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CRICOS PROVIDER 00123M

School of Computer Science

COMP SCI 2103/7103 Algorithm Design & Data Structure

Lecture 1 - Course Profile and Assessment Information

adelaide.edu.au

seek LIGHT

Welcome

Welcome to CS 2103/7103, Algorithm Design and Data Structures.

- In this lecture we will:
 - Discuss some key administrative issues.
 - Describe what we're going to do in this course.
 - Talk about what to do this week.

Pre-requisites

- Who should be here?
 - You have passed CS1102/1202 (OO Programming)
- Who should not be here?
 - Anyone who has done CS2004 (DSA) or CS1103/2103.
 - Anyone who has not passed 1102/1202!

Course Outline

- Week 1-5: ADTs, Inheritance, Design, Recursion, Polymorphism, Complexity analysis of algorithms, Sorting and Searching
- Week 6-12: Data Structures: Linked Lists, Stacks, Queues, Heaps, Trees and Graphs, Algorithmic strategies.

Assumed Knowledge

You can design and build simple object-oriented programs in C++, including classes and memory management.

Teaching Staff

Dr Cheryl Pope

Lecturer (weeks 1-5) & Course
Coordinator



Dr Chitchanok Chuengsatiansup
Lecturer (weeks 6-12)



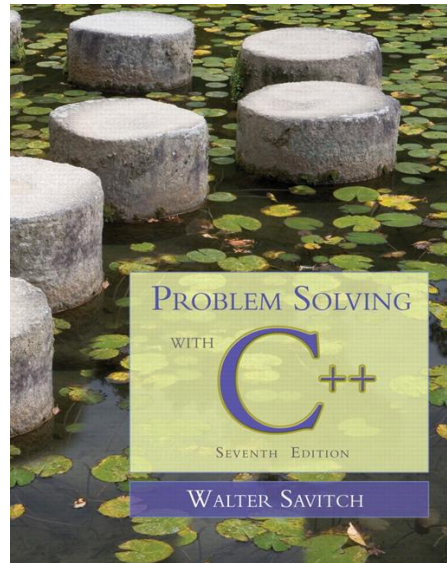
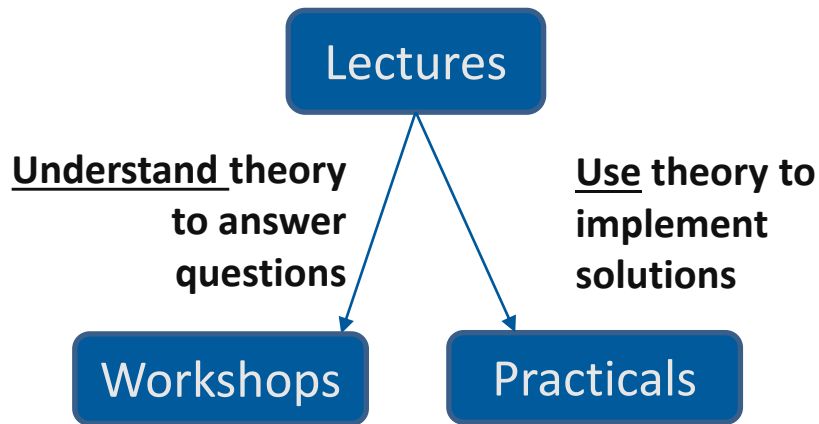
Practical Demonstrators / Workshop Supervisors:

- Ravi, Matthew, Sree, April, Josh
- Available **only** during scheduled practical sessions.

Course Organisation

– How the course is structured:

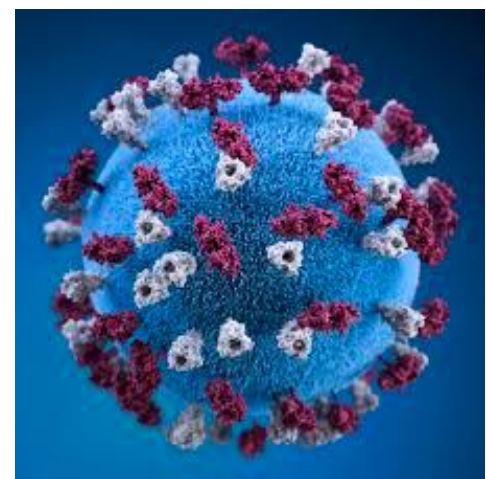
- Three hours of lectures (will include practice/examples) per week
- 1 x 2 hour practical sessions every week.
- 1 x 1 hour workshop every fortnight



