

Unit Outline (Higher Education)

Institute / School: Institute of Innovation, Science & Sustainability

Unit Title: Mobile Development Fundamentals

Unit ID: GPSIT2000

Credit Points: 15.00

Prerequisite(s): GPSIT1101

Co-requisite(s): Nil

Exclusion(s): Nil

ASCED: 020103

Description of the Unit:

This course will provide students with a background into the major mobile application platforms currently available including iOS and Android. Students will start to develop skills in application development. This course also serves to provide students with exposure to programming concepts, covering topics such as boolean expressions, selection, iteration, list data collections, events and procedures. This course will incorporate additional learning hours to support the development of students' academic and study skills.

Grade Scheme: Graded (HD, D, C, P, MF, F, XF)

Work Experience:

No work experience

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the Unit but gained a final mark of 45 per cent or above, has completed all major assessment tasks (including all sub-components where a task has multiple parts) as specified in the Unit Description and is not eligible for any other form of supplementary assessment

Course Level:

Level of Unit in Course	AQF Level of Course					
	5	6	7	8	9	10
Introductory	■	■	■	■	■	■
Intermediate	✓	■	■	■	■	■
Advanced	■	■	■	■	■	■

Learning Outcomes:

Knowledge:

- K1.** Understand constructs typical of many programming languages such as: variables, expressions, assignment, sequence, selection, iteration, procedures, parameters, return values.
- K2.** Describe the basic (software) architectures and operating systems of various mobile platforms.
- K3.** Describe key aspects of the behaviour and organisation of a mobile app as pertaining to the various mobile platforms.
- K4.** Describe at a high level the considerations and key elements of the process of developing an app from conception to publicly releasing.

Skills:

- S1.** Analyse the input, processing and output needs of small programming problems.
- S2.** Design code sequences to realise algorithms in a programming language.
- S3.** Design basic user interfaces and develop storyboards to convey designed interaction sequences.
- S4.** Comprehend already-written code sequences to describe their effect when running.
- S5.** Develop test cases for code sequences to ensure correct behavior.
- S6.** Develop mobile apps using visual programming environments.
- S7.** Develop the appropriate English language and academic skills to successfully study at an undergraduate level

Application of knowledge and skills:

- A1.** Design, develop, test and debug mobile apps from a given textual program specification.

Unit Content:

This may include:

- Programming Constructs: Sequence, Selection, Iteration, Variables, Expressions, Lists, Events, UI Components.
- Programming Techniques: Event handling, searching through lists, data storage and retrieval, task decomposition.
- Fundamentals of mobile programming concepts.
- Basics of hardware architecture for mobile computing.
- Basics of operating systems for mobile computing.
- Overview of software development lifecycles, as applicable to development of a mobile app.
- Programming approaches and tools for various mobile platforms, such as iOS, Android and Windows Phone.
- Differences between desktop and mobile programming.

Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1, K2, K3, K4, S1, S2, S3, S5, S6, S7, A1	Demonstrations of learning outcome knowledge	Project(s)/Assignment(s)/Report(s)/Lab Task(s)/Presentation(s)	60% - 80%
K1,K2,K3,K4,S1,S2,S3,S4,S5,S7,A1	Review and Skills Practice	Test(s)/Examination(s)/Quiz(zes)	20% - 40%

Adopted Reference Style:

APA

Refer to the [library website](#) for more information

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