COURSE SYLLABUS

Course Title: Active Server Pages

Course Number: CPT 239

Lecture hours per week: 3.0   **Lab/Clinic Hours:**   **Semester credit hours:** 3.0

Prerequisite: CPT 186

Catalog Course Description: This course is a study of Active Server Pages (ASP) programming to build, implement, and execute ASP scripts and examines topics related to the syntax of server-side ASP scripting as well as the use of ASP with databases.

Purpose of the Course: To teach the student different approaches for creating server-side scripts using Active Server Pages. The student will learn to successfully build, implement, and execute scripts to create fully-functional Web applications. In addition, the student will learn how to develop scripts and pages in real-world environments that take full advantage of the newest technology.

Required Text(s):
1. Introduction to ASP.NET, Third Edition; Kathleen Kalata; Course Technology; ISBN: 9781418837655
2. Data Files which can be downloaded from the site http://www.course.com/catalog/downloads.cfm. Type the text's ISBN number in the search box, and when the text is found, click on "Student Downloads."
3. Microsoft Visual Studio.NET 2005/2008 Professional, or Visual Web Developer Express will be used for this course to develop ASP.NET forms. It is mandatory that the student have access to Visual Studio.NET 2005/2008 at home or by using the software available in the Business Division Student Lab in the Engineering Technology Building (#103), Room 115, on the Barton Campus.
4. NOTE: Students in traditional classes must access Blackboard for course-related information. Students in hybrid and online classes will access their online content through Blackboard.

COLLEGE-WIDE STUDENT LEARNING OUTCOMES

1. Communication – Students will demonstrate the ability to use active reading and listening skills and to produce effective written and oral communication for varying audiences.
2. Information Technology and Technological Literacy – Students will demonstrate competency in using computer technology within a field of study.
3. Critical Thinking/Reasoning – Students will demonstrate the ability to apply the scientific method, mathematical processes, and research skills to analyze and solve problems/issues by using reflection and reasoning to justify conclusions.

4. Professional and Personal Responsibility – Students will demonstrate the ability to exhibit conduct, attitudes, and etiquette appropriate to the student's community and chosen career. Students will demonstrate the ability to manage time, to use effective interpersonal skills, and to display responsible behavior.

5. Diversity – Students will demonstrate the ability to recognize diversity and to demonstrate respectful conduct and attitudes toward all. Students will demonstrate the ability to explain how global issues impact life, work, and opportunities.

Approved March 26, 2009

COMPUTER PROGRAMMING PROGRAM STUDENT LEARNING OUTCOMES

Upon successful completion of the CPT/Programming program, the graduate will be able to:

1. Students will be able to analyze, design, develop, and document solutions that will satisfy the information needs of business users using established design methodologies and standards.
2. Students will be able to design, create, test, and document logical programming solutions to prescribed specifications following established standards and using current development environments and languages for application development and database management.
3. Students will be able to demonstrate the knowledge and ability to install and maintain microcomputer hardware and operating system software.
4. Students will be able to demonstrate the use of a minimum of three business application software packages.
5. Students will be able to demonstrate fundamental team building, project management, and presentation skills by participating in team projects that include team goals and values, a development methodology for documentation and coding, group presentations, and exposure to topics such as diversity, time management, and goal setting.
6. Students will be able to demonstrate the ability to take initiative, assume responsibility, and work under pressure with minimum supervision by successfully completing "hands-on" computer lab assignments.

CPT 239 COURSE OUTCOMES

1. Students who successfully complete this course will have demonstrated the skills necessary to accomplish the following objectives with a minimum competency of 70 percent.
2. Students will be able to demonstrate the ability to take initiative by completing a lab assignment with minimal supervision.
3. Students will be able to demonstrate the ability to work under pressure, and show responsibility by completing lab assignments.
4. Students will be able to demonstrate the ability to create a basic Web page using ASP.NET controls.
5. Students will be able to demonstrate the ability to create dynamic Web applications using Server controls.
6. Students will be able to demonstrate the ability to debug ASP.NET project solutions by identifying and correcting syntax errors, run-time errors, and logic errors.

7. Students will be able to demonstrate the ability to create a Theme file that includes skins to format the web controls on a web page.
8. Students will be able to demonstrate the ability to create a Web page to display a rotating banner ad that uses a database as the source of the data for the banner ads.
9. Students will be able to demonstrate the ability to add a cookie to store values passed from a web page.
10. Students will be able to demonstrate the ability to access, display, and update information stored in a database using ADO.NET components.

