Course Name: Mobile Application Development   **Course Code: ITEC343**

General Information						
Course Code	**ITEC 343**	**Level/Year**	**6/3**	**Required (R) / Selected Elective (SE)**		**R**
Credit Hours	**Theory**	**2**	**Lab**	**1**	**Total**	**3**
Prerequisites	**ITEC342**	**Course Coordinator**		**Shazia Ali**		
Corequisites	**Nil**	**Track Leader**		**Dr. Sivamalar**		

Course Description

The Mobile Application Development course is designed to provide students with a comprehensive understanding of mobile app development concepts, tools, and techniques. This course introduces mobile application development for the Android platform. Android is a software stack for mobile devices that includes an operating system, middleware, and key applications. The Android SDK provides the tools and APIs necessary to begin developing applications on the Android platform. Students will learn skills for creating and deploying Android applications, with particular emphasis on software engineering.

Course Objectives: On completion of the course, the student will be able to:

This course will develop the students' ability to:

• Understanding Mobile application development concepts

• Explore the architecture of Android.

• Use android studio for Android application components.

• Understand activities and apply various components.

• Discover screen components and layouts.

• Exploit different views for the android application.

• Develop apps for android devices.

• Testing and debugging mobile applications

Course Contents

List of Topics	Weeks
CH 1: **Introduction to Mobile application**	1,2
CH 2: **Getting Started with Android**	3,4,5
CH 3: **Getting to Know the Android User Interface**	6,7
CH 4: **Designing Your User Interface with Views**	8,9
CH 5: **Displaying Pictures and Menus with Views**	10,11
CH 6: **Data Persistence**	12,13

CH7: **Testing & debugging mobile applications**	14,15

Textbook
Required Textbook---Beginning Android Programming with Android Studio, 4th Edition, 2016, Jerome DiMarzio, ISBN: 978-1-118-70559-9

Reference Materials
Headfirst Android Development- O'Reilly- 2nd Edition, Dawn Griffiths & David Griffiths ISBN: 978-1-491-97405-6

Course Learning Outcomes

CLO	Description	Mapped PI
CLO#01	**Identify** the various Android components, **understand** the fundamentals of mobile application development, their specific purposes and lifecycles, and explain their roles within the process of mobile application development.	**PI 1.1, PI 1.2**
CLO#02	**Explain** the Android architecture and effectively **demonstrate** the ability to build, run, and debug a mobile application within this framework	**PI 2.2**
CLO#03	**Design** an Android application's user interface programmatically using appropriate UI frameworks and tools.	**PI 2.1**
CLO#04	**Apply** techniques for integrating the user interface with a database and for storing files in both internal and external storage within an Android application and methods of testing to enhance the app quality.	**PI 2.3**
CLO#05	**Create** an Android-based application as a group mini-project, showcasing teamwork and collective problem-solving skills.	**PI 3.2,PI 3.3**

CLO-PI-SO Mapping

	SO-1	SO-2	SO-3	SO-4	SO-5	SO-6
CLO#01	PI 1.1, PI 1.2	-	-	-	-	-
CLO#02	-	PI 2.2	-	-	-	-
CLO#03	-	PI 2.1	-	-	-	-
CLO#04	-	PI 2.3	-	-	-	-
CLO#05	-	-	PI 3.2,PI 3.3	-	-	-