PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE
MASTER SYLLABUS

CIW E-COMMERCE STRATEGIES AND PRACTICES
WEB 2220

Class Hours: 3.0 Credit Hours: 3.0
Laboratory Hours: 0 Revised: Fall 05

Note: This course is not designed for transfer credit.

Catalog Course Description:

This course teaches students how to conduct business online and how to manage the technological issues associated with constructing an electronic-commerce Web site. Students will study how implementing technology can engage cardholders, merchants, issuers, payment gateways and other parties in electronic transactions.

Entry Level Standards:

Students taking this course should be proficient in Windows 98, 2000 or XP

Prerequisites:

WEB 2200; or OST 2801 and 2802 and 2803; or CSIT 2645 or equivalent

Corequisites:

WEB 2293 CIW E-Commerce Certification Exam

Textbook(s) and Other Course Materials:


Supplementary Materials:

Software
Many software programs are recommended to complete the labs in the books; however, these programs are above and beyond the average student budget. Listed below is the software that is referenced in this course. Again, purchasing this software is optional. The course will be taught with students studying the screen shots in the text. If you have the software or wish to purchase it, you can practice the exercises in the course. It is possible, however, to master the course material and pass the certification exam by studying the screen shots in the texts. These optional software packages include:

b. Microsoft Windows 2000 Service Pack 2
c. ShopFactory
d. Microsoft SQL server 2000
e. Microsoft SQL Server 2000 Service Pack 2
f. Microsoft Commerce Server 2002
g. Microsoft Windows 2000 Security Rollup Package 1 (SRP1)
h. Microsoft Windows 2000 Hotfix Q294831 (IIS buffer patch)
i. Microsoft Windows 2000 Hotfix 313582 (COM+ Rollup Package)
j. Microsoft Windows 2000 MDAC 2.7 Hotfix Rollup
k. RightNow Web 3
CD-ROM. Each coursebook includes a supplemental CD-ROM with files that are referenced and used in the course. The labs will refer you to the CD and you will access these and use the files in the course. The contents of the CD-ROM must be copied to the computer desktop for the files to be modified as directed in the labs.

NOTE: This course is one of a series in the Certified Internet Webmaster (CIW) program offered at Pellissippi State. The CIW certification program validates job-role skills competency for entry-level job seekers and seasoned professionals alike. Candidates can earn CIW certificates in various information technology (IT) job roles, from the foundational CIW Associate certification, continuing to CIW Professional and specialization certifications, and up to advanced-level Master CIW certifications. The course prepares you for the Master CIW Designer certification. For detailed information, see CIW's website at www.ciwcertified.com.

You will take an exam preparatory course that includes the certification exam. This 1-hour course is a co-requisite to this course or can be taken after completing this course; it will be your choice as to the semester you take the exam course.

More information on CIW certification is on the WebCT website for this course.

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lesson 1: Electronic Commerce Foundations</td>
</tr>
</tbody>
</table>
| 2    | Lesson 2: Law and the Internet  
    | Lesson 3: Web Marketing Goals |
| 3    | Lesson 4: Online Product Promotion  
    | Lesson 5: Site Usability |
| 4    | Lesson 6: Customer Relationship Management |
| 5    | Lesson 7: Business-to-Business Frameworks |
| 6    | Lesson 8: Electronic Site Creation Packages |
| 7    | Lesson 9: Electronic Commerce Site-Creation Software |
| 8    | Lesson 10: Site Development Software Implementation--Microsoft Platform |
| 9    | Lesson 11: Developing an Electronic Commerce Site Using Commerce Server |
| 10   | Lesson 12: Online Catalog |
| 11   | Lesson 13: Using and Configuring Payment Gateways  
    | Lesson 14: E-Services Support |
| 12   | Lesson 15: Transaction Security  
    | Lesson 16: Web Site Management and Performance Testing |
| 13   | Co-Course WEB 2292 course work |
| 14   | Co-Course WEB 2292 course work |
II. Course Objectives*:

A. Define e-commerce and discuss its trends and statistics. I

B. Explain the legal aspects of e-commerce, including jurisdiction, copyright, and patents. I

C. Identify and describe e-commerce marketing goals. I

D. Explain usability and discuss the factors that affect it. I

E. Define e-services and formulate an e-service action plan. III, VI

F. Explain Electronic Data Interchange (EDI) and its role in e-commerce. I

G. Define e-business and the role it plays in current business. II, VI

H. Explain interoffice resources for increased productivity and cost reduction. V, VI

I. Distinguish between e-commerce software options and weigh their advantages and disadvantages. I

J. Install and customize an e-commerce site with a product catalog using software applications. I, II, III, IV, V, VI

K. Install and verify a payment gateway for transaction processing. IV, V, VI

L. Administer payment transactions for the batching process. IV, V, VI

M. Identify major components of e-commerce security. IV, V, VI

N. Generate a certificate request for a trusted third-party certificate authority. IV, VIV

O. Install a server certificate. IV

P. Develop a fully transaction-enabled e-commerce web site. I, II, III, IV, V, VI

*Roman numerals after course objectives reference goals of the Web Technology program.