The objectives of the CPT 239 course are intended to meet the CPT/Programming program competencies numbered 2 and 6 above.

CPT 239 – Main Topics

Tutoring is now available in the Business Division Student Lab located on the Barton Campus in the Engineering Building (#103), Room 115. The hours for tutoring are posted in the lab (ET 115); no appointment is necessary. There are no fees required for this service.

Introduction Assignment Due

Chapter One – Introduction to Web Programming
- Introducing Visual Web Developer Tools – Exploring Visual Web Editors, Exploring the Individual Windows, Creating a New Web Application
- Introduction to HTML – The Fundamentals of Tags and Attributes, HTML Structure, Tags that Contain or Format Text, Tags for Elements Other than Pure Text, Creating a New Web Page with a Web Editor
- Introduction to XML – XML Standards, XML Rules, Markup Validation of XML Documents, Creating and Validating XML Documents in the XML Designer, Displaying Images with an XML File, Web Site Accessibility
- Introduction to ASP.NET Server Programming – Before There Were Client-Server Applications, Processing ASP.NET Applications, Server Controls, HTML Tags and HTML Controls, Web Controls, Creating a Web Page Using Web Editor
- Help Resources
- Chapter Summary

Chapter 1 Assignment Due

Chapter Two – Introduction to Programming
- Integrating Programming and Web Forms – Configuring the Page Directive, Where to Place Programming Statements
- Using Variables and Constants in a Web Form – Declaring a Variable, Declaring a Constant
- Working with Different Data Types – Working with Text Data, Working with Numeric Data, Working with the Date and Time, Converting Data Types, Working with Collections
- Working with Objects to Store Data – Using the Request Object to Retrieve Data from the Header, Retrieving Data from a Form with the Request Object, Accessing Form Field Data, Working with the Response Object, Session Objects, Working With Collections

- Designing .NET Web Applications – Web Application Architecture, Organization of Classes in the .NET Framework
- Programming with Visual Basic.NET – Creating a Class in ASP.NET, Using a Procedure, Creating a Property Method, How Web Applications Interact with the Systems.Drawing.Graphics Class, Using the Systems.Drawing.Graphics Class, Dynamically Creating Server Controls, Dynamically Creating a Hyperlink Control
- Programming Control Structures – If Then Statement, Select Case Statement, While Loop, Do Loop, For Next Loop, For Each Loop, Nested Statements
- Introduction to Web Configuration and Debugging – Exception Handling, Using Exception Classes to Identify Exception Errors, Common Error Status Messages, Creating a Custom Error Message, Using the Web Site Administration Tool, Configuring the Web Application to Use the Debugger Tool, Programming Best Practices
- Chapter Summary

Chapter 2 Assignment Due

Chapter Three – Designing Web Applications
- Creating Cascading Style Sheets – Overview of CSS Style Rules, Comments within CSSs, Cascading Priority with Rules, Creating Classes, Using the Style Builder, Using the Color Picker Feature
- XSLT Stylesheets – Understanding the Structure of an XSLT Stylesheet, Customizing XSLT Stylesheets, Inserting and Configuring the XML Control in a Web Form
- Master and Content Pages – Creating the Master Page, Creating the Content Page, Using Master and Content Pages
- Creating a Navigational System – The Site Map, Building Breadcrumb Trails with the SiteMapPath Control, TreeView Control, The Menu Control, Using the MultiView Control
- Chapter Summary

Chapter 3 Assignment Due
***** Test 1 *****

Chapter Four – Custom Designing Web Applications
- Customizing the Presentation Layer – Using Style Sheets to Configure a Web Page Dynamically, Using Skins to Format a Web Form, Using Themes to Create a Uniform Web Page
- User Controls – Understanding User Controls, Creating and Registering a User Control
- Web Parts and Portals – Web Parts, Web Portals
- The Use of Third-Party Controls – Dot Net Nuke, Free TextBox, Telerik, Other Third-Party TextBox Controls, Retrieving Information from a TextBox Control, The Value of Retrievable Data
- Chapter Summary

