



The University of Jordan
Accreditation & Quality Assurance Center

COURSE Syllabus

1	Course title	Programming in Special Languages
2	Course number	1901238
3	Credit hours	3
	Contact hours (theory, practical)	3
4	Prerequisites/corequisites	Programming Methodologies (1901237)
5	Program title	B.Sc. in Computer Science
6	Program code	01
7	Awarding institution	The University of Jordan
8	School	King Abdullah II School of Information Technology
9	Department	Computer Science
10	Level of course	Third year
11	Year of study and semester (s)	2021/2022 – 1 ST semester
12	Final Qualification	Bachelor
13	Other department (s) involved in teaching the course	-
14	Language of Instruction	English
15	Delivery method	<input checked="" type="checkbox"/> Face to face learning <input type="checkbox"/> Blended <input type="checkbox"/> Fully online
16	Online platforms(s)	<input checked="" type="checkbox"/> Moodle <input checked="" type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....
17	Date of production/revision	10/2021

18 Course Coordinator:

Mrs. Lubna Nassir Eddeen
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19 Other instructors:

None

20 Course Description:

As stated in the approved study plan.

Object-oriented Programming (OOP) Environment; Input/Output; Loops; Decision; Function; Array and Strings; Data structures; Encapsulation; Advanced variables; Object Oriented Programming; Useful OOP features; Class and object; Polymorphism; Exceptions handling; Applet; I/O streams; Threads, Files. Applying all topics through weekly exercises in lab.

21 Course aims and outcomes:

A- Aims:

The course aims at introducing students to basic programming techniques using Java with hands-on lab practice

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to...

A. Knowledge and Understanding: students should

- A1. Understand the fundamental of programming.
- A2. Understand the fundamental object-oriented programming OOP.
- A3. Understand the advanced object-oriented programming.
- A4. Understand the fundamental control structures.
- A5. Understand the fundamental data structures concepts.
- A6. Understand the fundamental Exception handling concepts.
- A7. Understand the fundamental Graphical User Interface (GUI) concepts.

B. Intellectual Skills: students should be able to:

- B1. Compare between various control structures.
- B2. Compare between various data structures.
- B3. Compare between the various OOP techniques.
- B4. Compare between the various exception handling mechanisms.

C. Subject Specific Skills: students should be able to:

- C1. Apply suitable OOP technique efficiently to solve given problems
- C2. Apply appropriate control structure to solve given problems.
- C3. Apply data structure processing technique efficiently to solve given problems.
- C4. Choose appropriate Exception handling technique to solve given problems.

D. Transferable Skills: students should be able to:

- D1. Work in group to implement a solution for given problems using Java.

22. Topic Outline and Schedule:

Week	Lecture	Topic	ILO's	Learning Methods (Face to Face/Blended / Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	References
1	1.1	Topic 1 An Overview of Computers and Programming Languages	A1 A2, A3 A2, A3,C1	Face to Face		Synchronous lecturing/meeting	in class questions + quizzes	Chapters 1 + 2
	1.2			Face to Face		Synchronous lecturing/meeting		
	1.3	Topic 2 Basic Elements of Java		Online	Microsoft Teams	Synchronous lecturing/meeting		
3,4	2.1	Topics 3 Introduction to Objects and Input/output	A4, B1,C2 A4, B1,C2 A5,A7, B3, C1,D1	Face to Face		Synchronous lecturing/meeting	in class questions + quizzes	Chapters 3 + 4
	2.2			Face to Face		Synchronous lecturing/meeting		
	2.3	Topic 4 Control Structures I: Selection		Online	Microsoft Teams	Synchronous lecturing/meeting		
5,6	3.1	Topic 5 Control Structures II: Repetition	A2, A3, C1 A2,A3, A5, B3, C1	Face to Face		Synchronous lecturing/meeting	in class questions + quizzes	Chapter 5+ 6
	3.2			Face to Face		Synchronous lecturing/meeting		
	3.3	Topic 6.1 Graphical User Interface (GUI)		Online	Microsoft Teams	Synchronous lecturing/meeting		
7,8	4.1	Topic 6.2 Object-Oriented Design (OOD)	A4, A5, B2, C2 A3, B3, C1, D1	Face to Face		Synchronous lecturing/meeting	in class questions + quizzes	Chapters 6+ 7
	4.2			Face to Face		Synchronous lecturing/meeting		
	4.3	Topic 7 User-Defined Methods		Online	Microsoft Teams	Synchronous lecturing/meeting		
9,10	5.1	Topic 8	A6, B4, C4, D1 A1	Face to Face		Synchronous lecturing/meeting	in class questions + quizzes	Chapter 8

