

# SWARRNIM STARTUP & INNOVATION UNIVERSITY

## Swarnnim School of Computing & IT

### BCA (Honours) Programme

**Semester - VII**

**Course Title: Advance Mobile App Development**

**SUBJECT CODE: HRBCA230706A**

**Teaching and Examination Scheme:**

Teaching Scheme				Credits	Evaluation Scheme				
Theory	Tutorial	Pr	Total		Internal		External		Total
					Theory	Practical	Theory	Practical	
3	-	2	5	5	30	20	70	30	150

**Prerequisite:** Basic knowledge of object oriented concepts of any programming language

**Contents:**

Sr.	Topic	Teaching Hrs.
1	<b>Kotlin Basics</b> Kotlin REPL, operators, types, conditional statements, null safety, arrays, lists and loops in Kotlin, Creating and calling functions with default and named arguments , writing simple lambdas, classes, objects, constructors, visibility modifiers, inheritance.	8
2	<b>Android User Interface Design Essentials</b> Exploring User Interface Screen Elements: Introducing Android Views and Basic Layouts, Displaying Text with TextView, Retrieving Data From Users, Using Buttons, Check Boxes and Radio Groups, ImageView, Working with Spinner , Getting Dates and Times From Users, Using Indicators to Display Data to Users, Adjusting Progress with SeekBar , Working with RatingBar, Test Swither, Switch, ListView, Notifications in Kotlin .	15
3	<b>Advance Layout of Android</b> Layouts (List view, Grid Layout, Card Layout, Drawer Layout) (6) Types of Adapter. (Array, Base and custom) (4), Use of Fragments (3), Floating Button (2).	10
4	<b>Audio, Video and Camera:</b> Use Media Player, Recording and Playing sound, creating a sound pool, Using Camera, Recording Video.	10

	<b>Working with Graphics and Animation:</b> Working with Graphics, Using the Drawable Object, Using the ShapeDrawable object, Hardware Acceleration, Working with Animation.  <b>Working with Location Services and Maps:</b> Working with Google Maps, Working with Geocoding and Reverse Geocoding.	
5	<b>Database Connectivity Using SQLite:</b> Using android data and storage APIs, managing data using SQLite, sharing data between applications with content providers, working with file and directories, Shared preferences, CRUD operations  <b>Working with Common API:</b> Using Android Networking APIs Using Android Web APIs Using Android Telephony APIs, Notification.  <b>Web Data Parsing</b> Kotlin Android XML Parsing , What is JSON? Format os JSON Data? Why JSON? JSON Data parsing using URL	15
6	<b>Publishing your Application:</b>	2

**\*Continuous Evaluation:**

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc.

**Reference Books:**

1. Android Wireless Application Development (TextBook)  
Lauren Darcey and Shane Conder; Pearson Education; First Edition
2. Professional Android 2 Application  
Development Reto Meier; Wiley India Pvt Ltd,2011
3. Beginning Android  
Mark L Murphy,; Wiley India Pvt Ltd.(2009)
4. Pro Android  
Sayed Y Hashimi and Satya Komatineni; Wiley India Pvt Ltd.(2009)
5. geeksforgeeks Kotlin Android: <https://www.geeksforgeeks.org/kotlin-android-tutorial/>
6. javatpoint Kotlin Android:<https://www.javatpoint.com/kotlin-tutorial>