

Las Positas College  
3000 Campus Hill Drive  
Livermore, CA 94551-7650  
(925) 424-1000  
(925) 443-0742 (Fax)

## Course Outline for CIS 9105

### E-COMMERCE WEB TECHNOLOGY

Effective: Fall 2011

#### I. CATALOG DESCRIPTION:

CIS 9105 — E-COMMERCE WEB TECHNOLOGY — 2.00 units

E-Commerce strategies and practices show how to conduct business online and manage the technical issues associated with constructing an e-commerce Web site. Learn the similarities and differences between traditional and electronic commerce, and will explore e-commerce technologies at various levels of sophistication. NOTE: This course is one of a series in the Certified Internet Web Professional (CIW: [www.ciwcertified.com](http://www.ciwcertified.com)) program.

1.50 Units Lecture 0.50 Units Lab

#### **Strongly Recommended**

CIS 59 - Web Dev: HTML/CSS/Javascript

#### **Grading Methods:**

Letter or P/NP

#### **Discipline:**

	<b>MIN</b>
<b>Lecture Hours:</b>	27.00
<b>Lab Hours:</b>	27.00
<b>Total Hours:</b>	54.00

#### II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 4

#### III. PREREQUISITE AND/OR ADVISORY SKILLS:

**Before entering this course, it is strongly recommended that the student should be able to:**

A. CIS59

#### IV. MEASURABLE OBJECTIVES:

**Upon completion of this course, the student should be able to:**

##### A. E-Commerce Site Development

1. Evaluate an e-commerce site to maximize audience usability
2. Develop and host an e-commerce site using instant storefront services and stand-alone ecommerce software
3. Implement e-commerce-based learning solutions
4. Implement inventory and fulfillment strategies for an e-commerce site
5. Implement payment-processing services for an e-commerce site
6. Develop a knowledge base

##### B. E-Commerce Technology and Security

1. Define and use standards, initiatives and e-commerce frameworks that support supplier transactions
2. Configure Web server software for an e-commerce site
3. Analyze and improve e-commerce site performance
4. Secure e-commerce transactions
5. Secure an e-commerce site.

##### C. E-Commerce Business, Marketing and Legal Issues

1. Identify the effects of e-commerce on business operations and revenue generation
2. Identify legal and governmental issues in e-commerce
3. Implement effective marketing for an e-commerce site
4. Implement strategies for effective customer service and manage customer relationships in ecommerce operations

#### V. CONTENT:

##### A. Electronic Commerce Foundations

1. Introduction to Web Commerce
2. Impetus for Web Commerce
3. Electronic Commerce Defined
4. Applying E-Commerce Concepts to Focus Companies
5. Types of Electronic Commerce
6. Microcommerce and Macrocommerce

7. Benefits of Electronic Commerce
8. Drawbacks of Electronic Commerce
9. E-Commerce Solutions
10. Web Storefront Hardware and Software
11. Ingredients of a Web Storefront
12. The Virtual Enterprise
13. Site Implementation
14. E-Commerce Guidelines
- B. Law and the Internet
  1. Introduction to Internet Legal Issues
  2. Electronic Publishing
  3. Intellectual Property Issues
  4. Areas of Liability
  5. Copyright, Trademark and Patent Issues
  6. Privacy and Confidentiality
  7. Jurisdiction and Electronic Publishing
  8. Internet Taxation
  9. International Tax and the Internet
  10. Customs and E-Commerce
  11. Tariffs and E-Commerce
  12. Protecting a Brand
  13. Ethical Business Practices
- C. Web Marketing Goals
  1. Marketing Overview
  2. Web Marketing Benefits
  3. Examples of Successful Web Marketing
  4. Marketing Goals
  5. Web Marketing Strategies
  6. Growth Drivers and Barriers in E-Commerce
  7. Selecting and Positioning Your Product
  8. Identifying Your Target Market
- D. Online Product Promotion
  1. Online Promotion Overview
  2. E-Commerce Promotion Considerations
  3. E-Commerce Site Categories
  4. Banner Ads
  5. Advertising Representatives
  6. Banner Ad Positioning
  7. Banner Ad Exchange Networks
  8. Referrer Programs
  9. Blogs and Blogads
  10. Pop-Up and Related Ads
  11. Search Engine Placement
  12. <Meta> Tags and Search Engines
  13. E-Mail and Marketing
  14. Ad Performance Evaluation
  15. Offline Product Promotion
  16. Ad Campaign Implementation
- E. Site Usability
  1. Overview of Usability Issues
  2. Usability Testing
  3. Designing the Site Hierarchy
  4. Page Layout Design Guidelines
  5. Browser Compatibility Issues
- F. Customer Relationship Management (CRM) and EServices
  1. Managing the Customer
  2. Customer Relationship Management
  3. Customer Service Concepts
  4. Customer Service Tools and Methodology
  5. E-Service Action Plan
  6. Integrating CRM and Customer Service
- G. Business-to-Business Frameworks
  1. B2B E-Business Overview
  2. E-Commerce Fundamentals
  3. Business Concepts
  4. Internet Marketplaces
  5. Tools and Technologies
  6. Electronic Data Interchange (EDI)
  7. Open Buying on the Internet (OBI)
  8. Open Trading Protocol (OTP)
  9. Web Services
- H. E-Commerce Site Creation Packages — Outsourcing
  1. Outsourcing Site Creation Packages
  2. Entry-Level Outsourcing:
  3. Online Instant Storefronts
  4. Online Outsourcing Solutions
  5. Outsourcing: Mid-Level Offline
  6. Instant Storefronts
  7. Mid-Level Offline Storefront Products
  8. Outsourcing: High-Level Offline Instant Storefronts
  9. High-Level Offline Storefront Products
  10. Auctions: The Other
  11. E-Commerce Option
- I. E-Commerce Site Creation Software
  1. Microsoft Commerce Server 2007 Overview
  2. Web Server Overview
  3. Microsoft Internet Information Services (IIS) 6.0
  4. IIS 6.0 Preparation, Installation, Configuration
  5. Sun Java System Web Server 6.1
  6. Open-Source Solutions

