AMITY UNIVERSITY

Course Curriculam

Course Code: IT201

Course Level UG

Course Title Java Programming

Course Description :

Credit Units

L	T	P/S	SW	AS/DS	FW	No. of PSDA	Total Credit Unit
3	0	2	0	0	0	0	4

Course Objectives :

SN.	Objectives
1	Imparting java programming skill to students
2	knowledge of object-oriented paradigm in context of Java programming language
3	Designing desktop applications using latest Java based API.

Pre-Requisites : General

SN.	Course Code	Course Name

Course Contents / Syllabus :

SN.	Module	Descriptors / Topics	Weightage
1	Module I	• Concepts of OOP, Features of Java, • How Java is different from C++, • Data types, Control Statements, • Identifiers, arrays, Operators, Classes, Constructors, • Inheritance: Multilevel hierarchy, • Method overriding, Abstract classes, Final classes, • String Class. Various Types of String Operations • Run time Polymorphism.	20.00
2	Module II	• Defining, Implementing, Importing Packages • Interfaces: Functional Interface, Lambda Expression • Errors, Difference between Errors and Exceptions, • Types of Exceptions, Exception Handling, • Java's Built-in Exception, Custom Exceptions, exception Logging	20.00
3	Module III	• Creating, Implementing and Extending thread, • Thread priorities, • Synchronization suspending, resuming and stopping Threads, • I/O Streams; Byte Stream, Character Stream, File Handling Exploring Various Packages of Java: java.lang, java.util, java.util.regex etc	20.00
4	Module IV	• Generic (Templets) • Creating user defined Generic Classes • Java.util package • Collection Framework • List, Set and Map Interfaces • Vector, Array List, Stack, Queue, Link List	20.00
5	Module V	• Java Annotations and its Types • Create custom annotations • Maven Framework, Repositories, Dependencies and Plugin, Goal & Build lifecycle. • Project Object Model (pom.xml), build a core java application	20.00

Course Learning Outcomes :

SN.	Course Learning Outcomes
1	Able to recognize the benefits and features of Open Source Technology. Interpret, Contrast and compare open source products among themselves Understand and demonstrate Version Control System along with its commands

Pedagogy for Course Delivery :

SN.	Pedagogy Methods
1	The course would be covered under theory and laboratory. In addition to assigning project–based learning, early exposure to hands-on design to enhance the motivation among the students. It incorporates designing of problems, analysis of solutions submitted by the students groups and how learning objectives were achieved. The class will be taught using remote teaching methodology. Students' learning and assessment will be on the basis of four quadrants and flipped class method. E-content will b

Theory /VAC / Architecture Assessment (L,T & Self Work): 75.00 Max : 100

Attendance+CE+EE : 5+35+60

SN.	Type	Component Name	Marks
1	Attendance		5.00
2	End Term Examination (OMR)		60.00
3	Internal	MID TERM TEST	15.00
4	Internal	CLASS QUIZ	10.00
5	Internal	INTEGRATED PROJECT	10.00

Lab/ Practical/ Studio/Arch. Studio/ Field Work Assessment : 25.00 Max : 100

Attendance+CE+EE : 5+35+60

SN.	Type	Component Name	Marks
1	Attendance		5.00
2	External	PRACTICAL	30.00
3	External	VIVA VOCE	30.00
4	Internal	PERFORMANCE	15.00
5	Internal	PRACTICAL / LAB RECORDS	10.00
6	Internal	VIVA VOCE	10.00

Lab/ Practical details, if applicable :

SN.	Lab / Practical Details
1	Java programs using classes & objects and various control constructs such as loops etc, and data structures such as arrays, structures and functions• Java programs for creating AWT applications for display of images and texts. • Java programs related to Interfaces & Packages. • Input/output and random files programs in Java. • Java programs using Event driven concept. • Java programs related to Graphical User Interface • Java Programs Related to multithreading • Creating a pom.xml and core java

List of Professional skill development activities :

No.of PSDA : 0

SN.	PSDA Point

Text & References :

SN.	Type	Title/Name	Description	ISBN/ URL
1	Book	JAVA The Complete Reference by PATRICK NAUGHTON & HERBERT SCHILD, TMH.		
2	Book	Introduction to JAVA Programming a primar, Balaguruswamy.		
3	Book	K. Arnold and J. Gosling, "The JAVA programming language", Pearson Education.		