Al-Al Bayt University
Prince Hussein bin Abdullah Faculty of Information Technology
Computer Science

Course Syllabus

Course Title	**Computer Science-2 for Scientific Disciplines**	**Course Code**	901131
Coordinator	**Dr Wael Qassas**	**Prerequisite(s)**	0901099
E-mail		**Credit Hours**	3
Course Is	**√ Required**	**□ Elective**	

Course Description:

This module aims to introduce the principles of problem solving strategy and imperative programming. A student completing this module should be able to understand the fundamental programming concepts. learn to develop a flowchart to solve mathematical problems, learn how to use typical C program environment to write computer programs.

Course Learning Outcomes (CLO):

1- Be able to understand the fundamental programming concepts.
2- Be able to develop a flowchart.
3- Understand a typical C program environment.
4- Understand the concept of structural programming
4- Be able to write programs C

Tentative Topics Covered

Week No	Topic
1	Flowchart: simple flowcharts, Conditional flowchart, Simple iteration flowchart and multiple iteration flowchart, analyzing simple examples
2	Input/Output statements ,Escape sequence in output statements (\n,\r,\t,\a, \b)
3	Data types, Arithmetic expression, Relational expressions, Logical expression
4	Priority of operations, compound statements (+= , ++ ,-- , ...)
5	Selection(if, if else, nested if else, dangling else) Ternary selection statement (? :) , Multiple selection statement (Switch)

6	Repetition for statement (for)
7	while, do..while statements
8	Nested Loops, break, Different examples on Nested loops
9	Functions: Standard library functions(abs,floor,ceil,pow,sqrt,mod)
10	**Functions:** User Functions , Function definition and prototype,
11	Function forms , Scope rules
12	Functions: Call by value &call by reference, Recursive functions
13	One dimensional array (declare an array ,read array ,print array, minimum, maximum, average..)
14	Arrays : Functions with Array parameters/.
15	Two dimensional arrays
16	Arrays of Characters (strings), manipulation and examples.

Textbook(s)			
Title	, C++ How to Program,		
Author(s)	Deitel & Deitel	Publisher	Prentice-Hall
Edition	5th edition	Year	2005

References	
Book Titles (Author(s), Title, Edition, Publisher, Year)	**Website URL (if available)**
	https://web2.aabu.edu.jo/faculties_site/programs/syllabus.jsp?co=901131 www.cplusspluss.com

Evaluation	
Assessment Tool	**Marks**
- First Exam	**20**
- Second Exam	**20**
- Assignments (Reports, Quiz, Seminar, Tutorial, etc.) **- Discipline, presence and participation**	
- Lab	**10**
- Final Examination	50