

Course Title: Net Centric Computing

Credit: 3

Course No: CSIT.415.1

Number of period per week: 3+3

Nature of the Course: Theory + Lab

Total hours: 45+45

Year: Fourth, Semester: Seventh

Level: B. Sc. CSIT

1. Course Introduction

This course is an introduction to ASP.Net Web Development using the C# programming language. Students will utilize ASP.NET to deliver dynamic content to a Web Application. Topics include Web Forms, User Controls, Server Controls, and Database Integration

2. Objectives

By the end of this course, students will be able to

- Explain the role of the Microsoft .NET Framework to ASP.NET
- Add server controls to an ASP.NET Web Form and Enhance functionality of ASP.NET server controls.
- Utilize validation controls to validate user input in an ASP.NET Web Form.
- Use Microsoft ADO.NET to access data in an ASP.NET Web application.
- Store application and session data using a variety of methods and Configure and deploy an ASP.NET Web application.

3. Specific Objectives and Contents

Specific Objectives	Contents
<ul style="list-style-type: none">• Explain ASP.net and .net framework• Discuss web servers used to execute ASP.net scripts	Unit I: ASP.net Overview (4 Hrs) <ul style="list-style-type: none">1.1. Asp.Net Introduction, How Asp.Net Works, Different Languages used in Asp.Net.1.2. Common Language Runtime (CLR), .NET Framework, Features of ASP.net1.3. Web Server, Web servers for ASP.net, Introduction of IIS and Visual Studio1.4. Review of HTML, CSS and Java Script, ASP.net vs PHP
<ul style="list-style-type: none">• Discuss syntax and semantics of C# programming language• Practice basic features like loops, selections, arrays, string etc in writing C# programs• Use object oriented features in writing C# programs• Demonstrate use of features like exception handling file handling in C#	Unit II: C# Programming Basics (8 hr) <ul style="list-style-type: none">2.1 C# Structural Elements: Looping and Conditional Constructs, Primitive types ,operators and expressions2.1 C# Object Based Elements: Class, Object, Message, State, Constructor, Garbage Collector, Static and Instance Members2.1 Object Composition: Arrays, Strings, Structures, Enumerations, Operator Overloading.2.1 Object Oriented Elements: Interface, Inheritance, Polymorphism, Abstract Classes2.1 Exception Handling: The try-catch construct, throw,

	<p>finally</p> <p>2.1 Input/Output: Console I/O, File I/O, Network I/O</p>
<ul style="list-style-type: none"> • Discuss different types of control available in ASP.net • Demonstrate the use of labeling and input controls • Use image controls to create better user interfaces • Create forms by using different controls 	<p>Unit III: ASP.net Standard Controls (8 hr)</p> <p>3.1. Basics of ASP.net Controls: HTML Server Controls, Web Server Controls, Validation Controls</p> <p>3.2. Displaying Information: Label Controls, Literal Controls, Bulleted List</p> <p>3.3. Input Control: Textbox controls, RadioButton and RadioButtonList Controls, CheckBox and CheckBoxList Controls, Button controls, LinkButton Control, ImageButton Control, Using Hyperlink Control, DropDownList, ListBox</p> <p>3.4. Displaying Images: Image Control, Image Map Control, Using Panel Control, Using Hyperlink Control</p>
<ul style="list-style-type: none"> • Discuss the use of validation controls • Use validation controls to validate forms • Create regular expressions to use them into Regular Expression Validator 	<p>Unit IV: Validation and Rich Controls (8 hr)</p> <p>4.1. Validation Controls: Required Field Validator Control, Regular Expression Validator Control, Compare Field Validator Control, Range Validator Control, Validation Summary Control, Custom Validator Control</p> <p>4.2. Rich Controls: Accepting File Uploads, Saving files to file system, Calendar Control, Displaying advertisements, Displaying Different Page view, Displaying a Tabbed Page View, Wizard Control</p>
<ul style="list-style-type: none"> • Connect ASP.net programs to databases • Demonstrate the execution of SQL statements embedded in ASP.net programs • Display data retrieved from database by using various controls 	<p>Unit V: Database Access and Display (8 Hrs)</p> <p>5.1. Database Access: Creating database Connections, Connecting to MSSQL Server and MS Access, Data Set & Data Table Features, Using inline SQL Statements, Using Stored Procedures, Executing select commands, SQL Transaction</p> <p>5.2. Displaying Data: Using Grid View Control, Repeater Control, Data List Control, Details View Control, Form View Control</p>
<ul style="list-style-type: none"> • Demonstrate the use of master pages in web page designing • Discuss concepts of page and state management • Exemplify the uses of navigation controls • Write programs to upload, 	<p>Unit VI: Advanced ASP.net Features (9 Hrs)</p> <p>6.1. Designing Websites with master pages: Creating master pages, Creating default contents, Nesting master pages, Registering master pages in web configuration</p> <p>6.2. Page & State Management, Overview of Events in Page</p> <p>6.3. Using Navigation Controls: Understanding Site Maps, Using the Sitemap Path Control, Formatting</p>

