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.	0506335		**Course name**	Programming Basics	
Credit Hours	3		**Prerequisite/ Co-requisite**	-	
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

This course provides an introduction to scientific programming using C# programming language. Students will analyze a wide variety of scientific & business problems, construct appropriate C# programs for solving these problems, compile & debug the problems & running the code.

Learning resources

Course book information (Title, author, date of issue, publisher ... etc.)	C# for programmers, Paul Deitel, Harvey Deitel, 6th edition, Prentice Hall, 2016.			
Supportive learning resources (Books, databases, periodicals, software, applications, others)	1- Visual C# how to program, H.M. Deitel, P. J. Deitel, J. Listfield, T. R. Nieto, C. Yaeger, and M. Zlatkina, Prentice Hall, 2011. 2- Building.Net Applications, Programming C#, J. Liberty, 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				

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

No.	Course learning outcomes	The associated program learning output code
	Knowledge	
K1	Introduce and List the major elements of the .NET Framework and explain how C# fits into the .NET Platform.	**MK1**
K2	Analyze the basic structure of a C# application and be able to document, debug, compile, and run a simple application.	**MK2**
K3	Defining the ways to create, name, and assign values to variables.	**MK3**
K4	Defining the ways to Create, initialize, and destroy objects in a C# application	**MK1**
	Skills	
S1	Explaining how to build new C# classes from existing classes.	**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 C# instructions.	**MC2**
C2	Knowing the C# processes.	**MC2**
C3	Knowing the fundamentals of the C# 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	**Overview of the Microsoft .NET Platform** Introduction to the .NET Platform Overview of the .NET Framework Benefits of the .NET Framework The .NET Framework Components Languages in the .NET Framework	Lecture	44-33
2	**Overview of C#** Structure of a C# Program Basic Input / Output Operations Recommended Practices Compiling, Running, and Debugging	Lecture	80-59
3	**Using Value-Type Variables** Common Type System Naming Variables Using Built-In Data Types Creating User-Defined Data Types Converting Data Types	Lecture	638-632 و95-75
4	**Statements and Exceptions** Introduction to Statements Using Selection Statements Using Iteration Statements Using Jump Statements Handling Basic Exceptions Raising Exceptions	Lecture	124-95
5	**Methods and Parameters** Using Methods Using Parameters Using Overloaded Methods	Lecture	223-178
6	**Arrays** Overview of Arrays Creating Arrays Using Arrays	Lecture	250-236
7	**Essentials of Object-Oriented Programming** Classes and Objects Using Encapsulation C# and Object Orientation Defining Object-Oriented Systems	Lecture	333-280
8	**Using Reference-Type Variables** Using Reference-Type Variables Using Common Reference Types The Object Hierarchy Namespaces in the .NET Framework Data Conversions	Lecture	272-253
9	**Creating and Destroying Objects** Using Constructors Initializing Data Objects and Memory Resource Managements	Lecture	391-382 و347-343
10	**Inheritance in C#** Deriving Classes Implementing Methods Using Sealed Classes Using Interfaces Using Abstract Classes	Lecture	377-242
11	**Aggregation, Namespaces, and Advanced Scope**	Lecture	295-285

	Using Internal Classes, Methods, and Data Using Aggregation Using Namespaces Using Modules and Assemblies		
12	**Operators and Events** Introduction to Operators Operator Overloading Creating and Using Delegates Defining and Using Events	Lecture	484-426
13	**Properties and Indexers** Using Properties Using Indexers	Lecture	1484 و1480 و230
14	**Attributes** Overview of Attributes Defining Custom Attributes Retrieving Attribute Values	Lecture	1433 و125 و1381 و843
15	Project/case building	Lecture	
16	Project/case building	Lecture	

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

**** 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 C#.		
2	Write a C# program to input multiple operations		
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		