Syllabus*: Object Oriented Programming (1) (1910011110)

Second Semester 2021 /2022

COURSE INFORMATION	
Course Name: Object-Oriented Programming 1 **Semester:** Second **Department:** Department of Computer Science **Faculty:** Prince Al-Hussein bin Abdullah II Faculty for Information Technology	**Course Code:** 1910011110 **Section:** 1 **Core Curriculum**:
Day(s) and Time(s): Sun, Tue, and Thur 10:00-11:00 **Classroom:** e.g. IT 201	**Credit Hours:** 3 **Prerequisites**: 191001101

COURSE DESCRIPTION

The course enables you to understand the basic principles of programming. The language used for the course is Java, chosen because it supports object oriented programming and because it is becoming widely used in industry.
The course will include discussions and explanations of the following topics: introduction to programming; writing, compiling, and running simple programs; expressions, variables, and assignments; control structures; objects and classes, methods, and arrays.

DELIVERY METHODS

The course will be delivered through an active classroom based discussion:

FACULTY INFORMATION

Name	**Dr. Alaa Eddien Abdallah**
Academic Title:	**Associate Professor**
Office Location:	**IT 235**
Telephone Number:	**4683**
Email Address:	**aabdallah@hu.edu.jo**
Office Hours:	**Sunday & Tuesday 12-13**

REFERENCES AND LEARNING RESOURCES

Required Textbook Introduction to Java Programming Comprehensive Version. Liang, Y. Daniel. 12th Edition/2019.
https://www.amazon.com/Introduction-Programming-Structures-Comprehensive-Version-dp-0136520154/dp/0136520154/ref=dp_ob_title_bk

Deitel&Deitel, Java: How to Program, 9thedition , Prentice Hall, 2011.

STUDENT LEARNING OUTCOMES MATRIX*

Core Curriculum Learning Outcomes	Program Learning Outcomes	Course Objectives	Course Student Learning Outcomes	Assessment Method
Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.	COMP-2: Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.	**Distinguish** computer's basic concepts, computer programs, history of the Java programming language. (2)	Clo2	Exam & Assignment
		In depth **understanding** syntax and semantics of Java and demonstrate knowledge of Java language specification, API, JDK, and IDE. (2)	Clo1	Exam & Assignment
		Be able to **apply** control structure (selection and loops) in designing Java applications. (2)	Clo2	Exam & Assignment
		Demonstrate the ability to use methods in Java program flow. (2)	Clo2	Exam & Assignment
		Be able to **apply** arrays and Strings in designing Java applications. (2)	Clo2	Exam & Assignment
		Be able to apply Object-oriented concepts in designing Java applications. (2)	Clo2	Exam & Assignment

* يتم تعديلها وفقا لما يتم تحديده لكل مساق بالتنسيق مع الكلية والقسم المعني

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: 053903333 EXT 5023/4583
Location: (https://hu.edu.jo/facnew/index.aspx?typ=68&unitid=70000000)
Email: (huniv@hu.edu.jo)

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
e.g. Exam 1	e.g. 30%	11-4-2022
e.g. Exam 2	e.g. 30%	09-5-2022
e.g. Final Exam (3)	e.g. 40%	Add date/time

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, match, true and false and/or descriptive questions.

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	-

*** يمكن التعديل حسب طبيعة البرنامج (بكالوريوس/دراسات عليا)**

WEEKLY LECTURE SCHEDULE AND CONTENT DISTRIBUTION

مثال على التوزيع : مساق الكيمياء العامة 101

"Lecture hours and weeks are approximate and may change as needed"

Note: For Chem 101 sections with 2 lecture periods per week (S/T, M/W or T/R), one lecture period covers 1.5 lecture hours (80 minutes). The course content specifies the sections in chapters 1-10 of the textbook that will be included in quizzes, homework and exams.

