PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE
MASTER SYLLABUS

CIW E-COMMERCE DESIGNER CERTIFICATION
WEB 2293

Class Hours: 1.0 Credit Hours: 1.0
Laboratory Hours: 0 Revised: Fall 05

Note: This course is not designed for transfer credit.

Catalog Course Description:

The preparatory course for the CIW E-Commerce Designer exam focuses on standards, technologies and practices for both business-to-business and business-to-consumer e-commerce models. This course will use materials that allow students to instantly evaluate the level of IT knowledge achieved and will include practice exams.

Entry Level Standards:

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

Prerequisites:

WEB 2200

Corequisites:

WEB 2220

Textbook(s) and Other Course Materials:

Test preparation materials (CD) and cost of certification exam will run approximately $150 for this course. Your instructor will help you order the CD and will manage the ordering of the exam. Doing this through your instructor will get you the half-price of $150. Otherwise, the cost for the CD and exam would be ~$300.

1. AssessPREP - CIW E-Commerce Designer Individual License CD (1 year) ISBN 0742319539 (Cost~$70 if purchased through your instructor). Your instructor will provide you with the order form. You will order this directly from Prosofttraining using this order form. AssessPREP is a computer-based assessment tool designed to measure a learner's proficiency on a given topic or application. The CIW AssessPREP CD will let you (a) pre-assess your aptitudes, then tailor your study accordingly (b) prepare for the certification exam (c) instantly evaluate course knowledge and (d) review materials in testing or study environments.

2. CIW E-Commerce Certification Exam You can either take the certification exam at Pellissippi State through the CIW Exam Membership Program (half price~$75) or go to a Prometric Testing Center to take the exam (~$150).

Information on the CIW E-Commerce Designer Certification Exam can be found at http://www.ciwcertified.com/exams/1d0425.asp?comm=home&llm=3. This exam (CIW E-Commerce Designer 1D0-425) specifically

Contains a total of 70 items--60 scored items and 10 non-scored beta items. (The beta items are scattered throughout and are not scored). To certify, you must correctly answer at least 45 of the 60 scored questions to achieve a total score of 75% or greater.

You will have 90 minutes to complete the exam. Each item offers four solutions or distracters. Exam candidates must select the
one best solution for each item.

CIW E-Commerce Designer focuses on standards, technologies and practices for both business-to-business and business-to-consumer e-commerce models. This individual understands and facilitates relationships among marketing, promotion, customer service, user interaction, purchasing methods, and secure transactions by using SSL and SET, payment gateways, inventory control, shipping and order information and site performance testing and evaluation. Specifically, the exam tests over:

Electronic commerce (e-commerce) trends and statistics.
Business-to-consumer (B2C) and business-to-business (B2B) e-commerce.
E-commerce vs. traditional sales methods.
Considerations of launching an electronic commerce Web site, including hardware, software, bandwidth, in-house hosting and outsourcing.
Generating revenue on the Internet and payment collection for the Internet.
Security issues and legal aspects of e-commerce, including but not limited to jurisdiction, copyright, intellectual property, taxation, and software patents.
E-commerce marketing goals and online marketing strategies.
Drivers and barriers to growth and advantages and disadvantages of hard goods and soft goods.
Product pricing ranges and price changes and determine global versus niche product appeal.
Internet demographics, product distribution, banner ads, exchange networks and referrer programs.
Search engine placement and e-mail marketing.
Usability and factors affecting usability, including but not limited to screen flow, click patterns, and customer services (FAQ and e-mail).
E-services and Customer Relationship Management (CRM) including the ability to formulate a CRM action plan and customer surveys.
Synchronous and asynchronous services.
Electronic Data Interchange (EDI), Open Buying on the Internet (OBI), and the Open Trading Protocol.
Supply chain and procurement and vertical and horizontal markets.
Instant storefronts, including but not limited to entry-level packages for creating and managing electronic commerce storefronts.
Online electronic commerce packages, including but not limited to mid-level and high-level outsourcing solutions for electronic commerce site creation.
Web site development software, web server software, virtual directories, virtual servers, and multiple IP addresses.
Database needs and requirements.
Development software configuration.
Catalog design and components of online catalogs.
Shopping cart implementation, including but not limited to shipping, taxation requirements and fulfillment tracking.
Payment methods and payment gateways, including but not limited to accepting credit cards, verifying payment gateways, online transaction information and credit card process transactions.
Knowledge database installation, population, integration and administration.
Encryption schemes including but not limited to symmetric, asymmetric and one-way.
Security implementations including but not limited to hashing, message digests and digital signatures.
Certificate-related infrastructure and digital certificates.
Secure Sockets Layer (SSL), Secure Electronic Transactions (SET)  
and secure ordering pages of a site.  

Server monitoring and optimization.  

NOTE: It is **not** necessary to pass the certification exam in order to pass this  
course. You will receive credit for taking the exam.

Supplementary Materials:

1. **Software**

The following software should be installed on your system before beginning this class:
   
a. Microsoft Windows (98/2000/Me or XP)  
b. Adobe Acrobat Reader. Download free from  

1. **AssessPREP CD-ROM.** You will purchase the AssessPREP CD-ROM with study files that  
you will use to pre-assess your skills, review the material covered on the actual certification  
exam, and use the material as practice for the exam.

