GANPAT UNIVERSITY

FACULTY OF ENGINEERING & TECHNOLOGY

Programme	Diploma Engineering		Branch	Computer Engineering	
Semester	VI		Version	1.0.0.0	
Effective from Academic Year	2020-21		Effective for the batch Admitted in		JULY 2018
Subject code	1CE2603	Subject Name	Android Programming		

Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	3	0	2	0	5	Theory	40	60	100
Hours	3	0	4	0	7	Practical	60	40	100

Pre-requisites:
Must have knowledge of programming language like core java,c,c++ Must have basic understanding of Database Technology or Sql Must have understanding of XML .

Course Learning Outcomes:
The course content should be taught and implemented with an aim to develop different skills leading to the achievement of the following competencies and course learning outcomes: T1. To understand Android activities life cycle. T2. To develop operations on GUI objects. T3. To implement Event driven programming. T4. To apply various techniques on working with menu. The practical should be carried out in such a manner that students are able to acquire different learning out comes in cognitive, psychomotor and affective domain to demonstrate course learning outcomes.

Course Content				
Name of UNIT	Unit Content	Unit Learning Outcomes	Marks	Hrs
UNIT – 1	1.1 Overview of Android 1.2 Android run On – Android Internals? 1.3 Use Android for mobile apps development 1.4 Differentiate Environment setup for Android apps Development 1.5 Framework - Android- SDK, Eclipse 1.6 Emulators – What is an Emulator / Android AVD? 1.7 Android Emulation – Creation and set up 1.8 First Android Application	1a State Analyze Open source mobile technology 1b Describe Basics of Application development 1c Describe Framework, SDK, Emulation 1d Use Android Application structure	15	8

UNIT – 2	2.1 Design criteria for Android Application: Hardware Design Consideration, Design Demands for Android application, Intent, Activity, Activity Lifecycle and Manifest 2.2 Creating Application and new Activities 2.3 Simple UI -Layouts and Layout properties: Introduction to Android UI Design, Introducing Layouts 2.4 XML Introduction to GUI objects viz.:EditText, TextView, Button, ToggleButton , Padding etc	2a. Describe Android Activities lifecycle and UI Layout 2b. Classify Expressions, Manifest, other necessary UI concept 2c. Distinguish List and explain GUI Objects 2d. Construct Layout Design concepts	20	12
UNIT – 3	3.1 Event driven Programming in Android (Text Edit, Button clicked etc.) 3.2 Activity Lifecycle of Android	3a. Describe Android Event driven Programming, Activity Lifecycle, Explain Exception handling	15	10
UNIT – 4	4.1 Menu :Basics, Custom v/s System Menus, Create and Use Handset menu Button (Hardware) 4.2 Dialog : Creating and Altering Dialogs 4.3 Toast : List & Adapters 4.4 Demo Application Development and Launching	4a Demonstrate working with menu and dialog, Themes, Dialog 4b. Apply Demo Application Launching 5c	10	8
UNIT – 5	5.1 Basic operation of SQLite Database 5.2 Android Application Priorities	5a. Manipulate Perform Database operation	10	6

List of Practical		
No.	Unit	Name of Practical
1	I	Installation and setup of java development kit(JDK),setup android SDK,setup eclipse IDE,setup android development tools (ADT) plugins,create android virtual device
2	I	To Create “Hello World” application. That will display “Hello World” in the middle of the screen using TextView Widget in the red color
3	II	To Create application for demonstration of android activity life cycle
4	II	To Create Registration page to demonstration of Basic widgets available in android.
5	II	To Create sample application with login module.(Check username and password) On successful login, Chnage TextView “Login Sucessful”. And on failing login, alert user using Toast “Login fail”
6	II	To Create login application where you will have to validate usename and passwords Till the username and password is not validated , login button should remain disabled.
7	II	ToCreate and Login application as above. Validate login data and display Error to user using setError() method.

8	II	To Create an application for demonstration of Relative and Table Layout in android.
9	II	To Create an application for demonstration of Scroll view in android
10	II	To Create an application for demonstration of Explicitly Starting New Activity using Intent.
11	II	To Create an application that will pass two number using TextView to the next screen , and on the next screen display sum of that number.
12	III	To Create spinner with strings taken from resource folder(res >> value folder). On changing spinner value, change background of screen.
13	III	To Create an application that will get the Text Entered in Edit Text and display that Text using toast (Message).
14	III	To Create an application that will Demonstrate Button onClick() Event and change the TextView Color based on button Clicked
15	IV	To Create an UI such that, one screen have list of all the types of cars. On selecting of any car name, next screen should show Car details like: name, launched date, company name
16	IV	To Create an application that will Demonstrate Dialog Box Control In Android
17	V	To Create an android application that will perform insert, update, delete and select operation on Student table using SQLite Database

List of Instruments / Equipment / Trainer Board	
1	**Software:** Java, Netbeans, Eclipse, Android SDK (open source)
2	Android Studio

List of Textbooks			
No	Title of Textbooks	Authors	Publication
1	Professional Android 2 Application Development	Reto Meier	Wiley India Pvt Ltd

List of Reference Books			
No	Title of Reference Books	Authors	Publication
1	Building Android Apps	IN EASY STEPS	McGraw-Hill Education
2	Pro Android	Sayed Y Hashimi and Satya Komatineni	Wiley India Pvt Ltd
3	Beginning Android	Mark L Murphy	Wiley India Pvt Ltd

Link of Learning Web Resource	
1	http://www.tutorialspoint.com/android/
2	http://www.tutorialspoint.com/android/android_overview.htm
3	http://www.codelearn.org/android-tutorial/android-introduction
4	https://mkyong.com/tutorials/android-tutorial/