

## Format K1

**Maharashtra State Board of Technical Education, Mumbai**

## **TEACHING PLAN (TP)**

Academic Year: 2025-26 (EVEN)

**Institute Code and Name:** 0078- K. K. Wagh Polytechnic, Nashik

## **Programme and Code: Information Technology (IF)**

## **Course and Code: Mobile Application Development (MAD)**

### Scheme: K

**Allocated Hrs.: 30**

## Semester: Sixth

## Course Index: 006

**Course Code:** 316006

**Name of Faculty:** Mrs. D. D. Pawar

## CLASS: TYIF (Param)

## **COURSE LEVEL LEARNING OUTCOMES (COS)**

CO1 - Interpret the features of android operating system.

CO2 - Use after configuring Android development environment.

CO3 - Develop android applications using UI components and layouts.

CO4 - Create database driven Android applications.

## CO5 - Develop advanced Android applications that

CS5 Develop advanced Android applications that requires relevant permissions for security.

## TEACHING-LEARNING & ASSESSMENT SCHEME

Course Code	Course Title	Abbr	Course Category	Learning Scheme			Credits	Paper Duration	Assessment Scheme								Total Marks			
				Actual Contact Hrs/Week					Theory				Based on LL & TSL Practical							
				C L	T L	L L	SLH	NLH	FA-TH		SA-TH		Total		FA-PR		SA-PR			
									Max	Max	Max	Min	Max	Min	Max	Min	Max	Min		
316006	Mobile Application Development	MAD	DSC	2	-	4	2	8	4	-	-	-	-	25	10	25#	10	25	10	75

Total IKS Hrs for Sem.: 0 Hrs

Abbreviations: CL- Classroom Learning , TL- Tutorial Learning, LL-Laboratory Learning, SLH-Self Learning Hours, NLH-Notional Learning Hours, FA - Formative Assessment, SA -Summative assessment, IKS - Indian Knowledge System, SLA - Self Learning Assessment Legends: @ Internal Assessment, # External Assessment, \*# On Line Examination , @\\$ Internal Online Examination

## SUGGESTED COS - POS MATRIX FORM

Course Outcomes (COs)	Programme Outcomes (POs)							Programme Specific Outcomes (PSOs)		
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability and Environment	PO-6 Project Management	PO-7 Life Long Learning	PSO- 1	PSO- 2	PSO- 3
CO1	2	-	-	1	-	-	-	2	2	2
CO2	2	1	-	3	-	-	1	3	1	2
CO3	3	2	3	2	1	2	2	3	2	2
CO4	2	2	2	2	1	3	1	3	1	1
CO5	2	3	3	2	1	3	1	3	2	2

Legends :- High:03, Medium:02,Low:01, No Mapping: -

\*PSOs are to be formulated at institute level

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**Course Code:** 316006

**Semester:** Sixth (IF-6K)

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<b>Unit No. (Alloted Hrs.)</b>	<b>CO (Mention only Number)</b>	<b>TLO (Mention only Number)</b>	<b>Unit Name and Learning Content Title/ Details</b>	<b>Plan (No. of Lectures)</b>		<b>Actual Execution (From - To &amp; No. of Lectures)</b>		<b>Pedagog y used (Teachin g method/ Media)</b>	<b>Re marks</b>
				<b>From</b>	<b>To</b>	<b>From</b>	<b>To</b>		
<b>1 (2)</b>	<b>1</b>	<b>1.1, 1.2, 1.3, 1.4</b>	<b>Basics of Android OS</b> 1.1 Introduction to Android Operating System 1.2 Need and features of Android 1.3 Android Architecture Framework 1.4 Introduction to Android Application Development IDE (Android Studio, Eclipse, Visual Studio with Xamarin etc.)	<b>2 Lectures</b>				Lecture Using Chalk-Board Presentations Video Demonstrations	
				17/12/2025	18/12/2025				
<b>2 (2)</b>	<b>2</b>	<b>2.1, 2.2, 2.3, 2.4, 2.5</b>	<b>Introduction to Android Environment</b> 2.1 Use of Java JDK and introduction to Android SDK 2.2 Different Android tools like Android Development Tools (ADT), Android Virtual Devices (AVD) and emulators 2.3 Dalvik Virtual Machine (DVM) , difference between DVM and JVM 2.4 Terminologies in Android : Android Run Time (ART), Over the Air (OTA), Firmware Over The Air (FOTA), Global Positioning System (GPS) , Google Cloud Messaging (GCM) 2.5 Android directory structure	<b>2 Lectures</b>				Lecture Using Chalk-Board Presentations Video Demonstrations	
				24/12/2025	31/12/2025				

