

JSS COLLEGE FOR WOMEN (Autonomous)

Saraswathipuram Mysore-9

Choice Based Credit System

CBCS Scheme

COP in

Android Programming

(2026-27)

DEPARTMENT OF COMPUTER SCIENCE

Proposed Regulations for the Career Oriented Program in Android Programming

Preamble

The course of study for the career oriented program is an add-on course. Any Degree student of the college may be admitted. The rules and regulations for admission for the course shall be in accordance with those framed by the college from time to time.

The course of study is taught in two years under semester scheme. The first year course is entitled “CERTIFICATE COURSE IN Android Programming”. It shall be of one academic year with two semesters/term of 15weeks each.

The second year course is entitled “DIPLOMA COURSE IN Android Programming”. It shall be of one academic year with two semesters/term of 15 weeks each.

The second year course is entitled “ADVANCE DIPLOMA COURSE IN Android Programming”. It shall be of one academic year with two semesters/term of 15 weeks each. However, to join this course the candidate should have completed the Certificate course.

A candidate is awarded with the respective certificates at the end of each course with marks obtained.

JSS COLLEGE FOR WOMEN (AUTONOMOUS)

SARASWATHIPURAM MYSURU-570009

CBCS Syllabus – COP in Android Programming for 2025-2026 onwards

Year	Sem	Corse	Title	Hours / Week			Credits			Maximum Marks						Exam Duration	Total Marks
										Th IA		Pr IA		Exam			
				L	T	P	L	T	P	C1	C2	C1	C2	Th	Pr		
I	I	DSC 1	Introduction to Android Operating System	2	0	2	2	0	1	10	05	10	05	50	20	2 Hours	100
	II	DSC 2	Designing user interface	2	0	2	2	0	1	10	05	10	05	50	20	2 Hours	100
II	III	DSC 3	Intents in android	2	0	2	2	0	1	10	05	10	05	50	20	2 Hours	100
	IV	DSC 4	Video controller in android	2	0	2	2	0	1	10	05	10	05	50	20	2 Hours	100
III	V	DSC 5	Introduction to JSON	2	0	2	2	0	1	10	05	10	05	50	20	2 Hours	100
	VI	DSC 6	Mini project	2	0	2	2	0	1	10	05	10	05	50	20	2 Hours	100

Proposed syllabus for the Certificate course in Android Programming:-

SEMESTER-I

Credit (L: T: P = 2: 0: 1)

DSC 1:

Introduction to Android Operating System

Course outcomes

Upon successful completion of this course, students will be able to:

CO1: Explain the fundamentals of the Android Operating System, its ecosystem, versions, and features.

CO2: Describe the Android architecture, framework, and SDK components used in application development.

CO3: Demonstrate the use of Android Studio, Android Virtual Device (AVD), and Emulator to develop Android applications.

CO4: Develop basic Android applications using appropriate layouts and Android project structure.

UNIT-I

15hrs

Introduction to Android Operating System: Definition, open handset alliance, android ecosystem, versions of android, features of android, android architecture, features of android, android framework, android SDK features.

UNIT-II

15hrs

Android virtual device, emulators, introduction to android studio, Android project structure, Layouts in Android: absolute layout, frame layout, relative layout, table layout.

DSC 1 Introduction to Android Operating System (Practical): As per the syllabus

Text Book

Android by Prasanna Kumar Dixit, Vikas Publishing House Pvt Ltd.

Reference Book

Android Programming with Kotlin for Beginners by John Horton, Packt Publishing.

SEMESTER-II
Credit (L: T: P = 2: 0: 1)
DSC 2:

Designing user interface

Course outcomes

Upon successful completion of this course, students will be able to:

CO1: Explain the functionality of Android user interface components and widgets.

CO2: Implement interactive Android user interfaces using controls and event handling.

CO3: Develop Android applications using advanced UI components and view controls.

CO4: Analyze the Android activity lifecycle for efficient application management.

UNIT-I

15hrs

Designing user interface with view, text view, button, adding event to button, image button, edit text, activity file, check box, radio button, radio group, progress bar, spinner, toggle button,

UNIT-II

15hrs

Android date picker, time picker, autocomplete text view, custom toast. Views: list view, grid view, image view, scroll view Activity in android, android activity life cycle

DSC 2 Designing user interface (Practical): As per the syllabus

Text Book

Android by Prasanna Kumar Dixit, Vikas Publishing House Pvt Ltd.

Reference Book

Android Programming with Kotlin for Beginners by John Horton, Packt Publishing.

Proposed syllabus for the Diploma course in Android Programming:-

SEMESTER-III

Credit (L: T: P = 2: 0: 1)

DSC 3:

Intents in Android

Course outcomes

Upon successful completion of this course, students will be able to:

CO1: Explain the concepts of Android intents, services, broadcasts, and their lifecycle in application development.

