



Course Specifications

Course Title:	Visual Programming
Course Code:	CSI311
Program:	Computer Science and Information Technology
Department:	Computer Science and Information.
College:	College of Science in Zulfi
Institution:	Majmaah University

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A. Course Identification

1. Credit hours: 3
2. Course type
a. University <input type="checkbox"/> College <input type="checkbox"/> Department <input checked="" type="checkbox"/> Others <input type="checkbox"/>
b. Required <input checked="" type="checkbox"/> Elective <input type="checkbox"/>
3. Level/year at which this course is offered: 5 th
4. Pre-requisites for this course (if any): Programming2 (CSI 221)
5. Co-requisites for this course (if any): None

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	42	70%
2	Blended	6	10%
3	E-learning	6	10%
4	Correspondence	0	0%
5	Other	6	10%

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	Lecture	30
2	Laboratory/Studio	20
3	Tutorial	10
4	Others (specify)	
	Total	60
Other Learning Hours*		
1	Study	10
2	Assignments	3
3	Library	2
4	Projects/Research Essays/Theses	1
5	Others (specify)	4
	Total	20

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

Quick review of the Internet and Internet programming concepts, Web Servers and Web Application Servers, Design Methodologies with concentration on Object-Oriented concepts, Client-Side Programming, Server-Side Programming, Active Server Pages, Database Connectivity to web applications, Adding Dynamic content to web applications, Programming Common Gateway Interfaces, Programming the User Interface for the web applications.

2. Course Main Objective

Quick review of the Internet and Internet programming concepts, Web Servers and Web Application Servers, Design Methodologies with concentration on Object-Oriented concepts, Client-Side Programming, Server-Side Programming, Active Server Pages, Database Connectivity to web applications, Adding Dynamic content to web applications, Programming Common Gateway Interfaces, Programming the User Interface for the web applications.

The main objectives are summarized as shown below:

1. Giving the students the insights of the Internet programming and how to design and implement complete applications over the web.
2. It covers the notions of Web servers and Web Application Servers, Design Methodologies with concentration on Object-Oriented concepts, Client-Side Programming, Server-Side Programming, Active Server Pages, Database Connectivity to web applications, Adding Dynamic content to web applications, Programming Common Gateway Interfaces, Programming the User Interface for the web applications.
3. It also concentrates on the usage of recent platforms used in developing web applications such as the .Net environment like C#, XML, and ASP.Net.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	Knowledge:	
1.1	Using C# data types, class libraries and control constructs.	k3
2	Skills :	
2.1	Implement C# classes, objects, and class relationships.	s3
2.2	Develop and write programs applying Object Oriented principles using C#.	s3
2.3	Create member functions using C# syntax and exception handling.	s2
2.4	Building C# classes and inheritance hierarchies	s2
3	Competence:	
3.1	Writing GUI applications using the drag-and-drop facilities.	c2
3.2	Writing and deploying components in an ASP.NET Web application	c2

C. Course Content

No	List of Topics	Contact Hours
1	Access and SQL – part I <ul style="list-style-type: none"> • Understanding Key Database Concepts • Creating an Access Database • Using Access and SQL to Create Database Tables • Manipulating Data Using SQL 	4

2	Access and SQL – part II <ul style="list-style-type: none"> Retrieving Specific Data Using the WHERE Clause Sorting DataGrouping Data Retrieving Data Using Advanced Techniques Retrieving Data from More Than One Table 	4
3	Object-Oriented Concepts and the Basics of C# - part I <ul style="list-style-type: none"> Writing a C# Program that Produces Output Compiling and Executing a Program from the Command Line Adding Comments to a Program Compiling and Executing a Program Using the Visual Studio IDE Using the System Namespace Declaring Variables Using the Standard Binary Arithmetic Operators 	4
4	Object-Oriented Concepts and the Basics of C# - part II <ul style="list-style-type: none"> Using Floating-Point Data Types Using the string Data Type to Accept Console Input Making Decisions Writing Methods Creating a MessageBox Adding Functionality to MessageBox Buttons 	4
5	Semantic Analysis: <ul style="list-style-type: none"> Data type as set of values with set of operations data types Type-checking models Semantic models of User defined types 	8
6	Methods in C# <ul style="list-style-type: none"> Writing methods with No Arguments and No Return Value Implementation Hiding and How to use Multiple Files Writing methods That Require a Single Argument Writing methods That Require a Multiple Arguments Writing methods That Return Values 	8
7	Classes in C# <ul style="list-style-type: none"> Understanding Class Concepts Creating a Class from Which Objects Can Be Instantiated Creating instance variables and methods Declaring Objects Compiling and Running a Program That Instantiates Class Objects Organizing Your Classes Using Public Fields and Private Methods Understanding Constructor Methods Understanding Destructor Methods 	4
8	Selection and Repetition <ul style="list-style-type: none"> Making Decisions Using the if Statement Making Decisions Using the if-else Statement Using Compound Expression in if Statement Making Decisions Using the switch Statement Using the Conditional Operator Using the NOT operator 	4

