



Jordan University of Science and Technology
Faculty of Computer & Information Technology
Software Engineering Department

SE310 Visual Programming
Second Semester 2022-2023

Course Catalog
3 Credit Hours. This course describes the environment of visual programming languages and allows students to build a high quality visual application. This course covers the main Object Oriented programming concepts such as: classes, objects, properties, attributes, encapsulation, data abstraction, inheritance, abstract classes, interfaces, and polymorphism. The foundations of user interface design and development are covered with the emphasis on developing usable interfaces, using main programming concepts including using various control structures and different data structures to develop a high-quality software systems. This course also teaches the students how to query data from various data sources using the LINQ query language. Finally, the exception handling techniques and string manipulations are discussed.

Text Book	
Title	Visual C# 2012 How to Program
Author(s)	Deitel and Deitel
Edition	5th Edition
Short Name	Book1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Book2	Essential C# 6.0	Mark Michaelis	4th Edition	
Online Tutorial	Introduction to C# ["Online]	Microsoft	1st Edition	

Instructor	
Name	Dr. Mahmoud Hammad
Office Location	A1 L-3
Office Hours	
Email	m-hammad@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Mon : 10:00 - 11:30 Room: A2122

Prerequisites		
Line Number	Course Name	Prerequisite Type
1732112	CS211 Data Structures	Prerequisite / Study
1762100	SE210 Java Programming	Prerequisite / Pass

Tentative List of Topics Covered		
Weeks	Topic	References
Weeks 1, 2	GUI Concepts Part I and II (Online Labs), Introduction to the Visual C# 2010, introduction to C# applications, Introduction to classes and objects. Control Statements: Part I & Part II, Methods: A deeper look	ch 1,2,3,4,5,6, 14, 15 From Book1
Weeks 5, 6	Arrays	ch 8 From Book1
Weeks 7, 8	Generic Data Collections	ch9 From Book1
Weeks 3, 4	Classes and Objects	ch 7, ch 10 From Book1
Week 11	Object-Oriented Programming: Inheritance	ch 11 From Book1
Week 13	Polymorphism, Interface & Overloading	ch 12 From Book1
Week 14	Exception Handling	ch 13 From Book1
Week 15	Strings and StringBuilder, Mutability	ch 16,17 From Book1

Weeks 9, 10	LINQ Queries	ch 9, 18 From Book1
Week 12	Abstract classes	Ch 12 From Book1

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
The student will be able to design and develop basic console based C#.NET applications using different control structures and data structure such as arrays. [1C5]	20%	HWs, Final, Term project, Midterm, Quizzes
The student will be able to demonstrate and use Object Oriented Programming features such as Encapsulation, Inheritance, Polymorphism, Abstraction, interfaces and operator overloading. [1C4]	20%	HWs, Final, Midterm, Quizzes
The student will be able to use various visual components and controls (GUI Interface) [1C16]	20%	HWs, Term project
The student will be able to recognize different types of data structures such as lists and the ability of applying LINQ statements on such types of data structures. [1C10]	20%	Final, Term project, Midterm, Quizzes
The student will be able to apply string manipulation, file operations and exception handling mechanisms within .NET application environment. [1C14]	20%	Final, Term project, Quizzes

Relationship to Program Student Outcomes (Out of 100%)																									
C	H	SM1p	SM2p	SM3p	EA1p	EA2p	EA3p	EA4p	D1p	D2p	D3p	D4p	D5p	D6p	ET1p	ET2p	ET3p	ET4p	ET5p	ET6p	EP1p	EP2p	EP3p	EP4p	EP5p

Evaluation	
Assessment Tool	Weight
HWs	15%
Final	50%
Term project	15%
Midterm	15%
Quizzes	5%

Policy	
Exams	* The format for the exams is generally (but NOT always) as follows: Write programs, Multiple-choice, and Find the output. * Makeup exam should not be given unless there is a valid excuse
Attendance	* If you miss a class, it is your responsibility to find out about any announcements or assignments you may have missed. * University policies will be applied regarding attendance.
Term Project	You must have a clear contribution in the term project if the term project is a group work, otherwise you have to implement it all by yourself. You must discuss the term project including its code. In the distance education, you must open the camera while discussing the term project.
Quizzes	Expect a pop-up quiz every week and be ready for it.
Assignments	Programming assignments are designed to help you understand the C# programming language and apply the GUI concepts.
Communications	You are welcome to send me messages using the elearning systems or email me to my JUST email address from your JUST email address. Social media messages and chats are not allowed.

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