

Course Number: CSC 317

Course Title: Introduction to Web Software Development

Number of Credits: 3

Schedule: Three hours of lecture per week.

Prerequisite: CSC 201, CSC 210 or consent of instructor

Catalog Description

Introduction to development of Web apps: client, server, back-end database. Installation of Apache web server, PHP processor, MYSQL database. Develop a simple e-commerce application.

Expanded Description

Introduction to creating web pages, reading and processing user input submitted through web pages; client side and server side programming; connecting a web page to a database.

Overview of topics covered in this course:

HTML fundamentals

Concept of tags, formatting; physical and logical style tags. Components of a web page, links, images, tables, frames

Cascading Style Sheets

Definition, separating page style and content. Id and class selectors. Linking and importing style sheets. CSS level 1 and level 2 specifications.

Javascript

Client side programming. Javascript syntax, operators, control statements, arrays, functions. Document Object Model. Concept of events and event handlers. Scripting events, input elements and DOM interfaces. Forms, reading and validating user input. Date object.

Dynamic HTML

Javascript security

Common Gateway Interface

Description, role of web server

HTTP

Definition, syntax, request response cycle, content negotiation.

PHP

Server side programming. PHP syntax, operators, control statements, strings, arrays. Server and environment variables. GET and POST methods.

Sending data to the server for processing. Regular expressions.
Cookies and sessions. Electronic mail.

MySQL

Introduction to working with databases. MySQL syntax, creating and designing tables.
Inserting, updating values in a table, retrieving data from tables.

Describe PHP functions that work with MySQL. Create a simple e-commerce web site with PHP and MySQL.

Usability

Concepts of well designed web pages.

Course Objectives

The objectives of this course include:

- To introduce students who have little or no experience with creating and designing web pages with the tools needed to publish web pages.
- Teach formatting concepts in HTML and CSS.
- Introduce students to client side programming in Javascript.
- Understand user interaction with various events.
- Cover the mechanism of CGI and HTTP.
- Introduce students to server side programming in PHP.
- How to store data through a multi-paged document.
- Teach database fundamentals.

Learning Outcomes

At the end of this course students will

- Be able to fully understand the <tag> concept in web pages.
- Be able to view source code of a web page and modify a web page.
- Design web pages using HTML and CSS.
- Create web pages with various input elements, prompt the user for input, use event handlers.
- Process user input, validate forms in Javascript.
- Organize a website, publish web pages.
- Read data from a server, store data to a server.
- Be able to create tables in a database, connect a web page to the database.
- Apply covered topics to create an e-commerce website.

Method of Evaluation

Student learning will be evaluated on the basis of

- Quality of homework assignments.
- Grade on midterm examination
- Grade on final examination
- Class participation.

The weight assigned to each element of evaluation will be determined by the instructor of the course on the first day of the class.

Required Textbook

*P.K. Yuen & V. Lau, Practical Web Technologies, Addison-Wesley 2003,
First Edition*

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