Visual Programming for Software Engineering (2010031274)

Second Semester 2021/2022

COURSE INFORMATION	
Course Name: Visual Programming for Software Engineering **Semester:** Second Semester 2021/2022 **Department:** Department of Software Engineering **Faculty:** Prince Al-Hussein Bin Abdullah II Faculty for Information Technology	**Course Code: 2010031437** **Section:** Compulsory **Core Curriculum**:
Day(s) and Time(s): Sunday, Thursday, Tuesday: 9:00-10:00 Sunday, Thursday, Tuesday: 11:00-12:00 **Classroom:** Session 1: IT 210, Session 3: H.B 203	**Credit Hours:** 3 **Prerequisites**: 1910011110 Object Oriented Programming (1)

COURSE DESCRIPTION

This course aims to introduce the students who have built a solid background in console systems to the concepts of Visual/GUI design using structured and OO programming skills acquired in previous courses. Topics include Windows Forms and Controls, Event–Driven Programming. The course also includes a design project, which brings together students coding, and user–interface design principles. After completing this course, the students are ready to undertake professional projects with added business value for clients within a Software Engineering or Systems ..Analysis context

DELIVERY METHODS

The course will be delivered through a combination of active learning strategies. These will include:

- PowerPoint lectures and active classroom based discussion
- Video lectures
- E-learning resources: e-reading assignments and practice quizzes through Model and Microsoft Team

FACULTY INFORMATION

Name	**Maryam Alzawahra**
Academic Title:	**Tutor**
Office Location:	**IT 250**
Telephone Number:	

Email Address:	**Maryam_alz@hu.edu.jo**
Office Hours:	Sunday 10:00-11:00 Thursday 10:00-11:00 Tuesday 10:00-11:00 *Please send an e-mail (Maryam_alz@hu.edu.jo) to meet at any other time.*

REFERENCES AND LEARNING RESOURCES

Required Textbook:

- 1. Visual C#: how to program 2017, 6th Edition. Paul Deitel - Harvey Deitel

Suggested Additional Resources:

- Essential C# 6.0, 4th Edition, by Mark Michaelis,2016.
- C# 2010 for Programmers, by Paul J. Deitel and Harvey M. Deitel. Deitel & Associates, Inc

STUDENT LEARNING OUTCOMES MATRIX*

Core Curriculum Learning Outcomes	Program Learning Outcomes	Course Objectives	Course Student Learning Outcomes	Assessment Method
	[EP 3] Ability to apply relevant practical and laboratory skills.	• Leaning basic controls to build GUI • Ability to connect application with database • Understands OOP concepts	• [CLO1] Recognize the basics of visual C# programming including variables, constants, declarations, data types, expressions, and event handling • [CLO2] Be able to apply control structure (Selection and Repetition) in designing applications • [CLO3] Use Methods and Arrays to implement applications • [CLO4] Learn the basic of building windows applications • [CLO5] Demonstrate the ability to use methods in program flow • [CLO6] Be able to Connect database with projects • [CLO7] Learn Object Oriented programming concepts	• Exams • Project
	[EP 6] Understanding of appropriate codes of practice and industry standards.		• [CLO6] Be able to Connect database with projects • [CLO7] Learn Object Oriented programming concepts	• Exams • Project

	[D4] Apply advanced problem-solving skills, technical knowledge and understanding, to establish rigorous and creative solutions that are fit for purpose for all aspects of the problem including production, operation, maintenance and disposal. and quantify the effect of this on the design.		• [CLO4] Learn the basic of building windows applications	• Exams • Project

ACADEMIC SUPPORT

It is The Hashemite University policy to provide educational opportunities that ensure fair, appropriate and reasonable accommodation to students who have disabilities that may affect their ability to participate in course activities or meet course requirements. Students with disabilities are encouraged to contact their Instructor to ensure that their individual needs are met. The University through its Special Need section will exert all efforts to accommodate for individual's needs.

Special Needs Section:
Tel:
Location:
Email:

COURSE REGULATIONS

Participation

Class participation and attendance are important elements of every student's learning experience at The Hashemite University, and the student is expected to attend all classes. A student should not miss more than 15% of the classes during a semester. *Those exceeding this limit of 15% will receive a failing grade regardless of their performance*. It is a student's responsibility to monitor the frequency of their own absences. **Attendance record begins on the first day of class irrespective of the period allotted to drop/add and late registration. It is a student's responsibility to sign-in; failure to do so will result in a non-attendance being recorded.**

In exceptional cases, the student, with the instructor's prior permission, could be exempted from attending a class provided that the number of such occasions does not exceed the limit allowed by the University. The instructor will determine the acceptability of an absence for being absent. A student who misses more than 25% of classes and has a valid excuse for being absent will be allowed to withdraw from the course.

Plagiarism

Plagiarism is considered a serious academic offence and can result in your work losing marks or

being failed. HU expects its students to adopt and abide by the highest standards of conduct in their interaction with their professors, peers, and the wider University community. As such, a student is expected not to engage in behaviours that compromise his/her own integrity as well as that of the Hashemite University.
Plagiarism includes the following examples and it applies to all student assignments or submitted work:

- **Use of the work, ideas, images or words of someone else without his/her permission or reference to them.**
- **Use of someone else's wording, name, phrase, sentence, paragraph or essay without using quotation marks.**
- **Misrepresentation of the sources that were used.**

The instructor has the right to fail the coursework or deduct marks where plagiarism is detected

Late or Missed Assignments

In all cases of assessment, students who fails to attend an exam, class project or deliver a presentation on the scheduled date without prior permission, and/or are unable to provide a medical note, will automatically receive a fail grade for this part of the assessment.

