

COURSE CODE	COURSE TITLE	L	T	P	C
1154CS104	ANDROID MOBILE APPLICATION DEVELOPMENT	3	0	0	3

Course Category: University Elective

A. Preamble:

In this modern era almost, every hand has a handheld device. Each handheld device has the computing capability to meet the half the needs of user such as banking, browsing, education and emergency etc. It is good for an 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 application for android platform.

B. Prerequisite Courses:

Sl. No	Course Code	Course Name
		NIL

C. Related Courses:

Sl. No	Course Code	Course Name
		NIL

D. Course Educational Objectives:

Learners are exposed to

- Basics about mobile platform
- Techniques in implementation, software design, and user-interaction design for mobile application.
- Packaging and distributing the apps.

E. 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	Understand mobile platform and mobile app development	K2
CO2	Develop simple android application	K3
CO3	Familiarize in Graphics and Sensors used for Android application development	K2
CO4	Apply the testing strategies for developed application	K3
CO5	Build the App and publish it in the market	K3

F. Correlation of COs with POs:

Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	M	L			M	L								L	
CO2	M		L		H	M								H	L
CO3	M		M		H	M	L						L	H	L
CO4	M	L			H	L		M						M	L
CO5	L				H	M			L		L	L			H

H- High; M-Medium; L-Low

G. Course Content:

UNIT I GETTING STARTED WITH MOBILITY**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**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**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**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**9**

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

Total: 45**H. Learning Resources****i. Text Books**

1. “Anubhav Pradhan, Anil V Deshpande” Composing Mobile Apps Learn|Explore|Apply using Andriod, Wiley Publications 1st Edition 2014.
2. Jeff. McWherter and Scott Gowell “ProfessionalMoble Application Development” John Wiley & Sons Ltd.
3. Mark Gargenta, “Learning ANDROID”, Oreilly Publication, First Edition, March 2011.

ii. Reference Books

1. Charlie Collins, Michael Galpin and Matthias Kappler, “Android in Practice”, DreamTech, 2012

iii. Online Resources

1. <http://developer.android.com/develop/index.html>
2. <https://www.tutorialspoint.com/android/>
3. <https://www.javatpoint.com/android-tutorial>

iv. Android Application Resources

1. <https://play.google.com/store/apps/details?id=arjuntoshniwal.androidtutorials.advanced&hl=en>