QF05/0408-4.0 E	Course Plan for Bachelor program - Study Plan Development and Updating Procedures/ Management Information Systems Department

Study plan No.	2021/2022		**University Specialization**	MIS	
Course No.	0506336		**Course name**	Various Programming Languages	
Credit Hours	3		**Prerequisite/ Co-requisite**	0506335	
Course type	☐ MANDATORY UNIVERSITY REQUIREMENT	☐ UNIVERSITY ELECTIVE REQUIREMENTS	☐ FACULTY MANDATORY REQUIREMENT	☐ Support course family requirements	✓Mandatory requirements ☐ Elective requirements
Teaching style	☐ **Full online learning**		☐ **Blended learning**		✓**Traditional learning**
Teaching model	☐ **1 Synchronous: 1 asynchronous**		☐ **1 face to face : 1 asynchronous**		✓**2 Traditional**

Faculty member and study divisions' information (to be filled in each semester by the subject instructor)

Name	Academic rank	Office No.	Phone No.	E-mail	
Division number	**Time**	**Place**	**Number of students**	**Teaching style**	**Approved model**

Brief description

Advanced visual basic provides an introduction to event driven programming in windows environment using visual basic. Further applications of programming techniques are provided. The student will develop well documented programs containing complex data structures and develop graphical user interface.

Learning resources

Course book information (Title, author, date of issue, publisher ... etc)	Visual Basic.net how to program, H.M. Deitel, P. J. Deitel and T. R. Nieto, Prentice Hall, 2011.			
Supportive learning resources (Books, databases, periodicals, software, applications, others)	Programming Visual Basic. Net, D. Grundgeiger, O'Reilly, 2002			
Supporting websites				
The physical environment for teaching	☐ Class room	✓labs	☐ Virtual educational platform	☐ Others
Necessary equipment and software	Microsoft Visual C# 2010 Express			
Supporting people with special needs				
For technical support				

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Course learning outcomes (S= *Skills, C= Competences K= Knowledge,)*

No.	Course learning outcomes	The associated program learning output code
	Knowledge	
K1	Demonstrate an understanding of the programming concept.	**MK2**
K2	Analyze the basic structure of a Visual basic application and be able to document, debug, compile, and run a simple application.	**MK3**
K3	Defining the ways to create, name, and assign values to variables.	**MK2**
K4	Defining the ways to create, initialize, and destroy objects in Visual basic	**MK1**
	Skills	
S1	Explaining how to build new Windows Forms Application.	**MS2**
S2	Defining operators, use delegates, and add event specifications.	**MS1**
S3	Declaring Statements and Exceptions	**MS1**
S4	Demonstrate Repeating Instructions	**MS2**
	Competences	
C1	Knowing the Windows Forms Application.	**MC2**
C2	Knowing the Visual basic instructions.	**MC2**
C3	Knowing the fundamentals of the Visual basic programming language.	**MC2**

Mechanisms for direct evaluation of learning outcomes

Type of assessment / learning style	Fully electronic learning	Blended learning	Traditional Learning (Theory Learning)	Traditional Learning (Practical Learning)
Midterm exam		**30%**		
Participation / practical applications		**0**		
Asynchronous interactive activities		**30%**		
Final exam		**40%**		

Note 1: Asynchronous interactive activities are activities, tasks, projects, assignments, research, studies, projects, work within student groups ... etc, which the student carries out on his own, through the virtual platform without a direct encounter with the subject teacher.

Note 2: According to the Regulations of granting Master's degree at Al-Zaytoonah University of Jordan, 40% of final evaluation goes for the final exam, and 60% for the semester work (examinations, reports, research or any scientific activity assigned to the student).

Schedule of simultaneous / face-to-face encounters and their topics

Week	Subject	learning style*	Reference **
1	**The .NET Framework** ▪ Overview of the .NET Framework and Common Language Runtime ▪ Class Library/API ▪ Assemblies ▪ What's new in the Visual Basic Language	Lecture	

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2	**The Visual Studio .NET IDE** • Creating a new Visual Basic project and choices of projects • Development Environment windows • Using controls from the Toolbox • Using the MSDN Library Help Files	Lecture	
3	**Integrated development environment** • Project window. • Tool box. • Forms. Events. Methods. • Menu bar& tool bar •	Lecture	
4	**Fundamentals of Visual Basic Programming** • Program Structure • Namespaces • Data Types • Variables	Lecture	
5	**Fundamentals of Visual Basic Programming** • Conversions • Operators and Expressions • Console I/O	Lecture	
6	**Control Structures** • If Statement • Select Case Statement • Do/Loop Statement • For/Next Statement • Exit and Continue	Lecture	
7	**Procedures** • Subroutines • Functions • Pass-by-value Versus Pass-by-reference • Access modifiers • Overloading • Optional Parameters	Lecture	
8	**Advanced Data Types** • Arrays • Enumerations • Structures	Lecture	
9	**Object-Oriented Programming** • Object-Oriented Concepts • Defining Classes • Methods and Properties • Shared Data and Methods • Constructors	Lecture	

10	**Inheritance** • Inheritance • Controlling Base Class Construction • Access Control • Polymorphism • Events • Abstract and Not Inheritable Classes • Type Conversion in Inheritance	Lecture	
11	**Interfaces and Collections** • Interface Fundamentals • Programming with Interfaces • Using Interfaces at Runtime • Resolving Ambiguities • Collections • Generic Types • Type-Safe Collections	Lecture	
12	**Windows Forms Controls** • Buttons, Labels and Textboxes • Radio Buttons and Group Boxes • Check Boxes • List Boxes and Combo Boxes • Scroll Bar • Timer Control • Flexible Event Handling	Lecture	
13	**User Interface Features** • Dialog Boxes • Menus • Files	Lecture	
14	**Database Programming** • ADO.NET • .NET Data Providers • Using Data Readers • Using Data Sets • .NET 2.0 Data Binding	Lecture	
15	**New Features in Visual Basic** • Local Type Inference • Object Initializers • Array Initializers • Anonymous Types • Partial Methods • Extension Methods • Lambda Expressions • Query Keywords	Lecture	
16	Project building	Lecture	

*** Learning styles: Lecture, flipped learning, learning through projects, learning through problem solving, participatory learning ... etc.**

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**** Reference: Pages in a book, database, recorded lecture, content on the e-learning platform, video, website ... etc.**

Schedule of asynchronous interactive activities (in the case of e-learning and blended learning)

Week	Task / activity	Reference	Expected results
1	Knowing how to deal with Microsoft Visual basic.		
2	Build Windows forms application.		
3	Using Built-In Data Types		
4	Creating User-Defined Data Types		
5	Converting Data Types		
6	Using Selection Statements		
7	Using Selection Statements		
8	Using Iteration Statements		
9	Using Iteration Statements		
10	Using Jump Statements		
11	Using Methods		
12	Using Parameters		
13	Creating Arrays		
14	Using Arrays		
15	Project/case building		
16	Project/case building		