Syrian Arab Republic		الجمهوريّة العربيّة السوريّة
Ministry of Higher Education		وزارة التعليم العالـــــي
Syrian Virtual University		الجامعة الافتراضيّة السوريّة

Course Description: Web Application Development and Design

1- Basic Information:

Course Name	Web Application Development and Design
Course ID	IWB202
Contact Hours (Registered Sessions)	
Contact Hours (Synchronized Sessions)	12
Mid Term Exam	1.5
Exam	1.5
Registered Sessions Work Load	
Synchronized Session Work Load	24
Credit Hours	

2- Pre-Requisites

Course	ID
E−commerce technologies	IWB101

3- Course General Objectives

Web Application Development and Design:
This course talks about methods and ways and techniques of developing Web applications by reviewing static web concept and dynamic web concept and the process of developing software works on client side and server side.
The course also talks about the relation of web application and Web servers and database management systems.
The Visual Studio .Net Development environment is used to build web applications depending on ASP.Net and JavaScript
At the end of this course, the student must be able to:
 1- Web application: Static and dynamic Web.
 2- Programming from client side.
 3- Programming from server side
 4- Use .Net developing environment and ASP .Net programming language.

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4- ILO – Intended Learning Objectives/Outcomes:

Intended Learning Objectives/Outcomes	Code
Learn the basics of XHTML	**ILO1**
Acquisition advanced skills XHTML	**ILO2**
Using Cascading Style Sheets CSS	**ILO3**
Learn the basics of JavaScript	**ILO4**
Learn interacting ways between JavaScript and HTML	**ILO5**
Create dynamic pages using Java Script	**ILO6**
Learn the basics of JQuery	**ILO7**
Using attributes and CSS in JQuery	**ILO8**
Acquisition skills in JQuery	**ILO9**
Learn the basics of ASP .Net 2013	**ILO10**
Learn state management	**ILO11**
Learn controls data binding	**ILO12**
Learn dealing ways with databases	**ILO13**
Learn dealing ways with databases Programmatically	**ILO14**
Learn how to create and use web service	**ILO15**
Learn the basics of XML	**ILO16**

5- Course Syllabus

- **Recorded sessions of multiple 1.5 hour and the sum of them of rank 18 hour At most.**

- **Recorded and synchronized sessions to cover subjects theoretically and practically**

- The practical section is related to the content of the theoretical section

ILO	Course Syllabus	RS	SS	Type	القسم العملي مع Additional

					Notes
ILO1	**XHTML basics** • Web and Internet basics • Basic tags • tables		1	☐ Tests ☐ exercises (TD) ☐ homework	Visual Studio 2013
ILO2	**Advanced skills XHTML** • Forms • HTML5		1	☐ Tests ☐ exercises (TD) ☐ homework	Visual Studio 2013
ILO3	**Cascading Style Sheets** • CSS • Fonts • Lists		1	☐ Tests ☐ exercises (TD) ☐ homework	Visual Studio 2013
ILO4	**JavaScript basics** • Control instructions • Arrays • Functions • Pattern Matching		2	☐ Tests ☐ exercises (TD) ☐ homework	Visual Studio 2013
ILO5	**Interact JavaScript and HTML** • Events • Input validate • Example		1	☐ Tests ☐ exercises (TD) ☐ homework	Visual Studio 2013
ILO6	**Dynamic Pages using Java Script** • Elements position • Dealing with Elements • Dynamic Content • Elements Movement		1	☐ Tests ☐ exercises (TD) ☐ homework	Visual Studio 2013
ILO7	**JQuery basics** • Selectors		1	☐ Tests ☐ exercises (TD) ☐ homework	Visual Studio 2013
ILO8	**Attributes and CSS JQuery** • Attributes • CSS		1	☐ Tests ☐ exercises (TD) ☐ homework	Visual Studio 2013
ILO9	**JQuery skills** • Dealing with Elements • Events • Ajax • Effects		1	☐ Tests ☐ exercises (TD) ☐ homework	Visual Studio 2013
ILO10	**ASP .Net 2013** • ASP.NET • HTML Controls		2	☐ Tests ☐ exercises (TD) ☐ homework	Visual Studio 2013

	• Web Controls • Validator				
ILO11	**State management** • View State • Session • Cookies		1	☐ Tests ☐ exercises (TD) ☐ homework	Visual Studio 2013
ILO12	**Controls data binding** • Binding multiple values		1	☐ Tests ☐ exercises (TD) ☐ Assessment	Visual Studio 2013
ILO13	**Dealing with databases** • Connect to database • View data in controls • Using data elements • Link query parameters with controls		1	☐ Tests ☐ exercises (TD) ☐ homework	Visual Studio 2013
ILO114	**Dealing with databases Programmatically** • Example • Repeater • Datasets		1	☐ Tests ☐ exercises (TD) ☐ homework	Visual Studio 2013
ILO15	**Web Service** • Create web service • Example • Example (using web service)		1	☐ Tests ☐ exercises (TD) ☐ homework	Visual Studio 2013
ILO16	**XML** • XML		1	☐ Tests ☐ exercises (TD) ☐ homework	Visual Studio 2013

6- Assessment Criteria:

ILO Code	ILO	Intended Results	Assessment Type				
			Interactive	Practice Work	Exams	ppt	Reports
ILO1	Learn the basics of XHTML		X	X	X		
ILO2	Acquisition advanced skills XHTML		X	X	X		
ILO3	Using Cascading Style Sheets CSS		X	X	X		
ILO4	Learn the basics of JavaScript		X	X	X		
ILO5	Learn interaction ways between JavaScript and HTML		X	X	X		
ILO6	Create dynamic pages using Java Script		X	X	X		
ILO7	Learn the basics of JQuery		X	X	X		
ILO8	Using attributes and CSS in JQuery		X	X	X		
ILO9	Acquisition skills in JQuery		X	X	X		
ILO10	Learn the basics of ASP .Net 2013		X	X	X		
ILO11	Learn state management		X	X	X		
ILO12	Learn controls data binding		X	X	X		
ILO13	Learn dealing ways with databases		X	X	X		
ILO14	Learn dealing ways with databases Programmatically		X	X	X		
ILO15	Learn how to create and use web service		X	X	X		
ILO16	Learn the basics of XML		X	X	X		

7- Practice Tools

Tool Name	Description
Visual Studio 2013	Integrated development environment from Microsoft.

