

**Welcome to**

**COMP1100 — Introduction to Programming and Algorithms**

Ben Lippmeier

Australian National University

Semester 2, 2006

## What is this course about?

- Introduction to the basic principles of programming
- First part of a sequence COMP1100 + COMP1110
- About 2/3rds programming concepts using **Haskell**, a functional programming language, followed by ...
- About 1/3rd introduction to **Java**, an object-oriented programming language, leading on to ...
- COMP1110 using **Java**.

## Core Topics

- Types and data structures
- Control structures
- Abstraction
- Modularisation

## Philosophy

- *Data-directed program design*
- *Programming as a human activity*

Learning to program is a lot like learning a foreign language.

You must

***practice, practice, practice ...***

## COMP1100 Web Site

`http://cs.anu.edu.au/student/comp1100/`

The main information resource and communication tool for the course.

Lecture notes, lab exercises, assignments, announcements, discussion forums, etc.

Linked from the WebCT pages.

## Lectures

There will be at least 30 lectures, 3 each week:

- Tuesday 1–2pm, PHYS T
- Thursday 3–4pm, CHEM T1
- Friday 10–11am, PHYS T

Attend all lectures — check web site regularly for schedule.

Lecture slides and sample programs on the web site.

## Laboratory Classes

10 two-hour weekly laboratory classes, beginning in week 2.

**You must register in a lab class as soon as possible.**

Registration is on-line at <http://cs.anu.edu.au/streams/>

Check your timetable to avoid clashes.

Logging on to StReaMS will automatically create an account for you on the DCS Student System.

# DCS Student Computing Environment

Different to other labs and InfoPlace at ANU – (Linux and KDE).

Handouts:

- Student Computing Environment User Guide
- Student Computing Environment Familiarisation Exercises

Once you have a DCS student account, work through the familiarisation exercises sometime ***this week***.

This will help prepare you for the first supervised lab classes in week 2.

## Textbooks

Main textbook:

*Haskell: The Craft of Functional Programming (2nd edition)*

– Simon Thompson (Addison-Wesley)

Later in the semester:

*Big Java (2nd edition)*

— Cay Horstmann (Wiley)

This is also the textbook for COMP1110 in second semester.

## Assessment

**Assignments: 35%** – three assignments

10% + 15% + 10% due near weeks 6, 9, 12

**Lab participation: 5%** – satisfactory completion of exercises

**Mid-semester quiz: 10%** – week 7, open book

redeemable against final exam

**Final Exam: 50%** – exam period, two A4 sheets of notes allowed

## Learning how to program

- There will seem to be an endless number of minor details to be remembered. You can be a successful programmer without knowing them all.
- There will be many frustrations.
- Computers won't handle ambiguity.
- **Abstraction:** at different times in the process, different aspects are (temporarily) irrelevant.
- *Practice and experiment.*

## What to do now:

- Make sure you have the four handouts:
  - COMP1100 General Course Information
  - Student Environment User Guide
  - Student Environment Familiarisation Exercises
  - DCS Student Handbook
- Check you timetable and register in lab classes at <http://cs.anu.edu.au/streams/>
- Get the textbook and [read Chapter 1](#)
- Go to the DCS labs  
Work through the [familiarisation exercises](#) sometime this week

**Questions?**