

Mobile Technologies

Semester II

Subject Code: MS21902

Learning Outcomes:

Learner will able to,

- Apply the fundamental design paradigms and technologies to mobile computing applications.
- Develop consumer and enterprise mobile applications using representative mobile devices and platforms using modern development methodologies.
- Design effective mobile interfaces using human computer interaction principles.
- Appraise the quality and performance of mobile applications.
- Synthesize new knowledge in the area of mobile computing by using appropriate research methodologies and techniques.
- gain knowledge of installing Android Studio and Cross Platform Integrated Development Environment.
- use the techniques, skills, and modern technology.
- develop high levels of technical competence in the field of mobile technology.



Mobile Technologies


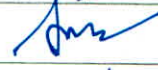
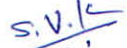

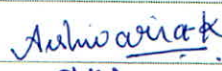

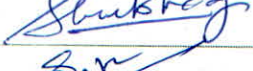

Semester I	Subject Code: MS21902	Lectures: 60
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Objectives:

The syllabus aims in equipping students with,


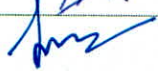
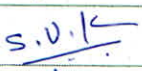
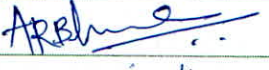
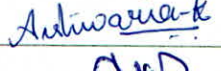

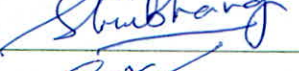

- understanding the basic wireless communication systems
- an exposure for students to various aspects of mobile computing
- Understanding the fundamentals of Android OS, PhoneGap and IOS
- learning the Android programming and PhoneGap programming

Unit 1: Introduction to Mobile computing and Android	10
Chapter 1 : Introduction to Mobile Computing <ul style="list-style-type: none"> • Introduction and need for Mobile computing • Mobility and portability • Mobile and Wireless devices • Mobile Applications Mobile Operating system – IOS, BlackBerry, Windows phone, Plam OS, Symbian OS, PhoneGap	3
Chapter 2 : Android Fundamentals <ul style="list-style-type: none"> • Introduction to Android - Overview and evolution of Android , Features of Android, Android architecture • Components of an Android Application, Manifest file • Android Activity • Service Lifecycle 	7

Sr. No.	BOS member	Subject Expert	Sign
1	Prof. Seema Chouhan	Subject Expert	
2	Prof. M. B. Lonare	Subject Expert	
3	Prof. Shilpa Kadilkar	Subject Expert	
4	Mr. Anuradha Bhamre	Industry Expert	
5	Ms. Aaishwarya K.	Alumni	
6	Prof. Ashwini Kulkarni	Chairman	
7	Prof. Shubhangi Jagtap	Internal Faculty	
8	Prof. Swati Pulate	Internal Faculty	


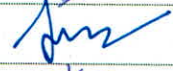


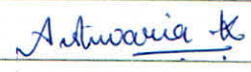
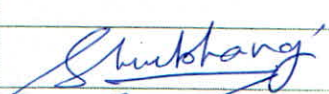



Unit 2: Android Programming	18
Chapter 3 : Android UI Design <ul style="list-style-type: none"> • Basic UI Designing (Form widgets ,Text Fields , Layouts ,[dip, dp, sip, sp] versus px) • Intent(in detail) • All components (e.g Button , Slider, Image view, Toast) Event Handling • Adapters and Widgets • Menu 	6
Chapter 4 : Android Thread and Notification <ul style="list-style-type: none"> • Threads running on UI thread (runOnUiThread) • Worker thread • Handlers & Runnable • AsyncTask (in detail) • Broadcast Receivers • Services and notifications • Toast • Alarms 	7
Chapter 5 : Advanced Android Programming <ul style="list-style-type: none"> • Content Providers – SQLite Programming • JSON Parsing • Accessing Phone Service(Call, SMS, MMS) • Location based services 	5

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Unit 3: PhoneGap Programming and IOS Fundamentals	20
Chapter 6 : PhoneGap Programming <ul style="list-style-type: none"> • Why Use PhoneGap? • How PhoneGap Works • Designing for the Container • Writing PhoneGap Applications • Building PhoneGap Applications • PhoneGap Limitations • PhoneGap Plug-Ins • Hello, World! Program • PhoneGap APIs –1 Accelerometer: <ul style="list-style-type: none"> • Querying Device Orientation • Watching a Device's Orientation • Creating a Contact, Searching for Contacts, Cloning Contacts, Removing Contacts. 	12
Chapter 7 : IOS Fundamentals <ul style="list-style-type: none"> • Introduction - What is IOS ,IOS Architecture, Frameworks, Application Life Cycle, Features • Swift - Introduction to Swift ,General Concepts of Swift • Xcode - Introduction to Xcode , Navigator, Editor Utility, Tools, Console, Document, Simulator, Instruments • Startup - Application Templates, Introduction to Storyboard , Hello World Application, How 'Hello World' Working, Debugging Database, Plist, Preference, Sqlite Web Service, Restful Web Service (JSON & XML) 	8

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*Contact hours=12

