Course Delivery Plan

Department of Computer Science and Engineering

Semester: SPRING, 2016

Course Code : CSE214/CSE215 **Credit Hours**: 3+1

Course Title : Object Oriented Programming

Course Intended Learning Outcome:

(1) Identify problems and apply object-oriented programming concept to build information system

(2) Apply UML notations used in object-oriented applications design.

(3) Implement common I/O operations using Java

(4) Implement event-driven graphical user interfaces (GUI) in Java

Theory Session Plan:

Week No	Topics	Expected Learning Outcome	Assessments (ASSN/CT/Mid/Final)
WK 1	a. Introduction and importance of Object Oriented Programming; Applications b. Basic concepts of OOP: Encapsulation, Inheritance and Polymorphism	a. Appreciate OOP b. Apply OOP general concept to model real life scenarios	2/3 problems related to discussion in the class
WK 2	a. Basic on Java programming b. Course Project Team and discussion on presentation and deliverables	a. Writing Java programs b. Team formation for the course project	2/3 problems related to discussion in the class
WK3	a. Class and Objects; Constructors b. UML Modeling notations for class c. Encapsulation applications d. Project Discussion and execution plan	a. Create class and using objects b. Selection of project topic by team	**CLASS TEST 1** (on last class of the week)
WK4	a. Basic IO and String classes b. Array in Java c. Inheritance in Java; Overriding and Overloading	a. OOP Programming using java	None
WK5	a. Abstract class; Interface and polymorphism b. Swing Applications	a. OOP Programming using Java	**PRESENTATION 1** (student present on the idea of the team project)
WK6	a. Polymorphism using Java b. Exercise for polymorphism c. Review discussion	a. Problem solving using Java b. Writing code for multiple inheritance in Java	**CLASS TEST 2**
WK7	----- midterm week ------	----- midterm week ------	**MIDTERM EXAM**
WK8	a. Exception handling in Java b. Application of exception handling	a. Programming using exception handling b. Problem solving using polymorphism	None
WK9	a. Collection classes in Java b. Applications of collection classes	a. Implementation using collection classes	**PRESENTATION 2** (student present on the design of the project)
WK10	a. Collection classes in Java b. Network programming using Java	a. Using collection classes b. Problem solving using networking	None
WK11	a. Client-Server programming using Java b. Application of client-server programming	Using client-server programming	**CLASS TEST 3**
WK12	Review exercises on OOP and Java programming	Problem solving using OOP and Java	**PRESENTATION 3** (student present on the implementation of project)
WK13	Review exercises on OOP and Java programming	Problem solving using OOP and Java	**LAB Assessment**
WK14	----- final exam week ------	----- final exam week ------	**FINAL EXAM**

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Course Title : Object Oriented Programming

Lab Session Plan:

Week No	Topics	Expected Learning Outcome	Assessments (ASSN/CT/Mid/Final)
WK 1	a. Java installation and testing different JDK tools b. Basic Java Programming	a. Learn using Java	2/3 problems related to discussion in the class
WK 2	a. Basics on Java programming b. Course project work	a. Writing Java programs b. Team formation for the course project	2/3 problems related to discussion in the class
WK3	a. Using Class and Object in Java b. Using StarUML for UML modeling	a. Create class and using objects b. Selection of project topic by team	None
WK4	a. Writing Java program using IO and String classes; Wring Java program using Array in Java; Writing Java program using Inheritance in Java b. Working for the project	a. OOP Programming using java	None
WK5	a. Using Abstract class, Interface and polymorphism b. Preparing for project presentation	a. OOP Programming using Java	**PRESENTATION 1** (student present on the idea of the team project)
WK6	a. Using Polymorphism in Java b. Working for the team project	a. Problem solving using Java b. Writing code for multiple inheritance in Java	**CLASS TEST 2**
WK7	----- midterm week ------	----- midterm week ------	**MIDTERM EXAM**
WK8	a. Using exception handling in Java b. Working for the team project	a. Programming using exception handling b. Problem solving using polymorphism	None
WK9	a. Using collection classes in Java b. Working for the team project and prepare for the presentation	a. Implementation using collection classes	**PRESENTATION 2** (student present on the design of the project)
WK10	a. Using collection classes in Java b. Network programming in Java	a. Using collection classes b. Problem solving using networking	None
WK11	a. Client-Server programming using Java b. Application of client-server programming	Using client-server programming	**CLASS TEST 3**
WK12	Working for the team project and prepare for the demo	Demonstration of the project	**PRESENTATION 3** (student present on the implementation of project)
WK13	Working for the team project	Lab performance appraisal based on Project Work	**LAB Assessment**
WK14	----- final exam week ------	----- final exam week ------	**FINAL EXAM**

Text Book(s):

(1) Introduction to Java Programming, Y. Daniel Liang, 8th Edition, 2010

(2) Java Programming: From Problem Analysis to Program Design, D.S. Malik, 2010

Reference Material/Book(s):

(1) Online tutorials

(2) Web references from Google search engine