

Course Overview



Welcome

In this topic:

- The course outline
- Course information.

Teaching Staff

- **Course Coordinator/Lecturer**

- Dr Feras Dayoub

- **Lecturer**

- Dr Tony Chen

- **Course Tutors**

- Sofia McLeod
- Angela Qin
- Ryan Carmody
- Ashwinraj Giriraj
- Vincy Benita Jelsingh
- Tu LAN
- Sukhman Kaur
- Angel Wadhawan
- Abdul Mohsi Jawaaid
- Dung Anh Hoang

Learning Outcomes

- ❑ **Implement** solutions in C++.
- ❑ **Test** and debug C++ implementations
- ❑ **Understand** the core concepts of object oriented programming.
- ❑ **Design** object oriented solutions for small systems.
- ❑ **Effective use** of version control (Github).
- ❑ **Effective use** of the Linux command line.



Learning and Teaching Modes

- **Lectures:**
 - Will be recorded and available on Monday for each week.
- **Interactive sessions**
 - Quizzes about the the lecture topics in class on Wednesday and Friday.
- **Pracs**
 - Will focus on developing core programming skills
 - The practical exams are Individual activities.
- **Workshops**
 - Hands on collaborative sessions in groups.
 - Introduce key skills required by the practicals.
- **Final Exam**
 - Written and central (multiple-choice).

Workload is 10 to 12 hours per week.

Course Structure and Learning Activities

| Week# | Week of | Topic | Workshop (5%) | Prac (20%) | Prac-Exam (25%) | Project (15%) | Final Exam 35% |
|---------------|---------|---------------------------|------------------|---------------|--------------------|------------------|-------------------|
| 1 | 25-Jul | Your first C++ program | ✓ | 5% | | | |
| 2 | 1-Aug | Pointers & Arrays | ✓ | 5% | | | |
| 3 | 8-Aug | Basics of OOP Design | ✓ | | 2% | | |
| 4 | 15-Aug | Classes and Objects | ✓ | 5% | | | |
| 5 | 22-Aug | Inheritance | ✓ | | 5% | | |
| 6 | 29-Aug | Polymorphism | ✓ | 5% | | | |
| 7 | 5-Sep | Abstract classes | ✓ | | 8% | Form Groups | |
| 8 | 12-Sep | Unified Modeling Language | ✓ | | | Project Plan | |
| Break | 19-Sep | | | | | | |
| Break | 26-Sep | | | | | | |
| 9 | 3-Oct | Templates & STL | ✓ | | | | |
| 10 | 10-Oct | Static Members | ✓ | | | | |
| 11 | 17-Oct | Exception Handling | ✓ | | | 15% | |
| 12 | 24-Oct | Review | | | 10% | | |
| Exam Block | | | | | | | 35% |



Recommended Resources

The course website provides links to a number of online resources to assist students in learning programming in C++. For those students who would also like to have a text book, we would recommend the following:

"Problem Solving with C++", 10th Global Edition, Walter Savitch,
ISBN-13:9781292222820, Pearson, 2018.

Practical Assessment

- All practicals are automatically marked
 - Practicals 1, 2, 4 and 6 are all individual
- The major practical project, weeks 8 to 11,
 - **Group-based** activity, groups of 2-3.
 - is manually **assessed**.
 - all members of each group must be present
- All practical exams are automatically marked
 - P-Exams in weeks 3, 5 and 7.
 - Practical Exams are **individually assessed**
 - no groups permitted

| Prac (20%) | Prac-Exam (25%) | Project (15%) |
|---------------|--------------------|------------------|
| 5% | | |
| 5% | | |
| | 2% | |
| 5% | | |
| | 5% | |
| 5% | | |
| | 8% | Form Groups |
| | | Project Plan |
| | | |
| | | |
| | | |
| | | |
| | | 15% |
| | 10% | |
| | | |

Workshop Assessment

- All workshops are automatically marked
 - groups of up to 3 students can be formed
 - all group members get the attendance mark
 - all work must be submitted **during** a workshop session
 - the attendance marks are capped at 10 workshops
- Workshops in practical exam weeks
 - an example practical exam will be attempted
- Workshop marks are for attendance
 - half mark per workshop attendance
 - marks are not awarded for functionality

Should I be here?

- We assume you can already write small programs
 - **if you struggle with the first practical consider transferring to COMP SCI 1101 Introduction to Programming***
- Our primary focus is programming in C++ using
 - Linux command line tools
 - a version control system (Github)
- We dive into The Four Pillars of Object Oriented Programming

ENCAPSULATION



ABSTRACTION



INHERITANCE



POLYMORPHISM



Penalties for Late Submission of Work

- Unless advised otherwise and where appropriate, all other work is subject to the following late penalty policy:
 - The mark awarded will reduce by 25% for each day/part day late,
 - Marks in excess of the maximum that can be awarded are discarded.
 - Assignment work submitted 4 or more days late will receive 0 marks.
- Practical Exams
 - must be completed during the practical exam
- Workshops
 - submissions must be made during the workshop

Late submissions will not be accepted for practical exams or workshops. The work must be submitted before leaving the practical exam or workshop.

Final Examination

- Final Exam
 - a one-hour multiple-choice written examination
 - the day, time and venue are organised by the examinations office
 - all lecture material is examinable.
- **Hurdle Requirement:**
 - if your final mark for the course is greater than 44 F and,
 - your mark for the final written exam is less than 40%,
 - your final mark for the course will be reduced to 44 F.

Extensions and Missed Assessments

- Extensions due to medical or compassionate grounds
 - submit a request **before the due date**
 - provide documentation – medical form / counsellor's letter
 - extensions will considered on a case-by-case basis
 - this may not always be possible
- Missing a practical exam or assessment session
 - submit a request to the course coordinator **within 5 days**
 - provide documentation – medical form / counsellor's letter
 - alternate arrangements will considered on a case-by-case basis
 - this may not always be possible

Grounds not Considered

- **Circumstances not eligible for modified arrangements:**
 - it was avoidable and there was opportunity to avoid it
 - it is not covered by a Disability Action Plan
 - balancing study workloads from other courses
 - personal commitments or events such as work, international travel, holidays or weddings
 - stress or anxiety normally associated with examinations, required assessment tasks or any aspect of course work
 - misreading or misunderstanding of the examination timetable
- You must be able to attend all classes and examinations.



Replacement Exams

- If your final examination is affected by medical or compassionate circumstances you may be eligible for a replacement examination
- Please consult examinations for specific policy details
 - <http://www.adelaide.edu.au/student/exams/modified/replacement/>

Academic Honesty Policies

- The University has strict policies prohibiting students from presenting other people's work as their own, whether that of students or from outside the University.
- You may not copy code from another student or give another student your code to copy from, unless specifically authorised to do so by a staff member. Your group work is authorised cooperation.
- You may not copy code from anywhere else, without permission.
- **If caught, you may receive zero for the assignment, zero for the course or be expelled.**
- If you don't do the work yourself, you won't be able to do it in the examination and you won't be able to do it in the workforce.

Full policy available at the university webpages.

Violations to 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.

1. Do not submit any work or part thereof which is not yours.

2. Do not submit any work for which you have received unfair assistance.