



COMP1000

Introduction to Computer Programming

Session 1, Weekday attendance, North Ryde 2020

Department of Computing

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General Information

Unit convenor and teaching staff

Matthew Roberts

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Credit points

10

Prerequisites

Corequisites

Co-badged status

Unit description

This unit is an introductory computer science unit, providing a practical introduction to basic computing and programming concepts. Students gain an understanding of, and practical experience in, computer programming; practical experience in implementing informal prose descriptions of problem solutions using an imperative language; an understanding of, and practical experience in, designing, coding, testing and debugging simple algorithms; and an understanding of the principle of incremental development. Other topics include: the concept of program correctness; the differences between high-level languages, assembly languages and machine languages; the role played by compilers; and the execution of programs by computer hardware.

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 problem solving skills to develop algorithms that solve small to medium-sized computational problems

ULO2: design and write code to implement a program description in an imperative programming language

ULO3: use standard software engineering practices to document, debug and test their programs

ULO4: understand and apply appropriately the concepts of variables, loops, functions,

conditionals and compound data in the implementation of programmed systems

ULO5: identify and describe ethical issues in an academic environment and demonstrate active engagement in the learning process

Assessment Tasks

Coronavirus (COVID-19) Update

Assessment details are no longer provided here as a result of changes due to the Coronavirus (COVID-19) pandemic.

Students should consult [iLearn](#) for revised unit information.

[Find out more about the Coronavirus \(COVID-19\) and potential impacts on staff and students](#)

General Assessment Information

Late Submission No extensions will be granted without an approved application for Special Consideration. There will be a deduction of 10% of the total available marks made from the total awarded mark for each 24 hour period or part thereof that the submission is late. For example, 25 hours late in submission for an assignment worth 10 marks – 20% penalty or 2 marks deducted from the total. No submission will be accepted after solutions have been posted.

Delivery and Resources

Coronavirus (COVID-19) Update

Any references to on-campus delivery below may no longer be relevant due to COVID-19.

Please check here for updated delivery information: https://ask.mq.edu.au/account/pub/display/unit_status

CLASSES

Each week of COMP115 has three hours of lectures and a two-hour practical class. For details of days, times and rooms, consult the University timetables webpage (<http://www.timetables.mq.edu.au>). The Day and Evening streams of COMP115 have the same content. Practical classes commence in Week 1 and are held in the E6A Computer Laboratories.

REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS

- [Software Technology: Programming](#)
- *Learning Processing: A Beginner's Guide to Programming Images, Animation, and Interaction*, Daniel Shiffman, Morgan Kaufmann, 2nd edition, 2015

The course is built around material in these books and it will be extremely difficult to successfully

complete this unit without reading the relevant chapters. These texts are the primary sources of examinable material in this unit. Furthermore, you will find the lecture material much easier to understand if you read the textbooks in advance of the lectures. The lecture schedule below lists the relevant sections of the textbooks.

The textbook website at <http://www.learningprocessing.com/> provides supplementary material that you may find useful, including tutorials on Processing, the complete code for the examples in the book, and related downloads. The Macquarie University library has a number of copies of the textbook, including some in the reserve collection. The library also has many other books on programming that you may find useful if the concepts are not adequately explained by the textbook or class material.

UNIT WEBPAGE AND TECHNOLOGY USED AND REQUIRED

Web Home Page

COMP1000 will make extensive use of the iLearn course management system, including for delivery of class materials, discussion boards, online self-tests, submission of work and access to marks and feedback. Students should check the iLearn site (<https://ilearn.mq.edu.au>) regularly for unit updates.

Questions and general queries regarding the content of this unit, its lectures or practical classes, or its assessments should be posted to the discussion boards on the COMP100 iLearn site. In particular, any questions which are of interest to all students in this unit should be posted to one of these discussion boards, so that everyone can benefit from the answers. Questions of a private nature should be directed to the unit teaching staff.

echo360

Any audio and screen video recordings of the lectures in the Day and Evening streams will be made available online at iLearn via the echo360 system.

Technology Used and Required

The practical work in this unit involves programming in the Processing language (<http://processing.org>) which will give students experience with features that are used in many modern programming languages. The Processing software can be downloaded free of charge for Windows, Linux and Mac OS X computers from the Processing web site. It is also installed in the 9WW Computer Laboratories.

Unit Schedule

The unit is broken into six modules

1. Foundations of Programming (FP)
2. Variables and Conditionals (V&C)
3. Loops (L)

4. Functions (F)
5. Compound Data (CD)
6. Program Design and Problem Solving (PD&PS)

All but the first and last modules (V&C, L, F, CD) cover one skill which is absolutely necessary to program a computer. Thus all students must demonstrate a satisfactory performance in each of these modules to pass the course. Satisfactory performance in a module is defined in the assessment tasks section. The first and final modules (FP, PD&PS) introduce then synthesise the skills learned in the other modules. Student performance in these module is important to their final grade and to demonstrate they have reached the level of mastery required to pass, but less than satisfactory performance in these modules does not preclude a student from passing (as it does for the other modules).

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>). 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](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

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

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/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 [ask.mq.edu.au](#) or if you are a Global MBA student contact globalmba.support@mq.edu.au

Student Support

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

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [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

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at [ask.mq.edu.au](#)

If you are a Global MBA student contact globalmba.support@mq.edu.au

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 since First Published

Date	Description
19/02/2020	new data flowed through from CMS