COMP6010

Foundations of Computer Programming

Session 1, Online-scheduled-weekday 2024

School of Computing

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General Information

Unit convenor and teaching staff
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Contact via Email
By appointment

Lecturer
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Credit points
10

Prerequisites

Corequisites

Co-badged status

Unit description
This unit provides a foundation-level study of programming. The topics covered include programming environment and the process of program execution, variables, operators, boolean logic, control structures including conditions and loops, functions, storage of collections of items and performing operations on the same, and file management.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at https://www.mq.edu.au/study/calendar-of-dates

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: Apply enhanced problem solving skills to develop algorithms

ULO2: Implement programs from algorithms, showing an understanding of control flow.

ULO3: Adhere to standard software development skills such as test-driven development and debugging

ULO4: Understand and apply important foundation-level programming concepts of variables, operators, boolean logic, and control structures.

ULO5: Understand and apply important foundation-level programming concepts of functions and collections.

General Assessment Information

Requirements to Pass the Unit

To pass this unit, you must have:

- An overall mark of 50% or higher in the unit, AND,
- A mark of 50% or higher in practical exam 2.

Assignments (10% + 10%)

The programming assignments requires students to solve a real-life problem based on the contents covered during the semester. Submission of assignments will be done using the iLearn submission box.

Quizzes (20%)

4 quizzes over the course of 13 weeks. These quizzes will be taken during your registered practical class. Exact weeks can be found in the assessment tasks table.

Practical Exam 1 (20%)

In-class practical exam assessing contents covered during the first half of semester. This will be taken during your registered practical class.

Practical Exam 2 (40%)

In-class practical exam assessing contents during the entire semester. This will be taken during your registered practical class. Practical Exam 2 is a hurdle assessment, more information about the hurdle requirement for Practical Exam 2 is provided in the next section.

HURDLE

Practical Exam 2 is a hurdle task. You must make a serious attempt at this assessment. A serious attempt is considered an attempt where you have either completed all questions, or tried to complete as much of the exam as possible. **This assessment is a hurdle assessment as it is the only assessment where we assess all topics during the session.** There are two attempts at the hurdle assessment and the best mark of two attempts will be used. Both attempts are uncapped (eligible for full marks). The first attempt will be in the week 12 practical class and second in the week 13 practical class. **You must get at least 50% in practical exam 2 to clear**

this hurdle. If your total mark in the unit is 50 or more but you do not pass practical exam 2, your final unit mark will be capped at 49, and your grade will be FH.

Late Assessment Submission Penalty

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark) will be applied each day a written assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. Submission time for all written assessments is set at **11:55 pm**. A 1-hour grace period is provided to students who experience a technical concern.

For any late submission of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, students need to submit an application for Special Consideration.

Assessments where Late Submissions will be accepted

In this unit, late submissions will be accepted as follows:

- In Class (Practical) Quizzes/Exams: NO
- Assignment 1 and 2: YES, Standard Late Penalty applies

Special Consideration

The Special Consideration Policy aims to support students who have been impacted by short-term circumstances or events that are serious, unavoidable and significantly disruptive, and which may affect their performance in assessment. If you experience circumstances or events that affect your ability to complete the assessments in this unit on time, please inform the convenor and submit a Special Consideration request through ask.mq.edu.au.

Assessment Tasks

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Quizzes	20%	No	Weeks 4, 7, 9, 11		No	
Practical Exam 1	20%	No	Week 8		No	
Practical Exam 2	40%	Yes	Week 12 and 13		No	
Assignment 1	10%	No	First week of mid semester break		No	
Assignment 2	10%	No	Week 13		No	

Quizzes

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 20 hours
Due: **Weeks 4, 7, 9, 11**
Weighting: **20%**
Groupwork/Individual:
Short extension [3]: No
AI Approach:

Quizzes over the course of 13 weeks in practical classes (exact weeks to be determined based on timetabling and published in the unit guide).

On successful completion you will be able to:

- Apply enhanced problem solving skills to develop algorithms
- Implement programs from algorithms, showing an understanding of control flow.
- Adhere to standard software development skills such as test-driven development and debugging
- Understand and apply important foundation-level programming concepts of variables, operators, boolean logic, and control structures.

Practical Exam 1

Assessment Type [1]: Programming Task
Indicative Time on Task [2]: 15 hours
Due: **Week 8**
Weighting: **20%**
Groupwork/Individual:
Short extension [3]: No
AI Approach:

Online, invigilated practical exam assessing content covered during the first half of the session.

On successful completion you will be able to:

- Apply enhanced problem solving skills to develop algorithms
- Implement programs from algorithms, showing an understanding of control flow.
- Adhere to standard software development skills such as test-driven development and

debugging
- Understand and apply important foundation-level programming concepts of variables, operators, boolean logic, and control structures.

Practical Exam 2

Assessment Type [1]: Programming Task
Indicative Time on Task [2]: 30 hours
Due: **Week 12 and 13**
Weighting: **40%**
Groupwork/Individual:
Short extension [3]: No
AI Approach:
This is a hurdle assessment task (see assessment policy for more information on hurdle assessment tasks)

Online, invigilated practical exam assessing content covered during the entire session.

