# Introduction to Computer Program Design - Course Outline

## COMP 102: 2010 Trimester 2

This document sets out the workload and assessment requirements for COMP 102. 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 102 is a first course in computer program design. The course forms a basis for later courses in Computer Science and Engineering, but will also be useful for students who want to learn computer programming but do not intend to study this subject at higher levels.

## Objectives

By the end of the course, students should be able to understand, design, and construct small programs using the Java programming language and an object-oriented design approach.

The course involves a substantial practical component in which you will construct a number of programs to develop your understanding of programming and program design. The programming assignments emphasise the construction of simple versions of a range of useful applications.

The course does not assume that you have done any computer programming previously. However, it does assume some familiarity with using a computer; if you have not used a computer before, you should plan to spend additional time on the assignments, especially at the beginning of the course.

## Textbook and other Materials

The textbook for COMP 102 is: *Java Foundations: Introduction to Program Design and Data Structures*, by Lewis, DePasquale, and Chase, published by Addison Wesley, 2008.

Second-hand copies of the previous textbook will also be acceptable: *Java Software Solutions: Foundations of Program Design, 5th or 6th Edition*, by Lewis and Loftus, published by Addison-Wesley, 2006 (5th Edition) or 2008 (6th Edition).

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

COMP 102 is a trimester 2 course. The trimester starts on 12 July. The examination period at the end of the course is 18 October - 14 November.

Lectures for COMP 102 are:

- Mon, Tue, Fri 10:00 - 10:50 in Laby LT118

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

Each student should attend two 1 hour weekly lab sessions which will be held in Cotton 238, one on Wednesday or Thursday or Friday (just after the assignment is handed out) and one on the following Monday or Tuesday (before the assignment is due). See the online timetable for the times you can choose from. You must sign up for lab sessions on the web: (at https://signups.victoria.ac.nz/) (also linked from the course home page).

You may also use any of the other school 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 for the assignments outside the scheduled lab sessions.

## Withdrawal

The last date for withdrawal from COMP 102 with entitlement to a refund of tuition fees is Friday 23 July 2010. The last date for withdrawal without being regarded as having failed the course is Friday, 20 August 2010 -- though later withdrawals may be approved by the Dean in special circumstances.

## School of Engineering and Computer Science

Staff in the School of Engineering and Computer Science are mostly on levels 2, 3, and 4 of the Cotton Building.

The undergraduate labs are mostly on level 2, though one lab is on level 1. The School office is on level 3: Cotton 358. The head of the School is Professor John Hine.

## Staff

The course organiser and lecturer for COMP 102 is Xiaoying Sharon Gao. The Senior Tutor is Ambreen Khan-Evans. Their contact details are:

- **Dr Xiaoying Gao (Sharon)**
  - Cotton 442
  - +64 4 463 5978
  - xgao@ecs.vuw.ac.nz

- **Ambreen Khan-Evans**
  - Cotton 236
  - +64 4 463 5936
  - Ambreen.Khan-Evans@ecs.vuw.ac.nz

## Announcements and Communication

The main means of communication outside of lecture will be the COMP 102 web area at http://ecs.victoria.ac.nz/Courses/COMP102_2010T2/. There you will find, among other things, this document, the course schedule (with copies of the lecture slides), assignment handouts, the COMP 102 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 will frequently respond to them also.

# Assignments

There will be 10 weekly lab assignments.

Each lab assignment will be described in a handout that will be handed out at a lecture or in the lab, and will also be available from the website. The first lab assignment is an introduction to using the computers in our lab facilities and software that you will be using throughout the course. The other weekly assignments consist mostly of programming exercises. The assignments are a critical learning component of the course. They 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.

The assignments (except the first) are intended to take about 5 hours per week, but the actual time required will vary considerably from student to student. The scheduled lab sessions will help you with the assignments, but you will 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 provide on-line helpdesk assistance also.

