FAKULTI TEKNOLOGI DAN KEJURUTERAAN

PROGRAM	**Diploma in Information Technology (System Support)**
COURSE NAME	**Computer Programming**
COURSE CODE	**DTC 1013**
CREDIT HOUR	**3**
SYNOPSIS	This course focuses on problem solving and programming techniques. Among the problem solving technique is to design algorithms using pseudo code or flow chart. Topics include detailed concept of data representation, data constants and variables, arithmetic expressions and assignment statements, problem solving with the structure and repeat options. Exposure will be given for Object Oriented Programming (OOP).
COURSE STRUCTURE	
CHAPTER	**TOPICS**
1	**Topic 1: Problem Solving** 1.1 Software Development Method 1.2 Problem Specifications and Requirement 1.3 Problem Analysis 1.4 Algorithm Design 1.4.1 Pseudocode 1.4.2 Flow Chart 1.5 Implementation Or Execute Algorithm 1.6 Testing And Program validation that have been done, Documentation

2	**Topic 2: Basics Of C++** 2.1 Simple coding 2.1.1 Comment 2.1.2 Command 2.1.3 Processor 2.1.4 Function 2.1.5 Variable 2.1.6 Keyword 2.1.7 Input / Output 2.1.8 Statement 2.1.9 Assignment 2.1.10 Statement 2.1.11 End Statement 2.2 Set script and token 2.2.1 Keyword Reserved Word 2.2.2 Identifiers 2.2.3 Constants 2.2.4 Literal String 2.2.5 Punctuator 2.2.6 Operator 2.3 Types Of Data andTypes Of Declaration 2.3.1 Integer 2.3.2 Char 2.3.3 Double2.3.4 float 2.4 Compiling and Programming 2.4.1 Syntax Error 2.4.2 Runtime Error 2.4.3 Logic Error
3	**Topic 3: Arithmetic Calculation** 3.1 Arithmetic Operator 3.2 Arithmetic Expressions and Primacy Of The Operator 3.3 Increase and decrease operator 3.4 Handling ++ and – 3.5 Assignment Operator Compound + =, ¬¬–=, *=,%= 3.6 Cast Operator 3.7 Relation Operator ==, !=, <,>,<=,>= 3.8 Logical Operator &&,||,!

4	**Topic 4: Selection Structure and Repetition Structure** 4.1 if Statement 4.1.1 One-way Selection Statement 4.1.3 Two-ways Selection statement 4.1.3 Multilateral Selection Statement 4.1.4 Nested Selection Statement 4.2 Expressions Operator 4.3 Break and Switch statement 4.4 Loop control – loop while, for, do-while 4.5 Break statementand continuein loop 4.6 Nested Loop
5	**Topic 5: Function** 5.1 Module Programming Elements 5.1.1 Function Definition 5.1.2 Function Calls 5.1.3 Prototype/Function Declaration 5.2 Variable Scope 5.2.1 Global Variable 5.2.2 Local Variable 5.2.3 Function withreturn 5.2.4 Function with parameter 5.2.5 Function with defined mathematics in C++
6	**Topic 6: Array** 6.1 Array 1-dimension Array 2-dimension
7	**Topic 7: Format Input and Output** 7.1 Manipulator 7.2 Printing usemanipulator 7.3 Input and output to/from file

8	**Topic 8: Introduction To Object Oriented Programming** 8.1 Structure 8.2 Object 8.3 Class 8.4 Constructor 8.5 Destructor 8.6 Inheritance 8.7 Polymorphism
References:	1. Harvey M. Deitel Paul Deitel, “C++ How To Program" Deitel 2017, 10th edition 2. Abdul Kadir, “C++ Programming A Practical Hand-On For Self Learning”, 2016, Penerbit UTEM 3. Noraniah Mohd Yassin, Zalmiah Zakaria. “Pengaturcaraan Berstruktur Menggunakan C++”. Penerbit UTM, 2016.