On successful completion you will be able to:
- Apply enhanced problem solving skills to develop algorithms
- Implement programs from algorithms, showing an understanding of control flow.
- Adhere to standard software development skills such as test-driven development and debugging
- Understand and apply important foundation-level programming concepts of variables, operators, boolean logic, and control structures.
- Understand and apply important foundation-level programming concepts of functions and collections.

Assignment 1

Assessment Type [1]: Programming Task
Indicative Time on Task [2]: 10 hours
Due: **First week of mid semester break**
Weighting: **10%**
Groupwork/Individual:
Short extension [3]: No
AI Approach:

Programming assignment that requires students to solve a real-life problem based on the contents covered during the semester

On successful completion you will be able to:

- Apply enhanced problem solving skills to develop algorithms
- Implement programs from algorithms, showing an understanding of control flow.
- Adhere to standard software development skills such as test-driven development and debugging
- Understand and apply important foundation-level programming concepts of variables, operators, boolean logic, and control structures.

Assignment 2

Assessment Type [1]: Programming Task
Indicative Time on Task [2]: 10 hours
Due: **Week 13**
Weighting: **10%**
Groupwork/Individual:
Short extension [3]: No
AI Approach:

Programming assignment that requires students to solve a real-life problem based on the contents covered during the semester

On successful completion you will be able to:

- Apply enhanced problem solving skills to develop algorithms
- Implement programs from algorithms, showing an understanding of control flow.
- Adhere to standard software development skills such as test-driven development and debugging
- Understand and apply important foundation-level programming concepts of variables, operators, boolean logic, and control structures.
- Understand and apply important foundation-level programming concepts of functions and collections.

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[1] If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment

- Academic Success for academic skills support.

[2] Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation.

[3] An automatic short extension is available for some assessments. Apply through the Service Connect Portal.

Delivery and Resources

Week 1 Classes

Lectures start in week 1.

Practical classes start in week 1.

Methods of Communication

We will communicate with you via your university email and through announcements on iLearn. Queries to convenors can either be placed on the iLearn discussion board or sent to the unit convenor via the contact email on iLearn.

COVID Information

For the latest information on the University's response to COVID-19, please refer to the Coronavirus infection page on the Macquarie website: https://www.mq.edu.au/about/coronavirus-faqs. Remember to check this page regularly in case the information and requirements change during semester. If there are any changes to this unit in relation to COVID, these will be communicated via iLearn.

Resources

Lecture notes: Check iLearn and also refer to https://softwaretechnologymq.github.io/

Python (3.11.2 at the time of writing this guide): https://python.org/

Visual Studio Code: https://code.visualstudio.com/

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://policies.mq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- Academic Appeals Policy
- Academic Integrity Policy
- Academic Progression Policy

- Assessment Policy
- Fitness to Practice Procedure
- Assessment Procedure
- Complaints Resolution Procedure for Students and Members of the Public
- Special Consideration Policy

Students seeking more policy resources can visit Student Policies (https://students.mq.edu.au/support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit Policy Central (https://policies.mq.edu.au) and use the search tool.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/admin/other-resources/student-conduct

Results

Results published on platform other than eStudent, (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit connect.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe academic integrity – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free online writing and maths support, academic skills development and wellbeing consultations.

Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

The Writing Centre

The Writing Centre provides resources to develop your English language proficiency, academic writing, and communication skills.

- Workshops
- Chat with a WriteWISE peer writing leader
- Access StudyWISE
- Upload an assignment to Studiosity
- Complete the Academic Integrity Module

The Library provides online and face to face support to help you find and use relevant information resources.

- Subject and Research Guides
- Ask a Librarian

Student Services and Support

Macquarie University offers a range of Student Support Services including:

- IT Support
- Accessibility and disability support with study
- Mental health support
- Safety support to respond to bullying, harassment, sexual harassment and sexual assault
- Social support including information about finances, tenancy and legal issues
- Student Advocacy provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via the Service Connect Portal, or contact Service Connect.

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.

Changes from Previous Offering

We value student feedback to be able to continually improve the way we offer our units. As such we encourage students to provide constructive feedback via student surveys, to the teaching staff directly, or via the FSE Student Experience & Feedback link in the iLearn page.

Practical Exam 2 second attempt has been uncapped.

Computing Drop-in Centre (CDC)

COMP6010 is supported by the Computing Drop-in Centre (CDC) that operates daily (weekdays) from,

- 10:00 to 12:00,
- 13:00 to 15:00,
- 16:00 to 18:00

The web page at https://students.mq.edu.au/study/faculties/science-and-engineering/drop-in-centre contains further information including,

- location,
- the service agreement about what the centre can and cannot help you with,
- week in which the service begins,
- other units supported by the centre,
- roster (as not all time slots will have staff supporting every unit),
- zoom links for the evening sessions.

Unit information based on version 2024.04 of the Handbook