



# Philadelphia University

Faculty of Engineering - Department of Computer Engineering  
First Semester 2021/2022

## Course Details:

<b>Title:</b>	Programming Language (630263)
<b>Prerequisite:</b>	---
<b>Credit Hours:</b>	3 credit hours (approximately 44 contact hours)
<b>Textbook:</b>	“C++ Programming From Problem Analysis To Program Design”, Fifth Edition, D.S. Malik, 2010 or later
<b>References:</b>	“C++ How to program”, By: H.M.Deitel and P.J. Deitel, 5th ed. Prentice Hall “Problem solving with C++: the object of programming”, By: Walter Savitch, Pearson/ Addison Wesley, 2005
<b>Course Description:</b>	This course is a requirement for all engineering students. It introduces the basic principles of structured programming. Students will learn and practice the solving engineering problems using the C++ programming language.
<b>Website:</b>	<a href="http://www.philadelphia.edu.jo/academics/srushdan/">http://www.philadelphia.edu.jo/academics/srushdan/</a>
<b>Instructor:</b>	Eng. Sultan M. Al-Rushdan <b>Email:</b> srushdan@philadelphia.edu.jo <b>Office:</b> Engineering building, room: 6715 , ext: 2149 <b>Office hours:</b> SUN, TUE (10:00 – 11:00 , 13:00 – 14:00) , MON , WED (09:10-10:10)

## Course Outlines:

Week	Topic
1 (17/10 – 21/10)	Course Introduction, Programming Environment
2 (24/10 – 28/10)	Basic elements of C++ Input / Output Instructions
3 (31/10 – 4/11)	Variables and Data types Math. Functions
4 (7/11 – 11/11)	Control Statements: selection, multiple selection
5 (14/11 – 18/11)	
6 (21/11 – 25/11)	
7 (28/11 – 2/12)	Control Statements: Repetition
8 (5/12 – 9/12)	
9 (12/12 – 16/12)	Arrays. One and Two Dimensional arrays
10 (19/12 – 23/12)	
11 (26/12 – 30/12)	Functions: <ul style="list-style-type: none"><li>• Definition</li><li>• Local / Global variables</li><li>• Call by Reference, Call by value</li><li>• Recursive functions</li></ul>
12 (2/1 – 6/1)	
13 (9/1 – 13/1)	
14 (16/1 – 20/1)	Structures and Pointers
15 (23/1 – 27/1)	
16 (29/1 – 5/2)	Final Exam

## Course Learning Outcomes with reference to ABET Student Outcomes:

Upon successful completion of this course, the student should:

1.	Be able to write computer programs to solve specific engineering problems	[1,2]
2.	Be able to develop and design computer algorithms to solve an engineering problem	[2,6]
3.	Have the ability to read and analyze existing computer programs	[1,6]
4.	Understand the basics of computer programming: variables, conditions, loops and arrays	[7]
5.	Understand the concept of functions and have the ability to use them to simplify problem solving	[7]
6.	Understand how arrays arranged in computer memory and how to use them to store and process data.	[7]

### Assessment Guidance:

Evaluation of the student performance during the semester (total final mark) will be conducted according to the following activities:

**Sub-Exams:** The students will be subjected to scheduled written exam, during the semester.

**Quizzes and Assignments:** At least (4) Quizzes and Assignments will be conducted during the semester.

**Final Exam:** The students will be subject to scheduled final exam at the end of the semester covering the whole materials taught in the course.

### Grading policy:

Mid Exam	30% (5/12 – 9 /12)
Semester Work	30%
Final Exam	40%(29/1 – 5/2)
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Total:	100%

### Attendance Regulation:

The semester has in total 45 credit hours. Total absence hours from classes and tutorials must not exceed 15% of the total credit hours. Exceeding this limit without a medical or emergency excuse approved by the deanship will prohibit the student from sitting the final exam and a zero mark will be recorded for the course. If the excuse is approved by the deanship the student will be considered withdrawn from the course.

Absent of final written exam without a medical or emergency excuse approved by the deanship will result in Zero mark recorded for final exam.