



**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**Syllabus for Bachelor of Vocation (B.Voc), 5<sup>th</sup> Semester**  
**Branch: Software Development**  
**Subject Name: Mobile Application Development-II**  
**Subject Code: 21150202**

**Type of course:** Core

**Prerequisite:** Basic Knowledge of OOPS concept and Core java

**Rationale:** Mobile Application development is becoming need of the day as webpage development was about ten years ago. Most companies are developing their mobile applications so that customers may interact with them on mobiles itself. Android is most popular mobile operating system of today. Android application development course is therefore designed to enable the diploma information technology students to build mobile applications on this platform. This course covers the basics of Android along with required programming codes for developing necessary programming skills for mobile applications. Thus this course is an important course for Software Development students with possibilities of self-employment.

**Teaching and Examination Scheme:**

Teaching Scheme			Credits	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
			ESE (E)	PA (M)	ESE (V)	PA (I)		
3	0	0	3	50	0	0	0	50

L- Lectures; T- Tutorial/Teacher Guided Student Activity; P- Practical; C- Credit; ESE- End Semester Examination; PA- Progressive Assessment

**Content:**

Sr. No.	Content	Teaching Hrs.	Module % Weightage
1.	<b>Introduction to UI</b> - Layouts, Fragments, Adapters, Action bar, Dialogs, Notifications , UI best practices, UI Architecture, Application context, Intents, Activity life cycle, Supporting multiple screen sizes	<b>08</b>	<b>20</b>
2.	<b>Working with Media</b> - Playing audio and video, Recording audio and video	<b>04</b>	<b>20</b>
3.	<b>Location and Maps</b> - Google maps, Using GPS to find current location <b>Working with data storage</b> - Shared preferences, Preferences activity, Files access, Using External storage, SQLite database <b>Animation</b> -View animation, Drawable animation <b>Working with Sensors</b> - Motion Sensor, Position Sensor, Environmental Sensor <b>Working with Camera</b> – By Camera Intent, By Camera API	<b>12</b>	<b>20</b>
4.	<b>Content providers</b> - Content provider introduction, Query providers <b>Network Communication</b> - Web Services, HTTP Client, XML and JSON, Using e-mails. <b>Services</b> - Service lifecycle, Foreground service, Creating own services	<b>10</b>	<b>20</b>



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5	<b>Android Telephony-</b> Telephony Manager, Get Call State, Get Call State2, Simple Caller Talker, Phone Call, Send SMS, Send Email.	<b>08</b>	<b>20</b>
	<b>Total</b>	<b>42</b>	<b>100</b>

**Reference Books:**

1. Beginning Android, Mark L Murphy, Wiley India Pvt Ltd.
2. Professional Android, Sayed Y Hashimi and Satya Komatineni, Wiley India Pvt Ltd.
3. Android in Action, Chris King, Robi Sen and W. Frank Ableson, Manning Publications.
4. Learning Android, Ramesh Bangia, Khanna Publishing House.

**Suggested Specification Table with Marks (Theory): (For BVOC only)**

<b>Distribution of Theory Marks</b>					
R Level	U Level	A Level	N Level	E Level	C Level
10	20	20	0	0	0

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate  
C: Create and above Levels (Revised Bloom's Taxonomy)

**Course Outcomes:**

Sr. No.	CO Statement	Marks % Weightage
CO-1	Understand and Apply the knowledge to design user interface using fragment, intent, notification and other components.	20
CO-2	Understand concepts of media in development of applications.	20
CO-3	Understand and Develop applications using map, location and animation.	20
CO-4	Understand and Develop applications using content provider and services.	20
CO-5	Understand and Develop applications using Telephony.	20

**List of Open Source Software/learning website:**

Students must refer to following sites to enhance their learning ability.

- <https://www.udacity.com/course/ud853>[www.w3.org](http://www.w3.org)
- [www.w3schools.com](http://www.w3schools.com)
- <https://www.eclipse.org/downloads/www.mysql.com>
- <http://www.codelearn.org/androidtutorial>