	5.2	User-Defined Classes and ADTs	A2, A3	Face to Face		Synchronous lecturing/meeting		
	5.3			Online	Microsoft Teams	Synchronous lecturing/meeting		
11,12	6.1	Topic 9 Arrays	A2, A3,C1 A4, B1,C2 A4, B1,C2	Face to Face		Synchronous lecturing/meeting	in class questions + quizzes	Chapter 9
	6.2			Face to Face		Synchronous lecturing/meeting		
	6.3			Online	Microsoft Teams	Synchronous lecturing/meeting		
13,14	7.1	Topic 10 Inheritance and Polymorphism	A5, A7, B3, C1,D1 A2, A3, C1	Face to Face		Synchronous lecturing/meeting	in class questions + quizzes	Chapter 10
	7.2			Face to Face		Synchronous lecturing/meeting		
	7.3			Online	Microsoft Teams	Synchronous lecturing/meeting		
15,16	8.1	Topic 11 Handling Exceptions and Events	A2,A3, A5, B3, C1	Face to Face		Synchronous lecturing/meeting	in class questions + quizzes	Chapter 11
	8.2			Face to Face		Synchronous lecturing/meeting		
	8.3	+ Revision	Online	Microsoft Teams	Synchronous lecturing/meeting			

- Teaching methods include: Synchronous lecturing/meeting; Asynchronous lecturing/meeting
- Evaluation methods include: Homework, Quiz, Exam, pre-lab quiz...etc

23 Evaluation Methods:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	Platform
Quizzes & Assignments	20	Topics 1-11	Microsoft Teams
MID exam	30	Topic 1-7	Juexams.com
Final Exam	50	Topics 1-11	Juexams.com

24 Course Requirements (e.g: students should have a computer, internet connection, webcam, account on a specific software/platform...etc):

- Computer
- Internet connection
- Account on Microsoft Teams, Moodle
- JDK 8u111 with NetBeans 8.2

25 Course Policies:

Please follow The University of Jordan regulations regarding the following policies, more information is at www.ju.edu.jo

- A- Attendance policies:
- B- Absences from exams and submitting assignments on time:
- C- Health and safety procedures:
- D- Honesty policy regarding cheating, plagiarism, misbehavior:
- E- Grading policy:
- F- Available university services that support achievement in the course:

26 References:

- A. Required book (s), assigned reading and audio-visuals:
 - **D.S. Malik, Java Programming: From Problem Analysis to Program Design, Fifth Edition. Course Technology, Cengage Learning, 2011, ISBN-13 978-1-111-53053-2.**
- B. Recommended books, materials, and media:
 - Oracle™, Java Programming Language, Java SE 6, 2010. Reference
Website: <http://www.oracle.com/technetwork/java/javase/documentation/index.html>
 - Paul Deitel, Harvey Deitel, Java™ How to Program, Prentice Hall; 9th edition (March 7, 2011), ISBN-10: 0132575663, ISBN-13: 978-0132575669
 - Herbert Schildt, Java, A Beginner's Guide, McGraw-Hill Osborne Media, 5th Edition (Aug 16, 2011), ISBN-10: 0071606327, ISBN-13: 978-0071606325
 - Oracle's online Java tutorial: <https://docs.oracle.com/javase/tutorial/>

27 Additional information:

N/A

Name of Course Coordinator: Mrs. Lubna Nasir Eddeen. Signature:  Date: 1/10/2021

Head of Curriculum Committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of Curriculum Committee/Faculty: ----- Signature: -----

Dean: ----- Signature: -----