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

Course Information

Course: CSE110 Object Oriented Programming (Section 5)

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: Yeasir Rayhan
Lecturer, Department of Computer Science and Engineering
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Course Site: https://sites.google.com/site/yeasirrayhan111/cse110

Class Routine and Office Hour

Day	08:30–10:00	10:10–11:40	11:50–01:20	01:30–03:00	03:10–04:40	4:50-6:50
Sun	CSE 225 AB2 205	Office Hour	CSE 101 529	Office Hour		CSE110 638
Mon	Office Hour	CSE 205 109	Office Hour	CSE110 AB2 502		
Tue	CSE225 638	Office Hour				
Wed	Office Hour	CSE 205 109	Office Hour	CSE110 AB2 502		
Thu	CSE 225 AB2 205	Office Hour	CSE 101 AB2 205			

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	**Understand** and **apply** 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	**Use** the principles of inheritance and polymorphism and **design** abstract classes and interfaces for implementing object-oriented programs.
CO3	**Apply** object-oriented programming concepts, exception handling, file handling, graphical user interface (GUI), multi-threaded programming and generics for solving object-oriented problems.
CO4	**Choose** appropriate tools, **perform** and **demonstrate** skills and **write** 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, multiple-level inheritance, late binding)	Do	**CO2**		10	10	**Midterm Exam II (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**		8	8	**Final Exam (20)**
Implementation of Generics and GUI, Multi-threaded Programming, JDBC and other advanced topics	Do			12	12	

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 Class and Interfaces	Do	CO4					
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
Total			**6**	**6**	**8**	**2**	**22**

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	CO 4	**3**	**2**	**2**	**2**	**2**	**11**

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
Total Mark	**19.3**	**21.9**	**25.8**	**33.0**	**100**

Teaching Materials/Equipment

Text Book:

Follow course site

Software/Tools:

Follow course site

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
5	16 October	11 November	11 December

Academic Code of Conduct

Academic Integrity:
Any form of cheating, plagiarism, and 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**.