



**East West University**  
**Department of Computer Science and Engineering**  
**Course Outline of CSE110**  
**Fall 2019 Semester**

## Course Information

**Course: CSE110 Object Oriented Programming (Section 2)**

### Credit and Teaching Scheme:

	Theory	Laboratory	Total
Credits	3.0	1.5	4.5
Contact Hours	3 Hours/Week for 13 Weeks	3 Hours/Week for 13 Weeks	6 Hours/Week for 13 Weeks

**Prerequisite:** CSE106 Discrete Mathematics

## Instructor Information

**Instructor:** Md. Mohsin Uddin (Initial: **MMSU**)

Lecturer, Department of Computer Science and Engineering

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## Class Routine and Office Hour

Day	08:00-10:00	10:10-11:40	11:50-01:20	01:30-03:00	03:10-04:40
Sunday		CSE110LAB (2) 638		CSE475 (2) AB2-403	
Monday		CSE110 (2) AB2-304	OFFICE HOUR	OFFICE HOUR	CSE411 (2) AB2-403
Tuesday				OFFICE HOUR	
Wednesday		CSE110 (2) AB2-304	OFFICE HOUR		CSE411 (2) AB2-403
Thursday	CSE411 LAB (2) 630	OFFICE HOUR	OFFICE HOUR	CSE475 (2) 337	

## Course Objective

This course presents a conceptual and practical introduction to object-oriented programming (OOP). The course will cover general principles of programming in object-oriented frameworks to enhance transferable skills, such as programming, designing, and problem-solving skills. This

course introduces object-oriented concepts and develops OOP programs which provides solutions to real-world object-oriented problems. Java is primarily chosen as the programming language in this course. Knowledge of this course will be needed as prerequisite knowledge for CSE207 Data Structures.

### Course Outcomes (COs)

After completion of this course students will be able to:

CO1	<b>Understand</b> and <b>apply</b> the basics of elementary programming in the target language and concepts related to the definition, creation and usage of classes and objects for writing object-oriented programs.
CO2	<b>Use</b> the principles of inheritance and polymorphism and design abstract classes and interfaces for implementing object-oriented programs.
CO3	<b>Apply</b> object-oriented programming concepts, exception handling, file handling, graphical user interface (GUI), multi-threaded programming and generics for solving object-oriented problems.
CO4	<b>Choose</b> appropriate tools, <b>perform</b> and <b>demonstrate</b> skills and <b>write</b> report to design, build, and test realistic object-oriented applications.

### Course Topics, Teaching-Learning Methods and Assessment Scheme

Course Topic	Teaching-Learning Method	CO	Mark of Cognitive Learning Levels		Mark of COs	Exam (Mark)
			C2	C3		
Principles of Object-Oriented Programming and Basics of Elementary Programming in Java (conditional branching, looping, methods and arrays)	Lecture, Class Discussion, Discussion Outside Class with Instructor/Teaching Assistant	CO1	5	5	10	Midterm Exam I (15)
Introduction to Classes and Objects (Classes, Objects, Instance variables and instance methods, Constructors)	Do			5	5	
Inheritance and Polymorphism in OOP (super class, sub class,	Do	CO2		10	10	Midterm Exam II

multiple-level inheritance, late binding)						(17)
Abstract Class and Interfaces (differences, applicability and implementation)	Do			7	7	
Exception Handling in OOP and File handling using Text and Binary I/O	Do	CO3		10	10	Final Exam (20)
Implementation of Generics and GUI, Multi-threaded Programming, JDBC and other advanced topics	Do			10	10	

## Lab Exercises

Experiment	Teaching-Learning Method	CO	Marks of Cognitive Level	Mark of Psychomotor Level		Mark of Affective Level	Mark of COs
			C3	P2	P3	A2	
Java Basics of Elementary Programming, Conditional Statements	Lab Experiment and Result Analysis and Discussion with Instructor, Post-Lab Report	CO4					
Looping, Nested Looping, Arrays	Do	CO4					
Java Methods and library functions	Do	CO4					
Designing and Implementing simple Classes and Objects, Arrays of Objects etc.	Do	CO4					
Lab Mid (Exam)	Individual Exam	CO4	1	1	2	1	5
Implementing associations of Classes	Do	CO4					
Designing and Implementing Inheritance and Polymorphism	Do	CO4					
Designing and Implementing Abstract	Do	CO4					