- Submitting a term paper on time is a key part of the assessment process. Students who fail to submit their work by the deadline specified will automatically receive a 10% penalty. Assignments handed in more than 24 hours late will receive a further 10% penalty. Each subsequent 24 hours will result in a further 10% penalty.
- In cases where a student misses an assessment on account of a medical reason or with prior permission; in line with University regulations an incomplete grade for the specific assessment will be awarded and an alternative assessment or extension can be arranged.

Student Complaints Policy

Students at The Hashemite University have the right to pursue complaints related to faculty, staff, and other students. The nature of the complaints may be either academic or non-academic. For more information about the policy and processes related to this policy, you may refer to the students' handbook.

COURSE ASSESSMENT

Course Calendar and Assessment

Students will be graded through the following means of assessment and their final grade will be calculated from the forms of assessment as listed below with their grade weighting taken into account. The criteria for grading are listed at the end of the syllabus

Assessment	Grade Weighting	Deadline Assessment

Mid Exam	40%	
Project	20 %	
Final Exam	40%	

Description of Exams

Test questions will predominately come from material presented in the lectures. Semester exams will be conducted during the regularly scheduled lecture period. Exam will consist of a combination of multiple choice, short answer, writing code or descriptive questions.

No make-up exams, homework or quizzes will be given. Only documented absences will be considered as per HU guidelines.

Grades are not negotiable and are awarded according to the following criteria*:

Letter Grade	Description	Grade Points
A+	Excellent	4.00
A		3.75
A-		3.50
B+	Very Good	3.25
B		3.00
B-		2.75
C+	Good	2.50
C		2.25
C-		2.00
D+	Pass	1.75
D	Pass	1.50
F	Fail	0.00
I	Incomplete	-

WEEKLY LECTURE SCHEDULE AND CONTENT DISTRIBUTION		
Topic	**Chapter in Text**	**Week #**
Introduction to C# 1.1 C# 1.2 Other High-level Languages 1.3 Introduction to Microsoft .NET 1.4 .NET Framework and the Common Language Runtim	1,2 and 3	Week1 (3 Lectures)

2.1 Visual Studio .NET Integrated Development Environment (IDE) Overview 2.2 Visual Studio .NET Windows 2.3 Decision Making: Equality and Relational Operators		
Control Structures: Part 1 5.1 if Selection Structure 5.2 while Repetition Structure 5.3 Formulating Algorithms: Case Study 1 (Counter-Controlled Repetition 5.4 Case Study 2 (Sentinel-Controlled Repetition)	5	Week2 (3 Lectures)
Graphical User Interface Concepts: Part 1 14.1 Windows Forms 14.2 Labels, TextBoxes and Button 14.3 GroupBoxes and Panel 14.4 CheckBoxes and RadioButtons 14.5 PictureBoxes	14	Week 3,4 (6 Lectures)
Control Structures: Part 2 6.1 for Repetition Structure 6.2 Switch Multiple-Selection Structure 6.3 do/while Repetition Structure 6.5 Statements break and continue 6.6 Logical and Conditional Operators	6	Week 5 (3 Lectures)
Graphical User Interface Concepts: Part 2 15.1 Menus 15.2 LinkLabels	15	Week 6 (3 Lectures)

15.3 ListBoxes and CheckedListBoxes 15.4 ComboBoxes 15.5 ListViews		
Database, SQL and ADO .NET 22.1 Structured Query Language (SQL) 22.2 ADO .NET Object Model 22.3 Programming with ADO.NET: Modifying a DBMS	22	Week 7 (3 Lectures)
Arrays 8.1 Declaring and Allocating Array 8.2 Examples Using Arrays 8.3 Passing Arrays to Methods 8.4 Passing Arrays by Value and by Reference	8	Week 8 (3 Lectures)
Object-Based Programming 10.1 Initializing Class Objects: Constructors 10.2 Using Overloaded Constructors 10.3 Properties 10.4 Using the this Reference 10.5 Garbage Collection 10.6 static Class Members	10	Week 9,10 (6 Lectures)
Object-Oriented Programming: Inheritance 11.1 Base Classes and Derived Classes 11.2 protected and internal Members 11.3 Relationship between Base Classes and Derived Classes 11.4 Constructors and Destructors in Derived Classes 11.5 Software Engineering with Inheritance	11	Week 11,12 (6 Lectures)
Object-Oriented Programming: Polymorphism	12	Week 13,14 (6 Lectures)

12.1 Derived-Class-Object to Base-Class-Object Conversion 12.2 Polymorphism Examples 12.3 Abstract Classes and Method 12.4 Case Study: Inheriting Interface and Implementation		

ASSESSMENT RUBRICS

ASSESSMENT for the Project					
Criteria	**Quality**				**Total**
Report	Full with a good language, organization and proper citations	Full but with weak language and organization	Lot of missing things	Report is very poor and there is no much work on it	
	5	3	2	0	**/5**
Application	Complete application with fully connection with database	Weak in connection with database	Incomplete application	No or incorrect application	
	15	10	8	0	**/15**
Degree of difficulty	It can be considered as a good final project	It does not have enough functionality for a graduation project	Very little functionality with many major design issues	It can't be considered more than a course project not a graduation project	
					Total out of 20