



Course Outline (Higher Education)

School:	School of Engineering, Information Technology and Physical Sciences
Course Title:	MOBILE USER INTERFACE DESIGN & DEVELOPMENT
Course ID:	ITECH3106
Credit Points:	15.00
Prerequisite(s):	(ITECH2306)
Co-requisite(s):	Nil
Exclusion(s):	(ITECH3229)
ASCED:	020103

Description of the Course:

This course introduces students to the Java-based tools and APIs (Application Programming Interfaces) used to build apps for Android mobile devices, as well as some issues around planning and designing the user experience for such apps. Students will be instructed in the planning, coding and creation of touch-based apps targeting the Android operating system.

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

Work Experience:

No work experience: Student is not undertaking work experience in industry.

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the course but gained a final mark of 45 per cent or above and submitted all major assessment tasks.

Program Level:

Level of course in Program	AQF Level of Program					
	5	6	7	8	9	10
Introductory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermediate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Learning Outcomes:**Knowledge:**

- K1.** Explain how development for mobile devices differs from web or PC based development.
- K2.** Describe standard mobile device development paradigms, such as model/view/controller.
- K3.** Describe and explain the major components of a mobile device API and OS framework, including how they work together.
- K4.** Compare performance and resource management issues involved in mobile development to standard PC application development.

Skills:

- S1.** Identify and analyse user-experience requirements for a proposed mobile device app.
- S2.** Design the user-experience of a mobile device app, through storyboarding techniques.
- S3.** Construct mobile device apps using features of mobile SDK(s).
- S4.** Apply touch interface elements in mobile applications.

Application of knowledge and skills:

- A1.** Create mobile applications which meet the provided project design goals.
- A2.** Incorporate various libraries and functionality into mobile applications.

Course Content:

Topics may include:

- Mobile User Interfaces and MVC.
- Requirements Identification and Analysis of User Interaction Goals for Mobile Apps.
- Designing User Interactions / User Experience.
- Android Studio and Android Architecture.
- Views, Activities and Layouts.
- Actions and Events, Checkbox and RadioButton views.
- Passing Data between Activities.
- Menus and Action Bars.
- Touchscreens and MultiTouch.
- Sound and Audio.
- Fragment Based Interfaces.

Values:

- V1. Recognise the legal and ethical issues that underpin responsible application development.
- V2. Recognise the importance and influence of mobile devices to modern society.

Graduate Attributes

The Federation University FedUni graduate attributes (GA) are entrenched in the [Higher Education Graduate Attributes Policy](#) (LT1228). FedUni graduates develop these graduate attributes through their engagement in explicit learning and teaching and assessment tasks that are embedded in all FedUni programs. Graduate attribute attainment typically follows an incremental development process mapped through program progression. **One or more graduate attributes must be evident in the specified learning outcomes and assessment for each FedUni course, and all attributes must be directly assessed in each program**

Graduate attribute and descriptor		Development and acquisition of GAs in the course	
		Learning Outcomes (KSA)	Assessment task (AT#)
GA 1 Thinkers	Our graduates are curious, reflective and critical. Able to analyse the world in a way that generates valued insights, they are change makers seeking and creating new solutions.	K1, K2, K3, K4, S1, S2, S3, S4, A1, A2	Assignments
GA 2 Innovators	Our graduates have ideas and are able to realise their dreams. They think and act creatively to achieve and inspire positive change.	S1, S2, A1	Assignments
GA 3 Citizens	Our graduates engage in socially and culturally appropriate ways to advance individual, community and global well-being. They are socially and environmentally aware, acting ethically, equitably and compassionately.	Not applicable	Not applicable
GA 4 Communicators	Our graduates create, exchange, impart and convey information, ideas, and concepts effectively. They are respectful, inclusive and empathetic towards their audience, and express thoughts, feelings and information in ways that help others to understand.	S1, S2	Assignments
GA 5 Leaders	Our graduates display and promote positive behaviours, and aspire to make a difference. They act with integrity, are receptive to alternatives and foster sustainable and resilient practices.	Not applicable	Not applicable

Learning Task and Assessment:

Students should engage with course material and computer laboratory classes and maintain a notebook with notes and exercises. The assessment for the course will include at least one practical assignment and a final examination will test the understanding of the concepts studied in this course.

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
K1, K2, K3, K4, S2, S3	Study course material, read and summarise theoretical aspects of the course.	Test(s)/Examination(s)/Presentation(s)	20 - 30%
S1, S2, S3, S4, A1, A2	Assignments based on the creation of mobile applications.	Assignment(s)/Lab Assignment(s)/Report(s)	70 - 80%

Adopted Reference Style:

APA

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

Fed Cite - [referencing tool](#)