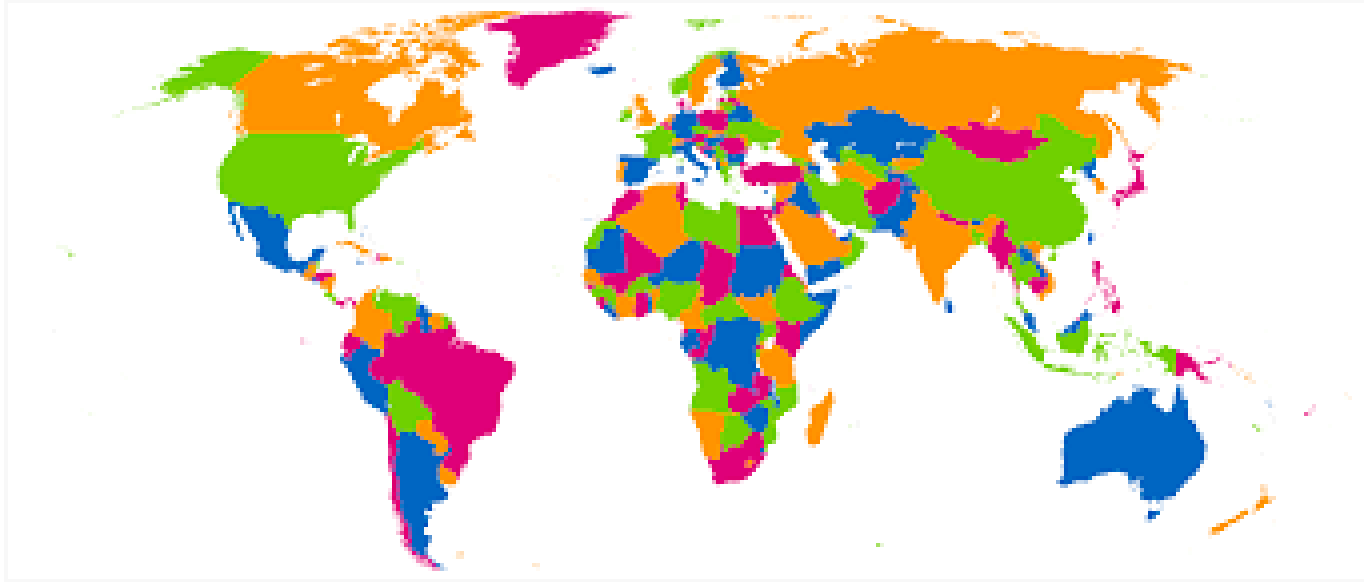
Walter Savitch:
Problem Solving in C++
10th Global Edition

Covid-19 precautions

- Lectures
 - Live streamed through Echo 360 at scheduled time with live Q&A
 - Recording available after
- Workshops
 - Wear masks if able
 - Hand hygiene
- Practicals
 - Clean mouse/keyboards before/after use
 - Wear masks if able
- If you are unwell DO NOT come in to campus
 - You can join one of the online workshop or practical sessions
 - Asynchronous options for completing workshop/practical work
 - Piazza board discussion with peers
 - Details in practical/workshop sheets



On campus or remote?



- The assessments, activities and schedule is identical whether you are on campus or remote.
- The only difference is that if you are remote, you will be enrolled in the online workshop and practical session which is held in Zoom.

Where to find information and get help

- The Course Information module in MyUni contains links to all the important course information

The screenshot displays the MyUni interface for the course 4020_COMP_SCI_X_0002. The top navigation bar includes a search bar and buttons for 'View progress', '+ Module', and a menu icon. The left sidebar lists various navigation options: Home, Announcements, Piazza, Modules (highlighted), Course Readings, Echo 360, Assignments, Assignment Help, Grades, and People. The main content area shows the 'Course Information' module expanded, listing five items: 'COVID-19 Modified Teaching Arrangements', 'About this course', 'Course Outline' (with an external link icon), and 'Course Contacts'. Each item has a green checkmark and a three-dot menu icon on the right.

| Course Information | | ✓ | + | ⋮ |
|---|---|---|---|---|
| COVID-19 Modified Teaching Arrangements | | ✓ | | ⋮ |
| About this course | | ✓ | | ⋮ |
| Course Outline | 🔗 | ✓ | | ⋮ |
| Course Contacts | | ✓ | | ⋮ |

- If you have any questions regarding this course and cannot find the answer in there ask on the Piazza discussion board.



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Assessment

Assessment

- This course has 3 components:
 - 3 examinations
 - 1) Week 4 during your scheduled practical – 10%
 - 2) Week 8 during your scheduled practical - 10%
 - 3) Final Exam period – 50%
 - Workshops (5%)
 - Practicals (25%)
- You are expected to participate in all activities.
- Hurdle: You need at least 40% of the mark of the final examination to pass this course.)

