PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE
MASTER SYLLABUS

CIW E-COMMERCE
WEB 2220

Class Hours: 3.0  Credit Hours: 3.0
Laboratory Hours: 0  Revised: Fall 08

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 Website. Students will study how implementing technology can engage cardholders, merchants, issuers, payment gateways and other parties in electronic transactions. Guided labs will assist the student in exploring e-commerce technologies at all levels. This course is part of the Master CIW Designer track.

Entry Level Standards:

Students taking this course should be proficient in Windows XP

Prerequisites: WEB 2200 or CSIT 2645 or equivalent

Corequisites: WEB 2293

Textbook(s) and Other Reference Materials Basic to the Course:

Required Textbook:

E-Commerce Strategies and Practices: Academic Student Guide
Prosoft Learning Corporation, Version 5, ©2005
ISBN: 1593021534

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 pass the master the course material and pass the certification exam by studying the screen shots in the texts. These optional software packages include:

- Microsoft Windows Server 2003, with the following components:
  - Microsoft Certificate Server
- Microsoft Windows Server 2003 Service Pack 1
- Internet Information Services (IIS) v6.0
- Microsoft Internet Explorer 6 or later
- Netscape 7.2 or later (optional)
- Mozilla Firefox 1.0.4 or later (optional)
NOTE: This course is one of a series in the Certified Internet Web Professional (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 http://www.ciwcertified.com/.

You will take an exam preparatory course that includes the certification exam. This 1-hour course is a corequisite 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.

I. Week (Phase)/Unit/Topic Basis:

- **Phase 1** Lesson 1: Electronic Commerce Foundations
- **Phase 2** Lesson 2: Law and the Internet
  Lesson 3: Web Marketing Goals
- **Phase 3** Lesson 4: Online Product Promotion
  Lesson 5: Site Usability
- **Phase 4** Lesson 6: Customer Relationship Management
- **Phase 5** Lesson 7: Business-to-Business Frameworks
- **Phase 6** Lesson 8: Electronic Site Creation Packages
  Lesson 9: Electronic Commerce Site-Creation Software
- **Phase 7** Lesson 10: Site Development Software Implementation
  Lesson 11: Developing an Electronic Commerce Site Using Commerce Server
- **Phase 8** Lesson 12: Creating an Online Catalog
  Lesson 13: Inventory Control and Order Processing
- **Phase 9** Lesson 14: Payment Gateways
  Lesson 15: E-Service Implementation and Support
- **Phase 10** Lesson 16: Transaction and Web Site Security
- **Phase 11** Lesson 17: E-Learning Solutions
- **Phase 12** Lesson 18: Site Management and Performance Testing
- **Phase 13** Work on co-course WEB 2293
- **Phase 14** Work on co-course WEB 2293
- **Phase 15** Certification Exam taken in co-course WEB 2293

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.
D. Explain usability and discuss the factors that affect it.
E. Define e-services and formulate an e-service action plan.
F. Explain Electronic Data Interchange (EDI) and its role in e-commerce.
G. Define e-business and the role it plays in current business.
H. Explain interoffice resources for increased productivity and cost reduction.
I. Distinguish between e-commerce software options and weigh their advantages and disadvantages.
J. Install and customize an e-commerce site with a product catalog using software applications.
K. Install and verify a payment gateway for transaction processing.
L. Administer payment transactions for the batching process.
M. Identify major components of e-commerce security.
N. Generate a certificate request for a trusted third-party certificate authority.
O. Install a server certificate.
P. Develop a fully transaction-enabled e-commerce website.

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

III. Instructional Processes:
The student will use the following processes to accomplish the objectives of this course:

A. Focus on the standards, technologies, and practices for both business-to-business and business-to-consumer e-commerce models. (Technological literacy outcome)
B. Understand and facilitate relationships among marketing, promotion, customer service, user interaction, purchasing methods, and secure transactions. (Technological literacy outcome)
C. 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)
D. Conduct site performance testing and evaluation in relation to e-commerce. (Technological literacy outcome)
E. Understand how to conduct business online and how to manage the technological issues associated with constructing and e-commerce website. (Technological literacy outcome)
F. Use research activities to promote independent thinking. (Active Learning Strategies)
G. Implement a genuine transaction-enabled business-to-consumer website. (Technological literacy outcome)
H. 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. (Active Learning Strategies, Technological literacy outcome)
I. 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 course work to experiences beyond the classroom, and encouraging students to take active and responsible roles in the educational process.

IV. Expectations of 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.
2. Explain the difference between business-to-consumer and business-to-business e-commerce.
3. Weigh the advantages and disadvantages of using e-commerce over traditional sales methods.
4. Assess the initial considerations of launching an electronic commerce website, including hardware, software, bandwidth, in-house hosting, and outsourcing.
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)
18. Compare global product appeal to niche product appeal. (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)
30. Define e-services. (E,F,G,H)
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 web site development software. (H)
48. Examine database needs and requirements. (H)
49. Examine the development software setup and configuration. (H)
50. Unpack a Solution Site for Commerce Server. (G,H,I)
51. Create a foundation for your e-commerce site. (G,H,I)
52. Examine the Commerce Server Business Desk. (G,H,I)
53. Customize default pages. (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

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 D2L discussion board and email to communicate with instructor and with each other.
- 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:
Each student is expected to submit only his/her work. Do not collaborate on work with other students except for a group project. 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. A photo ID is required 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. It is the responsibility of students who are taking this course at a distance and cannot come to the Pellissippi State Testing Center, to make arrangements for a proctored exam. Contact the instructor to discuss this matter.

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

Hardware/Software Requirements for this Course

IBM-type criteria:
Hardware:

- Intel Pentium 4, Intel Centrino, Intel Xeon, or Intel Core Duo (or compatible) processor.
- Microsoft Windows XP with Service Pack 2 or Windows Vista Home Premium, Business, Ultimate or Enterprise (certified for 32-bit editions)
- 1 GB of RAM
- 5 GB of available hard-disk space
- 1024 x 768 monitor resolution with 16-bit video card
- CD-ROM drive (DVD preferred)
- High-speed Internet connection such as cable modem or DSL recommended, if possible
- Speakers

Software:

- Internet Explorer 6.0 (or higher) with Outlook Express
- Adobe Acrobat Reader 6.0 or better. Download free from
- OPTIONAL: Netscape 7.0 (full installation)

Macintosh criteria:
Hardware:
- PowerPC G4 or G5 or multicore Intel processor
- Mac OS X v.10.4.8
- 1 GB of RAM
- 7 GB of available hard-disk space space
- 1024 x 768 monitor resolution with 16-bit video card
- CD-ROM (DVD preferred)
- High-speed Internet connection such as cable modem or DSL recommended, if possible
- Speakers

Software:
- QuickTime 7.0.4 or better

FOR CIW Courses: 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.

Internet access is required for full implementation of the courseware