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](http://www.ciwcertified.com).

**I. Week/Unit/Topic Basis:**

AssessPREP is a computer-based assessment tool designed to measure a learner's proficiency on a given topic or  
application. The CIW E-Commerce CD will assess a student's knowledge of the areas covered on the CIW E-  
Commerce Certification Exam.

**Phase I:**

**Fall/Spring**

**Weeks 1-6**  
**Summer**  
**Weeks 1-4**

**Order AssessPREP CD and certification exam.** Student will work with the instructor to  
order the AssessPREP CD and order the certification exam from ProSoft. After installing  
the AssessPREP CD for this class on your computer, you can begin your self-study. The  
instructor will work with you to determine a date toward the end of the semester when you  
wish to schedule for the exam to be given; you must schedule the exam **at least three**  
weeks in advance of when you wish to take it. You can take the exam **once**. If you take  
the exam in the PSTCC CIW Exam lab, your scores will be recorded by the instructor and  
factored into your grade for this course; if you choose to take the exam in testing center  
not associated with PSTCC, you will fax your test scores to the instructor so the score can  
be factored into your grade.

During Phase I of the semester, you will be studying and working through the companion  
CIW course (for this exam, the co-requisite course is WEB 2220 CIW E-Commerce  
Designer). During this time, you can be using the AssessPREP CD to practice and review  
the material presented.

**Phase II:**

**Fall/Spring**

**Weeks 7-12**  
**Summer**  
**Weeks 5-6**

**Use AssessPREP CD:** Student will use the AssessPREP CD to review and practice for  
the CIW E-Commerce Designer Certification Exam. Here are some of the activities on the  
CD you can use to help review and prepare for the certification exam:

- Choose to take an exam or a drill by double clicking on the icons on the  
  AssessPREP screen. The exams simulate the actual tests. Drills focus in a single  
  subject matter.
- Take the quizzes as your work through WEB 2220 CIW E-Commerce Designer  
  course to be sure you have mastered the material in the manual. Quizzes are only  
  relevant when used with CIW AssessPREP Learning System student manuals. The  
  materials allow for  
  - Multiple study modes for adaptive learning  
  - Personalized study plan and progress reports
Study questions and reference tools
Simulations of actual testing environments
Alignment and references back to CIW instructor-led courseware

Drill-down testing on missed questions

Phase III:
Fall/Spring
Weeks 13-15
Summer
Weeks 7-8

Take WebCT Quizzes: Quizzes have been created in WebCT made up from the questions on the AssessPREP CD. You can take two Practice Quizzes (10 items each) before taking the 25-item Quiz that will count. The questions for all quizzes are randomly drawn from the test bank from the CD. Your performance on these quizzes will indicate to the instructor that you are studying and learning the skills presented from the companion course and from the CD and that you are progressing toward successful completion of the certification exam.

Schedule and complete CIW E-Commerce Designer Certification Exam. You need to schedule the date and time for your exam at least three weeks in advance. This is the lead time ProSoft needs for the certification exam to be ordered and scheduled for downloading to the CIW lab at PSTCC. The certification exam can be taken only once for this course.

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,IV
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. \textit{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. \textit{Technological literacy outcome}

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

6. Use research activities to promote independent thinking. \textit{Active Learning Strategies}

7. Implement a genuine transaction-enabled business-to-consumer web site. \textit{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. \textit{Problem solving and decision making outcome}

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

*Strategies and outcomes listed after instructional processes reference TBR’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.

\textbf{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
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
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 will be built into the course. The quiz items will be randomly generated from a bank of quiz items; each student may receive a different set of quiz questions over a specific topic.

Grading Procedure:

- **50% of grade: Completion of CIW E-Commerce Designer Certification Exam.** You do not have to pass the certification exam to pass this course. Your grade for this portion will be determined by the number of points you get correct on the exam. This will be combined with the points you earn on the other two percentage components of the course (Quizzes and Online Communication Tools) shown below.

  90% of total correct = A  
  80% of total correct = B  
  70% of total correct = C  
  60% of total correct = D  
  <60% of total correct = F  

- **40% of grade: Quizzes--Online.** Quizzes delivered online through WebCT will be used to measure your progress as you work independently with the AssessPREP CD. The questions you are studying and practicing from the CD will be included in a question database to be delivered in 25-item quizzes. Questions will be randomly selected from the database for each student for each quiz. Two practice quizzes and one graded quiz will be structured for each course objective. The quizzes are timed and the last one will simulate the way the actual certification exam is administered. You are encouraged to take all three tries to familiarize yourself with the questions.

- **10% of grade: Online Communication Tools.** Students will use email and discussion board to communicate with instructor and with each other.

B. Laboratory Expectations:

N/A

C. Field Work:

N/A

D. Other Evaluation Methods:
Master Syllabi

N/A

E. Grading Scale:

   A  90-100%
   B  80-89 %
   C  70-79 %
   D  60-69 %
   F  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 Requirements for This Course
IBM-type criteria:
AssessPREP E-Commerce CD to be purchased through your instructor
Microsoft Windows (98/2000/Me or XP)
Internet Explorer 5.5 (or higher) with Outlook Express
Crypto System FineCrypt version 1.0 (available on the student supplemental CD-ROM that ships with the text)

OPTIONAL: Netscape 7.0 (full installation)