UNIVERSITI TEKNOLOGI MARA

CSC301: VISUAL PROGRAMMING

Course Name (English)	VISUAL PROGRAMMING `APPROVED`
Course Code	CSC301

MQF Credit	3

Course Description	This course covers an introduction to Visual Basic (VB) software package. Visual Basic is used to design windows applications. VB codes and experiment will be introduced during the design phase of windows applications. The aim of this course is to enable students to develop visual application, become familiar with visual development environment and use its facilities to build the applications

Transferable Skills	Students will be able to describe the process of visual programming design and development, explain the event-driven programming and able to became a good programmer related to visual and database programming skills as well as related to solving techniques and structured programming.

Teaching Methodologies	Lectures, Lab Work, Tutorial

CLO		
	CLO1	Explain the concepts of objects, properties and methods of visual programming
	CLO2	Manipulate the principles, methods and technique in modules construction.
	CLO3	Discuss problem solving methodology and implementation of data management techniques in programming language.

Pre-Requisite Courses	No course recommendations

Topics

1. Introduction to Visual Basic
1.1) Describe the three steps for writing a visual basic project
1.2) Write, run, save, print and modify VB project
1.3) Identity compile errors, run-time errors and logic errors
1.4) Use text box, frames, check boxes, option buttons, images, shapes and lines.

2. Variable, Constants and Calculations
2.1) Distinguish between variables, constant and controls
2.2) Differentiate among the various data data type
2.3) Format values for output using the formatting functions

3. Decisions and Conditions
3.1) Use block IF and nested IF to control flow of logic
3.2) Call event procedures from other procedures
3.3) Create message box to display error conditions
3.4) Debug projects using breakpoints, stepping program execution and displaying intermediate results

4. Menus, Functions and Subroutines ,Multiple forms
4.1) Create menus and submenus for program control.
4.2) Display and use the windows common dialog boxes
4.3) Write reusable code in subroutines and function procedures and call the procedures/function from other locations.
4.4) Create a project with multiple forms, use the show and hide methods to display the hide forms.
4.5) Differentiate between variables that are global to project and those visible only to a form.

5. Lists, Loops and Printing
5.1) Create and use list boxes and combo boxes
5.2) Use DO/LOOPS and FOR/NEXT statements to iterate through a loop
5.3) Use the string functions Left, Right and Mid refer to part of a string
5.4) Use Len functions to count the number of characters in a string
5.5) Using the Print method

6. Arrays
6.1) Set up and use a control array
6.2) Code selection logic using a Select-Case statement
6.3) Establish and array to variables and refer to individual elements in the array with variable subscripts
6.4) Use the For Each/Next to traverse the array
6.5) Store the data in multidimensional array

7. Data Files
7.1) Creating sequential files
7.2) Using Sequential files
7.3) Random data files

8. Accessing Database
8.1) Visual basic and Database File
8.2) Navigating the Database in code
8.3) Using list boxes and combo boxes
8.4) Updating database file

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Group Project	REPORT PROJECT	20%	CLO3
	Group Project	PRESENTATION PROJECT	20%	CLO3
	Lab Exercise	MINIMUM 2 LAB ASSIGNMENT-INDIVIDUAL	10%	CLO2
	Test	TEST 1	5%	CLO1
	Test	TEST 2	5%	CLO1

Reading List	Recommended Text	Corinne Hoisington 2017, *Microsoft Visual Basic 2017 for Windows, Web, and Database Applications: Comprehensive*, Cengage Learning
	Reference Book Resources	Diane Zak 2017, *Programming with Microsoft Visual Basic 2017*, 8 Ed., Cencage Learning
		Mike Mc Grath 2016, *Visual Basic in easy steps*, 4 Ed., Easy Steps Limited
		Corinne Hoisington 2015, *Microsoft Visual Basic 2015 for Windows, Web, Windows Store, and Database Applications: Comprehensive*, Cencage Learning
		James Foxall 2015, *Visual Basic 2015 in 24 Hours, Sams Teach Yourself*, Sams Publishing
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	