

## COMP9024: Data Structures and Algorithms

### Course Outline

Hui Wu  
Session 1, 2015  
<http://www.cse.unsw.edu.au/~cs9024>

### Staff

- ♦ **Lecturer in Charge:** Hui Wu
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- ♦ Consultation hours: 2:00-500pm Friday

### Aims

- ♦ The aims of this course are
  - to introduce the basic data structures and algorithms, and
  - to develop skills in the design and analysis of algorithms and data structures.

### Outcomes

- ♦ If successfully completing this course, you will
  - understand the basic data structures and algorithms;
  - be able to analyse the complexities of software; and
  - be able to design and select appropriate data structures and algorithms for applications.

### Topics

- ♦ Java programming language
- ♦ Analysis of algorithms
- ♦ Linked lists, stacks, queues and priority queues
- ♦ Trees and search trees
- ♦ Sorting, selection and sets
- ♦ Maps and dictionaries
- ♦ Text Processing
- ♦ Graphs

### Assessment

- ♦ Your final result is calculated based on:
  - Assignments: 30%
  - Final exam: 70%
- ♦ Assignments:
  - Four individual assignments.
- ♦ Final Exam:
  - Three hours
  - Closed book

## Homework

- ♦ I will release homework every week.
  - Solutions will be released one week later.
    - You are strongly recommended to work out the solutions to all questions.
  - Solutions to the selected questions will be covered in the lectures.

## Textbook

- ♦ Data Structures and Algorithms in Java (6<sup>th</sup> Edition) by Michael T. Goodrich and Roberto Tamassia.
  - The website for the textbook:  
<http://ww0.java4.datastructures.net/>