

Branch Name:	IMCA
Program Code:	CS301
Course Name:	Mobile Computing-I
Course Code:	1CS3010601T
Pre-requisite Course:	Knowledge of the Core Java Programming, database concepts

Course Objectives:

1. To understand the process of developing software for the mobile.
2. To be able to create mobile applications on the Android Platform.
3. To be able to create mobile applications involving data storage in SQLite database.
4. To be able to create mobile applications to call and message via Android APIs.
5. Learn to deploy the Android Application to the world via Play Store.

Teaching Scheme(Hours per week)				Evaluation Scheme(Marks)				
Lecture	Tutorial	Practical	Credit	Theory		Practical		Total
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
4	-	-	4	60	40	-	-	100

Subject Contents			
Sr. No	Topic	Total Hours	Weight (%)
1	Introduction to Mobile Computing : 1.1 Concept of Mobile Communication 1.2 Different generations of wireless technology 1.3 Basics of cell, cluster and frequency reuse concept 1.4 Noise and its effects on mobile 1.5 Understanding GSM and CDMA 1.6 Basics of GSM architecture and services like voice call, SMS, MMS, LBS, VA	8	25
2	Introduction to Android: 2.1 Overview of Android 2.2 Open Handset Alliance 2.3 What does Android run On – Android Internals? 2.4 Why Android for mobile apps development? 2.5 Environment setup for Android apps Development 2.6 Framework - Android- SDK, Eclipse 2.7 Emulators – What is an Emulator / Android AVD? 2.8 Android Emulation – Creation and set up 2.9 Android Project Framework 2.10 First Android Application	10	25
3	Android Activities and GUI Design concepts: 3.1 Intent, Activity, Activity Lifecycle and Manifest 3.2 Creating Application and new Activities 3.3 Expressions and Flow control, Android Manifest 3.4 Simple UI -Layouts and Layout properties Introduction to Android UI Design: <ul style="list-style-type: none"> • Introducing Layouts • Creating new Layouts • Draw able Resources • Resolution and density independence (px,dip,dp,sip,sp) 	8	15

4	Advanced UI Programming: 4.1 Event driven Programming in Android (Text Edit, Button clicked etc.) 4.2 Creation of a splash screen 4.3 Activity Lifecycle of Android 4.5 Creating threads for gaming requirement 4.6 Exception handler	8	25
5	Dialog, Theme and Basic Database Concept: 5.1 Android Themes 5.2 Dialog : Creating and Altering Dialogs 5.3 Toast : List & Adapters 5.4 Manifest.xml File Update 5.5 Demo Application Development and Launching 5.6 Basic operation of SQLite Database	8	10

Text Books: Lauren Darcey and Shane Conder, "Android Wireless Application Development", Pearson Education, 2nd ed. (2011).

Reference Books:

1. Reto Meier, "Professional Android 2 Application Development", Wiley India Pvt Ltd (2011).
2. Mark L. Murphy, "Beginning Android", Wiley India Pvt Ltd (2009).
3. Sayed Y. Hashimi and Satya Komatineni, "Pro Android", Wiley India Pvt Ltd (2009).

Course Learning Outcomes (CLO): On completion of this course, the students will be able to:

CLO	Description	Bloom's Taxonomy Level
CLO1	Understand the importance of mobile application for solving real world problems	1. Remembering, 2. Understanding 5. Evaluate
CLO2	Develop mobile applications using Android Platform.	6. Creating
CLO3	Understand the mechanism of database structure with Android Programming using SQLite Database.	2. Understanding 5. Evaluate
CLO4	Install and configure Android Platform	2. Understanding, 6. Creating 3. Applying
CLO5	Explain and use key Android programming concepts	4. Analyze, 3. Applying
CLO6	Deploy the Android application	6. Creating

Mapping of CLO with Pos & PSOs

Course Learning Outcomes	Program Outcomes(POs)												Program Specific Outcomes(PSOs)	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CLO1		H	H				M					M	H	H
CLO2		H	H			L		M		H			H	H
CLO3		M	M	H	M	H		M					H	M
CLO4		M	M	M		M		M	M					M
CLO5	H			M	H	M	H	H	H					
CLO6		H	H		H	H					L	M	H	H

H: High, M:Medium, L:Low