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				From	To	From	To		
3 (6)	3	3.1, 3.2, 3.3, 3.4	<b>Design UI in Android</b> 3.1 GUI components like : Text View, Edit Text, Button, types of buttons like image button , toggle button, Checkbox, Radiobutton, Radiobutton Group, Progress bar, Scrollbars, List, Custom Toast Alert message etc. 3.2 Introduction to Layouts and types of Layouts : Constraint layout, Linear Layout, Frame Layout, Relative Layout etc. 3.3 Introduction to views and its types : List view, Grid view, Image view, Scroll view 3.4 Basics of splash screen , adding styles to splash screen	<b>3 Lectures</b>				Lecture Using Chalk-Board Presentations Video Demonstrations	
				01/01/2026	08/01/2026				
4 (10)	4	4.1, 4.2, 4.3	<b>Android Components and Database Connectivity</b> 4.1 Major components in Android : Intent, Activity, Services, Broadcast Receiver 4.2 Life cycle of Android components like Activity, Broadcast Receiver, Services etc. 4.3 SQLite/Firebase database, necessity of SQLite/Firebase, creation and connection of the database, extracting data from the databases	<b>3 Lectures</b>				Lecture Using Chalk-Board Presentations Video Demonstrations	
				22/1/2026	28/01/2026				
				<b>7 Lectures</b>					
				29/01/2026	26/02/2026				

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				From	To	From	To		
5 (10)	5	5.1, 5.2, 5.3	<b>Android Application Deployment</b> 5.1 Advanced Concepts : Fragments, Location based services, SMS telephony, Audio capture, Camera, Bluetooth etc. 5.2 Security Concepts : Android security model, declaring and using permissions, using custom permission	<b>8 Lectures</b>				Lecture Using Chalk-Board Presentations Video Demonstrations	
			5.3 Application Deployment : Process for creating and deploying Android applications on Google Play store, become a publisher	<b>2 Lectures</b>					

### ASSESSMENT METHODOLOGIES/TOOLS

#### **A. Formative assessment (Assessment for Learning)**

Continuous assessment based on process and product related performance indicators

Each practical will be assessed considering

60% weightage to process

40% weightage to product

A continuous assessment based on term work

#### **B. Summative Assessment (Assessment of Learning) (SA-TH)**

End semester examination, Lab performance, Viva voce

### SUGGESTED LEARNING MATERIALS / BOOKS

Sr. No	Author	Title	Publisher with ISBN Number
1	Dixit, Prasanna Kumar	Android	Vikas Publication, New Delhi 2014, ISBN : 9789325977884
2	Maclean David , Komatineni Satya, Allen Grant	Pro Android 5	Apress Publications, 2015, ISBN :978-1-4302-4680-0
3	Hortan, John	Android Programming for Beginners	Packet Publications, 2015, ISBN : 978-1-78588-326-2

## LEARNING WEBSITES & PORTALS

Sr. No	Link / Portal	Description
1	<a href="https://www.udemy.com/topic/android-development">https://www.udemy.com/topic/android-development</a>	Introduction to Android Operating system
2	<a href="https://onlinecourses.swayam2.ac.in/nou21_ge41/preview">https://onlinecourses.swayam2.ac.in/nou21_ge41/preview</a>	Introduction to Android IDE tools.
3	<a href="https://www.geeksforgeeks.org/android-tutorial/">https://www.geeksforgeeks.org/android-tutorial/</a>	Basics of GUI components, layouts and views in android.
4	<a href="https://www.tutorialspoint.com/android/index.htm">https://www.tutorialspoint.com/android/index.htm</a>	Advanced components of android like intents, services, broadcast receiver and activities.
5	<a href="https://developer.android.com/training/data-storage/sqlite">https://developer.android.com/training/data-storage/sqlite</a>	Steps to insert and retrieve data from the Databases.
6	<a href="https://developer.android.com/guide/topics/permissions/overview">https://developer.android.com/guide/topics/permissions/overview</a>	Setting permissions in Android.
7	<a href="https://firebase.google.com/docs/database/android/start">https://firebase.google.com/docs/database/android/start</a>	Connectivity with Firebase database

**Note :**

- Teachers are requested to check the creative common license status/financial implications of the suggested online educational resources before use by the students

**Mrs. D. D. Pawar**  
**(Name & Signature of Staff)**

**Ms. M. S. Karande**  
**(Name & Signature of HOD)**