COIT11222 *Programming Fundamentals*
Term 2 - 2018

Profile information current as at 05/05/2024 02:32 pm

General Information

Overview
This unit will help you become a computer programmer even if you have had no programming experience. You will cover topics such as pseudocode, variables, constants, data types, operators, expressions, statements, classes, objects, inheritance, loops, methods, passing parameters and arrays. You will learn how to design, implement and test programs using a modern Integrated Development Environment (IDE).

Details
Career Level: *Undergraduate*
Unit Level: *Level 1*
Credit Points: *6*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites
There are no requisites for this unit.
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 - 2018

- Adelaide
- Brisbane
- Cairns
- Distance
- Melbourne
- Rockhampton
- Sydney
- Townsville

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 Undergraduate 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

1. **Written Assessment**
Weighting: 20%
2. **Written Assessment**
Weighting: 25%
3. **Examination**
Weighting: 55%

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 Have your say, forums and emails

Feedback
Students having difficulties installing the relevant software.

Recommendation
Create or source video which can help the students get set up correctly.

Feedback from Have your say

Feedback
Students find the practical tutorials very helpful.

Recommendation
Encourage students to view the practical tutorial videos.

Feedback from Have your say

Feedback
Some students found the use of Swing components difficult.

Recommendation
Create a practical tutorial video demonstrating the use of Swing components.

Feedback from Self-reflection

Feedback
Difficulty for distance students learning programming for the first time and generally need personal help.

Recommendation
Continue to support distance students by email and in some cases via the phone. Investigate holding workshops for distance students.

Unit Learning Outcomes

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

1. Understand the principles of object-oriented programming
2. Develop programs using various data types, operators, expressions, statements and loops
3. Develop programs using arrays for storing, searching and sorting data
4. Develop programs using user-defined methods, parameters and arguments
5. Develop programs using graphical user interface
6. Apply techniques used to produce quality programs.

Australian Computer Society (ACS) recognises the Skills Framework for the Information Age (SFIA). SFIA is in use in over 100 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 at
https://www.acs.org.au/professionalrecognition/mysfia-b2c.html
This unit contributes to the workplace skills as defined by SFIA. The SFIA code is included:
Program ming/Software Development (PROG)

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	6
1 - Written Assessment - 20%		•		•		•
2 - Written Assessment - 25%	•		•		•	•
3 - Examination - 55%	•	•	•	•	•	

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes					
	1	2	3	4	5	6
1 - Communication						
2 - Problem Solving	•	•	•	•	•	•
3 - Critical Thinking		•	•	•	•	•
4 - Information Literacy	•	•	•	•	•	•
5 - Team Work	•	•	•	•	•	•
6 - Information Technology Competence	•	•	•	•	•	•
7 - Cross Cultural Competence						
8 - Ethical practice						
9 - Social Innovation						
10 - Aboriginal and Torres Strait Islander Cultures						

Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
1 - Written Assessment - 20%	•	•	•	•		•				
2 - Written Assessment - 25%	•	•	•	•		•				
3 - Examination - 55%		•	•	•						

Textbooks and Resources

Textbooks

COIT11222

Prescribed

JAVA Programming
Edition: 8th (2016)
Authors: Joyce Farrell
CENGAGE Learning
Boston , MA , USA
ISBN: 978-1-285-85691-9
Binding: Paperback

View textbooks at the CQUniversity Bookshop

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- JDK, http://www.oracle.com/technetwork/java/javase/downloads/index.html
- (Optional)NetBeans, http://netbeans.org/downloads/index.html
- TextPad, http://www.textpad.com/download/index.html

Referencing Style

All submissions for this unit must use the referencing style: Harvard (author-date)
For further information, see the Assessment Tasks.

