

COSC230 Programming Languages

Course Outline

Course supervisor: Professor T. Takaoka
Department of Computer Science and Software Engineering
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Course aims

Programming languages communicate programs to a computer and every computing professional must know their history, purposes, styles and means of implementation.

While use of an object-oriented programming language (i.e. Java) was used in first year courses, COSC 230 looks at the history and concepts of functional and logic-based programming styles, as well as at implementation techniques for imperative languages.

Students will learn basic techniques for implementing imperative languages and how to employ and choose competently among a variety of programming tools, including functional and logic-based languages.

Lectures and Lecturers

Lectures are on Monday 9 10 am and Wednesday, 4-5 pm, room 031 for the whole term.

Part 1: Prof. Tadao Takaoka (12 lectures, week 1, 2, 3, 4, 5, 6),
phone 7773, e-mail: tad@cosc.canterbury.ac.nz
* Compiler Design

Part 2: AProf. W. Kreutzer (7 lectures, week 7, 8, 9, 10, 11, 12),
phone 7770, e-mail: wolfgang@cosc.canterbury.ac.nz
* Programming in Logic (using Prolog)
* Functional Programming

Tutorials/Labs

There are two tutorial/lab streams per week (Tuesday 9 am - 11 am and Thursday 1 - 3 pm) and you should attend one of them (of your choice) each week. If numbers attending are poorly balanced, we will ask some students to change their streams.

Tutorial sessions will be held in MSCS101. Laboratory sessions will be held in one of the department's labs.

Assessment

Part	Type	Worth	Due date
Assignment 1	Materials from part 1	20%	August 20, drop due August 27
Assignment 2	Materials from part 2	20%	October 16, drop due October 23
Exam		60%	to be announced

The test is a closed book one. Important documents are posted to Blackboard and the class notices. Please read all such notices.

Note that in order to pass the course, you must achieve a minimum mark of 45% on invigilated assessment items. The 45% cut-off will be applied to the mean of weighted marks on invigilated work after scaling. If you achieve less than 45%, you will receive a C-, D or E, depending on your marks.

References

As the coverage of this course is wide, there is no single textbook. In the class, various handouts will be given and most are available in the course reader. Lecture and lab attendance is essential.

Other important documents

You should be in possession of two important Computer Science documents that are handed out together (versions of these documents are also available through our departmental web page at <http://www.cosc.canterbury.ac.nz>). One is the Computer Science “Standard Academic Rules, Regulations and Guidelines”, and includes details of how to apply for aegrotats and other forms of special consideration. The other document contains our code of practice for computer use, and emergency procedures.

You should read both documents carefully, as you will be asked to sign a form acknowledging that you agree to abide by the rules specified in the two documents.