COIT11134 *Object Oriented Programming*
Term 2 - 2017

All details in this unit profile for COIT11134 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
This unit is designed to extend the students' understanding of object-oriented programming principles. Knowledge of programming fundamentals, classes and objects, interfaces and polymorphism, inheritance, GUI design, arrays and lists, sorting and searching algorithms are covered. The strength and weaknesses of the techniques are also considered. Students will apply this knowledge in solving practical problems.

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
Prerequisite COIT11222
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 - 2017

- 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. **Practical and Written Assessment**
Weighting: 15%
2. **Practical and Written Assessment**
Weighting: 20%
3. **Examination**
Weighting: 65%

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 From Lecturer/tutor and email

Feedback
OO concepts and principles need to be included in assignment content

Recommendation
To include the Object Oriented concepts such as inheritance, polymorphism, etc., as compulsory component in the assignments.

Unit Learning Outcomes

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

1. Understand the principles of object-oriented programming.
2. Develop object-oriented programs using a modern programming language.
3. Possess skills in developing object-oriented programs using a modern IDE (integrated development environment).
4. Have sufficient confidence in the use of object-oriented programming techniques to allow progression into advanced units in programming and utilise your skills in future projects.

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 following workplace skills as defined by SFIA. The SFIA code is included:

- Program ming/Software development (PROG)
- Testing (TEST).

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**
1 - Practical and Written Assessment - 15%	●	●	●	●
2 - Practical and Written Assessment - 20%	●	●	●	●
3 - Examination - 65%	●	●		●

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes			
	1	**2**	**3**	**4**
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 - Practical and Written Assessment - 15%		•	•	•		•				
2 - Practical and Written Assessment - 20%		•	•	•		•				
3 - Examination - 65%		•	•	•		•				

Textbooks and Resources

Textbooks
COIT11134

Prescribed

Core Java Volume I -- Fundamentals
Edition: 10 (2016)
Authors: Cay S. Horstmann
Pearson
Melbourne , Victoria , Australia
ISBN: ISBN-13: 9780134177304
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)
- NetBeans IDE
- Notepad++ editor

Referencing Style

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

Teaching Contacts

Yufeng Lin Unit Coordinator
y.lin@cqu.edu.au

Schedule

Week 1 - 10 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Revision of Java Classes, Objects and Methods	Chapter 4	

Week 2 - 17 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Inheritance	Chapter 5	

Week 3 - 24 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Polymorphism	Chapter 5	

Week 4 - 31 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
GUI and Event Handling (1)	Chapters 10 & 11	

Week 5 - 07 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
GUI and Event Handling (2)	Chapter 12	

Vacation Week - 14 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 21 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Java Exception Handling	Chapter 7	**Assignment 1** Due: Week 6 Friday (25 Aug 2017) 11:45 pm AEST

Week 7 - 28 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Interfaces and Inner Classes	Chapter 6	

Week 8 - 04 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Generic methods	Chapter 8	

Week 9 - 11 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Generic Classes	Chapters 8	

Week 10 - 18 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Linked Lists and Algorithms	Chapters 9	**Assignment 2** Due: Week 10 Friday (22 Sept 2017) 11:45 pm AEST

Week 11 - 25 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Stacks, Queues and Trees	Chapter 9	

Week 12 - 02 Oct 2017

Module/Topic	Chapter	Events and Submissions/Topic
Final Revision and additional readings	Additional lecture materials and resources from the publisher/other sources.	

Review/Exam Week - 09 Oct 2017

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 16 Oct 2017

Module/Topic	Chapter	Events and Submissions/Topic

Assessment Tasks

1 Assignment 1

Assessment Type
Practical and Written Assessment

Task Description
In this assignment, you need to develop a Java GUI-based application to meet the requirements of a case study that will be available in the unit Moodle site. By completing this assignment you will learn to use different Java Layout Managers, GUI controls and Listeners. You will develop Java classes that use Object Oriented Principles such as inheritance and aggregation. You will also learn to solve the issues that arise at the time of developing of Java class(es) that use inheritance.
You may use any of the following development environments:

- NetBeans Integrated Development Environment (IDE)
- Notepad ++ editor or similar editor (TextPad)

This assignment must be submitted on-line through the Moodle assignment submission system.
The full specification will be available in the unit Moodle site.

Assessment Due Date
Week 6 Friday (25 Aug 2017) 11:45 pm AEST

Return Date to Students
Week 8 Friday (8 Sept 2017)

Weighting
15%

Assessment Criteria
The detailed assessment criteria will be provided along with the assignment specifications. You can submit your assignment solution before the due date. However, the assignment marks and feedback on your solution will be returned to you only after two weeks of the due date.
Your assignment solution will be assessed mainly on the following:

- developing suitable Java classes
- using inheritance and/or aggregation principles
- selecting appropriate GUI controls
- using suitable Java Layout Managers and Listeners
- adhering to better programming practice

Penalties related to late submission and plagiarism will be applied as per University policy.

Referencing Style

- [Harvard (author-date)](#)

Submission
Online

Learning Outcomes Assessed

- Understand the principles of object-oriented programming.
- Develop object-oriented programs using a modern programming language.
- Possess skills in developing object-oriented programs using a modern IDE (integrated development environment).
- Have sufficient confidence in the use of object-oriented programming techniques to allow progression into advanced units in programming and utilise your skills in future projects.

Graduate Attributes

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

2 Assignment 2

Assessment Type
Practical and Written Assessment

Task Description
In this assignment, you have to develop a Java GUI based application to meet the additional requirements of the case study which was used for the assignment 1 of this unit. By completing this assignment you will learn to:

- Use more than one Java class in an application
- Read and/or write text files
- Use searching algorithms and/or sorting algorithms
- Use ArrayList or LinkedList or any other data structure

You may use any of the following development environments:

- NetBeans Integrated Development environment (IDE)
- Notepad++ editor or similar editor

This assignment must be submitted on-line through the Moodle assignment submission system.
The full specification will be available in the unit Moodle site.

Assessment Due Date
Week 10 Friday (22 Sept 2017) 11:45 pm AEST

Return Date to Students
Week 12 Friday (6 Oct 2017)

Weighting
20%

Assessment Criteria
The detailed assessment criteria will be provided along with the assignment specifications. You are encouraged to submit your assignment solution before the due date. The assignment marks and feedback on your solution will be returned to you after two weeks of the due date.
Your assignment solution will be assessed mainly on the following:

- extending Java classes and/or implementing Interfaces
- using suitable Java Layout Managers, GUI controls and Listeners
- developing Java classes for file reading and/or writing
- using algorithms for searching and/or sorting
- adhering to better programming practice

Penalties related to late submission and plagiarism will be applied as per University policy.

Referencing Style

- Harvard (author-date)

Submission
Online

Learning Outcomes Assessed

- Understand the principles of object-oriented programming.
- Develop object-oriented programs using a modern programming language.
- Possess skills in developing object-oriented programs using a modern IDE (integrated development environment).
- Have sufficient confidence in the use of object-oriented programming techniques to allow progression into advanced units in programming and utilise your skills in future projects.

Graduate Attributes

- 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
65%

Length
180 minutes

Exam Conditions
Open Book.

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

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