Teaching Contacts

Michael Li Unit Coordinator
m.li@cqu.edu.au

Schedule

Week 1 - 09 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
Creating Java Programs	Chapter 1	

Week 2 - 16 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
Using Data	Chapter 2	

Week 3 - 23 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
Making Decisions	Chapter 5	

Week 4 - 30 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
Looping	Chapter 6	

Week 5 - 06 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
Using Methods, Classes and Objects	Chapter 3	
Vacation Week - 13 Aug 2018		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Week 6 - 20 Aug 2018		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
More Object Concepts	Chapter 4	**Assignment 1** Due: Week 6 Friday (24 Aug 2018) 11:45 pm AEST
Week 7 - 27 Aug 2018		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Arrays	Chapter 8	
Week 8 - 03 Sep 2018		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Advanced Array Concepts	Chapter 9	
Week 9 - 10 Sep 2018		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Introduction to Swing Components	Chapter 14	
Week 10 - 17 Sep 2018		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Characters, Strings, and the StringBuilder	Chapter 7	
Week 11 - 24 Sep 2018		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Files Input and Output	Chapter 13	**Assignment 2** Due: Week 11 Friday (28 Sept 2018) 11:45 pm AEST
Week 12 - 01 Oct 2018		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Revision		
Review/Exam Week - 08 Oct 2018		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Exam Week - 15 Oct 2018		
Module/Topic	**Chapter**	**Events and Submissions/Topic**

Term Specific Information

Unit coordinator: Dr.Michael Li
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Assessment Tasks

1 Assignment 1

Assessment Type
Written Assessment

Task Description
This assessment item is designed to test your understanding of topics such as variables, constants, types, operators, standard input/output, loops, if statements, classes, objects and methods. The assessment task is to write, compile and execute java programs using the above mentioned topics. Further details are available on the unit website in the Assessment 1 Specification document.

Assessment Due Date
Week 6 Friday (24 Aug 2018) 11:45 pm AEST

Return Date to Students
Week 9 Monday (10 Sept 2018)

Weighting
20%

Assessment Criteria
1. Efficient object-oriented program design.
2. Appropriate use of variables, constants, types, operators, expressions, statements and loops.
3. Appropriate use of objects, classes and methods.
4. Effective use of good programming practice/techniques.
5. Rigorous testing of the program for logic, runtime and other errors.
6. Compilation and execution of the program using a modern IDE.

Referencing Style

- Harvard (author-date)

Submission
Online

Learning Outcomes Assessed

- Develop programs using various data types, operators, expressions, statements and loops
- Develop programs using user-defined methods, parameters and arguments
- Apply techniques used to produce quality programs.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence

2 Assignment 2

Assessment Type
Written Assessment

Task Description
This assessment item is designed to test your understanding of topics such as GUI input/output, arrays/arrayLists, methods with parameters and searching. The assessment task is to write, compile and execute a Java program using the above mentioned topics. Further details are available on the unit website in the Assessment 2 Specification document.

Assessment Due Date
Week 11 Friday (28 Sept 2018) 11:45 pm AEST

Return Date to Students
Review/Exam Week Friday (12 Oct 2018)

Weighting
25%

Assessment Criteria
1. Efficient object-oriented program design.
2. Appropriate use of variables, constants, types, operators, expressions, statements and loops.
3. Appropriate use of objects, classes and methods.
4. Effective use of good programming practice/techniques.
5. Rigorous testing of the program for logic and runtime errors, data validation and reuse of code.
6. Compilation and execution of the program using a modern IDE.
7. Efficient use of arrays/arrayLists, searching algorithms.
8. Appropriate use of graphical user interface.

Referencing Style

- Harvard (author-date)

Submission
Online

Learning Outcomes Assessed

- Understand the principles of object-oriented programming
- Develop programs using arrays for storing, searching and sorting data
- Develop programs using graphical user interface
- Apply techniques used to produce quality programs.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence

Examination

Outline
Complete an invigilated examination.

Date
During the examination period at a CQUniversity examination centre.

Weighting
55%

Length
180 minutes

Minimum mark or grade
40%

Exam Conditions
Open Book.

Materials
Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).
No calculators permitted

Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the **Student Academic Integrity Policy and Procedure**. This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

What is a breach of academic integrity?
A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

Why is academic integrity important?
A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

Where can I get assistance?
For academic advice and guidance, the Academic Learning Centre (ALC) can support you in becoming confident in completing assessments with integrity and of high standard.

What can you do to act with integrity?

Be Honest
If your assessment task is done by someone else, it would be dishonest of you to claim it as your own

Seek Help
If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)

Produce Original Work
Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem