Course Acronym:	CIS
Course Number:	134
Descriptive Title:	ASP.NET with C# Business Web Programming
Division:	Business
Department:	Computer Information Systems
Course Disciplines:	Computer Information Systems
Catalog Description:	This introductory programming course incorporates the basic concepts of web programming, problem solving, programming logic, and design techniques using the Microsoft.NET web programming languages. The student will be able to build a dynamic data-driven web application using an SQL (Structured Query Language) database. Emphasis is placed on emerging web programming skills and technologies to prepare students for advanced programming applications and to enter the e-Business industry.
Prerequisite:	Computer Information Systems 13 or equivalent experience
Co-requisite:	
Recommended Preparation:	Computer Information Systems 133
Enrollment Limitation:	
Hours Lecture (per week):	3
Hours Laboratory (per week):	3
Outside Study Hours:	6
Total Course Hours:	108
Course Units:	4
Grading Method:	Letter Grade and Pass/No Pass
Credit Status:	Credit, degree applicable
Transfer CSU:	Yes
Effective Date:	05/21/2007
Transfer UC:	No
Effective Date:	
General Education: ECC	
Term:	
Other:	
CSU GE:	

Term:	
Other:	
IGETC:	
Term:	
Other:	
Student Learning Outcomes:	**SLO #1 Developing an E-Commerce Software Application for the Web** The student will demonstrate the ability to create an e-commerce website using ASP.NET and C+. Given detailed specifications and example code, create a functioning e-commerce website that includes: a) a market-competitive user interface, b) a shopping cart, c) product recommendations, d) an order pipeline to follow the order process, e) a database which includes customers, products with product attributes, orders, audit, order, inventory, and product recommendation information, and search capability. **SLO #2 SQL, C+ and ASP.NET** Demonstrate knowledge of e-commerce development programming language usage. **SLO #3 Website Planning** Demonstrate project design and management of a complete e-commerce website including the use of requirements document, database and class diagrams, use case definitions, flowcharts, cross-functional flowcharts, site maps, user controls, classes and timelines
Course Objectives:	1. Examine web architecture and the Microsoft.NET Framework. 2. Appraise the role of the web page to e-Business and the Internet. 3. Create an e-Business application. 4. Analyze, plan, code and document a website using appropriate system design techniques and charts. 5. Code an application using conditional structures, variables, classes, functions, procedures, arrays, and database. 6. Utilize dynamic client- and server-side website programming tools, languages, and technologies such as Visual Studio.NET, ASP.NET, C#, HTML (Hypertext Markup Language), and CSS (Cascading Style Sheets). 7. Research and analyze the use of web services, social networking, and other web applications, as they apply to an e-Commerce website.
Major Topics:	**I. E-Commerce Website Architecture (3 hours, lecture)** A. Multi-tier architecture B. Third party interfaces C. Payment Processing and order fulfillment D. E-commerce trends **II. Website Development (3 hours, lecture)** A. Planning

