Master Course Syllabus

Course Discipline and Number: CIS 227   **Year: 2024-2025**
Course Title: Web Programming & Design   **Credit Hours: 3**

Attendance Policy: *To maintain good grades, regular attendance in class is necessary. Absence from class is considered a serious matter and absence never excuses a student from class work. It is the responsibility of all instructors to distribute reasonable attendance policies in writing during the first week of class. Students are required to comply with the attendance policy set by each of their instructors. Students are not penalized if they are unable to attend classes or participate in exams on particular days because of religious beliefs, in accordance with Chapter 161, Section 224-a of the Education Law of the State of New York. Students who plan to be absent from classroom activity for religious reasons should discuss the absence in advance with their instructors. See college catalog for more information.*

Services for Students with Disabilities: *It is the College's policy to provide, on an individual basis, appropriate academic adjustments for students with disabilities, which may affect their ability to fully participate in program or course activities or to meet course requirements. Students with disabilities should contact the Coordinator of Access and Equity Services, to discuss their particular need for accommodations. All course materials are available in alternate formats upon request.*

Course Description

Focuses on the fundamentals of web programming and the development of web-based applications. Client and server-side programming are discussed. Topics include advanced web page development, including Active Server Pages, CGI/Perl, database-driven content, and scripting languages. Prerequisites: CAPS 152; CIS 220; CIS 213 or CSCI 165; MATH 095 and RDNG 099 if required by placement testing; ENGL 099 or prior completion or concurrent enrollment in ESL 120, 121, and 122 (or prior completion of ESL 103) if required by placement testing. 3 Cr. (3 Lec.) Spring semester.

Course Context/Audience

This is a required course for the Computer Information Systems major.

Basic Skills/Entry Level Expectations

Writing: W2 Student should have completed ENGL 099 (if needed). The course requires short written responses and/or short papers without documentation, particularly personal reflection or narrative.

Math: M4 Completed MATH 095(if needed) - Course requires the use of basic mathematical skills plus basic algebra skills.

Reading: R2 Before taking this course, students must have a C or better in RDNG 099 or assessment indicating that RDNG 099 was not required.

Course Goals

This course has three primary goals:

1. To give the student an overview of the current technologies used in the development of dynamic and data-intensive web applications;
2. To help the student to acquire the knowledge and skills needed to build client-side web-based applications;
3. To help the student acquire the knowledge and skills needed to build business critical applications on the server side.

Course Objectives/Topics

Objective/Topic	# Hours
The student will be able to discuss the similarities and differences between server and client side web-based programming.	6 Hours
The student will be able to use HTML to build tables and forms in a web application.	6 Hours

The student will be able to use dynamic client-side technologies like HTML5, CSS3, AJAX, XML, and/or JQuery to build data intensive applications that collect, validate, and store data on the client side.	6 Hours
The student will be able to use JavaScript to manipulate web page elements.	6 Hours
The student will be able to describe the importance of a web server.	3 Hours
The student will use server-side ASP.NET (Active Server Pages) and/or JSP (Java Server Pages) to create, read, update, and delete data stored in relational databases like Access, SQL Server, MySQL, Java DB, and/or Oracle.	9 Hours
Students will use Web Services and Content Management Systems like SharePoint and/or WordPress.	9 Hours

General Education Goals - Critical Thinking & Social/Global Awareness

CRITICAL THINKING OUTCOMES	HOW DOES THE COURSE ADDRESS THE OUTCOMES (Include required or recommended instructional resources, strategies, learning activities, assignments, etc., that must or could be used to address the goal/outcomes)
Students will be able to ➢ develop meaningful questions to address problems or issues. ➢ gather, interpret, and evaluate relevant sources of information. ➢ reach informed conclusions and solutions. ➢ consider analytically the viewpoints of self and others.	Students will discuss current issues in web page design. Group discussions and/or projects will allow students to develop the ability to solve problems effectively and creatively. Projects and/or discussion topics will be assigned. Students will gather information from various sources for projects, then compare and contrast their findings. Group discussion and/or projects will allow students to develop the ability to solve problems effectively and creatively. Students will discuss current issues in web page design.
SOCIAL/GLOBAL AWARENESS OUTCOMES	**HOW DOES THE COURSE ADDRESS THE OUTCOMES** (Include required or recommended instructional resources, strategies, learning activities, assignments, etc., that must or could be used to address the goal/outcomes)
➢ Students will begin to understand how their lives are shaped by the complex world in which they live. ➢ Students will understand that their actions have social, economic and environmental consequences.	Students will compare various opinions including globalization, internationalization, accessibility and/or sustainability. They will have to analyze information from various sources and make web page design recommendations and decisions based on the results. Projects and/or discussion topics will be assigned. Students will create real-world projects like calculating carbon footprint and/or geolocation-driven applications.

Instructional Methods
Demonstration of existing code and walkthroughs of code provided in the text are all beneficial. Students must have plenty of experience writing programs on their own. Finding problems in code is useful - using non-examples.

Methods of Assessment/Evaluation

Method	% Course Grade
Discussions	20%
Programming projects and/or homework assignments	80%

Text(s)

Internet & World Wide Web How To Program, Fifth Edition by Paul Deitel; Harvey Deitel; Abbey Deitel, Prentice Hall: 2012. ISBN-10 0132151006; ISBN-13 9780132151009

Bibliography

Internet & World Wide Web - How to Program, Harvey Deitel and Paul Deitel, Latest Edition, © 2003 Pearson Education.

Anderson-Freed, Susan. Weaving a Website: Programming in HTML, JavaScript, Perl and Java, 1st edition, © 2001: Prentice Hall.

Armstrong, Damon. Pro ASP.Net 2.0 Website Programming, © 2005: Apress.

Marco Bellinaso and Kevin Hoffman, ASP. Net Website Programming: Problem Design - Solution, Visual Basic. NET, Latest edition, © 2001: Worx.

Other Learning Resources

Audiovisual No resources specified
Electronic Students will be required to complete online virtual labs. Students will be required to create web sites, web pages, and content using SharePoint Online. Students will be required to create blogs, web pages, and content using WordPress Online. Students will be required to download, install, and configure various software products including Web servers, Web browsers, and IDEs (Integrated Development Environments) like Visual Studio, Eclipse, Web Developer, NetBeans, and/or NotePad++.
Other No resources specified