COURSE DESCRIPTIONS

Faculty	Science and Information Technology				
Department	Computer Science			**NQF level**	6
Course Title	Programming language 1	**Code**	852121	**Prerequisite**	852110
Credit Hours	3	**Theory**	3	**Practical**	0
Course Leader	Mr. Shaker Mrayyen	**email**	smrayyen@jadara.edu.jo		
Lecturers	Dr. Arwa Zabian Mr. Shaker Mrayyen Mr. Osama Al rifai	**emails**	arwa@jadara.edu.jo smrayyen@jadara.edu.jo o.alrifai@jadara.edu.jo		
Lecture time		**Classroom**	Blended learning (synchronized)		
Semester	First	**Production**		**Updated**	2021-2022
Awards	Bachelor Degree			**Attendance**	Fulltime

Short Description
This course provides an algorithm development using top-down design with syntax and semantics of the C++ programming language, creating, compiling and executing C++ programs, Nested control structure, Nested Loops structure, Predefined and user defined functions, One dimensional and tow dimensional arrays.
Course Objectives
• To let students, acquire knowledge and understand structured programming. • Promote students' skills to gather and analyze structured programming design and executing C++ programs. • To construct and develop an efficient program in C++, • To learn the structure of a C++ program • To understand C++ Control Structures, • To discover and explore the power of functions. • To able to use one and multidimensional arrays • To test and debug a C++ program.

Learning Outcomes
A. Knowledge - Theoretical Understanding
a1: Demonstrate a knowledge in the basic concepts of C++ programming, different control structure, functions and arrays. (K1)
B. Knowledge - Practical Application
a2: Make use of basic concepts of C++ programming, different control structure, functions and arrays (K4)
C. Skills - Generic Problem Solving and Analytical Skills
b1:Analyze problem requirements to choose the best control structure used to find the appropriate solution.(S2)

D. Skills - Communication, ICT, and Numeracy
E. Competence: Autonomy, Responsibility, and Context
Teaching and Learning Methods
Face to face learning + online learning through quizzes and assignments
Assessment Methods
By quizzes, home works and exams

Course Contents					
Week	**Hours**	**CLOs**	**Topics**	**Teaching & Learning Methods**	**Assessment Methods**
1	1.5	a1	Basic Elements of C++, Arithmetic Expressions Programming Flow of Control	Face to face learning	quiz
1	1.5			Distance learning	
2	1.5		Input / Output Streaming	Face to face learning	
2	1.5			Distance learning	
3 4	1.5	a1, a2	Multiple Selections: Nested if, comparing if...else Statements with a Series of if Statements, switch structures.	Face to face learning	
	1.5			Distance learning	
	1.5			Face to face learning	
	1.5			Distance learning	
5,6	3	b1	Nested Repetition Structures, Nested Loops tracing and Debugging. While loop	Face to face learning	quiz
	3			Distance learning	
7	1.5	a1,a2,	Applying different control structure in writing a complete program	Face to face learning	Mid Term
	1.5		Mid Exam	Face to face exam	
8	1.5	a2, b1	User-Defined Functions I Predefined and User-Defined Functions, Value-Returning Functions,	Face to face exam	
	1.5			Distance learning	
9	1.5	a2, b1	Formal Parameter List, Actual Parameter List, Function Prototype.	Face to face learning	
	1.5			Distance learning	
10 11	1.5	b1	User-Defined Functions II Void Functions, Value and Reference Parameters and Memory Allocation, Scope of an Identifier, Global Variables, Named Constants, and Side Effects, Static and Automatic Variables, Default	Face to face learning	quiz
	1.5			Distance learning	
	1.5	b1		Face to face learning	
	1.5			Distance learning	

			Parameters and Function Overloading		
12,13, 14	4.5	b1	Arrays and Strings Declaring and Processing One-Dimensional Arrays, Array Initialization, Arrays as Parameters to functions, Character Arrays, Declaring and Processing Two Dimensional Arrays, Passing Two-Dimensional Arrays as Parameters to Functions	Face to face learning	assignment
	4.5			Distance learning	
15	2	a1,a2, b1	Final exam	Face to face exam	Final exam

Infrastructure	
Textbook	C++ Programming: From Problem Analysis to Program Design, D.S. Malik, 2018
References	**ISBN** 978-0-538-79808-2
Required reading	C++ How to Program, Deitel and Deitel, Prentice Hall, 2011, 8th Ed.
Electronic materials	**Available on : http://elearning.jadara.edu.jo/CourseContent/index/11362/**
Other	**Any other book related to C++ Programming**

Assessment Method		**Grade**				
			a1	**a2**	**b1**	
First (Midterm)		30	10	15	5	
Second (if applicable)						
Final Exam		50	10	20	20	
Coursework		20	5	10	5	
Coursework assessment methods	Assignments			5		
	Case study					
	Discussion and interaction					
	Group work activities					
	Lab tests and assignments					
	Presentations					
	Quizzes	15	5	5	5	
Total		100	25	45	30	

Plagiarism

Plagiarism is claiming that someone else's work is your own. The department has a strict policy regarding plagiarism and, if plagiarism is indeed discovered, this policy will be applied. Note that punishments apply also to anyone assisting another to commit plagiarism (for example by knowingly allowing someone to copy your code).

Plagiarism is different from group work in which a number of individuals share ideas on how to carry out the coursework. You are strongly encouraged to work in small groups, and you will certainly not be penalized for doing so. This means that you may work together on the program. What is important is that you have a full understanding of all aspects of the completed program. In order to allow proper assessment that this is indeed the case, you must adhere strictly to the course work requirements as outlined above and detailed in the coursework problem description. These requirements are in place to encourage individual understanding, facilitate individual assessment, and deter plagiarism.