Topics Covered					
Topic	**Chapter in Text**	**Week #**	**Lecture**	**Content**	**Delivery Method**
Elementary Programming	Ch2	Week1	Lect. 1	2.2 Writing a Simple Program 34 2.3 Reading Input from the Console 37	Face to face
			Lect. 2	2.4 Identifiers 40 2.5 Variables 40 2.6 Assignment Statements 42 2.7 Named Constants 43 2.8 Naming Conventions 44	Face to face
			Lect. 3	Practical questions on teams	Online
Selections	Ch3	Week2	Lect. 1	3.1 Introduction 78 3.2 boolean Data Type, Values, and Expressions 78 3.3 if Statements 80	Face to face
			Lect. 2	3.4 Two-Way if-else Statements 82 3.5 Nested if and Multi-Way if-else Statements 83	Face to face
			Lect. 3	Practical questions on teams	Online
		Week3	Lect. 1	3.6 Common Errors and Pitfalls 85 (cont.) 3.13 switch Statements 102	Face to face
			Lect. 2	3.14 Conditional Operators 105 3.15 Operator Precedence and Associativity 106	Face to face
			Lect. 3	Practical questions on teams	Online
Characters, and Strings	Ch4	Week4	Lect. 1	Character Data Type and Operations 126	Face to face
			Lect. 2	The String Type 131	Face to face
			Lect. 3	Practical questions on teams	Online

Loops	Ch5	Week5	Lect. 1	5.2 The while Loop 160 5.3 Case Study: Guessing Numbers 163	Face to face
			Lect. 2	5.4 Loop Design Strategies 166 5.5 Controlling a Loop with User Confirmation or a Sentinel Value 168	Face to face
			Lect. 3	Practical questions on teams	Online
		Week6	Lect. 1	5.6 The do-while Loop 171 5.7 The for Loop 173	Face to face
			Lect. 2	5.8 Which Loop to Use? 176 5.9 Nested Loops 178	Face to face
			Lect. 3	Practical questions on teams	Online
Methods	Ch6	Week7	Lect. 1	6.2 Defining a Method 206 6.3 Calling a Method 208	Face to face
			Lect. 2	6.4 void vs. Value-Returning Methods 211	Face to face
			Lect. 3	Practical questions on teams	Online
		Week8	Lect. 1	6.5 Passing Arguments by Values 213	Face to face
			Lect. 2	6.8 Overloading Methods 221 6.9 The Scope of Variables 224	Face to face
			Lect. 3	Practical questions on teams	Online
Single-Dimensional Arrays	Ch7	Week9	Lect. 1	7.1 Introduction 250 7.2 Array Basics 250	Face to face
			Lect. 2	7.5 Copying Arrays 260 7.6 Passing Arrays to Methods 261	Face to face
			Lect. 3	Practical questions on teams	Online
		Week10	Lect. 1	7.7 Returning an Array from a Method 264	Face to face
			Lect. 2	Solve Questions	Face to face
			Lect. 3	Practical questions on teams	Online
Multidimensional Arrays	Ch8	Week11	Lect. 1	8.2 Two-Dimensional Array Basics 290 8.3 Processing Two-Dimensional Arrays 293	Face to face
			Lect. 2	8.4 Passing Two-Dimensional Arrays to Methods 295 8.5 Case Study: Grading a Multiple-Choice Test 296	Face to face
			Lect. 3	Practical questions on teams	Online
`Objects and Classes	Ch9	Week12	Lect. 1	9.2 Defining Classes for Objects 324 9.3 Example: Defining Classes and Creating Objects 326	Face to face
			Lect. 2	9.4 Constructing Objects Using Constructors 331 9.5 Accessing Objects via Reference Variables 332	Face to face
			Lect. 3	Practical questions on teams	Online
		Week13	Lect. 1	9.7 Static Variables, Constants, and Methods 339	Face to face
			Lect. 2	9.8 Visibility Modifiers 344 9.9 Data Field Encapsulation 346 9.10 Passing Objects to Methods 349 9.11 Array of Objects 353	Face to face
			Lect. 3	Practical questions on teams	Online