

## Objectives

To enable the students to,

- Learn about the features and installation of Flutter
- Learn about the basic programming constructs of Dart
- Develop simple mobile applications in Flutter using Dart language
- Develop mobile applications using database Connections

## **UNIT I Introduction to Flutter** (9)

Features of Flutter- Advantages of Flutter- Disadvantages of Flutter. Flutter Installation- Installation in Windows- Installation in Mac OS- Creating Simple Application in Android Studio - Architecture of Flutter Applications

## **UNIT II Flutter Basics** (9)

Widgets- Gestures- Concept of State- Layers- Introduction to Dart Programming-Variables and Data types- Decision Making and Loops. Functions- Object Oriented Programming. Introduction to Widgets- Widget Build Visualization

## **UNIT III Introduction to Layouts** (9)

Type of Layout Widgets- Single Child Widgets- Multiple Child Widgets- Advanced Layout Application-Introduction to Gestures- Statement Management in Flutter. Ephemeral State Management-Application State - scoped model- Navigation and Routing.

## **UNIT IV Animation on Flutter** (9)

Introduction to Animation Based Classes-Work flow of the Flutter Animation- Working Application- Android Specific Code on Flutter- Introduction to Package- Types of Packages- Using a Dart Package- Develop a Flutter Plugin Package- Accessing Rest API- Basic Concepts- Accessing Product service API

## UNIT V Database Concepts

(9)

SQLite- Cloud Fire store- Internationalization on Flutter- Using intl Package-Testing on Flutter- Types of Testing- Widget Testing- Steps Involved- Working Example- Deployment- Android

Application- IOS Application- Development Tools- Widget Sets- Flutter Development with Visual Studio Code- Dart DevTools- Flutter SDK

## OUTCOMES

**At the end of the course, the students will be able to**

CO1: Install Flutter in Android Studio

CO2: Build simple Flutter application using simple widgets and

layouts CO3: Build Animation on Flutter

CO4: Develop Flutter applications using Dart packages