<table>
<tr><td colspan="3">UNITED INTERNATIONAL UNIVERSITY Department of
Computer Science and Engineering (CSE)
Course Syllabus</td></tr>
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1	**Course Title**	Advance Object Oriented Programming Laboratory
2	**Course Code**	CSE 2118
3	**Trimester and Year**	Spring 2024
4	**Pre-requisites**	CSE 1115, CSE 1116
5	**Credit Hours**	1.00
6	**Section**	F
7	**Class Hours**	Saturday 11.10 – 01.40
8	**Classroom**	Room 530
9	**Instructor's Name**	Nusaiba Zaman Manifa
10	**Email**	n.manifa1016@gmail.com
11	**Office**	637
12	**Counselling Hours**	Check eLMS
13	**Text Book**	Java The Complete Reference, Herbert Schildt
14	**Reference**	None
15	**Course Contents (approved by UGC)**	Students will gain an understanding of the Object-Oriented Concepts and Features based on the CSE 1115 course and develop real large-scale applications that implement GUI and manipulate files with Basic graphical user interface components, Multithreading, Multimedia, Files & streams, JDBC, Servlets, RMI, Networking, Java beans
16	**Course Outcomes (COs) and Mapping**	

CO	Statement	Bloom's Domain	Program Outcome	Knowledge Profile	Complex Problem	Engineering Activities
CO1	Design and implement an Object Oriented Programming based solution to a real life problem.	C	c Design/ development of solutions	Engineering design (K5) Engineering practice (K6)	Depth of Knowledge (P1) Interdependence (P7)?	-
CO2	Apply GUI, Socket programming, Multi-threading and secondary storage features of modern OOP languages.	C	e Modern Tool Usage			
CO3	Function effectively in a group.	P, A	i Individual and Team Work			

17	**Teaching Methods**	Lecture, Exercise.

18	**CO with Assessment Methods**	

CO	Assessment Method	(%)
-	Attendance	10
CO2	Coding Assignment	10
CO2	Coding Test	30
CO1,CO2, CO3	Project	50

19	**Lecture Outline**

Class	Course Content	Activities
1	Course overview Review of Object-oriented Programming Language. OOP Features: Inheritance, Object class Encapsulation, Polymorphism	Class Practice
2	GUI: Basic Components Introduction to JavaFX Event Handling	Class Practice
3	GUI Graphics using JavaFX SceneBuilder	Class Practice, Project Idea Submission

		4	Collection Framework, Comparable, Comparator, Iterator Classes: ArrayList Interfaces: List, Set Classes: Set, HashSet, Stack **Coding Test 1**	Coding Test 1, Project Idea Submission, Class Practice	
		5	I/O basics, Serialization Byte Streams vs. Character Streams	Class Practice	
		6	Introduction to Threads, Thread class, Runnable Interface, synchronization sleep, yield, wait, notify	Class Practice	
		7	**Project Update 1**	Project Update 1	
		8	Networking Basics TCP/IP Client, Server Sockets **Coding Test 2**	Coding Test 2, Class Practice	
		9	**Project Update 2**	Project Update 2	
		10	**Coding Test 3**	Coding Test 3	
		11	**Project Update 3**	Project Update 3	
		12	**Final Project Submission, Project Show, Coding Assignment Evaluation, Project Report Submission**	Project, Coding Assignment	

Appendix 1: Assessment Methods

Assessment Types	Marks
Attendance	10%
Coding Assignment	10%
Coding Test	30%
Project Updates	30%
Project Report	5%

Project Show	15%

Appendix 2: Grading Policy

Letter Grade	Marks %	Grade Point	Letter Grade	Marks%	Grade Point
A (Plain)	90-100	4.00	C+ (Plus)	70-73	2.33
A- (Minus)	86-89	3.67	C (Plain)	66-69	2.00
B+ (Plus)	82-85	3.33	C- (Minus)	62-65	1.67
B (Plain)	78-81	3.00	D+ (Plus)	58-61	1.33
B- (Minus)	74-77	2.67	D (Plain)	55-57	1.00
			F (Fail)	<55	0.00

Appendix-3: Program outcomes

POs	Program Outcomes
PO1	An ability to apply knowledge of mathematics, science, and engineering
PO2	An ability to identify, formulate, and solve engineering problems
PO3	An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
PO4	An ability to design and conduct experiments, as well as to analyze and interpret data
PO5	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
PO6	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
PO7	A knowledge of contemporary issues
PO8	An understanding of professional and ethical responsibility
PO9	An ability to function on multidisciplinary teams
PO10	An ability to communicate effectively
PO11	Project Management and Finance
PO12	A recognition of the need for, and an ability to engage in life-long learning