

# ANDROID APPLICATION DEVELOPMENT COURSE

Training Program



This “Android Application Development Course” is a 24 Hours Training Program with Certification. The program is to be developed for Matriculated, Intermediate and Graduate People who would like to develop their career in the Android Application.

This Certification with training program is ideally suited to following individuals who are:

- Fresh Matriculated or Intermediate
- People who would like to get knowledge of Android Application
- Are already working in programing and interested to switch over to Android Application
- Who want to be good and reputable jobs in the market and are like to enhance their skills in Android Application

Program is offered by: **3D Educators – Trainers & Consultants**

# Table of Contents

**Detail**

**Inauguration**

**Structure**

**Topics & Time Allocation**

**Other Learning Activities**

**About the Program Designer & Instructor**

**Syllabus**

# Program Details

## **Inauguration**

The Training Program will be inaugurated by a senior member of 3DEducators

## **Program Structure**

Number of classes in a week	One Class Per Week
Duration of each class	3- Hour
Total Duration	2.5 Months

## **Other Learning Activities:**

Classroom Assignments	15
Presentations by Trainees	1
Project	1

## **About the Program Designer & Instructor**

The Profile of Program Designers & Instructors is given below:

This Training Program has been designed and will be conducted by Senior most programmer and CERTIFIED PROFESSIONALS who having the huge experience of Programming especially on Android Applications. They have worked with various large commercial industries and for different departments. They also served foreign, Local & International organization.

The Trainers who are conducting this program are have on the position of the following:

- ✓ Senior Project Manager Head –
- ✓ Director Information Technology
- ✓ Corporate Trainers & Consultants

They trainers are foreign qualified and having the degrees of PHD, MBA, MS(IT), M.Sc. (Applied Physics) and Certification of MCSE, MCDBA, CISA, CISSP, PMP Certification

As Consultant & Senior Trainers, the team of trainers from banking side we at **3D Educators – Trainers & Consultants** would not compromise on the faculty quality, where the trainers who are also provide training for different service local and multinational industries or companies.



## Program Syllabus

### COURSE CONTENTS:

As a result of taking this Android training course, you will be able to:

- Describe the platforms upon which the Android operating system will run.
- Create a simple application that runs under the Android operating system.
- Access and work with the Android file system.
- Create an application that uses multimedia under the Android operating system.
- Access and work with databases under the Android operating system.

#### **Modular Outline: (Part One)**

**3 Hours**

Module 00: Introduction to Android Programming - Course Introduction

Module 01: Android Overview and History – Part One

- How it all got started
- Why Android is different (and important)
- Native Android Applications
- Android SDK Features

#### **Module 02: Android Overview and History (Part Two)**

**2 Hours**

- Android Development Environment
- Elements of Android SDK
- Android Software Stack
- Android Application Architecture
- Android Libraries
- Lab Exercise: Initial Configuration of the Android SDK

#### **Module 03: Android Stack**

**2 Hours**

- Overview of the stack
- Linux kernel
- Native libraries
- App framework
- Apps
- Lab Exercise: Configure Initial Application, Run in Emulator

#### **Module 04: SDK Overview**

**2 Hours**

- Platforms
- Tools
- Versions
- Lab Exercise: Download and Create in Android Virtual Device Manager

## Module 05: Hello World App

2 Hours

- Creating your first project
- The manifest file
- Layout resource
- Running your app on Emulator
- Lab Exercise: Create, Compile and Run 'Hello, Android' App

## Module 06: Main Building Blocks

2 Hours

- Activities
- Activity lifecycle
- Intents
- Services
- Content Providers
- Broadcast Receivers
- Lab Exercise: Review Activities, Intents, and Content Providers

## Module 06a: Main Building Blocks Demo

2 Hours

## Module 07: Basic Android User Interface

- XML versus Java UI
- Dips and Sps
- Views and layouts
- Common UI components
- Handling user events
- Lab Exercise: Create Application with on Click, on Key Down, on Focus Changed Event Handlers

## Module 07a: Basic Android User Interface Demo

## Module 08: Android System Overview

- File System
- Preferences
- Notifications
- Security model
- Lab Exercise: Create Application with Toast Notifications

## Module 09: Advanced Android User Interface - (Part One) 2 Hours

- Selection components
- Adapters
- Complex UI components
- Building UI for performance

## Module 10: Advanced Android User Interface - (Part Two)

Page # 6

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- Menus and Dialogs
- Graphics
- Animation
- Lab Exercise: Create Application with Android's Advanced User Interface Functions

## **Module 10a: Advanced Android User Interface Demo 2 Hours**

## **Module 11: Multimedia in Android**

- Multimedia Supported audio formats
- Simple media playback
- Supported video formats
- Simple video playback
- Lab Exercise: Create Android Audio/Video Application

## **Module 11a: Multimedia in Android Demo 3 Hours**

## **Module 12: SQL Database**

- Introducing SQLite
- SQLite Open Helper and creating a database
- Opening and closing a database
- Working with cursors Inserts, updates, and deletes
- Lab Exercise: Create Application to Create, Modify and Query an SQLite Database

## **Module 12a: SQL Database Demo**

## **Module 13: Basic Content Providers**

- Content provider MIME types
- Searching for content
- Adding, changing, and removing content
- Working with content files
- Lab Exercise: Create Application that Works with an Android Content Provider
- Module 13a: Basic Content Providers Demo

