COIT13234 *Mobile Software Development*
Term 1 - 2020

Profile information current as at 14/12/2025 04:12 pm

General Information

Overview
This unit introduces you to the practical issues involved in the design and implementation of mobile portals to enterprise systems. The software development process for mobile platforms will be addressed and particular attention will be paid to the impact that limited computing resources and wireless communication have on the development of secure, reliable and easy to use applications. The business drivers for mobile portals will be discussed, as will the social impact of mobile technology.

Details
Career Level: *Undergraduate*
Unit Level: *Level 3*
Credit Points: *6*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites
Prerequisites: COIT11134 and COIS12036
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 1 - 2020

- Brisbane
- Cairns
- Melbourne
- Online
- 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 Assessment**
Weighting: 25%
2. **Written Assessment**
Weighting: 20%
3. **Practical Assessment**
Weighting: 20%
4. **Examination**
Weighting: 35%

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 evaluation

Feedback
More focus should be on learning to program android devices and less on other issues.

Recommendation
The second assignment will be modified to do more programming and devote less time to marketing/business case analysis.

Feedback from Unit evaluation

Feedback
Android Studio used in labs hard to use.

Recommendation
The version of Android Studio used in labs to be updated.

Feedback from Unit evaluation

Feedback
Assignment specifications unclear.

Recommendation
Video of assignment to be added to the website.

Unit Learning Outcomes

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

1. Examine the technical challenges faced by mobile application development and explain how these challenges are being addressed
2. Investigate whether a given business problem would benefit from a solution using mobile technology
3. Compare and contrast the software development processes for mobile applications and conventional applications
4. Explore the opportunities for incorporating socially innovative features in mobile applications
5. Design and implement a mobile application.

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:
Ergonomic Experience Design (HCEV)
Systems Integration (SINT)
User Experience Evaluation (USEV)
Programming/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	5
1 - Practical Assessment - 25%				•	•
2 - Practical Assessment - 20%	•	•			•
3 - Written Assessment - 20%	•		•	•	
4 - Examination - 35%		•	•		

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
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 Assessment - 25%	•	•						•		
2 - Practical Assessment - 20%	•	•	•	•		•				
3 - Written Assessment - 20%	•	•	•	•		•				
4 - Examination - 35%	•	•	•							

Textbooks and Resources

Textbooks

COIT13234

Prescribed

Android Programming: The Big Nerd Ranch Guide
Edition: 3rd (2017)
Authors: Bill Phillips, Chris Stuart and Kristin Marsicano
Pearson Higher Ed USA
London , UK
ISBN: 978-0134706054
Binding: Paperback

Additional Textbook Information
Copies can be purchased at the CQUni Bookshop here: http://bookshop.cqu.edu.au (search on the Unit code)

View textbooks at the CQUniversity Bookshop

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Android Studio (latest version)

Referencing Style

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

Teaching Contacts

Colin Lemmon Unit Coordinator
c.lemmon@cqu.edu.au

Schedule

Week 1 - 09 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to Android programming, activities, layouts and activity lifecycle	Big Nerd Ranch Guide 3rd ed, Chapter 1-3, 5 & 6	

Week 2 - 16 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Fragments, FragmentManager and RecyclerView	Big Nerd Ranch Guide 3rd ed, Chapter 7 & 8	

Week 3 - 23 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Layouts, widgets, toolbar, menu and debugging	Big Nerd Ranch Guide 3rd ed, Chapter 4, 9 & 13	

Week 4 - 30 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic

ViewPager, Dialogs and fragment arguments	Big Nerd Ranch Guide 3rd ed, Chapter 11 & 12	

Week 5 - 06 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
SQLite, Implicit Intents and taking pictures	Big Nerd Ranch Guide 3rd ed, Chapter 14, 15 & 16	

Vacation Week - 13 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 20 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Data binding, MVVM, styles, themes and XML drawables	Big Nerd Ranch Guide 3rd ed, Chapter 20, 22 & 23	**Assignment 1 due** **Assignment 1** Due: Week 6 Monday (20 Apr 2020) 5:00 pm AEST

Week 7 - 27 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
HTTP, background tasks, loopers, handlers and handler threads	Big Nerd Ranch Guide 3rd ed, Chapter 25 & 26	

Week 8 - 04 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
SearchView, background services and broadcast intents	Big Nerd Ranch Guide 3rd ed, Chapter 27, 28 & 29	**Assignment 2 due** **Assignment 2** Due: Week 8 Friday (8 May 2020) 11:59 pm AEST

