

CIT 255
Internet Security and Server Administration

Course Description

The course provides students with an in-depth study of functions performed by web servers. Tasks performed by web administrators are discussed. Security risks unique to Internet services as well as solutions to these risks are presented. Students have hands-on experience with setting up a web server and troubleshooting web server problems. Prerequisites: CIT 253, either CIT 212 or CIT 218; or consent of instructor.

Course Competencies

Upon successful completion of this course, the student can:

1. Describe functions performed by web servers.
2. Set up a web server.
3. Manage a web server.
4. Describe the responsibilities of a web administrator.
5. Describe Internet security threats.
6. Describe methods of securing the Internet.
7. Implement encryption and authentication services.

Course Outline

- I. Introduction
 - A. Review of Internet Protocols
 - B. Oracle Implementation of a relational database management system (RDBMS)
 - C. Review of Network Operating System (NT/2000 or UNIX) Administration
- II. Server Administration
 - A. Overview of Web Site Features
 - B. Flow of Web Traffic
 - C. Web Servers: Apache and Microsoft IIS
 - D. Setting Up a Web Server
 - E. Operating a Web Server
 - F. Troubleshooting Web Server Problems
- III. Internet Security
 - A. Browser Vulnerability
 - B. Privacy, Integrity, Authentication, Anti-Replay, Anti-Denial-of-Service
 - C. Digital Certificates
 - D. Encryption and Decryption
 - E. Web Security: Secure Socket Layer (SSL), Transport Layer Security (TLS), Secure Common Gateway Interface/Application Program Interface (CGI/API)