Date:	Examination No.:	Version:2022-2023	Start:4/9/2022
Module Name - Code	Fundamentals of programming – 3110		
Module Language:	English		
Responsible:	Dr. Shirin Othman Muhammad		
Lecture (s):	Dr. Shirin Othman Muhammad		
College:	College of Engineering – Salahaddin University-Erbil		
Duration:	15 week – 1 semester		
Course outcomes:	At the end of the semester, students would be able to understand programming algorithms and problem-solving principles. The student will get familiar to partition problems into sub-problems then solve subproblems. They will get to know the starting point of programming at the end of the semester.		
Course Content:	Programming basics, Control structures, conditional and Iteration structures, User defined Functions, Arrays and functions, pointers.		
Literature:	• Bjarne Stroustrup "Programming Principles and Practice Using C++" Second Edition-2014 • H. M. Deitel, P. J. Deitel "C++ How to program", Fifth edition-2005		
Type of Teaching:	2 hrs. in Lectures theoretically. 2 hrs. in computer laboratory working. Students will be participated in writing programs, group discussions are allowed in lectures.		
Pre-requisites:	None		
Preparation Modules:	Students must have background about Information Technologies		
Frequency:	Every year in fall semester		
Requirements for credit points:	For the award of credit points, it is necessary to pass the module exam, which contains: weekly quiz and homework in addition to monthly examinations in both theoretical and practical parts during academic semester. The module exam contains: Practical/Written **Student's attendance is required in all classes. Students with more than 15% absence are NOT allowed to attend the final exam.**		
Credit point:	5		
Grade Distribution:	The following grade system is used for the evaluation of the module exam: The module exam is based on the summation of two categories of evaluations: **First: (50%)** of the mark is based on the academic semester effort which includes: ➢ Theoretical part 30%, it contains ✓ Midterm examination during the academic semester = 20%. ✓ Assignment, quiz and homework = (10%). ➢ Practical part 20% ✓ which covers monthly examination 10% ✓ quizzes, assignments, active participation in laboratory. 10% **Students who have less than 25 % are not allowed to attend the final exam** **Second: (50%)** of the mark is based on final examination that is comprehensive for the whole of the study materials reviewed during the academic semester. Theoretical exam 30%., and Practical exam 20%.		
Work load:	The workload is 135h. It is the result of 60h attendance and 75h self-studies (Assignments, preparation for exam and applications).		

Week No.	Date	Theoretical Lectures details
1	6/9	Module description
2	13/9	Introduction to C++
3	20/9	Introduction to C++
4	27/9	Quiz 1
5	4/10	Control structures
6	11/10	Control structures
7	18/10	Continuous exam 1
8	25/10	Functions (pre and user defined)
9	1/11	Functions (passed by value and passed by reference, overloaded functions) Quiz 2
10	8/11	Functions (inline functions, recursively, function declaration)
11	15/11	Continuous exam 2
12	22/11	Arrays (one dimensional)
13	29/11	Arrays (two dimensional)
14	6/12	Quiz 3
15	13/12	pointers