- 7. Sizing Your Hardware
- J. Site Development Software Implementation
  - 1. Commerce Site Development Overview
  - 2. Database Servers
  - 3. Commerce Site Development
- K. E-Commerce Site Development Using Commerce Server
  - 1. Building Commerce Solutions
  - 2. Commerce Site Management
  - 3. Solution Site Customization
- L. Creating an Online Catalog
  - 1. Catalog Design
  - 2. Commerce Server 2007 Catalog Definitions
  - 3. Building a Base Catalog
  - 4. Virtual Catalogs
  - 5. Using Commerce Server to Support B2B Commerce
  - 6. Support B2B Commerce
- M. Inventory Control and Order Processing
  - 1. Inventory Management
  - 2. Inventory Systems
  - 3. Designing Order Systems
  - 4. Order System Implementation
- N. Payment Gateways
  - 1. Payment Processing in ECommerce
  - 2. Choosing Payment-Processing Methods
  - 3. Credit Card Processing
  - 4. Managing Transactions
  - 5. Implementing PayPal
  - 6. Online Check Processing
  - 7. Preventing Fraud
- O. E-Service Implementation and Support
  - 1. Implementing Customer Support
  - 2. E-Mail and User Forums
  - 3. Frequently Asked Questions (FAQ) Implementation
  - 4. Knowledge Base
- P. Transaction and Web Site Security
  - 1. Overview of Transaction Security
  - 2. Purposes of Security
  - 3. Encryption and Decryption
  - 4. Public Key Infrastructure (PKI)
  - 5. X.509 Standard
  - 6. Certificate Revocation
  - 7. VeriSign
  - 8. Using, Obtaining, Installing Certificates
  - 9. Implementing Microsoft Certificate Services
  - 10. Secure Electronic Transactions (SET)
  - 11. Securing Sensitive Data
  - 12. Identifying Attack Types
  - 13. Protecting Against Attacks
  - 14. E-Commerce Forensic Techniques
- Q. E-Learning Solutions
  - 1. E-Learning Introduction
  - 2. E-Learning Models
  - 3. Distance-Learning Essentials
  - 4. E-Learning Content
  - 5. Student Navigation and Progress Reporting
  - 6. Reusable Learning Objects
- R. Site Management and Performance Testing
  - 1. Introduction to Site
  - 2. Management and
  - 3. Performance Testing
  - 4. Site Management Tasks
  - 5. Managing Web Site Performance
  - 6. Logging and Trend Analysis
  - 7. Performance-Monitoring Tools

#### VI. METHODS OF INSTRUCTION:

- A. **Lecture** -
- B. Classroom discussion
- C. Computer demonstrations with overhead display panel
- D. Discussion boards
- E. Lab experience: hands-on lab assignments
- F. PowerPoint presentations
- G. Chat rooms
- H. Read text and other supplemental sources (example, Internet sites)

#### VII. TYPICAL ASSIGNMENTS:

- A. Lecture 1. Storefronts options 2. Adding Javascript to an HTML/XHTML document
- B. Reading 1. Review various eCommerce storefronts 2. Read the U.S. Department of Labor Bureau of Labor Statistics Occupational Outlook Handbook Web Developer jobs
- C. Hands-on lab assignment, such as: 1. Create a PayPal account 2. Create a ecommerce storefront

#### VIII. EVALUATION:

- A. **Methods**
  - 1. Exams/Tests
  - 2. Quizzes
  - 3. Class Participation
  - 4. Lab Activities
  - 5. Other:
    - a. Methods

1. Quizzes and final examination
2. Graded hands-on lab assignments
3. Web site evaluation
4. Relevant active participation

**B. Frequency**

1. Frequency
  - a. Chapter quizzes, examinations (mid-term, final)
  - b. Weekly hands-on lab assignments to reinforce and demonstrate mastery of the various tools

**IX. TYPICAL TEXTS:**

1. - *E-Commerce Strategies and Practices: Academic Student Guide.*, ComputerPrep, 2009.
2. Gosselin, Don *The Web Warrior Guide to Web Design Technologies.*, Course Technology, 2009.

**X. OTHER MATERIALS REQUIRED OF STUDENTS:**

- A. Mobile storage device: web storage, flash drives, CD RW
- B. Access to the World Wide Web with any major Web browser