

Course Number: CIS 274

Course Title: Internet Application, Design and Development

Number of Units: 4

Schedule: Three hours of lecture and one hour of discussion per week.

Prerequisite: CIS 160, 260

Catalog Description

Issues in application design specific to Internet hardware, software and users. Students will develop a variety of projects and a final project. Topics will include HTML integration, CGI programming, XML, Java servlets, internationalization issues, client-server and database connectivity.

Expanded Description

1. The World Wide Web - URL's, HTTP, HTML, Browsers
2. Web Servers - Server Side Includes, Authentication
3. Common GateWay Interface
4. Server-Side Programming - JSP, Servlets, JavaBeans
5. Databases and the Web - JDBC
6. Search Engines
7. Working with Audio and Video
8. The Web and Security
9. eXtensible MarkUp Language

Software

Apache, Jrun, MySQL, HTML

Course Objectives and Role in Program

The objective of this course is to present issues in application design specific to Internet hardware, software and users. There will be several short programming exercises followed by a term project. Work must be done in groups of 2-3. The term project will be a robust e-business application. The knowledge of internet application and design plays an important role in many applications students develop during the program.

Learning Outcomes

Students completing this course will be able to

- Set up and maintain a web server in a 3-tier application, including a client, server, servlets/JSP's and backend database
- Provide services such as multimedia to clients in the client/server application
- Describe the fundamental addressing and transport mechanisms utilized on the World Wide Web
- Use XML and XSLT to provide dynamic information for web pages.

Method of Evaluation

Student learning will be evaluated on the basis of

- Completeness and quality of a term project developed in several stages.
- 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

“Professional JSP : Using JavaServer Pages, Servlets, EJB, JNDI, JDBC, XML, XSLT, and WML”, by Karl Avedal, Danny Ayers, Timothy Briggs, George Gonchar, Naufal Khan, Peter Henderson, Mac Holden, Andre Lei, Dan Malks, Sameer Tyagi, Stephan Osmont, Paul Siegmann, Gert Van Damme, Steve Wilkinson, Stefan Zeiger, John Zukowski, Ari Halberstadt, Carl Burnham, John Timney, Tom Myers, Alexander Nakhimovsky, Wrox Press Inc, 2000

Recommended Reference

“Core Servlets and JavaServer Pages”, by Marty Hall, Prentice Hall, 2000

“Essential XUL Programming”, by Vaughn Bullard, Kevin T. Smith, Michael C. Daconta, Wiley, 2001

“Custom CGI Scripting with Perl”, by Kevin Hanegan, Wiley, 2001

“Internet & World Wide Web, How to Program” by Deitel, Deitel & Nieto, Prentice-Hall, 2000

“HTML: The Definitive Guide”, 2nd Edition by Chuck Musciano and Bill Kennedy, O'Reilly and Associates

“Apache: The Definitive Guide”, Ben Laurie, O'Reilly & Associates

“Building B2B Applications with XML: A Resource Guide”, by Michael Fitzgerald, Wiley, 2001

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