



UNIVERSITI TEKNOLOGI MARA

CSC425: INTRODUCTION TO COMPUTER PROGRAMMING

Course Name (English)	INTRODUCTION TO COMPUTER PROGRAMMING APPROVED
Course Code	CSC425
MQF Credit	3
Course Description	The course is intended to introduce students to the steps in problem solving. Student will study the basic concepts of structured programming to understand the software development and programming process. The aim is to produce students who understand the fundamental ideas of computer programming and algorithms and able to implement the problem solution using C++ programming language.
Transferable Skills	Demonstrate ability to analyse issues/problems from multiple angles and make suggestions.
Teaching Methodologies	Lectures, Lab Work
CLO	CLO1 Demonstrate the basic concepts in computer programming. CLO2 Construct simple computer programs using structured approach. CLO3 Formulate autonomous learning related to problem solving tasks.
Pre-Requisite Courses	No course recommendations
Topics	
1. Introduction to Programming Language 1.1) Brief History of C++ 1.2) Preparation for programming 1.3) Program Development Life Cycle	
2. Component of a Programming Language 2.1) Identifier, variable, constant, statement 2.2) Standard data type (int, float, double, char) 2.3) Input/output statement 2.4) C++ block structure 2.5) Arithmetic expressions 2.6) Operators - Unary operator ++, --	
3. Control structure 3.1) Concept 3.2) Selection : 3.3) .if statement 3.4) .if..else statement 3.5) .nested if 3.6) Repetition : 3.7) .for statement 3.8) .while statement 3.9) .do..while statement 3.10) .Nested loops	
4. Functions 4.1) Introduction to function 4.2) Predefined functions: 4.3) .sqrt(), .abs(), .pow(), .setw(), .setprecision() 4.4) User-defined functions 4.5) Function without parameter 4.6) Function with parameter: 4.7) .Pass by value 4.8) .Pass by reference 4.9) Function with return value	

5. Arrays

5.1) Introduction to one dimensional array

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	4 Lab assignments	20%	CLO2
	Group Project	2 members per group	10%	CLO3
	Quiz	3 quizzes	10%	CLO1
	Test	Test 1	10%	CLO1
	Test	Test 2	10%	CLO1

Reading List	Recommended Text	D. S. Malik 2018, <i>C++ Programming: From Problem Analysis to Program Design</i> , 8th Edition Ed., Cengage Learning [ISBN: 1337102083]
	Reference Book Resources	<ul style="list-style-type: none"> • Cay S. Horstmann, Timothy A. Budd 2013, <i>Big C++ paperback</i>, 3rd Ed., Wiley New York [ISBN: 9781118674291] • Beryl Hoffman 2013, <i>C++ Programming for Beginners</i>, John Wiley & Sons, Inc • Bjarne Stroustrup 2014, <i>Programming: Principles and Practice Using C++</i>, 2nd Ed., 25, Amazon Ltd USA [ISBN: 13: 978-03219] • Deitel & Deitel 2016, <i>C++: How to Program</i>, 10th Edition Ed., Pearson Education [ISBN: 978013444823]
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	