Class and Interfaces							
Understanding and Implementing Exceptions and File management	Do	CO4					
Lab Exercises		CO4	4	4	4	0	12
Lab Final (Exam)	Individual Exam	CO4	1	1	2	1	5
<b>Total</b>			<b>6</b>	<b>6</b>	<b>8</b>	<b>2</b>	<b>22</b>

## Mini Project

Mini Project	Teaching-Learning Method	CO	Mark of Cognitive Levels		Mark of Psychomotor Levels		Mark of Affective Levels	Mark of COs
			C3	C4	P2	P3	A2	
Mini Project including Report and Presentation	Group-based moderately complex Project with report writing, and oral/poster presentation	CO4	3	2	2	2	2	11.0

## Overall Assessment Scheme

	COs				Assessment Area Mark
Assessment Area	CO1	CO2	CO3	CO4	
Class Participation	1.44	1.63	1.93		5
Class Test/Quizzes	2.88	3.26	3.86		10
Midterm Exam - I	15.00				15
Midterm Exam -II		17.00			17
Final Exam			20.00		20
Laboratory Experiments, Exam, and Lab Project				33.00	33
<b>Total Mark</b>	<b>19.3</b>	<b>21.9</b>	<b>25.8</b>	<b>33.0</b>	<b>100</b>

## Teaching Materials/Equipment

### Text Book:

- Paul Deitel and Harvey Deitel, *Java How to Program*, Prentice Hall (9<sup>th</sup> edition)
- Herbert Schildt, *Java: The Complete Reference*, 10<sup>th</sup> edition, McGraw-Hill Education (2017)

### Software/Tools:

- Java Development Kit (JDK 1.8)  
<https://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>
- Any Integrated Development Environment (IDE) supporting Java preferably Eclipse  
<https://www.eclipse.org/downloads/>

## Grading System

Marks (%)	Letter Grade	Grade Point	Marks (%)	Letter Grade	Grade Point
97-100	A+	4.00	73-76	C+	2.30
90-96	A	4.00	70-72	C	2.00
87-89	A-	3.70	67-69	C-	1.70
83-86	B+	3.30	63-66	D+	1.30
80-82	B	3.00	60-62	D	1.00
77-79	B-	2.70	Below 60	F	0.00

## Exam Dates

Section	Term I	Term II	Final
2	TBA	TBA	TBA

## Academic Code of Conduct

### Academic Integrity:

Any form of cheating, plagiarism, personification, falsification of a document as well as any other form of dishonest behavior related to obtaining academic gain or the avoidance of evaluative exercises committed by a student is an academic offence under the Academic Code of Conduct and **may lead to severe penalties as decided by the Disciplinary Committee of the university.**

### Special Instructions:

- Students are expected to attend all classes and examinations. A student **MUST** have at least 80% class attendance to sit for the final exam.
- Students will not be allowed to enter into the classroom after 10 minutes of the starting time.
- For plagiarism, the grade will automatically become zero for that exam/assignment.
- Normally there will be **NO make-up exam**. However, in case of **severe illness, death of any family member, any family emergency, or any humanitarian ground**, if a student miss any exam, the student **MUST** get approval of makeup exam by written application to the Chairperson through the Course Instructor **within 48 hours** of the exam time. Proper supporting documents in favor of the reason of missing the exam have to be presented with the application.

- For **final exam**, there will be NO makeup exam. However, in case of **severe illness, death of any family member, any family emergency, or any humanitarian ground**, if a student miss the final exam, the student **MUST** get approval of **Incomplete Grade** by written application to the Chairperson through the Course Instructor **within 48 hours** of the final exam time. Proper supporting documents in favor of the reason of missing the final exam have to be presented with the application. **It is the responsibility of the student to arrange an Incomplete Exam within the deadline mentioned in the Academic Calendar in consultation with the Course Instructor.**
- All mobile phones **MUST** be turned to silent mode during class and exam period.
- There is **zero tolerance for cheating** in exam. Students caught with cheat sheets in their possession, whether used or not; writing on the palm of hand, back of calculators, chairs or nearby walls; copying from cheat sheets or other cheat sources; copying from other examinee, etc. would be treated as cheating in the exam hall. The only penalty for cheating is **expulsion for several semesters as decided by the Disciplinary Committee of the university.**