
جامعة الزيتونة الأردنية
Al-Zaytoonah University of Jordan



Course Syllabus

***According to JORDAN National Qualification
Framework (JNQF)***

Course Name: Computer Programming

Course Number: 0130130

General Course Information:

Course Title	Computer Programming
Course Number	0130130
Credit Hours	3 credit hours
Education Type	Traditional learning
Prerequisites/Co-requisites	Fundamentals of Information Technology + Technical English for IT Students
Academic Program	Computer Science
Program Code	0130
Faculty	Faculty of Science and IT
Department	Computer Science
Level of Course	1
Academic Year /Semester	2024/2025 (2 nd Semester)
Awarded Qualification	Bachelor's degree
Other Department(s) Involved in Teaching the Course	N/A
Language of Instruction	English
Date of Production/Revision	2024-2025

Course Coordinator:

Coordinator's Name	Mrs. Fatima Mousa Quiam
Office No.	9231
Office Phone Extension Number	N/A
Office Hours	Sunday, Tuesday 12:30 -3:00 Monday, Wednesday 2:00-3:30
E-mail	f.quiam@zuj.edu.jo

Other Instructors:

Instructor Name	
Office No.	
Office Phone Extension Number	
Office Hours	
Email	

Course Description (English/Arabic):

English	This course focus on designing and writing instructions for a computer to perform specific tasks. Also on teaching students how to use programming languages to write, test, and debug programs. Key topics include data types, control structures, loops, functions, and arrays. The course aims to equip students with the ability to develop effective programming solutions to practical problems.
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Arabic

يركز المساق على تصميم وكتابة التعليمات البرمجية التي تمكن الحاسوب من تنفيذ مهام محددة، كما يهدف إلى تعليم الطلاب كيفية استخدام لغات البرمجة في كتابة البرامج واختبارها وتصحيح أخطائها. تشمل الموضوعات الأساسية أنواع البيانات، وهياكل التحكم، والحلقات التكرارية، والدوال، والمصفوفات. يهدف هذا المساق إلى تمكين الطلاب من تطوير حلول برمجية فعالة لمعالجة المشكلات العملية.

Textbook: Author(s), Title, Publisher, Edition, Year, Book website.

- Herbert Schildt, **Java: The Complete Reference**, 13th Edition, McGraw-Hill Education, 2023, <https://www.mhprofessional.com/java-the-complete-reference-thirteenth-edition-9781260463415>.

References: Author(s), Title, Publisher, Edition, Year, Book website.

- Scott Brandt, **Java From Zero: Learn Java Programming Fast for Beginners to Professionals: The Complete Guide With Code Examples and Exercises to Become a Professional**, Lulu.com, 2023, ISBN-13: 978-1447794158.
- Herbert Schildt, **Java: A Beginner's Guide**, 8th Edition, McGraw-Hill Education, 2020, <https://www.mhprofessional.com/java-a-beginners-guide-eighth-edition-9781260440218>.
- Paul J. Deitel & Harvey M. Deitel, **Java How to Program, Early Objects**, 11th Edition, Pearson, 2017, <https://www.oreilly.com/library/view/java-how-to/9780134751962/>

Course Educational Objectives (CEOs):

1.	Help students learn basic programming and problem-solving using Java.
2.	Teach students how to write and understand Java programs using variables, loops, and other key features.
3.	Show students how to write clear, organized code using their own methods and built-in Java tools.
4.	Get students ready for more advanced programming by building thinking and debugging skills.

Intended Learning Outcomes (ILO's):

Intended learning outcomes (ILOs)	Relationship to CEOs	Contribution to PLOs	Bloom Taxonomy Levels*	JNQF Descriptors**	
K- Knowledge and Understanding					
ILO1- K	Ability to analyze problem statements and translate them into clear, logical, and well-structured Java programs.	CEO 1	PLO 2	2,3,4	K
ILO2- K	Understanding and application of control structures, including conditionals (if, switch) and loops (for, while).	CEO 2	PLO 2	3,4,5	K
ILO3 - K	Knowledge of using built-in and user-defined methods, and	CEO 3	PLO 2	4,5,6	K

	understanding the role of arrays in storing and managing data.					
S- Intellectual skills						
ILO4 - S	Understand fundamental programming concepts, and apply basic Java elements such as input/output, variables, constants, expressions, and operators.	CEO 1 CEO 2	PLO 3	2,3,4	S	
ILO5 - S	Develop structured Java programs using control flow statements (if, switch) and loops (for, while), including nested structures.	CEO 2	PLO 4	2,3,4	S	
ILO6 - S	Use methods and arrays effectively , including built-in and user-defined methods (void and return types), with correct parameter handling and array manipulation.	CEO 3 CEO 4	PLO 4	3,4,5	S	
C- Competencies						
ILO7 - C	Ability to analyze problems and write clear, basic Java programs using appropriate syntax and structure.	CEO 1 CEO 2	PLO 5	4,5,6	C	
ILO8 - C	Ability to develop Java programs using control structures, methods (built-in and user-defined), and arrays to solve computational problems effectively.	CEO3 CEO4	PLO 6	4,5,6	C	
D- Transferable skills						
ILO 9 - D	Analytical and Technical Skills – Includes problem-solving, critical thinking, attention to detail, and the ability to evaluate, debug, and write accurate code.	CEO 3	PLO 7	4,5,6	D	
ILO 10 - D	Professional and Interpersonal Skills – Includes time management, communication, teamwork, adaptability, and self-directed learning in programming contexts.	CEO4	PLO 7	4,5,6	D	
*Bloom Taxonomy Levels:						
Level #	1	2	3	4	5	6
Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating
** Descriptor (National Qualification Framework Descriptors): K: Knowledge, S: Skill, C: Competency.						