III. Instructional Processes*:

Students will:

1. Focus on the standards, technologies, and practices for both business-to-business and business-to-consumer e-commerce models. Technological literacy outcome

2. Understand and facilitate relationships among marketing, promotion, customer service, user interaction, purchasing methods, and secure transactions. Technological literacy outcome

3. Apply and use Secure Sockets Layer (SSL) and Secure Electronic Transactions (SET), payment gateways, inventory control, shipping, and order information in relation to e-commerce. Technological literacy outcome

4. Conduct site performance testing and evaluation in relation to e-commerce. Technological literacy outcome

5. Understand how to conduct business online and how to manage the technological issues associated with constructing and e-commerce web site. Technological literacy outcome

6. Use research activities to promote independent thinking. Active Learning Strategies
7. Implement a genuine transaction-enabled business-to-consumer web site.  
*Technological literacy outcome*

8. Examine strategies and products available for building e-commerce sites, how such sites are managed, and explore how they can complement an existing business infrastructure.  
*Problem solving and decision making outcome*

9. Implement technology to engage cardholders, merchants, issuers, payment gateways, and other parties in electronic transactions.  
*Technological literacy outcome*

*Strategies and outcomes listed after instructional processes reference Pellissippi State’s goals for strengthening general education knowledge and skills, connecting coursework to experiences beyond the classroom, and encouraging students to take active and responsible roles in the educational process.*

**IV. Expectations for Student Performance**:  

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

1. Define electronic commerce (e-commerce) and discuss electronic commerce trends and statistics.  
   *A*

2. Explain the difference between business-to-consumer and business-to-business e-commerce.  
   *A*

3. Weigh the advantages and disadvantages of using e-commerce over traditional sales methods.  
   *A*

4. Assess the initial considerations of launching an electronic commerce web site, including hardware, software, bandwidth, in-house hosting, and outsourcing.  
   *A*

5. Discuss different archetypes for generating revenue on the Internet.  
   *E*

6. Explain three models for collecting payments on the Internet.  
   *C*

7. Discuss security issues.  
   *B*

8. Explain legal aspects of e-commerce.  
   *B*

9. Identify Internet issues that may present legal challenges.  
   *B*

10. Discuss how legal issues such as jurisdiction, copyright, and patents apply to software.  
    *A,B*

11. Identify what constitutes intellectual property and how to protect it.  
    *A,B*

12. Identify the current taxation issues facing Internet commerce.  
    *A*

13. Identify and define e-commerce marketing goals.  
    *E*

14. Describe online marketing strategies.  
    *E*

15. Discuss the drivers and barriers to growth.  
    *E*

16. Discuss the advantages and disadvantages of hard goods and soft goods.  
    *E*

17. Explain product distribution factors and methods dealing with cost and distance.  
    *E*

    *E*

19. Identify Internet demographics and their relevance.  
    *E*
20. Explain product/service awareness methods used by online marketers. E
21. Use banner ads effectively. E,G
22. Discuss exchange networks and referrer programs. E,G
23. Select among search engine placement options. E,G
24. Choose appropriate email marketing options. E,G
25. Explain the importance of usability. D
26. Discuss factors affecting usability. D
27. Explain click patterns. D
28. Clarify the concept of screen flow. D
29. Analyze usability results. D
31. Define Customer Relationship Management (CRM). E,F,G, H
32. Define synchronous and asynchronous e-services. E,F,G, H
33. Formulate a CRM action plan. E,F,G, H
34. Develop customer surveys. E,F,G, H
35. Explain Electronic Data Interchange (EDI), Open Buying on the Internet (OBI), and Open Trading Protocol. B,C
37. Explain vertical and horizontal markets. A,B,C
38. Identify inter-office productivity resources. A,B,C
39. Distinguish among the online instant storefront options for creating an electronic commerce site. G,H,I
40. Explain the advantages and disadvantages of online instant storefronts, including packages for creating and managing electronic commerce storefronts. G,H,I
41. Create an online instant storefront using Earthstores.com and ShopFactory. G,H,I
42. Evaluate the administrative merits of online electronic commerce packages. G,H,I
43. Evaluate the issues involved in choosing web server software. H
44. Examine the Microsoft Internet Information Server (IIS) configuration. H
45. Create a virtual directory and a virtual server. H
46. Bind multiple IP addresses. H
47. Discuss the issues in choosing website development software. H
48. Examine database needs and requirements. H
49. Examine the development software setup and configuration. H
51. Create a foundation for your e-commerce site. G,H,I
52. Examine the Commerce Server Business Desk. G,H,I
54. Explain the concepts of catalog design. E,F,G
55. Explain the components of an online catalog. E,F,G
56. Demonstrate how new categories, products, and properties are added to an online catalog. E,F,G
57. Define shipping and taxation requirements. E,F,G
58. Integrate an online catalog with the existing site that was developed. E,F,G
59. Explain the issues involved in choosing a payment method. G,I
60. Install a payment gateway. G,I
61. Enable the site you created to accept credit cards. G,I
62. Access online transaction information. G,I
63. Manually process credit card transactions. G,I
64. Describe the function of a knowledge base. H
65. Install, populate, administer, and integrate a knowledge base. H
66. Identify encryption schemes such as symmetric, asymmetric, and one way. C
67. Identify the benefits provided by security implementation such as hashing, message digests, and digital signatures. C
68. Explain the certificate-related infrastructure. C
69. Outline the consideration of a secure transaction. C
70. Request a digital certificate from VeriSign. C
71. Create a digital certificate from Microsoft Certificate Server. C
72. Install server digital certificates. C
73. Examine the current Secure Sockets Layer (SSL) procedure. C
74. Secure the ordering pages of the site you created. C
75. Examine the implementation of the Secure Electronic Transactions (SET). C
76. Manage the issues and tools used to run your e-commerce web site. G,H,I
77. Explain the tools and methods used to test your site for traffic. G,H,I
78. Identify the need for server monitoring and optimization. G,H,I
79. Identify site strengths and weaknesses. G, H, I

