



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, pointer, strings and classes.
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 Visual Studio. SO (1)
Important material	- Lecture notes - References - Internet resources
Instructor	- Eng. Manar Jaradat, Office: E3042 - Contact only via MS teams' messages

Major Topics Covered and Schedule:

Topic	Chapter	# Lectures
Introduction to computers and programming languages	Chapter 1	2
Basics of C++ - Data types, variables - Arithmetic expressions, operators, assignment, increment, decrement	Chapter 2	6
Input/ Output Basics	Chapter 3	2
Quiz		
Control Structure I (Selection) - Relational and logical operators - "if, if ... else" - Switch Structure	Chapter 4	5
Control Structure II (Repetition) - Loops: "while" Loop, "for" Loop and "do... while" Loop. - Nested control structure	Chapter 5	5
Midterm Exam		
Arrays and strings - One dimensional Arrays creation, initialization and manipulation - Strings - Multidimensional Arrays	Chapter 7, 8	4
User defined functions	Chapter 6	8

<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 		
Final Exam		

Course Policy

<ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> ▪ Quiz: 20% ▪ Midterm exam: 40% ▪ Final exam: 40%
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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