CO2: Demonstrate the implementation of intents and services for communication between Android application components.

CO3: Develop Android applications that integrate multimedia features for audio and video playback.

CO4: Analyze the Android system architecture and multimedia framework for efficient multimedia application development.

UNIT-I

15hrs

Intents in android, starting activities or services, types of intents, broadcast life cycle, services, Life cycle of android service, service life cycle, multimedia

UNIT-II

15hrs

Android system architecture, android system architecture, Multimedia frame work, android multimedia framework architecture, media format, container and network protocol, play audio and video

DSC 3 Intents in Android (Practical): As per the syllabus

Text Book

Android by Prasanna Kumar Dixit, Vikas Publishing House Pvt Ltd.

Reference Book

Android Programming with Kotlin for Beginners by John Horton, Packt Publishing

SEMESTER-IV
Credit (L: T: P = 2: 0: 1)
DSC 4:

Video controller in Android

Course outcomes

Upon successful completion of this course, students will be able to:

CO1: Explain the concepts of video controllers, text-to-speech, telephony, messaging, permissions, and location-based services in Android.

CO2: Demonstrate the implementation of SMS, text-to-speech, video control, and runtime permissions in Android applications.

CO3: Develop Android applications using fragments, markers, and location-based services to create interactive mobile applications.

CO4: Analyze Android telephony architecture and location services to design secure and efficient mobile applications.

UNIT-I

15hrs

Video controller in android, text to speech, telephony and messaging, sending SMS through android application, permissions, Location based services

UNIT-II

15hrs

Fragments, markers, adding markers getting location data, android telephony, architecture of android telephony, providing permission in android manifest file

DSC 4 Video controller in Android (Practical): As per the syllabus

Text Book

Android by Prasanna Kumar Dixit, Vikas Publishing House Pvt Ltd.

Reference Book

Android Programming with Kotlin for Beginners by John Horton, Packt Publishing.

**Proposed syllabus for the Advanced Diploma course in Android
Programming:-**

SEMESTER-V

Credit (L: T: P = 2: 0: 1)

DSC 5:

Introduction to JSON

Course outcomes

Upon successful completion of this course, students will be able to:

CO1: Explain the concepts, syntax, and applications of JSON, XML, and data parsing in Android.

CO2: Demonstrate the creation and management of SQLite databases using SQLiteOpenHelper and SQL commands.

CO3: Develop Android applications that perform data storage, retrieval, and transaction management using SQLite.

CO4: Analyze SQLite database features, ACID properties, and transaction mechanisms for reliable data management in Android applications.

UNIT-I

15hrs

Introduction to JSON, uses of JSON, JSON Values, how JSON uses JavaScript syntax, parsing JSON and XML

UNIT-II

15hrs

SQLite, Features of SQLite, ACID Properties, Weakness of SQLite, Naming conventions in SQLite, Reserved keywords, SQLite commands, DDL, DML, SQLiteOpenHelper class, methods of SQLiteOpenHelper class, transactions in SQLite, properties of transactions, begin transaction, commit transaction, rollback, SQLite methods

DSC 5 Introduction to JSON (Practical): As per the syllabus

Text Book

Android by Prasanna Kumar Dixit, Vikas Publishing House Pvt Ltd.

Reference Book

Android Programming with Kotlin for Beginners by John Horton, Packt Publishing.

SEMESTER-VI
Credit (L: T: P = 2: 0: 1)
DSC 6:

Mini project

Course Outcomes

Upon successful completion of this course, students will be able to:

CO1: Design and develop a complete Android application by integrating user interface, database, and API components.

CO2: Implement Android application features using appropriate development tools and programming practices.

CO3: Test and debug Android applications to identify and resolve functional and performance issues.

CO4: Evaluate and demonstrate the developed Android application by presenting its design, implementation, and functionality.

Mini project:

- Build a complete Android app integrating UI, database, and API
- App testing and debugging
- Submission and demo

DSC 6 Mini project (Practical): As per the syllabus

Text Book

Android by Prasanna Kumar Dixit, Vikas Publishing House Pvt Ltd.

Reference Book

Android Programming with Kotlin for Beginners by John Horton, Packt Publishing.

Question Paper Pattern

Theory (1 or 2 Credits)

Time: 2 Hours

Max. Marks: 50

Part – A

I. Answer all Questions.

05 X 02 = 10

- 1.
- 2.
- 3.
- 4.
- 5.

Part - B

II. Answer any Four Questions.

4 X 10 =40

- 6.
- 7.
- 8.
- 9.
- 10.
- 11.