CSC 351 - INTERNET PROGRAMMING CONCEPTS

CREDIT HOURS: 3
PREREQUISITES: CSC 201 or 202 or 211; and 350
GRADE REMINDER: Must have a grade of C or better in each prerequisite course.

CATALOG DESCRIPTION

Introduction to Internet application programming using scripting languages and user-interface design in a server delivered, browser-based environment. May not be used to satisfy computer science requirements for a major or minor in computer science or computer information systems.

PURPOSE OF COURSE

To familiarize the student with the structure and use of Internet application programming languages and with the elements of user-interface design. The focus is on client-side scripting using HTML, CSS, Javascript, and an introduction to server-side scripting using PHP. The emphasis of this course will be on syntax and debugging, web form processing and data validation using common programming structures, dynamic content using Javascript and HTML, and working with objects and cookies. Students are expected to have a working knowledge of HTML, CSS, and introductory programming concepts (variables, operators, decision structures, repetition structures, and methods).

EDUCATIONAL OBJECTIVES

Upon successful completion of the course, students should be able to:

1. Use the essential features of a standard, server-delivered applications language and the ability to create well-designed programs in this environment.
2. Use tools and techniques to construct attractive and useful user interfaces.
3. Design and develop server-side web applications.
4. Demonstrate an understanding of the importance of web standards.
5. Complete team-based projects.
6. Design and develop interactive, client-side web applications.
7. Explain how the client-server model of Internet programming works.

CONTENT

Review of HTML, CSS with introduction to the HTML environment ...........................................5
Specific Form Elements and Event Handlers

Introduction to Client-Side Javascript ........................................................................................10
Compare/Contrast with Java
Document Object Model (DOM) Javascript Object Model and Hierarchy
Predefined Functions
Event Handling
Form Validation and Testing
Persistence Control (Cookies)

User Interface Design .................................................................10
  Javascript User Interface Elements
  The Document Object
  The Window Object
  Frames and Their Hierarchy
  Form design

Introduction to Server-Side PHP ..................................................10
  Compare/Contrast with Javascript
  API usage
  Working with Databases and Forms
  Tracking Visitors with Session IDs (Session management)
  Authentication and Authorization
  Database Interaction
  Differentiation of Content for Different Browsers

Problem Solving and Web Site Design .........................................7
  Project Design
  Web Site Layout

Exams (plus final) ...........................................................................3

TOTAL 45

REFERENCES


Head First HTML and CSS, 2nd Edition by Elisabeth Robson and Eric Freeman

HTML & XHTML: The Definitive Guide by Chuck Musciano, Bill Kennedy

CSS: The Definitive Guide by Eric A. Meyer