Most of the assignments contain a "Core" part that covers the basic concepts and constructs, a "Completion" part that covers additional concepts and constructs, a "Challenge" part that involves more difficult programming and problem solving, and a "Reflection" part. The Core part will be worth up to 65% of the assignment, and the Reflection part will be worth 10%. The programs will be marked primarily on whether they work correctly, but there will be some weighting for good style.

We expect most students to be able to complete most of the Core, Completion, and Reflection components; the Challenge components are intended only for stronger students. If it takes you more than about 5 hours to complete the Core part of an assignment, we suggest that you should not spend additional time on the Completion or Challenge part. It is probably better to spend the additional time on the Reflection part, reading the textbook, going over your notes from the lectures, or working on questions and problems with other students.

## Group Work

In COMP 102 (though not in most other Computer Science courses) you are permitted (and encouraged) to work on the Core part of the assignments in pairs. 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 Core part. You must do the Completion, Challenge, and Reflection parts of the assignment yourself, and you may not share your code in groups of more than two (see the section on plagiarism below). 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 more confident about programming than you will not help you to learn the material.

## Assignment Submission

Each assignment (except 5 and 10) will be due at 10am on the Wednesday of the week after the assignment was handed out. Assignment 5 will be due 8 Sep (after the break) and assignment 10 will be due 17 Oct (the day before study week starts).

The assignments should be submitted electronically when you have completed them. Submission is via a web browser (you'll learn about this in assignment 1), so you can submit assignments from the 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.*

All the assignments are important for your learning, and the mandatory course requirement is that you must submit reasonable attempts for at least *seven out of the ten* lab assignments. We will check that you have met this requirement

reasonable attempts for at least seven of the ten lab assignments. We will check that you have met this requirement by looking at the electronic submissions. All but the first assignment will be marked, and will contribute a total of 20% to your final grade.

Model solutions to the assignments are generally posted shortly after the assignment deadline, so that you can review and assess your own work. Comparing your work to the provided solutions is an important part of the learning. Note that this also means that assignments submitted after the solutions are posted will not generally be marked, unless you have made prior arrangements on the basis of exceptional circumstances with the course organiser or senior tutor.

### Help Desk Sessions

To help you when you are having difficulties with the assignments, there will be a tutor in one of the labs (CO 238) at certain times. The times will be announced and posted on the course web site. We will also have tutors able to respond to queries via an on-line help desk. These tutors will be responding to queries throughout the week, but we cannot guarantee an immediate reply.

We strongly advise you NOT to leave the assignments to the last minute, since there may not be any help-desk available near the submission deadline.

## Tests and Exams

There will be two 45 minute in-term tests, held during the scheduled lecture times on 6 August and 17 September. You should contact the course organiser or the senior tutor as early as possible if you are not going to be able to attend a test at the scheduled time, or if you missed a test.

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 three 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.

All the assessment (assignments, tests, and exam) will address the key learning objectives of the course - understanding, designing, and writing programs in an object-oriented style. The tests and exam will assess all the material covered by the course up to the time of the test/exam. The tests 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 tests and exam by working on problems on paper. All tests and exams from past years are available from the website to help you.

## Assessment

Your grade for COMP 102 will be determined based on the following assessment weightings:

| Item | Weight |
|---|---|
| Test 1 | 15% |
| Test 2 | 15% |
| Marked Assignments | 20% |
| Final Examination | 50% |

Note that if you do better in the exam than you did in a 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.

### Mandatory Requirements

The practical skills involved in being able to write and debug programs are an essential component of COMP 102, so there is a mandatory requirement that you attempt the practical work. To fulfill this requirement you must submit reasonable attempts for at least *seven* of the ten lab assignments.

### Passing COMP 102

To pass COMP 102, a student must satisfy mandatory requirements and gain at least a **C** grade overall.

### Workload

In order to maintain satisfactory progress in COMP 102, you should plan to spend an average of 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
- Assignments (including lab session): 6 hours

# Academic Integrity and 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 102, we use an automated system to check all submitted code in order to identify students submitting the same code who have not stated that they were working with a partner. The system does not make any code available to people other than the organiser of the course and the managers of the system.

## 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.