Chapter 4 Assignment Due

Chapter Five – Advanced Web Controls

- The AdRotator Control – The Role of the Advertisement File, Modifying the Advertisement File, Understanding the Properties of the AdRotator Control, Inserting the AdRotator Control into a Web Page, Creating a Web Page to Display the AdRotator
- The Calendar Control – Supported Properties, Methods, and Events; Creating a Program to Interact with the Calendar Control; Working with Multiple Dates
- Using the FileUpload Control – Uploading a File with the FileUpload Control, Creating the FileUpload Page, Changing Security Permissions to the Upload Folder
- Sending E-mail from the Web Page – Security and Privacy Issued Related to E-mail, The Role of the E-mail Server, Configuring the E-mail Server, CDONTS and E-mail Objects, Sending an E-mail Message from an ASP.NET Web Page, Troubleshooting the Sending of E-mail Messages
- Storing and Retrieving Data on the Web Server's File System – Working with Directories and the DirectoryInfo Class, Creating and Deleting Directories with the DirectoryInfo Class, Creating and Reading Files from an ASP.NET Page, Security Issues Related to Building Web Applications
- Chapter Summary

Chapter 5 Assignment Due
***** **Test 2** *****

Chapter Six – Securing the ASP.NET Application

- Building the Information Management Security Policies – Security Policies, Privacy Policies
- Passing Valid Data from a Web Form – Understanding Validation Controls, Building Regular Expressions, Validating Form Data with Validation Controls
- Maintaining State – Maintaining State with Client-Side Cookies, Maintaining State with HTTP Cookies, Maintaining State without HTTP Cookies
- Storing Session Data – Storing and Retrieving Session Data
- Application Configuration – Viewing and Understanding the Web Server Property Sheets, Understanding Application Configuration Files
- Membership Services – Implementing Authorization, Authenticating Users with Forms Authentication, Implementing Authentication
- Using Web Controls to Maintain Security
- Chapter Summary

Chapter 6 Assignment Due

Chapter Seven – Managing Data Sources

- Working with Database Applications – Characteristics of a Relational Database, Relationships Between Tables, Applications that Store Relational Data
- Visual Studio.NET Built-in Database Tools – Create a SQL Server Database in Visual Studio.NET, Using the Table Designer, Creating a Relationship with the Database Diagram
- View and Queries – Using Views and Queries, Building a View with the Query and View Designer, Using the Query and View Designer
- SQL Statements – Creating Search Conditions; Building SQL Queries to Insert, Modify, and Delete Data
- SQL Stored Procedures and SQL Server Scripts – Input and Output Parameters, The Return Code, Creating Stored Procedures with the SQL Editor, Creating a Stored Procedure with an Input

Parameter, Inserting a New Record with a Stored Procedure, Using Wildcard Characters to Search for a Matching Value in a Column, Modifying a Stored Procedure with the SQL Editor, Using Built-in Views and Stored Procedures, Using and Building SQL Server Scripts
- Database Connections – Understanding the Connection String, Storing Connection Strings in the Web Configuration File, Creating a Connection to a Database from a Web Page, Creating a Connection to a Microsoft Access Database, Creating a Connection to XML Data, Moving Data to SQL Server
- Chapter Summary

Chapter 7 Assignment Due

Chapter Eight – Binding Data to Web Controls
- Designing a Web Data Application in the .NET Framework – Data Access Components, Creating DataSets and DataAdpaters, Data Binding Techniques, Binding Data to Web Controls, Repeated-Expressions Binding
- Binding Data to Web Controls and Data Controls – Binding Data in a Collection to a Web Control, Binding Data to a Data Control
- Automatic Binding Techniques – Binding Data to a DataList Control, Binding Relational Data to a GridView Control
- Overview of the ADO.NET Data Model – Using the DataReader Object to Retrieve Data from a Database, Using the DataSet to Retrieve Data from a Database, Using the DataSet Object to Retrieve Data from an XML File, The DataView Object
- Chapter Summary

Chapter 8 Assignment Due

***** Test 3 *****

Chapter Nine – Customizing Data with Web Controls

- Templates and Styles Available to the Data Controls – Templates Available to Data Controls, Styles Available to Data Controls, Modifying the DataList Control Using Styles
- Modifying Data Controls Using Templates – Using Templates to Modify the Repeater Control, Using Templates to Modify the DataList Control
- Using the GridView Control to Display Data – GridView Columns, Column Properties, Column Data, Modifying the GridView Control Columns and Templates
- Building a Master-Detail Page with the GridView and DetailView Controls
- Creating Custom Templates
- Chapter Summary

Chapter 9 Assignment Due

ASSIGN – Paper on the Adoption of ASP.NET Around the World

Chapter Ten – Managing Data with ASP.NET

- Inserting, Modifying, and Deleting Records – Using the GridView Control to Maintain a Database, Filtering Data with the GridView Control, Sorting Data with the GridView Control, Editing a New Record with the GridView Control, Deleting a New Record with the GridView Control, Inserting a New Record with the DetailsView Control, Using a FormView Control, Using Templates and Styles with the FormView Control
- Data Management – Using Stored Procedures with a GridView Control, Using Stored Procedures with a FormView Control
- Securing Databases – Securing Databases, Detecting Database Errors
- Chapter Summary

