The Hashemite University
Faculty of Science
Course Syllabus

Department of Basic Science

Course Title: Computer Programming
Course Number: 110108112
Pre-requisite: Computing Essentials (110108099)
Credit Hours: 3
Designation: Compulsory for Science Faculty
Instructor: Mrs.Hutaf Natoureah
Instructor's E-mail: hutaf@hu.edu.jo
Office Hours:

Course Description (Catalog): This course covers the main concepts and principles of Computer Fundamentals and Components, Computer Operation, Elements of Programming, Structured Programming Methods, C++ programming language, Variable Declaration, Assignment, Input/Output, Control Structures, Functions, Arrays (1-D and 2-D), pointers and strings.

The course focus is on learning the basic syntax of the language, converting descriptions of operations and algorithms into code. It also covers writing, testing and debugging simple programs.

Text Book C++ How to program, Deitel & Deitel, 4th Edition

References: Handouts and notes given by the instructor.

Major Topics Covered:

Topics	No. of Weeks	Contact Hours*
Program Development Life Cycle, basic elements in c++ program	1	3
C++ Data Types	2	6
C++ operators	2	6
Control Structures (Conditional IF)	1	3
Control Structures (Switch Statement)	1	3
Control Structures (Iteration -For, While and Do..While)	1	3
Functions (Library Functions (math.h, cstdlib.h) and User Defined functions)	1	3
Variable Scope and Storage Classes	1	3
Function Overload and Default Arguments	1	3
Arrays (one and two dimensional): definition and using.	1	3
Operations on array	1	3
Passing Array to functions, and static arrays	1	3
Pointers (definition, using, passing to function, constant with pointers)	1	3
Total	**15**	**45**

*Contact Hours include lectures, quizzes and exams.

❖ **Specific Outcomes of Instruction (Course Learning Outcomes):**

After completing this course, the students will be able to:

	Course Learning Outcomes (CLO)	(SO*)
CLO1.	Analyze the given problem statements to create basic program design	(a), (c)
CLO2.	Outline the essential features and elements of the C++ programming language.	(a), (k)
CLO3.	Identify programming fundamentals, including statement and control flow and functions	(a), (k)
CLO4.	Implement different functions for input and output, various data types, basic operators and functions.	(a), (k),(c)
CLO5.	Distinguish the syntax, semantics, type handling, storage classes rules, scoping rules, naming rules of C++ programming language.	(a), (k)
CLO6.	Edit, compile and execute a simple program with basic programming elements and data structures.	(a),(k)

*(SO) = Student Outcomes Addressed by the Course.

❖ **Student Outcomes (SO) Addressed by the Course:**

#	Outcomes Description Applied and Natural Sciences Student Outcomes	Contribution
(a)	an ability to apply knowledge of mathematics, science, and applied sciences	H
(b)	an ability to design and conduct experiments, as well as to analyze and interpret data	
(c)	an ability to formulate or design a system, process or program to meet desired needs	M
(d)	an ability to function on multidisciplinary teams	
(e)	an ability to identify and solve applied sciences problems	L
(f)	an understanding of professional and ethical responsibility	
(g)	an ability to communicate effectively	
(h)	the broad education necessary to understand the impact of solutions in a global and societal context	
(i)	a recognition of the need for, and an ability to engage in life-long learning	
(j)	a knowledge of contemporary issues	
(k)	an ability to use the techniques, skills, and modern scientific and technical tools necessary for professional practice.	M

H = High, M = Medium, L = Low

Grading Plan:

First Exam:	**30 points**	**--/--/2025**
Second Exam:	**30 points**	**--/--/2025**
Final Exam:	**40 points**	**To be announced later**

General Notes:

(**Attendance Policy) Attendance:** Mandatory. No more than 15% absence is permitted.

Entering the Class Room: You have 5 minutes to enter the class after the starting time. The door will be closed after that. Note that if you enter after the first 5 minutes you will lose the quiz if any.

Make ups: Make up exams will be only conducted for students who have a valid excuse for missing the exams. Bear in mind that make up will be much harder than the normal exam.

Cell Phones: must be closed before entering the class.

Cheating: Don't risk your semester. Be smart enough to pass.