

COSC241 Course Outline

Week	Lecture topics	Lab topics
1	Introduction, Review	Using the Linux Command Line
2	Algorithms, Recursion	Finding Max and Min; Number List
3	Algorithm Analysis 1 & 2	Recursion; Analysing an Algorithm
4	Array Algorithms 1 & 2	Palindrome (Recursion problem); Number list 2
5	Sorting, Random 1	Phone List; An Efficient Algorithm
6	Random 2, ADT principles	Shell Sort; Abstract Data Type Design
7	Stack ADT, Linked Lists 1	Implementing an Abstract data Type; Two Applications of Stacks
8	Linked Lists 2, Queues	Linked Lists
9	Trees 1 & 2	Linked Lists; Two Stack Queue
10	Binary Search Trees, Heaps	Immutable Lists; BSTs using Recursion
11	Priority Qs & Heapsort, Graphs 1	Data Types and Theory
12	Graphs 2 & 3	Practical Test
13	Maze Generation	