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8- Main References

1- Visual C# 2012 How to Program, Paul Deitel - Harvey Deitel, 5th Edition, Prentice Hall, 2014

9- Additional References

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10- Contents :

(1) XHTML Basics	Internet and Web basics	Overview of the Internet What is Internet IP Addresses Domain Names Name Servers World Wide Web Web or Internet Web Browsers Web Server Apache IIS
	Basic tags in XHTML	Basic tags in XHTML HTML and XHTML history HTML and XHTML versions HTML and XHTML Syntax Standard Structure XHTML Text Markup Basics Paragraphs Validating XHTML documents Headings Block Quotations <em> tag Fonts Special Characters Horizontal ruler <Meta> tag Images Image Format <img> tag Hypertext Links Lists Unrated lists Ordered Lists Definition Lists
	Tables	<table> Cells span

		Alignment Spacing
(2) Advanced skills in XHTML	Forms	\<form\> tag \<input\> tag textbox password checkbox radio button submit button reset button \<select\> \<textarea\>

	HTML5	New Tags in HTML5
		  \<video\>
		  \<audio\>
		  \<svg\>
		HTML5 - Web Forms 2.0
		\<input\>
		  Date type
		  Number type
		  Email type
		  URL type
		\<output\>
		New Attributes
		  placeholder
		  autofocus
		  required

(3) Cascading Style Sheets	Cascading Style Sheets	Style Sheets Levels Selector Simple Selectors Contextual Selectors Class Selectors Generic Selectors id Selectors Property-Value
	Fonts	Font Properties Font Name Font Size Font Style Font Weight Font decoration

	List	List Properties
(4) JavaScript Basics	JavaScript Basics	JavaScript and object oriented languages general properties Identifiers key words Comments Instructions Types , Statements and Expressions Basic Types Numbers and Strings Others Types Variables Numeric Operation Math Number String concat Implicit conversion Explicit conversion String Typeof method Date Input and View window

	Control Statements	Logical expressions
		Primitive values
		Relational Expressions
		Compound Expressions
		Selection Statements
		    if
		    switch
		    While, For

	Arrays	Dealing with Arrays
	Functions	Functions
	Pattern Matching	Characters and special characters Position Change Pattern replace Example match split

(5) Interact between HTML and JavaScript	Access and change HTML elements using JavaSecript	Document Object Model (DOM) Using Elements Names getElementById getElementsByName
	Events	Body Events Button Events Text Box Events Focus Events
	Input Validating	Input Validating
	Example	Example
(6) Dynamic pages using Java Script	Elements Position	Absolute Relative Static Moving Elements
	Dealing with elements	Show and hide Elements Change Color and Fonts
	Dynamic Contact	z-index (x,y) mouse pointer Interact with mouse click
	Sort, Search and Replace	Sort Search Replaceا
	Elements Movement	Elements Movement
(7) JQuery Basics	JQuery Basics	Install Library Using JQuery JQuery Functions
	Selectors	Selectors Example : use tag selector Example : use class selector Example using *
(8) Attributes In JQuery	Attributes	dealing with Attributes Attribute value addClass Attributes method
	CSS	CSS Dealing with properties CSS

		Change Elements width and height
		JQuery CSS methods
(9) JQuery Skills	Dealing with Document Elements	Document Object Model (DOM) Replace Element Delete Element Add Element Elements Dealing methods
	Events	Elements Events Event Types Event Event Helper Methods Trigger Methods Binding Methods Search Properties Search Methods Events Dealing methods
	Ajax	Load Data Load method Send data to server Get Data JSON JQuery AJAX Functions JQuery AJAX Events
	Effects	Show and hide Elements Toggling the elements JQuery Effect Methods UI Library Based Effects
(10) ASP .Net 2013 Basics	ASP.NET	Common Language Runtime CLR .NET languages ASP.NET pages الكود الخلفي
	HTML Controls	HTML Controls ASP.NET Life Cycle Page-Level Events Control Events
	Web Controls	Web Controls Add web control by code Web Controls output Example
	Validator	Validator
(11)	View State	View State

State Management		
	Session	Session Tracking Session Variables
	Cookies	Cookies
(12) Controls data binding	Controls data binding	Data Binding One Value
	Multi Values	ArrayList Hashtable
(13) Dealing with databases	Connecting to database	Create database Data Controls SqlDataSource
	View data in Controls	Lists
	Using Data Elements	FormView GridView , DetailsView
	Link query parameters with controls	Link query parameters with controls
(14) Dealing with databases Programmatically	Dealing with databases Programmatically	SqlConnection SqlCommand SqlDataReader
	Example	Example
	Repeater	Repeater
	Datasets	SqlDataAdapter DataSet DataAdapter : Example
	Example	Example
(15) Web Service	Web Service	How Web Services work Web Services
	Create and Share Web Service	Share web service Create Web Service
	Example	Example

	Using Web Service Example	Using Web Service : Example
(16) Introduction to XML	XML	XSL
	Example	Example
	Datasets and XML	Datasets and XML