In Progress

Please note that this Unit Profile is still in progress. The content below is subject to change.

COIT20245 *Introduction to Programming*

Term 2 - 2024

Profile information current as at 13/05/2024 09:06 am

All details in this unit profile for COIT20245 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

General Information

Overview

In this unit, you will apply computational thinking to develop fundamental algorithms for specified problems and implement them using Python. It is assumed that you have little or no programming experience. You will apply problem-solving techniques such as decomposition and abstraction. You will learn about the parts of a program, including variables, types, control structures and methods. A key aspect of this unit is practical, hands-on development and testing, which you will do in an industry standard Integrated Development Environment (IDE).

Details

Career Level: *Postgraduate*
Unit Level: *Level 8*
Credit Points: *6*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites

Anti-requisite: COIT29222 Programming Principles.
Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the Assessment Policy and Procedure (Higher Education Coursework).

Offerings For Term 2 - 2024

- Brisbane
- Melbourne
- Online
- Rockhampton
- Sydney

Attendance Requirements

All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

Website

This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.

Class and Assessment Overview

Recommended Student Time Commitment

Each 6-credit Postgraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

Class Timetable

Regional Campuses
Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

Metropolitan Campuses
Adelaide, Brisbane, Melbourne, Perth, Sydney

Assessment Overview

Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the University's Grades and Results Policy for more details of interim results and final grades.

CQUniversity Policies

All University policies are available on the CQUniversity Policy site.
You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the CQUniversity Policy site.

Previous Student Feedback

Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

Feedback from Unit coordinator reflection.

Feedback
Attendance particularly in lectures has been poor.

Recommendation
Possibly automate attendance recording in large lectures. Contact students with poor attendance and identify them as being at risk.

Feedback from Unit coordinator reflection.

Feedback
Academic misconduct has been a problem especially collusion.

Recommendation
Continue to educate students on the consequences of academic misconduct. Possibly employ third party software to detect such breaches. With such a large cohort it would be difficult to individualise the various assessment items.

Feedback from Student feedback.

Feedback
Some students find the unit's advanced level challenging, particularly when Java is used as the primary programming language, which may not align with the interests of all students in future programming pursuits.

Recommendation
Consider introducing Python as the primary teaching tool, as it could provide a more approachable and engaging experience for students navigating the complexities of an introductory unit with advanced content in Java.

Feedback from Student feedback.

Feedback
Students are happy with the teaching staff.

Recommendation
Continue employing experienced and dedicated teaching staff.

Unit Learning Outcomes

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

1. Implement, document and refactor functions that use Python's syntax, data representations, scope rules, and procedural concepts including iterations and conditionals
2. Devise algorithms using computational thinking techniques (decomposition and abstraction) and communicate algorithms (oral and written)
3. Use industry tools to efficiently and ethically develop quality applications (Integrated Development Environment (IDE), debugger, linter, Generative AI and version control)
4. Demonstrate secure coding practices (variable typing and scoping, testing and input validation)
5. Develop modules that implement standard algorithms (searching, sorting), process hierarchical data (JSON), and adhere to design principles (coupling and cohesion) and construct applications that use modules and Python libraries.

The Australian Computer Society (ACS), the professional association for Australia's ICT sector, recognises the Skills Framework for the Information Age (SFIA). SFIA is adopted by organisations, governments, and individuals in many countries and provides a widely used and consistent definition of ICT skills. SFIA is increasingly being used when developing job descriptions and role profiles. ACS members can use the tool MySFIA to build a skills profile.
This unit contributes to the following workplace skills as defined by SFIA 8 (the SFIA code is included):

- Programming/Software Development (PROG)
- Testing (TEST)
- Methods and tools (METL)

Alignment of Learning Outcomes, Assessment and Graduate Attributes

— N/A Level ∘ Introductory Level • Intermediate Level • Graduate Level ∘ Professional Level ∘ Advanced Level

Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes								
	1					2	3	4	5
1 - Knowledge	∘	∘	∘	∘	∘				
2 - Communication	∘	∘							
3 - Cognitive, technical and creative skills									
4 - Research									
5 - Self-management									
6 - Ethical and Professional Responsibility			∘	∘					
7 - Leadership									
8 - Aboriginal and Torres Strait Islander Cultures									

Textbooks and Resources

Information for Textbooks and Resources has not been released yet.

This information will be available on Monday 17 June 2024

Academic Integrity Statement

Information for Academic Integrity Statement has not been released yet.

This unit profile has not yet been finalised.