COMPUTER SCIENCE 250

ELECTRONIC COMMERCE

I. Introduction

  A. Catalog Description

  An introduction to the technological issues in electronic commerce. Topics include networks, the Internet and World Wide Web, web page design, web page programming, transaction processing, HTTP, network and e-commerce security, electronic payment systems. Students build an online commerce site using client-side and server-side programming. *Prerequisite: CSCI 161, CSCI 261.* Offered Fall term only.

  B. Objectives

  This course is designed to introduce students to the technology of electronic commerce. This course will give students the ability to design, implement, maintain and manage World Wide Web sites for online commercial transactions. This course is part of the Computer Science/Business curriculum.

    By the end of this course, the student will:

    • be familiar with the basics of networks, the Internet and the World Wide Web

    • be able to design World Wide Web pages using markup languages and scripting languages

    • be familiar with several models of electronic business

    • understand e-commerce security issues, including confidentiality, authentication, integrity and nonrepudiation

    • be able to create and maintain an online store

    • understand electronic payment systems

    • be familiar with ethical and legal issues, including privacy, minor protection, copyright and intellectual property.

  C. Prerequisites

  Computer Science: CSci 161, CSci 261 or permission of instructor

II. Required Topics

  A. The Internet and the World Wide Web

    1. HTTP Internet protocol

  B. Networks

    1. Client/server architecture

  C. Web server hardware and software

II. Required Topics (cont.)

   D. Electronic commerce models

      1. Shopping cart

      2. Auction

      3. Portals

      4. Financial services

      5. Cooperative advertising

   E. Electronic commerce software

      1. Hosting services

      2. In-house hosting

   F. Security in Electronic Commerce

      1. Confidentiality

      2. Authentication

      3. Integrity

      4. Nonrepudiation

      5. Secure Sockets Layer

      6. Public Key Encryption

      7. Digital Certificates, Digital Signatures

   G. Electronic Payment Systems

      1. Electronic cash

      2. Electronic wallets

      3. Smart cards

      4. Credit transactions

   H. Web page design

      1. Markup and scripting languages

      2. Web page design tools

      3. Client-side and server-side processing

      4. Database access

   J. Ethical and legal issues

Evaluation Criteria and Grading Structure

Evaluation will be based on graded assignments, exams and a group project.

Bibliography

Chaudhury, Abhijit and Jean-Pierre Kuilboer.e-Business and e-Commerce Infrastructure. McGraw-Hill Irwin. Boston, 2002. ISBN 0072478756.

Deitel, H. M., et al. **e-Business & e-Commerce: How to Program**. Prentice-Hall. Upper Saddle River. N.J. 2001. ISBN 013028419x.

Greenstein, Marilyn and Todd M. Feinman. Electronic Commerce: Security, Management and Control. McGraw-Hill. Boston. 2000. ISBN 007229289X.

Morrison, Joline and Mike Morrison. Database-Driven Web Sites. 2d. ed. Course Technology. Boston. 2002. ISBN 061906448X.

Schneider, Gary P. and James T. Perry. **Electronic Commerce.** 6th ed. CTI, Cambridge, MA. 2006 ISBN 0619217049.

Web Sites

CERT coordination Center. http://www.cert.org.

Child On-Line Protection Act. http://www.epic.org/free_speech/censorship/copa.html.

The Computer Security Institute. http://www.gocsi.com/.

Cookie Central. http://www.cookiecentral.com/.

CyberCash, Inc. - The E-Commerce Leader in Payment Solutions. http://www.cybercash.com/.

eCash - Safe. Simple. Secure. http://www.digicash.com/.

EFF - The Electronic Frontier Foundation. http://www.eff.org/.

Introduction - Introduction to EDI - A Primer. http://www.support.geis.com/edi/edipindx.html.

Mastercard International. http://www.mastercard.com/shoponline/e-wallets/.

NCSA: A Beginner's Guide to HTML Home Page.
        http://www.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimer.html

SET Secure Electronic Transaction LLC. http://www.setco.org.

TRUSTe - Building a Web You Can Believe In. http://www.truste.org/.

Verisign. http://www.verisign.com/.

Visa - New Technologies. http://www.visa.com/nt/main.html.

Welcome to Microsoft's Home Page. http://www.microsoft.com/.

Welcome to RSA Security Inc. http://www.rsasecurity.com/.

The World Wide Web Consortium. http://www.w3.org/.