

# GUJARAT TECHNOLOGICAL UNIVERSITY

## MASTER OF COMPUTER APPLICATIONS (MCA)

### SEMESTER: V

Subject Name: **Mobile Computing (MC)**

Subject Code: **650003**

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#### **Objectives:**

- To be able to understand the process of developing software for the mobile
- To be able to create mobile applications on the Android Platform
- To be able to create mobile applications involving data storage in SQLite database.

#### **Prerequisites:**

Knowledge of the Core Java Programming, database concepts.

#### **Contents:**

- 1. Introduction to Android** [2Hrs]
  - History of Mobile Software Development
  - The Open Handset Alliance
  - The Android Platform
  - Android SDK
  - Building a sample Android application
- 2. Android Application Design Essentials** [19Hrs]
  - Anatomy of an Android applications [1 Hr]
  - Android terminologies [3Hrs]
  - Application Context, Activities, Services, Intents [5Hrs]
  - Receiving and Broadcasting Intents [3Hrs]
  - Android Manifest File and its common settings [1 Hr]
  - Using Intent Filter, Permissions [3Hrs]
  - Managing Application resources in a hierarchy [2Hrs]
  - Working with different types of resources [1 Hr]
- 3. Android User Interface Design Essentials** [8Hrs]
  - User Interface Screen elements
  - Designing User Interfaces with Layouts
  - Drawing and Working with Animation

**4. Using Common Android APIs** **[18Hrs]**

- Using Android Data and Storage APIs **[3Hrs]**
- Managing data using SQLite **[1 Hr]**
- Sharing Data Between Applications with Content Providers **[5Hrs]**
- Using Android Networking APIs **[2Hrs]**
- Using Android Web APIs **[2Hrs]**
- Using Android Telephony APIs **[5Hrs]**

**5. Deploying Android Application to the World** **[1Hr]**

- Selling your Android application

**Text Book:**

1. Lauren Darcey and Shane Conder, “Android Wireless Application Development”, Pearson Education, 2<sup>nd</sup> 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)

**Chapter wise Coverage from Text Book:**

**Chapters:** 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 16, 29

**Note: In Practicals, Eclipse Mobile edition will be allowed to be used as an IDE.**