## **Module 14: Data Storage, Retrieval and Sharing 2 Hours**

- Android Techniques for Saving Data
- Saving Simple Application Data
- Creating and Saving Preferences
- Retrieving Shared Preferences
- Saving Activity State
- Creating a Preferences Page
- Saving and Loading Files
- Lab Exercise: Create application that performs Data Storage and Retrieval from Android External Storage

## **Module 15: Mapping and Location Based Services**

- Using Location Based Services
- Setting up your Emulator with Location Based Services
- Selecting a Location Provider

- Finding Your Location
- Using Proximity Alerts
- Using the Geocoded
- Creating Map Based Activities
- Lab Exercise: Create Location-Aware application that uses Proximity Alerts and Google Maps API

## Module 15a: Mapping and Location Based Services Demo

## Module 16: Working in the Background

- Introducing Services
- Using Background Worker Threads
- Introducing Notifications
- Using Alarms
- Lab Exercise: Create application with One-Time, Repeating Alarms, and Long-Running Background Task as Service



## **TERMS & CONDITIONS**

### **WITHDRAWAL FROM THE CERTIFICATION**

Students are not allowed to withdraw from the CERTIFICATION. If a student cannot continue the CERTIFICATION his/her fee will be forfeited.

### **CONDUCT AND DISCIPLINE**

A disciplinary action, leading to rustication, will be taken against students whose conduct is found objectionable at any time during the course of study. Reference will be made to 3D Educators code of conduct.

### **EVALUATION AND GRADING**

The performance of students is evaluated through continuous observation of a student's performance in the CERTIFICATION – class participation, submission of assignments, quizzes and exercises.

The student will be examined through three hourly exams conducted at the midterm and a final exam at the end of the program. Total marks for passing the CERTIFICATION will be 60 out of a total of 100.

Students who do not meet the attendance or any other eligibility criteria will not be allowed to appear in the final examination.

The following grading plan will be applicable for the CERTIFICATION:

<b>A</b>	<b>87 - 100</b>
<b>B+</b>	<b>81 - 86</b>
<b>B</b>	<b>72 - 80</b>
<b>C+</b>	<b>66 - 71</b>
<b>C</b>	<b>60 - 65</b>
<b>F</b>	<b>below 60</b>

Students who are unable to appear for the final exam are required to submit a written application stating the reason for not appearing for the exam. 3D Educators reserves the right to approve or deny such applications. If approved, the student will be allowed to sit for the exam within one month. Failure to do so, the student will be resubmit the examination fee and sit the future schedule exam. Without passing of the exams no certification will be awarded.

3D EDUCATORS

## **ONLINE LIVE CLASSES FACILITY AVAILABLE**

- Instructor Led Training
- Real Time Presentations
- Interactive Classes
- Complete Notes and Other Stuff shall be provided through our Secure Student Login Member's Area
- For Online Live Classes, you may please download the Admission Form through our website <http://www.3deducators.com>. Fill it properly and attached the required document along with Picture and send back to [info@3deducators.com](mailto:info@3deducators.com) with scanned fee submitted voucher in the bank.
- For Pakistan you may submit the fee at any MCB Branch with the title of "3D EDUCATORS-TRAINERS & CONSULTANTS".
- If you are outside Pakistan then you may transfer via Bank to Bank or any western union, Fast Track, Money Gram or else International Transfer Body.
- After Admission, if you don't have GMAIL Account then you are requested to kindly make one GMAIL Account and shared it [info@3deducators.com](mailto:info@3deducators.com). Then further correspondence shall be made by our institute official.
- Extra Bandwidth Charges shall be incurred.
- If you are outside country or city then extra courier charges shall be incurred for Certificate.

## **PRECAUTIONARY MEASURES**

- ✓ During Classes, you are requested to make sure that you are in isolated room, where no noise should be there except your voice.
- ✓ Kindly Switch Off your Cell Phone during the class, because it will disturb the quorum of class.
- ✓ If you have taken the admission in the course online, ethically it is recommended and suggested that you only avail this facility.
- ✓ Recording of Lectures are not allowed at your end.

This world is emerging and growing in the 21st Century very rapidly because of latest and remarkable technologies and its advancement. Due to advancement of technology, we 3D EDUCATORS offer Live Interactive class sessions.

3D EDUCATORS believe on Information Technology and its systems. Now you can also avail this facility at your home.

## **DISTANCE NOT MATTER**

You can join in the live classes Sessions of **3D EDUCATORS – TRAINERS & CONSULTANTS** from anywhere of the world.

### **CONTACT US:**

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**(Get the Admission Form)**

[Admission Form](#)

**MANAGEMENT**

**3D EDUCATORS – TRAINERS & CONSULTANTS**

## CERTIFICATE OF AUTHORIZATION FROM IMRTC

**CERTIFICATE  
OF AUTHORIZATION**

IMRTC USA Recognized

# CERTIFICATE OF AUTHORIZATION



*This is to Certify That IMRTC Authorized*

### **3D EDUCATORS - TRAINERS & CONSULTANTS**

*to work as Training & Research Partner in capacity of  
PARTNER THROUGH PAKISTAN CHAPTER*

*for the scope of activity shown below in accordance with the applicable rules of  
the IMRTC. The use of this certification and the authority granted by this  
Certificate of Authorization are subject to the provision of agreement set  
forth in the application.*

*The validity of this certificate is for Two Years from the date of Issuance  
and will increase according to the performance  
Issuance Date: 16 Aug 2015*

*Cheryyel Rhodes*

*Director Affiliations and Official Affairs*



Chapter ID: AS2933770

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