Advanced Object Oriented Programming (2010031273)

Second Semester 2021/2022

COURSE INFORMATION	
Course Name: Advanced Object Oriented Programming **Semester:** Second Semester 2021/2022 **Department:** Department of Software Engineering **Faculty:** Prince Al-Hussein Bin Abdullah II Faculty for Information Technology	**Course Code: 2010031273** **Section:** Mandatory **Core Curriculum**:
Day(s) and Time(s): Monday: 9:30:-11:00 Wednesday: 9:30:-11:00 **Classroom:** IT 110	**Credit Hours:** 3 **Prerequisites**: 1910011110- Object Oriented Programming (1)

COURSE DESCRIPTION

Three credit hours is counted for this course. This course covers advanced object-oriented concepts and methods in Java including object-oriented programming, analysis, and design. These methods including inheritance, interfaces, polymorphism, overriding, I/O streams, exception handling, multithreading, and Accessing Databases with JDBC.

DELIVERY METHODS

The course will be delivered through a combination of active learning strategies. These will include:

- PowerPoint lectures and active classroom based discussion
- Video lectures
- E-learning resources: e-reading assignments and practice quizzes through Model and Microsoft Team

FACULTY INFORMATION

Name	**Maen Hammad**
Academic Title:	**Professor**
Office Location:	**IT 323**
Telephone Number:	
Email Address:	**mhammad@hu.edu.jo**

Office Hours:	**Monday** 2:00-3:00 **Wednesday** 2:00-3:00 *Please send an e-mail (mhammad@hu.edu.jo) to meet at any other time.*

REFERENCES AND LEARNING RESOURCES

Required Textbook: Java: How to Program, 11/e, Paul Deitel, Harvey Deitel, Pearson, 2017.

Suggested Additional Resources:

- Introduction to JAVA programming – Comprehensive Version, Y. Daniel Liang, 10th edition, Pearson Education, 2015
- https://docs.oracle.com/javase/tutorial/

STUDENT LEARNING OUTCOMES MATRIX*

Core Curriculum Learning Outcomes	Program Learning Outcomes	Course Objectives	Course Student Learning Outcomes	Assessment Method
	[EP3]Ability to apply relevant practical and laboratory skills.	• Understanding and applying the concepts of class, object, instantiation, and methods. • Understanding and applying the concepts of inheritance, polymorphism, abstract classes, and interfaces. • Understanding and applying the concepts of graphical user interfaces. • Understanding and using run-time exceptions. • Understanding and applying the concepts of Multithreading, JDBC and Files	• [CLO1]Understand and implement the concepts of classes and objects • [CLO2]Understand and implement the concepts of inheritance, polymorphism, abstract classes, and interfaces. • [CLO3]Understand and implement the concepts of Exception Handling.	• Exams • Quizzes
	[EP6]Understanding of appropriate codes of practice and industry standards.		• [CLO1]Understand and implement the concepts of classes and objects. • [CLO6] Build GUI components using automated tools	• Exams • Quizzes
	[D4] Apply advanced problem-solving skills, technical knowledge and understanding, to establish rigorous and creative solutions that are fit for purpose for all aspects of the problem including production, operation, maintenance and disposal.		• [CLO6] Build GUI components using automated tools • [CLO2] Understand the concepts of network programming, threads and Multithreading.	• Exams • Quizzes

ACADEMIC SUPPORT

It is The Hashemite University policy to provide educational opportunities that ensure fair, appropriate and reasonable accommodation to students who have disabilities that may affect their ability to participate in course activities or meet course requirements. Students with disabilities are encouraged to contact their Instructor to ensure that their individual needs are met. The University through its Special Need section will exert all efforts to accommodate for individual's needs.

