MCA403 MOBILE APPLICATION DEVELOPMENT

	L	T	P	Cr
	3	0	2	4.0

Course objective: This course is concerned with the development of applications on mobile and wireless computing platforms.

Introduction: Cost of Mobile Application Development, Importance of Mobile Strategies, Challenges, Myths, Third-Party Frameworks, Mobile Web Presence, Applications

Introduction to Mobility: Mobility Landscape, Mobile Platforms**,** Mobile apps development, Overview of Android Platform, Setting up the mobile apps development environment with emulator.

Building block of Mobile apps: App user Interface Designing, Layout, User Interface elements, Draw-able, Menu, Activity states and lifecycle, Interaction among activities.

App functionality based user interface:Threads, Asynchronous task, Services-states and lifecycle, Notifications, Broadcast receivers, Telephony and SMS API**.**

Naïve Data Handling: On Device File I/O, Shared preferences, Mobile Databases such as SQLite and enterprise data access.

Sprucing up Mobile Apps: Graphics and animation-custom views, canvas, animation API multimedia-audio/video playback and record, location aware.

Testing Mobile apps: Debugging Apps, White and Black Box Testing and test automation of apps.

Creating Consumable Web Services for Mobile Devices: What is a Web Service, Web Services Languages (Formats), Creating an Example Web Service, Debugging Web Services

Mobile User Interface Design: Effective Use of Screen Real Estate, Understanding Mobile Information Design, Understanding Mobile Application Users, Understanding Mobile Platforms, Using the Tools of Mobile Interface Design.

Mobile Websites: Choosing a Mobile Web Option, Adaptive Mobile Websites, Dedicated Mobile Websites Mobile Web Apps with HTML5

Android: Android as Competition to itself, Connecting to the Google Play, Android Development Practices, Building an App in Android

iOS: IOS Project, Debugging iOS Apps, Objective-C Basics, Building the Derby App in IOS

Windows Phone 7: Windows Phone 7 Project, Building an App in Windows Phone 7, Distribution

Laboratory work: To develop robust mobile applications and work on related tools and technologies. exploring the application development for different mobile platforms like Android, iPhone, Symbian

Recommended Books:

1.   Professional Mobile Application Development, Jeff Mcwherter, Scott Gowell, Wrox Publisher, 1st Ed. 2012
2.   Sams Teach Yourself Android Application Development in 24 Hrs, Lauren Darcy and Shane Conder, 1st ed.
3.   Mobile Application Security, HimanshuDwivedi, Chris Clark, David Thiel, Tata McGraw Hill, 1st Edition, 2010