

COURSE CODE	COURSE TITLE	L	T	P	C
1154CS203	ANDROID PROGRAMMING	2	0	4	4

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
1	1150CS201	Problem Solving using C

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.
- Database connectivity with 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	Illustrate the basics of Java programming	K2, S2
CO2	Apply the basics of android and UI Element	K3, S3
CO3	Demonstrate Threading and Services	K2, S2
CO4	Demonstrate Animation and Sensors	K2, S2
CO5	Demonstrate App With Database	K2, S2

F. Correlation of COs with POs:

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

H- High; M-Medium; L-Low

G. Course Content:

UNIT I Basics of JAVA

6

Basic concepts of object-oriented programming, Tokens, Keywords, Identifiers, Data type, Arrays and Operators, Class fundamentals, constructors, this keyword, overloading methods

UNIT II Introduction to Android Development Environment

6

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

UNIT III Building Blocks of App Development

6

App user interface designing – mobile UI resources (Layout, UI elements, Drawable, Menu)

UNIT IV Activity

6

Activity- states and life cycle, interaction amongst activities-Services-Notifications – Icon – Toast Messages

UNIT V Data Base in App

6

Introduction to SQLite-App, Versioning, signing and packaging mobile apps, distributing apps on mobile market place

Lab Experiment:

P-

60

1. Java Program – Creating class
2. Java Program – Implementing Inheritance
3. Java Program – Implementing Over riding
4. Java Program – Implementing this key word
5. Setting up android and android emulator
6. Creating UI element – Layout
7. Creating UI element – Button
8. Creating UI element - Menu
9. Demonstrating Thread
10. Demonstrating Services
11. Creating Animation view and canvas
12. Listing the sensors used in mobile phone
13. Creating data base using SQLite
14. Interaction with Data Base

Total: 90

H. Learning Resources

i. Text Books

1. E. Balaguruswamy, Programming in java, Fourth Edition, TMH, 2010.
2. “Anubhav Pradhan, Anil V Deshpande” Composing Mobile Apps Learn|Explore|Apply using Android, Wiley Publications 1st Edition 2014.

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>