Chapter 10 Assignment Due

Chapter Eleven – Advanced Web Programming

- Building Reusable Code – Creating Reusable Code with Classes, Calling the Class from the Web Page, Creating and Using Classes, Using Code Snippets, Compiling the Application, Third-Party Components
- Building a Complete Application – Starter Kits, Planning Your Web Application, Analyzing Project Requirements, Designing the User Interface and Programming Requirements, Developing the Web Application, Maintaining the Web Application
- New Tools and Technologies – AJAX, Atlas, Integrating ASP.NET into Current Business Applications
- Deploying an ASP.NET Web Application
- Chapter Summary

Paper on the Adoption of ASP.NET Around the World Due

*****Comprehensive Final Examination *****

SPECIAL NOTE TO ONLINE STUDENTS: The final exam for online students will be administered on the Barton Campus and will be scheduled at a time determined by the department.

CPT 239 – Course Specific Requirements

A USB portable storage device such as a flash drive will be needed for coursework storage.

CPT 239 – Evaluation and Grading Information

GRADING POLICY

Exams represent 80 percent of the final grade: 55 percent tests and 25 percent final exam.

NOTE: ALL TESTS AND EXAMS ARE RETAINED BY THE INSTRUCTOR.

Lab/written assignments count 20 percent of the final grade.
1.   Programming assignments will be assigned from selected chapters.
2.   A one – two page paper on the adoption of ASP.NET 2005/2008 around the world is required. The paper will include information regarding the countries in which ASP.NET is available and the languages Microsoft has translated ASP.NET into. A rubric for assessment of the assignment will be provided.
3.   *The following factors will also be considered in grading programs:*
      a.   The program must work correctly and produce the desired results.
      b.   The program must be written in the style described in the text or described in class.
      c.   Write with compactness in mind.
      d.   Documentation should be clear and meaningful.

All assignments (i.e., labs, projects, research papers, etc.) for this course must be completed and submitted to the instructor by the due date established in order to receive credit for the assignment.

Final letter grades will be issued as follows:

A	=	90 - 100	points
B	=	80 - 89	points
C	=	70 - 79	points
D	=	60 - 69	points
F	=	0 - 59	points

READ THIS SYLLABUS CAREFULLY

You should read this syllabus carefully and ask your instructor about *any* aspects that you do not understand. The syllabus is an agreement between you and your instructor concerning course objectives, course content, grading, and other policies and procedures particular to this course. The above information is specific to the course. Three additional documents are provided as attachments and *are considered a part of this syllabus*:

Attachment I:

Each instructor will provide a supplement to this syllabus. The supplement will include: a week-by-week plan of instruction based on the section in which you are enrolled; your instructor's name, office hours and/or office location; and your instructor's contact information and recommended best methods to contact your instructor.

Attachment 2:

The Department responsible for developing and teaching has policies and procedures in place to assure quality instruction for all students. These are attached as "Departmental Policies and Procedures."
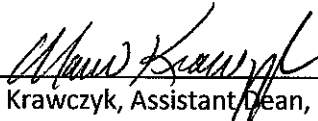
Attachment 3:

Please note that it is your responsibility to read the current Student Handbook included in Greenville Technical College's Catalog. (See website.) The Student Handbook addresses specific academic and student conduct policies and procedures. Excerpts from the Student Handbook representing the policies and procedures most often referred to in working with students are provided for your convenience as "Attachment 3."
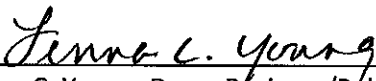
Approved by: _____

Beau Sanders, Department Head, Computer Programming
Beau.Sanders@gvltec.edu, (864) 250-8314, Barton Campus, Building 103, Room 311

Approved by: _____

Mark Krawczyk, Assistant Dean, Business
Mark.Krawczyk@gvltec.edu, (864) 250-8404, Barton Campus, Building 103, Room 304

Approved by: _____

Lenna C. Young, Dean, Business/Public Service

13 Dec 1
Date

Lenna.Young@gvltec.edu, (864) 250-8204, Barton Campus, Building 103, Room 104

This syllabus will remain in effect until revised or reviewed no later than   August 2011.