National Institute of Electronics and Information Technology Gorakhpur

Name of Group: IT Division

Name of Course: Android Programming & Information Security

Objective:

This training facilitates classroom and laboratory learning, letting students develop competence and confidence in android programming and understand the entire Android Apps Development Cycle, as well as it would also enable the students to independently create new Android Applications

Duration: 4 Weeks

Eligibility: B.TECH. (CS/IT/EC) or MCA/M.Sc. (IT/CS/ Electronics), BCA/PGDCA, Diploma in Computer/Electronics Stream, B.Sc. etc.

Knowledge of JAVA programming is required.

Course Fees (Proposed): Rs. 1000/- per week (+GST)

Registration Process: Candidates have to apply in prescribed application form. The forms can be collected from NIELIT Gorakhpur centre or can be downloaded from the NIELIT Gorakhpur website. The duly filled form along with the course fees has to be submitted at NIELIT Gorakhpur centre. The Fees deposited is Non-Refundable.

Course Content:

Modules:	Duration	Contents
Module 1	4 Weeks	Java Concepts, SQL ,Introduction to Android &application Structure , Emulator, UI Design, Intents, Menu, Preferences, Tabs & Tab activity ,Style & Themes ,Content Providers, Android Debug Bridge, linkify, Adapters & widgets, custom components, threads, Services, Multimedia in Android, Location Based Services ,Sensors, WIFI, Telephony services, Using Camera & Bluetooth, Application Deployment & Secure coding

* There will be 3 Hours Session per day.
* These sessions will include Theory Classes, Demo and Practical.

Mode of Payment: Fees can be paid either by swiping debit/credit card or by challan.

For any queries and more details please contact Mr. Abhinav Mishra (**8317093868)**

Android Programming & Information Security	
Unit 1	**Introduction to Android** • Introduction to Android Platform • Android Stack • Android Versions and Installing Android SDK and updating SDK components • Android Studio IDEs and ADT plug-in • Using the Emulator • Android vs. Other mobile platforms
Unit 2	**First Android Application** • Application Life Cycle • Application Components • Activity life cycle • Manifest File, Layout XML Code • Strings, The R File • Java Source Code • Java based layout vs. xml based layout • Eclipse Visual Layout Editor • Logging
Unit 3	**UI Design for Android** • Using different layouts - LinearLayout, TableLayout etc. • Drawable Resources • Resolution and density independence • Working with common widgets • Working with ListView and Adapters • Creating and using option menu • Working with preferences • Working with Dialogs and Toasts • Working with Graphics and Animation

Unit 4	**Introducing Intents** • Intents • Intent filters • Invoking activities by class name and URI • Sharing data using Extras Bundle and URI parameters • Working with Tabs and Fragments
Unit 5	**Files and Database** • Using File System • Introducing SQLite on Android • Database Connectivity • Cursors and content values • Using ContentProvider to share data • Understanding Security model
Unit 6	**Working in background** • Introducing Service and its life cycle • Creating and starting a service • Types of services • Working with multi-threading and AsyncTask • Broadcast receivers • Triggering receivers with intents • Responding to system events using Broadcast receivers • Using Alarm
Unit 7	**Security overview** • Design Review • Penetration Testing and Code Review • Open Source and Community Review • Incident Response

For more information,

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