Spring Semester L-2, T-II

COURSE INFORMATION			
Course Code	: CSE 220	Lecture Contact Hours	: 3.00
Course Title	: Object Oriented Programming language Sessional-II	Credit Hours	: 1.50

PRE-REQUISITE

N/A

CURRICULUM STRUCTURE

Outcome Based Education (OBE)

SYNOPSIS/RATIONALE

To have knowledge about Inheritance, Polymorphism, Encapsulation to do programming in an effective manner and solve practical life problems by building real-time projects.

OBJECTIVE

1. To learn the concept of OOP with a pure object oriented programming language (Java).
2. To learn how to use advance programming features such as GUI design, exception handling and multithreading.
3. To learn how to design and develop a complete real world software solution.

LEARNING OUTCOMES& GENERIC SKILLS

No.	Course Learning Outcome	Bloom's Taxonomy	CP	CA	KP	Assessment Methods
CO1	Identify the concept of OOP with a pure object oriented programming language (Java).	P1, P2	1	5	4, 5	E
CO2	Identify and express how to use advance programming features such as GUI design, exception handling and multi-threading.	P3, P4	1	5	4, 5	O
CO3	Demonstrate how to design and develop a complete real world software solution.	C3, P5	1	5	4, 5	Q

(CP- Complex Problems, CA-Complex Activities, KP-Knowledge Profile, Q – Quiz, Practice-P, Evaluation-E, Online-O)

COURSE CONTENT

Object-Oriented Programming (JAVA): Basic concepts on java, basic operation, command line; objects and classes in Java, class inheritance, polymorphism, exception handling, abstract classes, interfaces, Java Array, String, JAVA I/O (serialization) and stream, Generic Class and methods; Collection Frameworks; Concurrency; GUI: Swing components and swing Layouts.

SKILL MAPPING

No.	Course Learning Outcome	PROGRAM OUTCOMES (PO)											
		1	2	3	4	5	6	7	8	9	10	11	12
CO1	Identify the concept of OOP with a pure object oriented programming language (Java).	H											
CO2	Identify and express how to use advance programming features such as GUI design, exception handling and multi-threading.					M							
CO3	Demonstrate how to design and develop a complete real world software solution.			M									

(H – High, M- Medium, L-low)

TEACHING LEARNING STRATEGY

Teaching and Learning Activities	Engagement (hours)
Face-to-Face Learning	
Lecture	28
Practical / Tutorial / Studio	7
Student-Centred Learning	7
Self-Directed Learning	
Non-face-to-face learning	7
Revision	7
Assessment Preparations	7
Formal Assessment	
Continuous Assessment	4
Final Examination	3
Total	70

TEACHING METHODOLOGY

Lecture and Discussion, Co-operative and Collaborative Method, Problem Based Method

COURSE SCHEDULE

Week	Topic	Remarks
1.	Basic Concept on java, basic operation and command line	
2.	Introduction to class, inheritance, access specifiers	
3.	Class abstraction, Interface	Evaluation
4.	Closure	Practice
5.	Java Array and String	Evaluation
6.	Exception Handling	Practice
7.	Online-I	
8.	Java I/O (serialization) and stream	
9.	Generic class and methods	Practice
10.	Collection Frameworks	Evaluation
11.	Concurrency	Practice
12.	Introduction with Swing	Evaluation
13.	Swing Layouts	Practice
14.	Online-II	Final Quiz

ASSESSMENT STRATEGY

Components	Grading	CO	Blooms Taxonomy
Class Evaluation	30%	CO1	P1, P2
Online I	25%	CO2	P3, P4
Online II	25%	CO2	P3, P4
Quiz	20%	CO3	C3, P5
Total Marks	100%		

(CO = Course Outcome, C = Cognitive Domain, P = Psychomotor Domain, A = Affective Domain)

REFERENCE BOOKS

1. Java, The Complete Reference (9th ed) - Herbert Schildt (2014)
2. Introduction To Java Programming Comprehensive Version 10th Edition - Y. Daniel Liang