

COURSE CODE	COURSE TITLE	L	T	P	C
1151IT110	Mobile Application Development	3	0	0	3

Course Category: Program Core

Preamble :

In this modern era almost every hands has a handheld devices. Each handheld device have the computing capability to meet the half the needs of user such as banking, browsing, education and emergency etc. It is a must for a computer engineer to have some basic knowledge about the handheld devices platform and its supporting software development. This course will give adequate knowledge in developing a mobile applications for different such as Android, iOS, Windows.

A. Prerequisite Courses:

Sl. No	Course Code	Course Name
1	1151IT104	Object Oriented Programming
2	1151IT303	Object Oriented Programming Lab

B. Related Courses:

Sl. No	Course Code	Course Name
1	1156IT601	Minor Project
2	1156IT701	Major Project

C. Course Outcomes :

Upon the successful completion of the course, students will be able to:

CO Nos.	Course Outcomes	Level of learning domain (Based on revised Bloom's taxonomy)
CO1	Explain Basics Mobile Platform	K2
CO2	Develop Android application	K3
CO3	Familiarize in the Graphics used for Android application development	K2
CO4	Test the developed app and publish in market	K3
CO5	Explain the basic behind app development for iOS and Windows	K2

D. Correlation of COs with POs :

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	M											
CO2	M				H							
CO3	M				H							
CO4	M				H							
CO5	M				H							

H- High; M-Medium; L-Low

E. Course Content:

UNIT 1: GETTING STARTED WITH MOBILITY **L – 9**

Mobility landscape- Mobile platform- Mobile apps development, Overview of Android platform-setting up the mobile app development environment along with an emulator- case study on Mobile app development

UNIT II: BUILDING BLOCKS OF MOBILE APPS **L – 9**

App user interface designing – mobile UI resources (Layout, UI elements, Draw-able, Menu), Activity- states and life cycle, interaction amongst activities-App functionality beyond user interface - Threads, Async task, Services – states and lifecycle, Notifications, Broadcast receivers, Telephony and SMS

UNIT III: SPRUCING UP MOBILE APPS **L – 9**

Graphics and animation – custom views, canvas, animation APIs, multimedia – audio/video playback and record location awareness- native hardware access (sensors such as accelerometer and gyroscope)

UNIT IV: TESTING MOBILE APPS **L – 9**

Debugging mobile apps- White box testing-Black box testing- test automation of mobile apps- JUnit for Android- Robotium- MonkeyTalk

UNIT V: TAKING APPS TO MARKET **L – 9**

Versioning, signing and packaging mobile apps, distributing apps on mobile market place

TOTAL : 45 Periods

F. Learning Resources

i. Text Books

1. “Anubhav Pradhan, Anil V Deshpande” Composing Mobile Apps Learn|Explore|Apply using Android, Wiley Publications 1st Edition 2014.
2. Jeff McWherter and Scott Gowell “Professional Mobile Application Development” John Wiley & Sons Ltd.
3. Mark Gargenta, “Learning ANDROID”, O'Reilly Publication, First Edition, March 2011.
4. James Dovey and Ash Furrow, “Beginning Objective C”, Apress, 2012

ii. Reference Books

1. David Mark, Jack Nutting, Jeff LaMarche and Frederic Olsson, “Beginning iOS 6 Development: Exploring the iOS SDK”, Apress, 2013.
2. Charlie Collins, Michael Galpin and Matthias Kappler, “Android in Practice”, DreamTech, 2012

iii. Online Resources

1. <http://developer.android.com/develop/index.html>
2. http://www.cmer.ca/cmer-ak/course_01.html
3. vjit.ac.in/new/wp-content/.../Mobile-Application-Development.doc
4. <http://www.eli.sdsu.edu/courses/fall09/cs696/notes/index.html>
5. <http://www.slideshare.net/iivanoo/lecture01-11910341>