

ST. JOSEPH'S EVENING COLLEGE (AUTONOMOUS)

DEPARTMENT OF COMPUTER APPLICATIONS TEACHING LESSON PLAN FOR JAVA PROGRAMMING BCA 1st Semester (June, 2018 to September, 2018)

Objective of the subject: To equip students with knowledge of JAVA to work with programs and create their own programs and softwares.

Name of the Faculty: Mrs. Annie Syrien

Time/Hours required – 60 hrs

Sl. No.	Module and Topics	No. of Hours.	Teaching methods	Evaluation of Learning process
Unit I	Introduction to JAVA: JAVA Evolution, Overview of JAVA Language: Introduction,	12 Hrs 1	Lecture method with practical's	Questionaries, programs to work in lab and Assignment problems
	Simple Java Program, More of Java, An Application with Two Classes	1		
	Java Program structure, Java Tokens, Java Statements, Implementing a Java Program,	1		
	Java Virtual Machine, Programming Style.	1		
	Constants, Variables, and Data Types, Operators and Expressions, Type conversion and Associativity, Mathematical Functions.	2		
	Decision Making and Branching: Introduction, Decision Making with if Statement, Simple if Statement, The if else Statement, Nesting of if else Statements, The else if Ladder, The Switch Statement, The ?: Operator.	3		
	Decision Making and Looping: Introduction. The while Statement, The do Statement, The for Statement, Jumps in Loops Labeled Loops.	3		

Unit II	<p>Classes, Arrays, Strings and collection frame work: Classes, Objects and Methods, Constructors, Methods Overloading, Static Members, Nesting of Methods. Inheritance: Extending a Class Overriding Methods, Final Variables and Methods, Finalizer methods, Abstract Methods and Classes, Visibility Control. Arrays, One – dimensional Arrays, Creating an Array, Two – dimensional Arrays, Strings, Vectors, WrapperClasses.</p>	<p>12 Hrs 1 1 1 2 1 1 3 2</p>	Lecture method with practical's	Questionaries, programs to work in lab and Assignment problems
Unit III	<p>Interfaces, Packages, and Interfaces: Multiple Inheritance: Introduction, Defining Interfaces, Extending Interfaces, Implementing Interfaces, Accessing Interface Variables. Packages: Putting Classes together: Introduction, Java API Packages, Using System Packages, Naming Conventions, Creating Packages, Accessing a Package, Using a Package, Adding a Class to a Package, Hiding Classes.</p>	<p>6 Hrs 3 1 1 1</p>	Lecture method with practical's	Questionaries, programs to work in lab and Assignment problems
Unit IV	<p>Multithreaded Programming: Introduction, Creating Threads, Extending the Thread Class, Stopping and Blocking a thread, Life Cycle of a thread, Using Thread Methods, Thread Exceptions, Thread Priority, Synchronization, Implementing the 'Runnable' Interface.</p>	<p>10 Hrs 2 1 1 1 2 2</p>	Lecture method with practical's	Questionaries, programs to work in lab and Assignment problems

Unit V	Exceptions, Applet Programming: Introduction, Types of Errors, Exceptions, Syntax of Exception Handling Code,	12 Hrs 2	Through playing videos Lecture method with practical's	Questionaries, programs to work in lab and Assignment problems
	Multiple Catch Statements, Using Finally Statement,	1		
	Throwing Our Own Exceptions, Using Exceptions for Debugging.	2		
	Applet Programming: Introduction, How Applets Differ from Applications, Preparing to Write Applets,	1		
	Building Applet Code, Applet Life Cycle, Creating an Executable applet, Designing a Web Page, Applet Tag,	2		
	Adding Applet to HTML File, running the Applet, More about Applet Tag, Passing Parameters to Applets, Aligning the Display,	2		
	More About HTML Tags, Displaying Numerical Values, Getting Input from the User.	2		
Unit VI	Managing Input / Output Files in JAVA: Introduction, Concept of Streams, Stream Classes, Byte Stream Classes, Character Stream Classes,	8 Hrs 2	Lecture method with practical's	Questionaries, programs to work in lab and Assignment problems
	Using Streams, Other Useful I/O Classes, Using the File Class, Input/Output Exceptions,	2		
	Creation of Files, Reading/Writing Characters, Reading/Writing Bytes, Handling Primitive Data Types,	2		
	Concatenating and Buffering Files, Interactive Input and output, Other Stream Classes.	2		