



C. U. Shah University, Wadhwan City

Faculty of Computer Science

Name of Program: Bachelor of Computer Application (BCA)

Semester : III

w.e.f. June-2014

Teaching & Evaluation Scheme

Sr. No	Subject Code	Subject Name	Teaching Hours/Week				Credits	Evaluation Scheme/Semester							
			Th	Tu	Pr	Total		Theory				Practical			Total Marks
								Sessional Exam		University Exam		Internal		Uni.	
								Marks	Hrs	Marks	Hrs	Pr	TW	Pr	
2	4CS03BJV1	Programming with Java-1	4	-	-	4	4	30	1.5	70	3	-	-	-	100

Objectives: At the end of the syllabus student can develop the console based and window based programming.

Pre-requisites: Student should have the knowledge of Programming.

Ch. No.	Chapter Name	Chapter Topics	Total Hrs
1	History, Introduction and Language	History and Features of Java, Java Editions JDK, JVM and JRE, JDK Tools ,Compiling and Executing basic, Java Program, Java IDE (Netbeans and Eclipse), Data Type(Integer, Float,Character,Boolean), Java Tokens (Keyword,Literal,Identifier, Whitespace, Separators,Comments, Operators), Operators (Arithmetic, Relational,Boolean Logical, Bitwise Logical,Assignment, Unnary, Shift, Special operators), Type Casting, Decision Statements (if, switch), Looping Statements (for, while, do..while), Jumping Statements (break, continue, return), Array (One Dim., Rectangular, Jagged), Command Line Argument Array	11
2.	Classes and Objects	OOP Concepts (Class, Object,Encapsulation, Inheritance,Polymorphism), Creating and using Class with Members, Constructor,finalize() method,Static and Non-Static Members, Overloading (Constructor &Method),VarArgs	04
3.	Inheritance	Universal Class (Object Class), Access Specifiers (public,private,protected, default, privateprotected), Doing Inheritance,Constructors in inheritance, Method Overriding,Interface, Nested and Inner Class, Abstract and Final Class	05
4.	Java Packages	Normal import and Static Import, Introduction to Java API Packages, and imp. Classes: java.lang, java.util, java.io, java.net, java.awt, java.awt.event, java.applet, java.swing, java.lang Package Classes (Math,Wrapper Classes, String, StringBuffer), java.util Package Classes(Random, Date, GregorianCalendar, Vector,HashTable, StringTokenizer), Creating and Using UserDefined, package and sub-package	08
5.	Exception Handling, Threading	Introduction to exception handling, try, catch, finally, throw, throws, Creating user defined Exception Class, Thread and its Life Cycle (Thread States), Thread Class and its methods Synchronization in Multiple Threads, (Multithreading)	07
6.	Applets	Introduction to Applet,Applet Life Cycle, Implement & Executing Applet with Parameters, Graphics class	03
7.	AWT	Introduction to AWT,Panel, AWT Components, Label, Button, RadioButton, CheckBox,TextField, PasswordField, TextArea,ScrollBar, ComboBox, List, etc...	04
8.	Event Handling	Introduction to Event Handling, Event Delegation Model,Event Packages, AWT Event Package, Event Classes (ActionEvent,ItemEvent, MouseEvent, MouseWheelEvent, TextEvent, WindowEvent), Listener Interfaces (ActionListener, ItemListener, KeyListener, MouseListener, MoutMotionListener,WindowListener.)	05

9.	Streams (Input and Output)	Stream and its types (Input, Output,Character, Byte), File and RandomAccessFile Class, Reading and Writing through Character Stream Classes(FileReader, BufferedReader, FileWriter, BufferedWriter), Reading and Writing through Byte Stream Classes (InputStream,FileInputStream, BufferedInputStream,DataInputStream, OutputStream,FileOutputStream, BufferedOutputStream,	08
Total::			55

Teaching Methodology:

Revision, Paper Solving, Seminar, Expert Talk, MCQ Quiz, Viva Test, Programming Test

Learning Outcome:

After completion of this syllabus, students should be able to understand what Object Oriented Programming is and should have background to learn advanced java (J2EE).

Books Recommended:

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| 1. | Java: The Complete Reference, Ninth Edition | TataMcGraw | Herbert Schildt | ISBN: 0071808558 |
| 2. | Java: A Beginner's Guide, Sixth Edition | TataMcGraw | Herbert Schildt | ISBN: 0071809252 |

Reference Books:

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|---|-------------------------|--------------------------|---------------------|
| 1. Java 2 Core Language Little Black Book | Paraglyph Press | AJ Williams | ISBN: 1932111662 |
| 2. The Class Of Java | Pearson Education India | Jain Pravin | ISBN: 8131755444 |
| 3. Head First JAVA | O'Reilly Media | Kathy Sierra, Bert Bates | ISBN: 9781435291799 |
| 4. Beginning JAVA | Wrox | Ivor Horton | ISBN : 0764568744 |
| 5. Programming with Java | The Macraw-Hill | E.Balaguruswamy | ISBN : 0070617139 |