*Letters after performance expectations reference the course objectives listed above.

V. Evaluation:

A. Testing Procedures:

Online quizzes and labs will be built into the course. Students will also be required to participate in classroom discussions.

Grading Procedure:

- **Labs: 50 percent of grade.** Students will be given several labs to complete (short answer, multiple choice, etc.) The labs will be completed in the course of reading and working through the textbook. The files will be uploaded to web server space.
- **Quizzes: 35 percent of grade.** Students will be given a series of questions for each lesson and another cumulative quiz at the end of the course.
- **Online Communication Tools: 15 percent of grade.** Students will use the WebCT discussion board and email to communicate with instructor and with each other.

B. Laboratory Expectations:

N/A

C. Field Work:

N/A

D. Other Evaluation Methods:

N/A

E. Grading Scale:

- A 90-100%
- B 80-89%
- C 70-79%
- D 60-69%
- F 0-59%

VI. Policies:

A. Attendance Policy:

Pellissippi State Technical Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding videotape and Web courses) must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. (Pellissippi State Catalog)

B. Academic Dishonesty:

You are expected to submit only work that you do yourself. Do not collaborate on work with other students unless you are given a group project. Failure to observe these rules could result in you receiving a failing grade or being dismissed from the class with a grade of F.

Plagiarism, cheating, and other forms of academic dishonesty are prohibited. Students guilty of academic misconduct, either directly or indirectly through participation or assistance, are immediately responsible to the instructor of the class. In addition to other possible disciplinary
sanctions which may be imposed through the regular Pellissippi State procedures as a result of academic misconduct, the instructor has the authority to assign an F or a zero for the exercise or examination or to assign an F in the course. (Pellissippi State Catalog).

C. Accommodations for disabilities:

If you need accommodations because of a disability, if you have emergency medical information to share, or if you need special arrangements in case the building must be evacuated, please inform the instructor immediately. Please see the instructor privately after class or in his/her office. Students must present a current accommodation plan from a staff member in Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by going to Goins 127 or 131 or by phone: 694-6751(Voice/TTY) or 539-7153.

D. Other Policies:

Some exams are to be taken at the Testing Center at Pellissippi State. Policy requires that you have a photo ID to take a test in the Testing Center. Children are not allowed in the Testing Center. For location, hours, etc., refer to the Testing Center web site.

If you are taking this course at a distance and cannot come to the Pellissippi State Testing Center, it will be your responsibility to make arrangements for a proctored exam. Contact your instructor to discuss this matter.

Facilities: Students must have a valid Pellissippi ID to be presented on demand to gain access to Pellissippi facilities.

Hardware Requirements for This Course

IBM-type criteria:
- Pentium Computer 300 MHz minimum (Pentium III/750 MHz preferred) processing speed
- 128 MB RAM minimum
- 256 KB L2 cache
- Hard disk: 8 GB minimum
- Monitor capable of at least 800 x 600 resolution
- CD-ROM (DVD preferred) Drive 32X
- 56 kbps modem with Internet access (high speed such as cable modem or DSL recommended, if possible)
- Video adapter: at least 4 MB
- Speakers and 16 bit sound card
- Operating System: Windows 98 or higher

Macintosh criteria:
- PowerPC minimum (G3/300 MHz preferred)
- 128 MB RAM
- Monitor capable of at least 800 x 600 resolution
- CD-ROM (DVD preferred)
- 56 kbps modem with Internet access (high speed such as cable modem or DSL recommended, if possible)
- Speakers
- Video adapter: at least 4 MB
- Operating System: Macintosh 8.5.1 or higher (Mac OS 8.6 or higher preferred)

Software
- Microsoft Windows 2000 Service Pack 2
- Internet Explorer 6 (or higher)
- ShopFactory
- Microsoft SQL server 2000
- Microsoft SQL Server 2000 Service Pack 2
- Microsoft Commerce Server 2002
Microsoft Windows 2000 Security Rollup Package 1 (SRP1)
Microsoft Windows 2000 Hotfix Q294831 (IIS buffer patch)
Microsoft Windows 2000 Hotfix 313582 (COM+ Rollup Package)
Microsoft Windows 2000 MDAC 2.7 Hotfix Rollup
RightNow Web 3
Webserver Stress Tool
WebTrends