download files and send emails • Demonstrate the use of XML, web services and AJAX	the Sitemap Path Control, Using the Menu Control, Using Tree View Control 6.4. XML and Web Services and AJAX: Overview of XML, Creating /Reading/Deleting XML Files, Web Services, About Ajax, Setting up and implementing Ajax 6.5. FTP and Emails: Understanding FTP, Setting up FTP Server, Uploading and downloading FTP contents, Designing email panel, Sending Email, Sending auto emails, Deploying application on Web Server
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Evaluation System

Undergraduate Programs							
External Evaluation	Marks	Internal Evaluation	Weight age	Marks	Practical	Weight age	Mark
End semester examination	60	Assignments	20%	20	Practical Report copy	25%	20
(Details are given in the separate table at the end)		Quizzes	10%		Viva	25%	
		Attendance	20%		Practical Exam	50%	
		Internal Exams	50%				
Total External	60	Total Internal	100%	20		100%	20
Full Marks 60+20+20 = 100							

External evaluation

1. End semester examination:

It is a written examination at the end of the semester. The questions will be asked covering all the units of the course. The question model, full marks, time and others will be as per the following grid.

2. External Practical Evaluation:

After completing the end semester theoretical examination, practical examination will be held. External examiner will conduct the practical examination according to the above mentioned evaluation. There will be an internal examiner to assist the external examiner. Three hours time will be given for the practical examination. In this examination Students must demonstrate the knowledge of the subject matter.

Full Marks: 100, Pass Marks: 45, Time: 3 Hrs

Nature of question	Total questions to be asked	Total questions to be answered	Total marks	Weightage
Group A: multiple choice*	20	20	20×1 = 20	60%
Group B: Short answer type questions	7	6	6×8 = 48	60%
Group C: Long answer type questions	3	2	2×16 =32	60%
			100	100%

Each student must secure at least 50% marks in internal evaluation in order to appear in the end semester examination. Failed student will not be eligible to appear in the end semester examinations.

Internal evaluation

Assignment: Each student must submit the assignment individually. The stipulated time for submission of the assignment will be seriously taken.

Quizzes: Unannounced and announced quizzes/tests will be taken by the respective subject teachers. Such quizzes/tests will be conducted twice per semester. The students will be evaluated accordingly.

Attendance in class: Students should regularly attend and participate in class discussion. Eighty percent class attendance is mandatory for the students to enable them to appear in the end semester examination. Below 80% attendance in the class will signify NOT QUALIFIED (NQ) to attend the end semester examination.

Presentation: Students will be divided into groups and each group will be provided with a topic for presentation. It will be evaluated individually as well as group-wise. Individual students have to make presentations on the given topics.

Mid-term examination: It is a written examination and the questions will be asked covering all the topics in the session of the course.

Discussion and participation: Students will be evaluated on the basis of their active participation in the classroom discussions.

Instructional Techniques: All topics are discussed with emphasis on real-world application. List of instructional techniques is as follows:

- Lecture and Discussion
- Group work and Individual work
- Assignments
- Presentation by Students
- Quizzes
- Guest Lecture

Students are advised to attend all the classes and complete all the assignments within the specified time period. If a student does not attend the class (es), it is his/her sole responsibility to cover the topic(s) taught during that period. If a student fails to attend a formal exam/quiz/test, there won't be any provision for re-exam. Unless and until the student clears one semester he/she will not be allowed to study in the following semesters.

Laboratory Work

Student should write programs and prepare lab sheet for all of the units in the syllabus. Students should be able to write scripts ASP.net programs by using various concepts discussed in class. The lab work should be practiced for minimum of 3 lab hours per week.

Prescribed Text

- Bill Evjen, Scott Hanselman, Devin Rader, Professional ASP.NET 4 in C# and VB, Wrox, First Edition, 2010

References

- Imar Spaanjaars, Beginning ASP.NET 4.5 in C# and VB, Wrox, 2012,
- Matthew MacDonald, Beginning ASP.NET 4.5 in C#, Apress, 2012