Special Needs Section:
Tel:
Location:
Email:

COURSE REGULATIONS

Participation

Class participation and attendance are important elements of every student's learning experience at The Hashemite University, and the student is expected to attend all classes. A student should not miss more than 15% of the classes during a semester. *Those exceeding this limit of 15% will receive a failing grade regardless of their performance*. It is a student's responsibility to monitor the frequency of their own absences. **Attendance record begins on the first day of class irrespective of the period allotted to drop/add and late registration. It is a student's responsibility to sign-in; failure to do so will result in a non-attendance being recorded.**

In exceptional cases, the student, with the instructor's prior permission, could be exempted from attending a class provided that the number of such occasions does not exceed the limit allowed by the University. The instructor will determine the acceptability of an absence for being absent. A student who misses more than 25% of classes and has a valid excuse for being absent will be allowed to withdraw from the course.

Plagiarism

Plagiarism is considered a serious academic offence and can result in your work losing marks or being failed. HU expects its students to adopt and abide by the highest standards of conduct in their interaction with their professors, peers, and the wider University community. As such, a student is expected not to engage in behaviours that compromise his/her own integrity as well as that of the Hashemite University.

Plagiarism includes the following examples and it applies to all student assignments or submitted work:

- **Use of the work, ideas, images or words of someone else without his/her permission or reference to them.**
- **Use of someone else's wording, name, phrase, sentence, paragraph or essay without using quotation marks.**
- **Misrepresentation of the sources that were used.**

The instructor has the right to fail the coursework or deduct marks where plagiarism is detected

Late or Missed Assignments

In all cases of assessment, students who fails to attend an exam, class project or deliver a presentation on the scheduled date without prior permission, and/or are unable to provide a medical note, will automatically receive a fail grade for this part of the assessment.

- Submitting a term paper on time is a key part of the assessment process. Students who fail to submit their work by the deadline specified will automatically receive a 10% penalty. Assignments handed in more than 24 hours late will receive a further 10% penalty. Each subsequent 24 hours will result in a further 10% penalty.
- In cases where a student misses an assessment on account of a medical reason or with prior permission; in line with University regulations an incomplete grade for the specific assessment will be awarded and an alternative assessment or extension can be arranged.

Student Complaints Policy

Students at The Hashemite University have the right to pursue complaints related to faculty, staff, and other students. The nature of the complaints may be either academic or non-academic. For more information about the policy and processes related to this policy, you may refer to the students' handbook.

COURSE ASSESSMENT

Course Calendar and Assessment

Students will be graded through the following means of assessment and their final grade will be calculated from the forms of assessment as listed below with their grade weighting taken into account. The criteria for grading are listed at the end of the syllabus

Assessment	Grade Weighting	Deadline Assessment
First Exam	25%	
Second Exam	25%	
Quizzes	10%	
Final Exam	40%	

Description of Exams

Test questions will predominately come from material presented in the lectures. Semester exams will be conducted during the regularly scheduled lecture period. Exam will consist of a combination of multiple choice, short answer, writing code or descriptive questions.

No make-up exams, homework or quizzes will be given. Only documented absences will be considered as per HU guidelines.
Grades are not negotiable and are awarded according to the following criteria*:

Letter Grade	Description	Grade Points
A+	Excellent	4.00
A		3.75
A-		3.50
B+	Very Good	3.25
B		3.00
B-		2.75
C+	Good	2.50
C		2.25
C-		2.00
D+	Pass	1.75
D	Pass	1.50
F	Fail	0.00
I	Incomplete	-

WEEKLY LECTURE SCHEDULE AND CONTENT DISTRIBUTION

Topic	Chapter in Text	Week #
Introduction to Classes and Objects	Ch7	Week 1,2
Classes and Objects: A Deeper Look	Ch8	Week 3,4
Object-Oriented Programming: Inheritance	Ch9	Week 5, Week6
Object-Oriented Programming: Polymorphism and Interfaces	Ch10	Week7
Exception Handling: A Deeper Look	Ch11	Week8
Multithreading	Ch26	Week9
Files	Ch17	Week10
Accessing Databases with JDBC	Ch28	Week 11, week12
Building GUI components using tools	Tutorials	Week 13