MAR AUGUSTHINOSE COLLEGE RAMAPURAM

DEPARTMENT OF COMPUTER SCIENCE

Scheme and Syllabus of
ADD ON Course

Mobile Application Development - Android

BoS
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INTRODUCTION

The Department of Computer Science offers the Add-on course in Mobile Application Development - Android for the final year MSc Computer Science students, in addition to the curriculum offered by the University.

AIM OF THE PROGRAMME

The Add-on course aims at imparting crucial job skills to the students, thus enabling them to acquire an additional certificate along with their degree certificate. Thus, improving the employability skills of students.

MEDIUM OF INSTRUCTION: English.

DURATION OF THE COURSE

The duration of Add-on course is 100 hours (including the hours of final examination) of which 40 hrs theory and 60 hrs for laboratory/demonstration/experimental activities including project based on Mobile Application Development - Android.

The Add-on course will be a blend of theory classes / experimental learning / project-based learning / assignments / activity-based learning.

COURSE OBJECTIVES

- To get acquaintance with Mobile Application Development using Android
- To familiarize major features of Android.
- To Install and configure Android application development tools.

COURSE OUTCOMES (Cos)

- Install and configure Android application development tools
- Design and develop user Interfaces for the Android platform.
- Save state information across important operating system events.
- Apply Java programming concepts to Android application development.

EVALUATION

1. The add-on course shall be evaluated through an examination at the end of the course.
2. The duration of examination is one hour.
3. The total marks of the examination shall be 100

Components of Evaluation	Marks
Attendance	10
Project	50

Viva	20
External Examination	20
Total	100

4. A committee consisting of the Head of the Department, the course coordinator and a senior faculty member nominated by the Head of the department shall monitor the evaluation process.

5. Certificates will be issued to those students with 75% attendance, timely submission of assignment and project and a minimum of 40% marks in the qualifying examination.

Grading Pattern

Grades are given **on a 7-point scale** based on the total percentage of marks, *(ISA+ESA)* as given below: -

Percentage of Marks	Grade
95 and above	**S** Outstanding
85 to below 95	$\mathbf{A^+}$ Excellent
75 to below 85	**A** Very Good
65 to below 75	$\mathbf{B^+}$ Good
55 to below 65	**B** Above Average
45 to below 55	**C** Satisfactory
35 to below 45	**D** Pass
below 35	**F** Failure
Absent	**Ab**

SYLLABUS
Mobile Application Development – Android

Unit 1
Introduction to Android, Android Versions, Android Activity, Android Features and Architecture, Java JDK, Android SDK, Android Development Tools, Android Virtual Devices, Emulators, Dalvik Virtual Machine, Layouts – Linear, Absolute, Frame, Relative and Table.

Unit 2
Android User Interface- Fundamental UI design , User interface with View- Text View, Buttons, Image Button, Edit Text, Check Box, Toggle Button, Radio Button and Radio Group, Progress Bar, Autocomplete Text View, Spinner, List View, Grid View, Image View, Scroll View, Custom Toast Alert and Time and Date Picker.

Unit 3
Activity - Introduction, Intent, Intent_filter, Activity Life Cycle, Broadcast Life Cycle, Services, multimedia-Android System Architecture, Play Audio and Video, Text to Speech.

Unit 4

SQLite Database in Android- Introduction to SQLite Database, Creation and Connection of the Database, Extracting values from Cursors, Transactions, Telephoning and Messaging- SMS Telephony, Sending SMS, Receiving SMS, Wi-Fi Activity.

Unit 5

Introduction to JSON and XML, Use of JSON, Syntax and Rule of JSON, JSON Name, JSON Values, JSON Objects, JSON Arrays, Parsing JSON and XML, Google Play services, Location services, Maps.