



ashemite University
College of Engineering
(3 Credit Hours/Fac. Compulsory)

Course Name:	Computer Programming
Course Number:	110400102
Prerequisite:	110108099
Textbook:	C++ Programming: From Problem Analysis to Program Design. D.S. Malik, 8 th Edition, 2018.
References	C++ How to Program , Paul J. Deitel and Harvey Deitel, Pearson, 10 th Edition, 2016.
Course Description:	This course covers main topics of C++ programming including C++ fundamentals, operations, elements, structured methods, variables, assignment, Input/Output, control structures, functions, arrays, strings and pointers.
Course Learning Outcomes (CLOs):	CLO1: understand basic programming structures. SO's (1,2) CLO2: design C++ program to perform predefined task. SO's (1, 2) CLO3: analyze written C++ program to predict output. SO's (1, 2) CLO4: develop, debug and run C++ programs on Code::Blocks. SO (1)
Important material	<ul style="list-style-type: none"> - Lecture notes - References - Internet resources
Instructor	<ul style="list-style-type: none"> - Eng. Manar Jaradat, Office: E3042 - Email: manara@staff.hu.edu.jo - Contact only via MS teams: manara@staff.hu.edu.jo

Major Topics Covered and Schedule:

Topic	Chapter	# Lectures
Introduction to computers and programming languages	Chapter 1	2
Basics of C++ <ul style="list-style-type: none"> - Data types, variables - Arithmetic expressions, operators, assignment, increment, decrement 	Chapter 2	6
Input/ Output Basics	Chapter 3	2
Quiz		
Control Structure I (Selection) <ul style="list-style-type: none"> - Relational and logical operators - "if, if ... else" - Switch Structure 	Chapter 4	5
Control Structure II (Repetition) <ul style="list-style-type: none"> - Loops: "while" Loop, "for" Loop and "do... while" Loop. - Nested control structure 	Chapter 5	5
Midterm Exam		
Arrays and strings <ul style="list-style-type: none"> - One dimensional Arrays creation, initialization and manipulation - Strings - Multidimensional Arrays 	Chapter 7, 8	4

User defined functions <ul style="list-style-type: none"> – Predefined functions, user defined functions – Value returning functions, void functions – Value Parameters – Reference Variables as Parameters – Value and Reference Parameters and Memory Allocation – Reference Parameters and Value-Returning Functions Scope of an Identifier – Global Variables, Named Constants, Static and Automatic Variables – Function Overloading – Functions with Default Parameters – Arrays as a parameter to function 	Chapter 6	8
Final Exam		

Course Policy

- To access course material, visit the course page in Moodle: <http://www.mlms.hu.edu.jo/>. Students are asked to check the website regularly for announcements.
- Lectures will be held online via Microsoft teams
- Students are responsible for the reading assignments from the text and handouts
- Students are responsible for following up the lecture materials
- **If you miss a quiz/ exam, there won't be a makeup test, quiz, etc. and you will get a ZERO unless you have a valid excuse.**
- Cheating and plagiarism are completely prohibited.
- **Grading policy:**
 - **Quiz: 20%**
 - **Midterm exam: 40%**
 - **Final exam: 40%**

ABET Student Outcomes (SO) Addressed by the Course:

#	Outcome Description	Contribution
General Engineering Student Outcomes		
(1)	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics. <i>(Previously SO's (a, e, k))</i>	H
(2)	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors. <i>(Previously SO's (c, k))</i>	H
(3)	An ability to communicate effectively with a range of audiences. <i>(Previously SO (g))</i>	
(4)	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts. <i>(Previously SO's (f, h, j))</i>	
(5)	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives. <i>(Previously SO (d))</i>	
(6)	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions. <i>(Previously SO's (b, k))</i>	
(7)	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies. <i>(Previously SO (i))</i>	

H=High, M= Medium, L=Low