paper non-English to English dictionaries will be permitted.

Note: the test and the exam will be written on paper, not on the computer. While much of your learning will happen while working on the assignments at a computer, it is important to also prepare for the test and exam by working on problems on paper. You can find previous tests and exams on the [COMP112 Test/Exam Archive](#). Although they are for a different course, you may also find past tests and exams from (available from the [COMP102 Test/Exam Archive](#)) useful in practicing and studying for the COMP112 tests and exam.

Grade Computation

Your grade for COMP 112 will be determined based on the following assessment weightings:

Item	Weight
Assignments 1-4	12% (3% each)
Assignments 5-7	18% (6% each)
Test 1 (Wednesday 22 April)	15%
Final Examination	55%

If you get a higher mark in the exam than you did in the test, then we will boost your test mark up to your exam mark - we do not want to penalise students who took longer to get on top of the material, but got there in the end, as demonstrated in their exam.

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

All the assessment (assignments, tests, and exam) will address the first two learning objectives of the course; the final assignment and the exam will also address the third learning objective. The test and exam will assess material covered by the course up to the time of the test/exam.

Mandatory Requirements

The practical skills involved in being able to write and debug programs are an essential component of COMP 112, so there is a mandatory requirement that you attain 40% in at least 6 of the lab assignments. Students who do not meet the mandatory requirements will receive a failing grade, even if they have high marks on the tests and exam. **Students who have missed more than one assignment should contact the lecturer as soon as possible** to explore alternative arrangements to meet the mandatory requirements.

Passing COMP 112

To pass COMP 112, a student must satisfy the mandatory requirements and gain at least a **C-** grade overall.

Academic Integrity and Plagiarism.

We encourage you to talk with each other about the course and the assignments, and to help each other when you are stuck. But work that you submit for your assignments should represent your own work; presenting other people's work as your own is plagiarism and is not acceptable to the university. Please read the university and school policies on academic integrity and plagiarism below to make sure you know what is and what isn't allowed. A key point to remember is that if you are using other people's work as part of your assignment, you must make clear which bits are not yours, and then you can't be accused of plagiarism.

Academic integrity means that university staff and students, in their teaching and learning are expected to treat others honestly, fairly and with respect at all times. It is not acceptable to mistreat academic, intellectual or creative work that has been done by other people by representing it as your own original work.

Academic integrity is important because it is the core value on which the University's learning, teaching and research activities are based. Victoria University's reputation for academic integrity adds value to your qualification.

The University defines plagiarism as presenting someone else's work as if it were your own, whether you mean to or not. "Someone else's work" means anything that is not your own idea. Even if it is presented in your own style, you must acknowledge your sources fully and appropriately. This includes:

- Material from books, journals or any other printed source
- The work of other students or staff
- Information from the internet
- Software programs and other electronic material
- Designs and ideas
- The organisation or structuring of any such material

Find out more about plagiarism, how to avoid it and penalties, on the University's website:
<http://www.victoria.ac.nz/home/study/plagiarism>

The [School policy on Plagiarism](#) 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.

In COMP 112, we may use an automated system to check all submitted code in order to identify students submitting the same code. The system does not make any code available to people other than the organiser of the course and the managers of the system.

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way, your answers if they include any of our code. Also, you may not distribute model solutions to anyone other than a student currently in the course. Breaking this rule is a violation of the university's statute on student conduct. If we find that you have distributed our code on the web or by other means, we will seek disciplinary penalties. **Don't ruin the course for future students by giving them answers!**

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](#)
