Jordan University of Science and Technology

Faculty of Engineering

Nuclear Engineering Department

NE114 Programming For Engineers

Summer Semester 2022-2023

Course Catalog
3 Credit Hours. 3 Credit hours (2 hours lectures with 2 hours lab). This online course teaches you the C++ programming language from scratch, assuming only basic computer knowledge. While C++ is quite challenging, in this course we'll learn the basics step by step; towards the end of the course you'll learn how to create simple programs, including a Input/Output, Control Structures (Selection, Repetition), User-Defined Functions, and Arrays, structures and classes. Throughout the semester, problem solving skills will be stressed and applied to solving computing problems.

Text Book	
Title	C++ Programming: From Problem Analysis to Program Design
Author(s)	D. S. Malik
Edition	5th Edition
Short Name	Ref #1
Other Information	

Instructor	
Name	**Mr. Abedl-Rahman Almodawar**
Office Location	A1 L3
Office Hours	
Email	aaalmodawar@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Sun, Mon : 17:00 - 18:00 Room: 500 منصة الكترونية

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	An Overview of Computers and Programming Languages	From **Ref #1**
Week 2	Basic Elements of C++	From **Ref #1**
Week 3	Control Structures I (Selection)	From **Ref #1**
Week 4	Control Structures II (Repetition)	From **Ref #1**
Week 5	User-Defined Functions I	From **Ref #1**
Week 6	User-Defined Functions II	From **Ref #1**
Week 7	Arrays	From **Ref #1**
Week 8	Structs and classes	From **Ref #1**

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
The student will get familiar with programming languages. Also the student will learn how to edit, compile and execute simple programs [B]. [11, 17]	15%	
The student will learn how to write C++ programs that utilize: documentation, data types, naming conventions, arithmetic operators, input/output methods and appropriate manipulators for formatting [11, 17]	17%	
The student will learn how to write C++ programs using appropriate control structures: selection and looping statements [11, 17]	25%	
The student will learn how to write C++ programs using different types of functions: values-returning and void User-defined functions along with Built-in functions [11, 17]	26%	
The student will learn how to work with the Arrays data structure; array's declaration, initialization and processing. [[11, 17]	12%	
The student will learn how to work with the Structs and Classes data structures [11, 17]	5%	

Relationship to Program Student Outcomes (Out of 100%)						
1	2	3	4	5	6	7
50						50

Evaluation	
Assessment Tool	**Weight**
Mid-term Exam	30%
Lab work	20%
Final exam	50%

Policy	
Attendance	Attendance is very important for the course. In accordance with university policy, students missing more than 20% of total classes are subject to failure. Penalties may be assessed without regard to the student's performance. Attendance will be recorded at the beginning or end of each class.
Exams	All exams will be Online and CLOSE-BOOK exams; necessary algorithms/equations/relations will be supplied if required.
Lab exercises and quizzes	- Held during an internal lab - There will be in-Lab programming quiz every week. - No makeup for quizzes. - Every student is expected to do the quizzes in his lab section. - Homework assignments will be posted on e-learning. - Homework submission will be through e-learning.

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