Course Code	Course Title	L	T	P	C
OLMCA608	Mobile Application Development	3	1	0	4
Pre-requisite	NIL	Syllabus Version			
		1.0			

Course Objectives:

1. To understand mobile design principles and its applications.
2. To explore various prototypes for hybrid and native mobile applications.
3. To gain expertise in software development methodologies for deploying mobile applications

Course Outcomes:

1. Understand software principles for mobile applications
2. Get insight into the web technologies for developing mobile applications
3. Gain expertise in using Android Studio for development
4. Develop Android applications portable across variety of devices
5. Gain expertise in using databases for storing data related to applications

Module:1	Mobile Application Development

History of Mobile - Mobile Ecosystem - Designing for Context - Developing a Mobile Strategy- Mobile Information Architecture - Mobile Design -Types of Mobile Applications

Module:2	Web Technologies

HTML5: Elements, Form, Graphics, Media - CSS3: 2D transforms, 3D transforms, transitions, animations, images – JavaScript: Forms, Objects, Error Handling, Validations – jQuery: Selectors, Effects, Traversing - AJAX

Module:3	Introduction to Android Programming

Android Versions - Features of Android - Architecture of Android - Android Devices in the Market - Required Tools: Android Studio and SDK - Creating Android Virtual Devices (AVDs) - Launching Android Application - Manifest File

Module:4	Development Environment

Introduction to Android Studio - Installation Procedure: Java, Android Studio - Overview of IDE - Activity Selection - Gradle Build System - Generating a Signed APK

Module:5	Activities, Fragments, and Intents

Understanding Activities-Linking Activities-Using Intents-Fragments- Displaying Notifications- Dialogs

Module:6	User Interface

Layouts - Display Orientation - Basic Views - List Views - Image Views - WebView - Widget Components

Module:7	Data Persistence, Location Based Services

Saving User Preferences – Handling Files – Using Databases: SQLite, Firebase - Content Provider-Displaying Maps-Changing Views-Geocoding and Reverse Geocoding-Getting Location Data-Web Services using HTTP -JSON Services

Total Lecture Hours	120 hours

Text Book

1.	J F DiMarzio, “Beginning Android Programming with Android Studio”, 4th Edition, Wiley India Pvt. Ltd, 2016.
Reference Books	
1.	Brian fling, “Mobile Design and Development”, 2009, 1st Edition, O'Reilly Media.
2.	John Dean, “Web Programming with HTML5, CSS, and JavaScript”, Jones & Bartlett Learning, 2019
3.	Erik Hellman, “Android Programming – Pushing the Limits”, 1st Edition, Wiley India Pvt. Ltd., 2014.
4.	Google Developer Training, "Android Developer Fundamentals Course – Concept Reference”, Google Developer Training Team, 2017. https://www.gitbook.com/book/google-developer-training/android-developerfundamentals-course-concepts/details (Download pdf file from the above link)

Mode of Evaluation: Quiz/Assignment/Mid-Term, FAT			
Recommended by Board of Studies	27-07-2022		
Approved by Academic Council	N0.67	Date	08-08-2022