



COMPSCI 105 SS 2015 Principles of Computer Science

Course Information



Lecturers

▶ Lecturers

- ▶ Angela Chang (Course coordinator)
 - ▶ Email: angela@cs.auckland.ac.nz
 - ▶ Phone: 3737599 ext 86620
 - ▶ Room: 303S.585
 - ▶ Office hours: Tue, Wed, Thurs 11am-12noon
 - Or whenever the office door is open
- ▶ Dr Mike Barley
 - ▶ Email: barley@cs.auckland.ac.nz
 - ▶ Phone: 3737599 ext 86133
 - ▶ Room: 303S.394
 - ▶ Office hours: TBA

• Teaching Assistants

- Steven Hu
- qhu009@aucklanduni.ac.nz
- Monica Bian
- rbi002@aucklanduni.ac.nz



Topics

- ▶ Making informed choices about programming
 - ▶ Understanding the trade-offs
- ▶ Focus on ways of storing and manipulating data
 - ▶ Different ways of structuring data storage
 - ▶ Efficiency
 - ▶ Searching
 - ▶ Sorting
- ▶ Some new programming ideas
 - ▶ Importance of Abstraction
 - ▶ Recursion, regular expressions, exceptions, data interchange



Assessment

- ▶ **Note: Students must obtain a pass in both the practical (assignments) and non-practical work (test + exam) in order to pass as a whole**
- ▶ Laboratories every week (starting next week) 25%
 - ▶ Pre-lab exercises & two laboratories per week
 - ▶ dues on every Thursday OR Saturday
 - ▶ Note: labs to be submitted using CodeRunner
 - ▶ 5 Pre-lab exercises (7%)
 - ▶ 9 Laboratories (18%)
- ▶ Mid-semester Test 10%
 - ▶ Thurs 29th Jan, 10:00am – 11:00 am
- ▶ Final Exam 65%
 - ▶ Date to be announced



Laboratories

- ▶ All Laboratories will be started from Monday 12 Jan.
- ▶ Two Laboratories per week
 - ▶ First Lab (Lab)/ Venue: G75
 - ▶ Streams:
 - Monday 12:00noon – 1:00pm
 - Monday 1:00pm-2:00pm
 - Tuesday 12:00noon – 1:00pm
 - Tuesday 1:00pm-2:00pm
 - Tuesday 2:00pm-3:00pm
 - ▶ Second Lab (Tut)/ Venue: B75
 - ▶ Streams:
 - Thursday 12:00noon – 1:00pm
 - Thursday 1:00pm-2:00pm
 - Thursday 2:00pm-3:00pm
 - Friday 12:00noon – 1:00pm
 - Friday 1:00pm-2:00pm



Resources

- ▶ Lectures
 - ▶ Overheads and recordings
- ▶ Forum
 - ▶ Question and answers – peers, tutors and lecturers
 - ▶ <http://forums.cs.auckland.ac.nz/>
- ▶ Textbook
 - ▶ Problem Solving with Algorithms and Data Structures
 - ▶ Online, free, open source
- ▶ Additional resources
 - ▶ Python.org
 - ▶ PythonTutor.com



Calendar

Wk	Mo	Tu	We	Th	Fr
1		6/Jan Intro, Python lists, List Comprehension	7 Mutable objects References and Equality	8 Classes 1	9 Classes 2
2	12 Exceptions	13 Exceptions 2	14 JSON	15 Algorithm Analysis	16 Abstract Data Types, Stack ADT
3	19 Stacks	20 Queues	21 Lists	22 Lists 2	23 Recursion 1
4	26 PUBLIC HOLIDAY	27 Recursion 2	28 Searching	29 TERM TEST	30 Hash functions
5	2 Hash functions	3 Sorting: Simple Sorts	4 Sorting: Better Sorts	5 Introduction to Trees	6 PUBLIC HOLIDAY
6	9 Priority Queues and Binary Heaps	10 Using Trees - Expressions	11 Binary Search Trees	12 Binary Search Trees and Regular Expressions	13 More Regular Expressions



Laboratories

Wk	Mo	Tu	We	Th	Fr
1		6 Jan	7	8	9
2	12 Lab1	13 Lab1	14	15 Lab2	16 Lab2
3	19 Lab3	20 Lab3	21	22 Lab4	23 Lab4
4	26 PUBLIC HOLIDAY	27	28	29 Lab5	30 Lab5
5	2 Feb Lab6	3 Lab6	4 Lab7	5 Lab7	6 PUBLIC HOLIDAY
6	9 Lab8	10 Lab8	11	12 Lab9	13 Lab9



Assessments

Wk	Mo	Tu	We	Th	Fr	Sat
1		6 Jan	7	8	9	10
2	12 Due: prelab1 (1%)	13	14 Due: Lab1 (2%)	15	16	17 Due: Lab2 (2%)
3	19 Due: prelab2 (1.5%)	20	21 Due: Lab3 (2%)	22	23	24 Due: Lab4 (2%)
4	26 PUBLIC HOLIDAY	27 Due: prelab3 1.5%)	28	29 TERM TEST	30	31 Due: Lab5 (2%)
5	2 Feb Due: prelab4 1.5%)	3	4 Due: Lab6 (2%)	5	6 PUBLIC HOLIDAY	7 Due: Lab7 (2%)
6	9 Due: prelab5 1.5%)	10	11 Due: Lab8 (2%)	12	13	14 Due: Lab9 (2%)