

Bachelor of Computer Application
(Semester – V and Semester - VI)
Saurashtra University
Effective from June - 2018

CS-31 Mobile Computing using Android and iPhone				
Sr. No	Topic	Detail	Weight age In %	Approx . Lectures
1	Introduction to Android Android Application Design	<ul style="list-style-type: none"> • The Open Handset Alliance • The Android Platform, Android SDK • Building a sample Android application • Anatomy of an Android applications • Android terminologies • Application Context, Activities, Services, Intents • Receiving and Broadcasting Intents • Android Manifest File and its common settings • Using Intent Filter, Permissions • Managing Application resources in a hierarchy • Working with different types of resources 	20	12
2	Android User Interface Design	<ul style="list-style-type: none"> • User Interface Screen elements <ul style="list-style-type: none"> ○ Button, EditText, TextView, DatePicker, TimePicker, ProgressBar, ListView, GridView, RadioGroup, ImageButton, Fragement • Designing User Interfaces with Layouts <ul style="list-style-type: none"> ○ Relative Layout, Linear Layout, Table Layout etc • Dialogs • Drawing and Working with Animation <ul style="list-style-type: none"> ○ Frame By Frame Animation ○ Twined Animation 	20	12
3	Database Connectivity Using SQLite and Content Provider	<ul style="list-style-type: none"> • Using Android Data and Storage APIs • Managing data using SQLite • Sharing Data Between Applications with Content Providers 	20	12

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4	Location Based Services (LBS), Common Android API, Notifications, Services, Deployment of applications	<ul style="list-style-type: none"> • Using Global Positioning Services (GPS) • Geocoding Locations • Mapping Locations • Many more with location based services • Android networking API • Android web API • Android telephony API • Notifying the user, Notifying with the status bar • Vibrating the phone • Blinking the lights • Customizing the notifications Services • Application development using JSON in MySQL • Publish android application 	20	12
5	Introduction To iPhone	<ul style="list-style-type: none"> • Introduction To X-Code (IDE) • Framework, Design User Interface for button, text view, text field, etc. • Creating And Building Simple Application • Cocoa Touch And MVC 	20	12
TOTAL			100	60

Notes: Android application must be developed using ANDROID STUDIO.

Reference Books:

- (1) Android Wireless Application Development By Lauren Darcey and Shane Conder, Pearson Education, 2nd ed. (2011)
- (2) Beginning iOS 6 Development By David Mark , Jack Nutting , Jeff LaMarche , Fredrik Olsson Apress Publication.
- (3) Using SQLite By Jay A. Kreibich, Publisher: O'Reilly Media
- (4) Mobile Computing using Android and iPhone [ISBN: 978-93-81786-93–2] by Bharat & Company
- (5) Professional Android 2 Application Development Reto Meier, Wiley India Pvt Ltd (2011)
- (6) Beginning Android Mark L Murphy, Wiley India Pvt Ltd

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CS –32 Data Warehousing with SQL Server 2012				
No.	Topic	Detail	Weightage in %	Min. Lect.
1	Introduction to Data Warehousing	<ul style="list-style-type: none"> • What Is a Data Warehouse? • Data Warehousing Today • Future Trends in Data Warehousing. • Data Warehouse Architecture • Data Flow Architecture 	20	12
2	Designing and Implementation of Data Warehousing	<ul style="list-style-type: none"> • Logical Design for data warehouse • Physical Design for data warehouse • Design dimension table, fact table for data warehouse • Design and implement effective physical data structure for data warehouse 	20	12
3	Creating ETL Solutions with SSIS, Implementing Control Flow in SSIS	<ul style="list-style-type: none"> • Introduction to ETL with SSIS • Exploring data sources • Implementing data flow using SSIS • Introduction to Control Flow • Creating Dynamic Packages • Using Containers 	20	12
4	Enforcing Data Quality, Extending SQL Server Integration Services	<ul style="list-style-type: none"> • Introduction to Data Quality • Using Data Quality Service to Cleanse data • Using Data Quality Service to match data • Using Scripts in SSIS • Using Custom components in SSIS 	20	12
5	Deploying and Configuring SSIS Packages, Consuming	<ul style="list-style-type: none"> • Overview of SSIS Development • Deploying SSIS Projects • Planning SSIS Package 	20	12

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	Data in Data Warehouse	Execution <ul style="list-style-type: none"> • Introduction to Business Intelligence • Introduction to Reporting • Introduction to Data Analysis 		
			100	60

Notes: For Lab Practice : Microsoft SQL Server 2012 or Higher version

Reference Books:

- (1) Implementing a Data Warehouse with Microsoft® SQL Server® 2012 Dejan Sarka
Matija Lah Grega Jerkič
- (2) Building a Data Warehouse: With Examples in SQL Server – Vincent Rainardi-Apress (2014)
- (3) Data mining Explained A manager's guide to customer centric business intelligence by
- (4) Data mining by Pieter Adriaans, Dolf Zantinge
- (5) Data warehousing in the real world A practical guide for business DSS by Sam Anahory,

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CS-33: Programming in Python				
Sr. No.	Topic	Detail	Weightage In %	Approx. Lectures
1	Introduction to Python	The basic elements of Python, Branching programs, Strings and Input, Iteration, Functions and Scoping, Specifications, Recursion, Global variables, Modules, Files, Tuples, Lists and Mutability, Functions as Objects, Strings, Tuples and Lists, Dictionaries	20	12
2	OOP using Python	Handling exceptions, Exceptions as a control flow mechanism, Assertions, Abstract Data Types and Classes, Inheritance, Encapsulation and information hiding, Search Algorithms, Sorting Algorithms, Hashtables	20	12
3	Plotting using PyLab	Plotting using PyLab, Plotting mortgages and extended examples, Fibonacci sequence revisited, Dynamic programming and the 0/1 Knapsack algorithm, Dynamic programming and divide and conquer	20	12
4	Regular Expressions	Special Symbols and Characters, Regexes and Python, A Longer Regex example (like Data Generators, matching a string etc.) Text Processing: Comma Sepearated values, JavaScript Object Notation (JSON), Python and XML Case Study: Create Regular expressions (Custom), Process telephone numbers, Generate log data, HTML Generators, Tweet Scrub, Amazone ScreenScrapper, Mailmerge	20	12
5	Python and Data Analytics	Understand the problem By Understanding the Data Predictive Model Building: Balancing Performance, Complexity, and the Big Data	20	12
Total			100	60

Reference Books:

- 1) John V Guttag. "Introduction to Computation and Programming Using Python", Prentice Hall of India
- 2) Wesley J Chun, Core Python Applications Programming, 3rd Edition. Pearson
- 3) Michael Bowles, Machine Leaning in Python, Esssential techniques for predictive analysis, Wiley
- 4) Allen Downey, Jeffrey Elkner and Chris Meyers "How to think like a Computer Scientist, Learning with Python", Green Tea Press
- 5) Alex Martelli, Python Cookbook, O'REILLY