राष्ट्रीय प्रौद्योगिकी संस्थान पटना / NATIONAL INSTITUE OF TECHNOLOGY PATNA
संगणक विज्ञान एंव अभियांत्रिकी विभाग / DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
अशोक राजपथ, पटना-८००००५, बिहार / ASHOK RAJPATH, PATNA-800005, BIHAR
Phone No.: 0612-2372715, 2370419, 2370843, 2371929 Ext- 200, 202 Fax-0612-2670631 Website: www.nitp.ac.in

No:- Date:

Course Code: CSXX2851 Mobile Applications Development
L-T-P-Cr: 2-0-2-3

Pre-requisites: Introductory knowledge of object oriented programming.

Course Objectives:

1. To understand the fundamentals of android mobile application development
2. To understandandroid GUI components and their hierarchy.
3. To design and implement applications for android mobiles.
4. To manage data of mobile applications using databases.

Course Outcomes:

Sl. No.	Outcome	Mapping to POs
1.	Understanding of primary concepts of XML and Java required for mobile application development.	PO1
2.	Understanding of development of UI-rich application along with its hierarchy.	PO1, PO3, PO5
3.	Writing code for applications and understanding business logic.	PO1, PO2, PO3
4.	Understanding communication among applications and key components like activities, its lifecycle, intent, etc.	PO1, PO2
5.	Designing Graphical User Interface (GUI) of applications and understanding of SQLite database for data storage, retrieval, etc. of mobile applications.	PO1, PO3, PO5

Syllabus

Unit 1: Lectures: 6

Objects and classes in java, static methods, array of objects, constructor, constructor overloading, parameterized constructor, inheritance, exception handling, threading, ArrayList class,XML: syntax, elements, attributes, namespaces.

Unit II: Lectures: 4

Building the first android project: configuring the project, Choosing API level specification, Addition of activity and layout, inclusion of methods in the activity class, calling methods of activity class, changes in the activity codes, handling of GUI components, R class, use of ‘String’ resource.

No:- Date:

Unit III: Lectures: 3

Intent: use to start multiple activities and different layouts, Android manifest file, use of intent to start the activities, working of intent in android applications, adding information into the intent.

Unit IV: Lectures: 3

Working with activities, understanding of activities by sample application, an activity life cycle, dealing with configuration changes,

Unit V:Lectures: 8

Layouts and its types, setting layout width and height, adding padding, attributes for positioning views relative to the parent layout, positioning views relative to other views, attributes for positioning views relative to other views, use of margins, linear layout, adding weight to one view and multiple views, gravity attribute, grid layout, adding views to grid, toggle button, switch, check boxes, radio buttons, spinners, scroll views, fragments.

Unit VI: Lectures: 4

List views, defining list views in XML, SQLite database: files of database,SQLiteOpenHelper class,creation of database and its tables, inserting data into tables, updating records, setting conditions, deleting records.

Text Book:

1. Head First Android Development: A Brain-Friendly Guide, by Dawn Griffiths and David Griffiths, O'Reilly Media, Inc

Reference Books:

1. Android Programming (Big Nerd Ranch Guide), by Phillips, Stewart, Hardy and Marsicano
2. Android Programming – Pushing the limits by Hellman.