B. Requirements

C. Purpose and Audience

D. Design

E. Development

F. Testing and Implementation

III. .NET Development Environment (3 hours, lecture)

A. Visual Studio.NET editor

B. ASP.NET Framework

C. Project definition

D. Solution files

E. Debugging

F. Browsers

IV. Design Tools for the E-Commerce Website (6 hours, lecture)

A. Sitemaps and Flowcharts

B. Page designs

C. Use Cases

D. Class design

E. State design

V. Web Forms and ASP.NET (9 hours, lecture)

A. Web form layouts

B. ASPX server controls

C. ASPX HTML controls

D. Validation Controls

VI. Programming Basics Using C# (12 hours, lecture)

A. Algorithms

B. Expressions and operators

C. Variables and constants

D. Control structures

E. Logical and relational operators

F. Data types, casting, and converting

G. Functions

H. Events

I. Arrays

J. Objects

K. Classes

L. Namespaces

M. Event handlers and scope

VII. Data Integration (9 hours, lecture)

A. Data Sources

B. Data Connections

C. Data Classes

D. Data Server Controls

E. Database Views

F. Form Views

G. Grid Views

H. Data Pager

VIII. Themes (3 hours, lecture)

A. Theme Components

B. Master Pages and Page Directives

C. Content Pages

IX. State Management (3 hours, lecture)

A. View State

B. Session State

C. Application State

D. Cache

X. Navigation (3 hours, lecture)

A. Server Object

B. Request Object

C. Response Object

D. Menus and Submenus

E. Site Maps

XI. Website Creation (3 hours, lab)

A. File Management

B. Assets Folders

C. Components Folders

D. Solution File

XII. User Interface Design and Development - Presentation Tier (18 hours, lab)

A. Form design and creation

B. Design and Source views

C. ASPX, HTML and CSS

D. Master pages and Content pages

E. Navigation

F. Validation Controls and Error messages

XIII. Business Logic - Business Tier (24 hours, lab)

A. Event handling and the Event Object

B. Try/Catch/Finally exception handling

C. Data types, casting, converting

D. Data manipulation

E. Class design and implementation

F. State design and implementation

	G. Debugging **XIV. Database - Data Tier (9 hours, lab)** A. SQL Databases B. Database Access and Authorizations C. Data Connections and Sources D. Active Data Objects (ADO) E. Data Classes F. Data integration in web pages
Total Lecture Hours:	54
Total Laboratory Hours:	54
Total Hours:	108
Primary Method of Evaluation:	3) Skills demonstration
Typical Assignment Using Primary Method of Evaluation:	Create a real estate website that presents a catalog of available houses including pictures of the properties, detailed descriptions, and prices. Include a webpage that enables the user to calculate the monthly house payment with a breakdown of principal and interest. Provide several text components in which the user can enter the principal amount, the yearly interest rate and the number of years. Provide a button to cause the execution and calculation of the interest. Display the result in another text component. Validate the input and if any text component is left empty, display a message to the user indicating the error. Use a function to perform the calculation. Finally, write this program as a Web Service.
Critical Thinking Assignment 1:	Create an online auction site to include a feature that allows users to sell items. The website will have two aspects to it, similar to EBay and the Amazon Reseller. Design and develop the components that allow a seller to list his or her auction items. The seller enters an item's information (e.g., price, description) in a form and submits it, and the information is then inserted into the Auction Items table of the Auction.mdb database. An auction item may be changed and deleted as well. The auction site must ensure that a seller is logged in before allowing them to sell an item. Design and develop the components that allow a buyer to see auctioned items.
Critical Thinking Assignment 2:	Alan Li works for the Web News Service, Inc. and is responsible for entering daily news items. WNS publishes stories about national and international events, sports, entertainment, and leisure. Each news story is accompanied by a headline, a synopsis, and a reference to a file that contains the complete report. Some news stories are accompanied by image files. Alan has asked you to help him store this information digitally. Design and develop an administrative component to the Web News Service that allows Alan to maintain the news stories.

Other Evaluation Methods:	Objective Exam, Other (specify), Quizzes
Instructional Methods:	Demonstration, Lab, Lecture
If other:	
Work Outside of Class:	Answer questions, Other (specify), Problem solving activity, Required reading, Study
If Other:	
Up-To-Date Representative Textbooks:	Beasley, Essential ASP.NET Web Forms Development: Full Stack Programming with C#, SQL, Ajax, and JavaScript, 1st ed. APress, 2020.
Alternative Textbooks:	
Required Supplementary Readings:	
Other Required Materials:	
Requisite:	Prerequisite
Category:	sequential
Requisite course(s): List both prerequisites and corequisites in this box.	Computer Information Systems 13
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	**Computer literacy** **Demonstrate an understanding of the development and use of information systems in business.** CIS 13 - Explain the development and use of information systems in business. CIS 13 - Solve common business problems using appropriate information technology applications and systems.
Requisite Skill:	Equivalent experience
Requisite Skill and Matching Skill(s): Bold the requisite skill(s). If applicable	Demonstrate an understanding of the development and use of information systems in business.
Requisite course:	Computer Information Systems 133
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	**Experience in programming for the web.** CIS 133 - Design web-based programs using standard documentation techniques. CIS 133 - Design and code web pages using markup languages, a scripting language, and interfacing with a web service. CIS 133 - Assess programs using logic and syntax verification, testing and debugging techniques.

	CIS 133 - Create an e-business application using program development methodology.
Requisite Skill:	
Requisite Skill and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s). If applicable	
Enrollment Limitations and Category:	
Enrollment Limitations Impact:	
Course Created by:	Jacquelyn Thompson
Date:	09/01/2000
Original Board Approval Date:	02/20/2001
Last Reviewed and/or Revised by:	M. Chaban
Date:	10/10/2018
Last Board Approval Date:	12/19/2022