GANPAT UNIVERSITY

FACULTY OF COMPUTER APPLICATIONS

Programme	Master of Computer Applications	**Branch/Spec.**	Computer Application
Semester	II	**Version**	1.0.0.2
Effective from Academic Year	2022-23	**Effective for the batch Admitted in**	June 2022
Subject Code	P12A1FMA	**Subject Name**	Fundamental of Mobile Application

Teaching scheme						**Examination scheme (Marks)**			
(Per week)	**Lecture (DT)**		**Practical (Lab.)**		**Total**		**CE**	**SEE**	**Total**
	L	TU	P	TW					
Credit	2	1	2	0	5	Theory	40	60	100
Hours	2	1	4	0	7	Practical	20	30	50

Objective:

- To be able to understand the process of developing software for the mobile application using Android programming.

Pre-requisites:

- Basic knowledge of Object-Oriented Programming Concepts.

Course Outcomes :

- **1 = Slight (Low); 2 = Moderate (Medium); 3 = Substantial (High); "-" = No Correlation**

Name of CO	Description
CO1	Explain and apply Android architecture, components, and resources to develop and run a basic Android application.
CO2	Design and implement interactive user interfaces using Android views, view groups, layouts, and UI messaging techniques.
CO3	Develop Android applications using adapters, image/list/grid views, and menus to display data and media content effectively.
CO4	Apply Android data storage and sharing mechanisms such as Shared Preferences, files, SQLite, and cloud databases to manage application data.

Mapping of CO and PO

Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	1	2	0	0	0	2
CO2	3	3	2	3	1	0	0	2
CO3	2	2	2	3	1	0	0	2
CO4	3	3	2	3	1	0	0	3

Content:

Unit	SECTION – I	Hrs
1	**Basics of Android Programming** Basic of Android – Android Versions, Features of Android, Architecture of Android	11

	Android Components – Activity with life cycle; Intents; Service; Broadcast Receiver; Content Provider Design & Execute Android App – Creating First Android Application using Activity on Virtual and Physical devices, Creation and Deletion of Virtual Devices Working with Resources – Integer; String; Array; Boolean; Dimension, Colors	
2	**Working with View and Views Group** User Interface – Using XML; Using Programming, Display message – Log; Toast; Dialogs – Simple; Positive; Negative; Neutral, Basic Views – Text View; Edit Text; Simple Button; Image Button; Check Box; Toggle Button; Radio Group and Radio Button, Views Groups – Linear Layout; Constraint Layout	11
SECTION – II		
3	**Display Picture, Animation and Menus** Adapters –Base Adapter; Simple Adapter; Array Adapter, Display Picture –Image View; List View; Gallery View; Grid View Display Menus – Option menu; Context menu; Popup menu	11
4	**Sharing and Storage** Types of Storage – Internal & External; Shared Preferences; Files; SQLite database; Cloud database Shared Preferences – Introduction of Shared Preference; Saving and Retrieving Data. Files – Read, Write and Append the data in/from files SQLite – Introduction; Features; CRUD operation on table Cloud database – Introduction of Fire base; Features;	12

Practical Content:

List of programs specified by the subject teacher based on above mentioned topics.

Text Books:

1	Beginning Android 4 Application Development by Wei – Meng Lee, John Wiley & Sons Inc 2012.

Reference Books:

1	Professional Android 4 Application Development by Reto Meier, Wrox Pub.2012.
2	Teach Yourself Android Application Development in 24 Hours, 4th Edition, Sams Pub,2015.
3	Head First Android Development by Dawn Griffiths and David Griffiths, 2nd CEdition Oreilly Pub,2017
4	Learn Android Studio by Adam Gerber and Clifton Craig,1st Edition Apress Springer Nature 2015

MOOC/Certification Courses:

1	https://www.classcentral.com/course/udacity-android-basics-user-input-7343
2	https://www.edx.org/learn/android-development
3	https://www.udacity.com/course/android-developer-nanodegree-by-google--nd801
4	https://in.coursera.org/specializations/android-app-development

Question Paper Scheme:

University Examination Duration: 3 Hours

Note for Examiner: -

(I) Questions 1 and 4 are compulsory with no options.

(II) Internal options should be given in questions 2, 3, 5 and 6.

SECTION – I

Q.1 –8 Marks

Q.2 –11 Marks

Q.3 –11 Marks

SECTION - II

Q.4 –8 Marks

Q.5 –11 Marks

Q.6 –11 Marks