	<ul style="list-style-type: none"> Using the while Loop Using the for Loop Using the do Loop Using Nested Loop 	
9	Windows programming in C# - part I <ul style="list-style-type: none"> Creating a Form Creating a Form That Is the Main Window of a Program Placing a Button on a Window Using the Visual Studio IDE to Design a Form Understanding the Code Created by the IDE Adding Functionality to a Button on a Form Adding a Second Button to a Form 	4
10	Windows programming in C# - part II <ul style="list-style-type: none"> Using the Visual Studio Help Search Function Understanding Controls Creating a Form With Labels Setting a Label's Font Adding Color to a Form Using CheckBox and RadioButton Objects Adding a PictureBox to a Form 	8
11	ASP.Net - Part I <ul style="list-style-type: none"> Building Web Forms Using ASP.NET Writing Your First ASP.NET Page Processing Client Requests Exploring ASP.NET Server Controls Handling Control Events Using ASP.NET Server Controls to Create Web Forms 	8
Total		60

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge		
1.1	Using C# data types, class libraries and control constructs.	Lectures Lab demonstrations Case studies Individual presentations	Mid-terms exams Lab exam Homeworks Discussions Final exams
2.0	Skills		
2.1	Implement C# classes, objects, and class relationships.	Lectures Lab demonstrations Case studies Individual presentations	Mid-terms exams Lab exam Homeworks Discussions Final exams
2.2	Develop and write programs applying Object Oriented principles using C#.		
2.3	Create member functions using C# syntax and exception handling.		
2.4	Building C# classes and inheritance		

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	hierarchies		
3.0	Competence		
3.1	Writing GUI applications using the drag-and-drop facilities.	Small group discussion	Discussions Project
3.2	Writing and deploying components in an ASP.NET Web application	Whole group discussion Brainstorming Presentation	

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	First written mid-term exam	6	15%
2	Second written mid-term exam	12	15%
2	Presentation, class activities, and group discussion	Every week	10%
3	Homework assignments	After every chapter	10%
4	Practical exam	15	10%
5	Final written exam	16	40%

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

1. 6-office hours per week in the lecturer schedule.
2. The contact with students by e-mail , mobile, office telephone and website.

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	JOHN SHARP, 2015, “Microsoft Visual C# Step by Step”, ISBN: 978-1-5093-0104-1, Redmond, Washington 98052-6399, 8 th Edition 2015.
Essential References Materials	<ul style="list-style-type: none"> • ACM TRANSACTIONS ON INFORMATION SYSTEMS JOURNAL. • ENTERPRISE INFORMATION SYSTEMS JOURNAL. • EUROPEAN JOURNAL OF INFORMATION SYSTEMS JOURNAL.
Electronic Materials	<ul style="list-style-type: none"> • http://nptel.ac.in/courses.php?branch=Comp • https://www.coursera.org/
Other Learning Materials	Video and presentations that are available with the instructor.

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	<input type="checkbox"/> Class Rooms <input type="checkbox"/> Computer Labs <input type="checkbox"/> Library
Technology Resources (AV, data show, Smart Board, software, etc.)	Visual studio - PHP
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	None

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Students' evaluations.	Students	Indirect
Colleagues' evaluations.	Peer Reviewer	direct

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	DEPARTMENT COUNCIL
Reference No.	
Date	