Program Learning Outcome (PLOs):

(PLOs)		JNQF Descriptors**		
		K	S	C
PLO1-K	Knowledge of professional ethics, social responsibility, and the regulations governing them.	√		
PLO2-K	Understanding various programming techniques, the stages of software development, and the fundamental principles of security.	√		
PLO3-S	Skill in applying mathematical concepts to analyze and design algorithms and verify their correctness		√	
PLO4-S	Skill in using different programming languages and applying them to develop software and computer applications.		√	
PLO5-C	The ability to analyze, design, and develop effective and reliable computer programs that meet user requirements and adhere to professional ethics.			√
PLO6-C	The ability to keep up with continuous advancements in computer science, innovate, and work independently or as part of a team.			√
PLO7-D	The ability to work collaboratively, communicate effectively, and demonstrate teamwork spirit.			

** Descriptors according to the national qualifications framework (K: knowledge, S: skill, C: Competency)

Weekly Schedule (please choose the type of teaching)

- Face to Face (F2F)**
 Hybrid (One – To - One)
 Online

Schedule of Simultaneous and their Topics:

Week	First Lecture (F2F)	Second Lecture (F2F)	ILOs	PLOs	JNQF Descriptors*
1	Introduction to Computers and Programming Concepts	Introduction to Java and Setting Up the Programming Environment	ILO 1	PLO2	K
2	Java Syntax, Identifiers, Comments, and Code Structure	Variables, Constants, and Data Types	ILO2, ILO 4	PLO2	K, S
3	Input and Output using Scanner and System.out	Arithmetic Operators and Expressions	ILO 2	PLO3, PLO4	K, S
4	Assignment, Relational, and Logical Operators	Increment/Decrement and Operator Precedence	ILO2, ILO4	PLO4	K, S
5	if, if- else, and Nested if Statements	switch Statement and Multi-way Selection	ILO2, ILO5	PLO4	K, S
6	Introduction to Loops: while and do-while	Loop Control: break, continue, and Nested Loops	ILO5	PLO5	S
7	for Loops and Loop Design Examples	Using Loops for Pattern and Repetition Problems	ILO5	PLO5	S

Midterm Exam (30%)					
9	Introduction to Methods (Built-in and User-defined)	void Methods with Parameters	ILO3,ILO 6	PLO5	S
10	Return Methods and Method Overloading	Scope of Variables and Method Design Best Practices	ILO3, ILO6	PLO5	S, C
11	Arrays: Declaration, Initialization, and Accessing Values	Traversing Arrays with Loops	ILO6	PLO4, PLO5	S, C
12	Passing Arrays to Methods	Array Applications and Common Errors	ILO6, ILO8	PLO5	C
13	Multidimensional Arrays	Multidimensional Array Applications and Common Errors	ILO8	PLO5	C
14	Integrating Control Structures, Methods, and Arrays	Mini Project Workshop / Debugging Techniques	ILO9, ILO10	PLO5	C, D
15	Projects Discussion				
16	Final Exam				

* **K: Knowledge, S: Skills, C: Competency**

Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

- Lecture.
- flipped learning.
- learning through projects.
- learning through problem solving.
- participatory learning

Course Policies:

A- Attendance policies:

The maximum allowed absences is 15% of the lectures.

B- Absences from exams and handing in assignments on time:

Midterm exam can be retaken based on approval of excuse by the instructor's discretion.

Not handing assignment on time will incur penalties.

C- Academic Health and safety procedures

D- Honesty policy regarding cheating, plagiarism, and misbehaviour:

Cheating, plagiarism, misbehaviour will result in zero grade and further disciplinary actions may be taken.

E- Grading policy:

- All homework is to be posted online through the e-learning system.
- Exams will be marked within 72 hours and the marked exam papers will be handed to the students.
- Online Activities (Course Videos, Practice labs, Discussion Forums, Quizzes) **30%**
- Midterm **30%**
- Final Exam **4 %**

F- Available university services that support achievement in the course: **E-Learning Platform, Labs, Library.**

Required Equipment:

- PC / Laptop with webcam and mic
- Internet Connection
- Access to the ZUJ E-Learning Platform at <https://exams.zuj.edu.jo/>
- E-learning plan
- Satisfaction questionnaires for online and face-to-face learning
- Software for e-learning
- Training

Assessment Tools Implemented in the Course:

- Final Exam
- Midterm Exam
- Quizzes
- Homework
- Practice Labs
- Discussion Forums
- Periodic reports for learning assessment
- Improvement plans for online or face-to-face teaching.
- Others...

Responsible Persons and their Signatures:

Course Coordinator	Mrs. Fatima Mousa Quiam	Completed Date	2025/5/4
		Signature	
Received by (Department Head)	Dr. Mohammad Abdullah	Received Date	/ /
		Signature	