Grades

| Mark | Grade | | Notes |
|---------|--------------------|-----|--|
| 85-100% | High Distinction | HD | Great! |
| 75-84% | Distinction | D | Very good |
| 65-74% | Credit | C | Good |
| 50-64% | Pass | P | Satisfactory |
| 0-49% | Fail | F | Cannot count this course for points or as a pre-requisite. |
| 0% | Fail No Submission | FNS | No work submitted for assessment |
| | Result Pending | RP | Mark has not yet been finalised. |

If you see an RP on your transcript, it means that your mark is not currently available. If you don't know why, you should contact your course coordinator.

Lectures

- 3 scheduled each week – we may not always use all 3
- Covers the theory and demonstrates code examples
 - Workshop and practical assumes the knowledge from the lecture.
 - If you are not prepared,
 - your workshop tutor can mark you as not being an active participant in the workshop
 - Your practical tutor can refer you back to the lecture
- It's unfair to others if your tutors or your peers have to catch you up on lecture content. Be prepared!

Practicals

- Due every week except prac exam weeks
- You can collaborate with peers
 - As long as you contribute to the solution
 - As long as you understand the work submitted
 - You acknowledge the names of peers you worked with in your submission as a comment at the top
- You must make your own submission to receive credit
- Tutors are available to assist and answer questions **during your practical session**
- Solving the practical assignments prepares you for practical examinations and is key for your success in this course.

Workshops

- Every other week starting week 2
- You ***must*** collaborate with peers
 - There will be a problem that you are required to solve and/or discuss as a group
 - There will be work that you need to create as a group
 - Group work will be presented
- Your tutor will guide you in these activities
- Credit is based on preparation and active participation in the specified activities.
- Working through the workshop problems and presenting solutions prepares you for answering theory questions and helps you to develop fluency in the vocabulary of Algorithms and Data Structures.

Exams

- Exams are NOT collaborative
 - You can not consult or ask questions of ANY other person
- Open Book
- Internet Access
 - **OK:** search for information and then, without copying, write your solution
 - **NOT OK:** search for the information and then copy it, even if you make small changes
 - **NOT OK:** search for the exact question
- Each exam will be a combination of theory questions and coding problems
- Replacement exams will only be offered on documented grounds as covered in the Modified Arrangements for Coursework Assessment policy.

Exams

- The first two exams will be held in the lab or during your online practical session if you are studying online in week 4 and week 8 .
 - You must attend your enrolled practical session these weeks.
 - You must not post or discuss the exam until the end of the exam week.
- Final exam
 - Held during the University exam period
 - Written exam
 - Wayville for on-shore students
 - online-proctored for off-shore students

Late Submissions

- You should hand your coursework in on time.
- If you hand in your practical late, your mark will be capped, based on how many days late it is.
 - 1 day late – mark capped at 75%
 - 2 days late – mark capped at 50%
 - 3 days late – mark capped at 25%
 - more than 3 days late – no marks available
- Late submissions do not apply to exams. Exams close at the end of the time period and no further work is accepted
- One late assignment will turn into two, three or more!
- Hand in early!

Repeating Students

- Students who repeat a course are expected to attempt all of the aspects of the course again. This includes making fresh attempts at all coursework assessment items.
 - You may apply to the course coordinator to have your previous work counted but this is not usually granted.
 - Make sure that you attend all of the lectures, do all of the work and study hard for the exam – you don't want to get stuck repeating the same course over and over.
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Modified arrangements

Assignment extensions and replacement exams

- I follow the Modified Arrangements for Coursework Assessment policy
 - <https://www.adelaide.edu.au/policies/3303/?dsn=policy.document;field=data;id=5702;m=view>
 - In a nutshell
 1. Check that your reason for wanting an extension or replacement exam is covered in that policy
 2. Send me the supporting evidence (the policy states what this is)
 3. Tell me the new due date you are requesting
 - Put your exam dates in your calendar. You are expected to attend your exams.
 - I do not grant replacement exams due to a clash with another course unless your lecturer contacts me with evidence of why your other course activity can not be moved.
 - You may be able to negotiate to take your exam earlier, but you can not take it later.



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Academic honesty policies

Violations of Academic Integrity policy

- Plagiarism
 - Using another person's ideas, designs, words or works without appropriate acknowledgment.
 - Collusion
 - Another person assisting in the production of an assessment submission without the express requirement, or consent, or knowledge of the assessor.
 - Workshops and practicals are there to support your learning. You are expressly encouraged to work together on them.
 - Exams are assessments of **your** skill level. You must not submit someone else's answer.
 - If you have understood your practical and workshop work, you should be able to do the exam without assistance.
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What next?

Week 1 – all materials in Week 1 module

- Lecture Monday
 - Course Intro **DONE**
- Lecture on Tuesday & Friday
 - Designing abstract data types
- If you plan to work from home, set up your laptop (info in practical 1 sheet)
- First practical session
 - Work through the practical sheet.
 - You may want to bring your laptop if you have any questions



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