Week 9 - 11 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Location and Play Services, Google Maps and application deployment	Big Nerd Ranch Guide 3rd ed, Chapter 33 & 34	

Week 10 - 18 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Custom Views, drawables, animation and cross platform technologies	Big Nerd Ranch Guide 3rd ed, Chapter 31 & 32	

Week 11 - 25 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Kotlin, Jetpack and Room	Big Nerd Ranch Guide 4th ed	

Week 12 - 01 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic
Revision		**Assignment 3 Due** **Assignment 3** Due: Week 12 Monday (1 June 2020) 5:00 pm AEST

Review/Exam Week - 08 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 15 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic

Assessment Tasks

1 Assignment 1

Assessment Type
Practical Assessment

Task Description
This task requires the development of an Android mobile application using Android Studio and Java. The application will focus on basic programming techniques required to create a simple mobile application.
More details of this assignments will be provided in the Moodle course website.
The features of this mobile application will be extended in Assignment 2.

Assessment Due Date
Week 6 Monday (20 Apr 2020) 5:00 pm AEST

Return Date to Students
Week 8 Monday (4 May 2020)

Weighting
25%

Assessment Criteria

Component	Criteria	Marks
	Page Layouts	
Layouts	Options page	**1**
	List Page	**1**
	Details Page	**1**
	Operation	
Operation	Options page functions correctly	**1**
	List Page functions correctly	**1**
	Details Page including dialogs and menus functions correctly	**3**
	All errors are caught, and appropriate messages displayed	**1**
	Code	
Fragments	Fragments used for list page and details page	**2**
List View	ListView, ViewHolder and Adapter implemented correctly	**4**
Resources	Resources (such as string resources) used wherever possible	**1**
Menu	Menu and items correct	**1**
SQLite Database	Items are loaded from the database on start-up	**2**
	Details and edits are saved to the database	**2**
Dialogs	Dialog/s implemented correctly	**1**
Code Quality	Informative variable names, consistent indenting, adequate commenting, no more than one blank line between blocks of code	**3**
	Total	**25**

Referencing Style

- Harvard (author-date)

Submission
Online

Learning Outcomes Assessed

- Explore the opportunities for incorporating socially innovative features in mobile applications
- Design and implement a mobile application.

Graduate Attributes

- Communication
- Problem Solving
- Ethical practice

2 Assignment 2

Assessment Type
Written Assessment

Task Description
This assessment requires you to write a report that identifies and investigates an existing problem. You will then perform an analysis of existing mobile application software to address the problem, propose an improved application design and consider marketing and ethical issues.
More details of this assignments will be provided in the Moodle course website.

Assessment Due Date
Week 8 Friday (8 May 2020) 11:59 pm AEST

Return Date to Students
Week 10 Friday (22 May 2020)

Weighting
20%

Assessment Criteria

Component	Mark
Problem description	2
Research of existing applications	2
Strengths and weaknesses of existing solutions	2
Proposed improved solution	2
Points of difference	2
Target market	2
Marketing strategy	2
Ethical concerns	2
Referencing	2
Writing quality	2
Mark	20

Referencing Style

- Harvard (author-date)

Submission
Online

Learning Outcomes Assessed

- Examine the technical challenges faced by mobile application development and explain how these challenges are being addressed
- Compare and contrast the software development processes for mobile applications and conventional applications
- Explore the opportunities for incorporating socially innovative features in mobile applications

Graduate Attributes

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

3 Assignment 3

Assessment Type
Practical Assessment

Task Description
This assignment extends the features of the mobile application developed in assignment 1 using advanced features such as HTTP, threads, locations services and Google Maps.
More details of this assignments will be provided in the Moodle course website.

Assessment Due Date
Week 12 Monday (1 June 2020) 5:00 pm AEST

Return Date to Students
Exam Week Monday (15 June 2020)

Weighting
20%

Assessment Criteria

Component	Criteria	Marks
HTTP	Data retrieved from server	**3**
Threads	Appropriate thread type used for HTTP connection	**2**
Notification	Notification triggered on data received	**3**
Email	Email sent when menu item selected	**3**
Location Services	Current location used to initialise map	**3**
Google Map	Map displayed and shows location of specified item/s	**3**
Coding Style	Appropriate naming conventions, adequate commenting, well formatted	**3**
	Total	**20**

Referencing Style

- Harvard (author-date)

Submission
Online

Learning Outcomes Assessed

- Examine the technical challenges faced by mobile application development and explain how these challenges are being addressed
- Investigate whether a given business problem would benefit from a solution using mobile technology
- Design and implement a mobile application.

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
35%

Length
120 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).

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