University of Petra		
Faculty of Information Technology **Department of Computer Science**	جامعة البترا	كلية تكنولوجيا المعلومات قسم علم الحاسوب

Lab Syllabus

Year: 2025-2026   **Semester: (1)**

Course No.	Course Title	Prerequisite	Co-requisite	Credit Hours	Equivalent hours in NQF	Course level according to NQF
601106	Information Technology Fundamentals Lab	-	601105	1		6

#	Lab Instructor Name	E-mail	Section #	Office ext.
1	Dr. Eman Alduweib	emanalduweib@uop.edu.jo		
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6	Mr. Alaa Shorbaji			

Lab Coordinator's Name:	Dr. Eman Alduweib

Short Lab Description	This course implements programs using Java. Topics covered: problem solving techniques (Flowchart, Pseudo-code), procedural programming basic coding, program structure, primitive data types, mathematical and logical operations, basic control structures, built-in and user defined methods, and compilation and testing, passing parameters, and void methods.

Lab Objectives

- The student will use good documentation, formatting and naming conventions to insure program readability.
- The student will write a program using the JAVA arithmetic operators, input/output methods and appropriate manipulators for formatting.
- The student will use problem solving techniques (Flowchart, Pseudo-code) to solve the problems.

- The student will write a program using appropriate selection statements such as if-else.
- The student will write a program using looping statement.
- The student will write built-in and user-defined methods

Course Intended Learning Outcomes (ILOs) and their Alignment with Program ILOs, Teaching and Learning Methods, and Assessment Methods:

Upon successful completion of this course, students are expected to achieve the following learning outcomes:

Course ILOs	Program ILOs	Teaching and Learning Method	Assessment Method
Practical skills (P)			
P1. Implement the developed algorithms into high-level programming language codes.	2.2	Interactive lectures Live coding	Lab Mid Exam +In Lab Assessment+ Lab Final Exam
P2. Use a software development environment to write code and error detection and correction.	2.4	Interactive lectures Live coding	Lab Final Exam+ Lab Mid Exam
Competencies (C)*			
C1. Solution Development	C2	Interactive lectures Live coding	Lab Exams +In Lab Assessment

* Competencies: knowledge, skills, and behaviors that lead to successful professional performance

Lab Schedule:

Week	Topic Details	Course ILO number	Reference
Lab for Week 2: (19-23/10/2025)	Worksheet: How to install the IDE (VScode) and write your first program in JAVA.	**P2**	**Lab Manual**
Lab for Week 3 (26-30/10/2025)	Worksheet: write a java program. Format the output and print the result of math operations using print and println with literals only. (Do not use any data type declaration) . practice some syntax errors.	**P2**	**Lab Manual**
Lab for Week 4 (2-6/11/2025)	Worksheet: covers how to use the flowchart and psuedocode to solve different problems: Sequence, Selection, and Repition	**P1, P2**	**Lab Manual**
Lab for Week 5 (9-13/11/2025)	Worksheet: Identifiers, variables, different datatype, assignment statements and assignment expression, constants	**P1, P2**	**Lab Manual**
Lab for Week 6: (16-20/11/2025)	Worksheet: operator precedence and associativity, implicit and explicit casting. Java console (Scanner)	**P1, P2**	**Lab Manual**
Lab for Week 7: (23-27/11/2025)	Worksheet: Relational operators, Selection (if, if else if)	**P1, P2**	**Lab Manual**
	Lab Mid Exam		

Lab for Week 8 (30/11-4/12/2025)	**Worksheet:** Switch statement and nested if	**P1,P2**	**Lab Manual**
Lab for Week 9 (7-11/12/2025)	**Worksheet:** While looping (repetition) structure, Do … while looping	**P1, P2**	**Lab Manual**
Lab for Week 10 (14-18/12/2025)	Worksheet: For looping, break, continue statements	**P1, P2**	**Lab Manual**
Lab for Week 11 (21-25/12/2025)	Worksheet: nested loops	**P1, P2**	**Lab Manual**
Lab for Week 12 (28/12/2025-1/1/2026)	Worksheet: Built-in methods and user defined methods method signature, value returning method, method syntax, method calling	**P1, P2**	**Lab Manual**
Lab for Week 13: (4-8/1/2026)	Worksheet: passing parameters, void methods	**P1, P2**	**Lab Manual**
Lab for Week 14: (11-15/1/2026)	**Final Exam**		
15-16			

Assessment Methods and Grading System:

Assessment method	Grade	Comments
Lab Mid Exam	35	First 7-8 weeks covered material
In lab assessment	20	4 random MCQ quizzes through out the semester (each quiz covers theory and Part I of the same lab session and carries 5 marks)
Lab Final Exam	45	All topics
Total	**100**	

Learning References:

1- Text Manual:
ITF Lab Manual
2- References:
R1. Java How to Program: Deitel & Deitel, 8th edition. R2. D. S. Malik. C++ Programming: From Problem Analysis to Program Design (8th Ed.). Course Technology, 2018. R3. Paul J. Deitel and Harvey M. Deitel. C++ How to program (10th Ed.). Prentice–Hall, 2017. R4. Thomas L. Floyd. *Digital Fundamentals* (11th Ed.). Pearson Education Limited. 2015. R5. Introduction to Java Programming 10th edition, Y. Danial Liang, Pearson-Prentice Hall, 2015 R6. Introduction to Java Programming and Data Structures, Comprehensive Version, 12th edition, 2020
3- Videos:
V1. **How to install JDK** https://www.youtube.com/results?search_query=how+to+install+JDK V2. **How to install VSCode** https://www.youtube.com/results?search_query=how+to+install+vscode
4- Other Resources:
• Lecturer's Notes • http://www.oracle.com/technetwork/java/index.html

Course Policies[1]

- Attendance Policy: University regulations apply to attendance.

- <u>Academic Honesty:</u> Academic dishonesty is an unacceptable mode of conduct, and will not be tolerated in any form at University of Petra. All persons involved in academic dishonesty and plagiarism in any form will be disciplined in accordance with University rules and regulations.

Approved by	Name	Date	Signature
Coordinator of Curriculum Committee			
Faculty Dean/ Head of Department			

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[1] Additional information may be added in this section according to the nature of the course.