Title (Units): **COMP2025 Mobile Application Development Workshop (1,1,1)**

Course Aims: This course aims to introduce students to the basic concepts of mobile application development and equip them with skills in the design and development of mobile applications using up-to-date software development tools and application programming interfaces (API).

Prerequisite: COMP1005 Essence of Computing or equivalent course

Course Intended Learning Outcomes (CILOs):
Upon successful completion of this course, students should be able to:

No.	Course Intended Learning Outcomes (CILOs)
	Knowledge
1	Describe the fundamental elements in mobile application development
2	Describe the up-to-date software development tools and APIs for mobile application development
	Skill
3	Develop, test and publish a simple mobile application

Calendar Description: This course aims to introduce to students the basic concepts of mobile application development and equip them with skills in the design and development of mobile applications using up-to-date software development tools and application programming interfaces (API).

Teaching and Learning Activities (TLAs):

CILOs	Type of TLA
1-3	Students will attend lectures to learn the key concepts of mobile application development.
1-3	Students will work on mini project to consolidate their knowledge on mobile application development.
2-3	Students will attend laboratory sessions to gain practical skills on mobile application development.

Assessment:

No.	Assessment Methods	Weighting	CILOs to be addressed	Description of Assessment Tasks
1	Continuous Assessment	100%	1-3	Lab exercises and mini project to evaluate students' understandings on the concepts and skills of mobile application development.

Assessment Rubrics:

Excellent (A)	• Demonstrate a thorough understanding of the concepts of mobile application development. • Able to develop mobile applications with various advanced features. • Demonstrate an excellent self-learning capability by bringing new techniques into the project.
Good (B)	• Demonstrate a good understanding of the concepts of mobile application development. • Able to develop mobile applications with a good number of advanced features. • Demonstrate a good self-learning capability by bringing new techniques into the project.
Average (C)	• Demonstrate a basic level of understanding of the concepts of mobile application development. • Able to develop mobile applications with some basic features. • Rely on the given laboratory materials to complete the project.

Satisfactory (D)	• Demonstrate a minimal level of understanding of the concepts of mobile application development. • Able to develop mobile applications with a limited number of basic features. • Rely heavily on the given laboratory materials to complete the project.
Unsatisfactory (F)	• Do not understand the concepts of mobile application development. • Unable to complete the project.

Course Content and CILOs Mapping:

Content		**CILO No.**
I	Overview of mobile application development	1-3
II	User interface design	2-3
III	Geolocation applications and mapping features	2-3
IV	Advanced techniques in mobile application development	2-3

References:

- Jason. Appcelerator Titanium Smartphone App Development Cookbook - Second Edition. Packt Publishing, 2015.
- Ricardo Alcocer, Build Native Cross-Platform Apps with Appcelerator: A beginner's guide for Web Developers, J.B. Orion, 2015.
- Aaron Saunders, Building Cross-Platform Apps using Titanium, Alloy, and Appcelerator Cloud Services, Wiley, 2014.

Course Content:

Topic

I. Overview of mobile application development
   A. Different mobile platforms
   B. Software development tools for mobile application development
   C. Publish and distribute mobile applications

II. User interface design
   A. View and controller
   B. Styled sheets

III. Geolocation applications and mapping features
   A. GPS locations
   B. Annotations and routes

IV. Advanced techniques in mobile application development
   A. Local storage
   B. Accessing web and cloud services
   C. Structured data: XML and JSON
   D. Bluetooth communication