

EC423

E-Commerce Technology System Design

[Onsite]

Course Description:

Development of a complex business application Web site from start to completion in an area jointly agreed upon by the student and the faculty member. Issues of e-commerce will be discussed. The faculty member acts more as a facilitator and project manager for this final assignment. Design principles and interactive communication techniques are used to create an aesthetic and communicative Web site.

Prerequisite(s) and/or Corequisite(s):

Prerequisites: EC412 Managing and Maintaining E-Business Websites

Credit hours: 4

Contact hours: 50 (30 Theory Hours, 20 Lab Hours)

SYLLABUS: E-Commerce Technology System Design

Instructor: _____

Office hours: _____

Class hours: _____

MAJOR INSTRUCTIONAL AREAS

1. Issues in Web site design.
2. Defining the mission and target users of a Web site.
3. Requirements gathering for a Web site.
4. Web site designing and usability testing.
5. Deployment, marketing, and maintaining the Web site.

COURSE OBJECTIVES

After successful completion of this course, the student will have the opportunity to:

1. Apply project management techniques to a user-centered project on Web site development.
2. Define the project mission statement for a Web site design or redesign.

3. Determine information requirements for Web site design or redesign using an appropriate method of requirements gathering.
4. Create a conceptual design plan for a Web site covering its navigation and architecture.
5. Create a physical Web site based on a conceptual design.
6. Develop a page design considering the technical, layout, and content factors.
7. Design a Web site with universal usability.
8. Assess usability of a Web site by measuring user performance.
9. Deploy a Web site on the Internet.
10. Devise marketing strategies to attract high user traffic.
11. Maintain, evaluate, and update the data and information on a Web site.

Related SCANS Objectives

1. Analyze information in new ways, using creative thinking skills.
2. Organize and maintain information to maximize retention and expression of knowledge.
3. Demonstrate the ability to obtain, evaluate, identify, and create information.
4. Employ computers to acquire, organize, analyze, and communicate information.
5. Communicate with clients and customers efficiently.

6. Work with team members with cultural diversity.
7. Seek and provide suggestions to modify and improve existing products and services.
8. Select technologies that will meet the goals and demands.

TEACHING STRATEGIES

The curriculum is designed to promote a variety of teaching strategies that support the outcomes described in the course objectives and that foster higher cognitive skills. Delivery makes use of various media and delivery tools in the classroom.

COURSE RESOURCES

Student Textbook Package

Lazar, Jonathan, *Web Usability: A User-Centered Design Approach*, Pearson Education, Inc., 2006,

References and Resources

ITT Tech Virtual Library

Login to the ITT Tech Virtual Library (<http://www.library.itt-tech.edu>) to access online books, journals, and other reference resources selected to support ITT Tech curricula.

- **Books**

The following books are related to this course and are available through the ITT Tech Virtual Library. These are listed as reference and are not required reading.

ITT Tech Virtual Library > Books > Ebrary

- Gao, Yuan (Ed), *Web Systems Design and Online Consumer Behavior*, Idea Group Publishing, 2004
- Addison, Doug, *Small Websites, Great Results : The Blueprint for Creating Websites that Really Work*, Paraglyph, Incorporated, 2004

ITT Tech Virtual Library > Books > NetLibrary

- Courage, Catherine and Kathy Baxter. *Understanding Your Users: A Practical Guide to User Requirements Methods, Tools, and Techniques: Morgan Kaufmann Series in Interactive Technologies*. Boston : Elsevier, 2005.

Michael, Alex. and Ben .Salter. *Mobile Marketing: Achieving Competitive Advantage Through Wireless Technology*. Boston: Elsevier, 2006.

Smith, Bud E. and Arthur Bebak. *Creating Web Pages for Dummies For Dummies; 8th Ed*. Hoboken, N.J: John Wiley & Sons, Inc., 2007.

- **Periodicals**

ITT Tech Virtual Library > Periodicals > EBSCOHost

- Creswell, Mary, "Building A Better Website," *Presentations: 14, no. 6 (Jun 2000): 26*
- Goldsborough, Reid, "Survival on the Web requires usability," *Business Journal (Central New York): 15, no. 1 (2001): 8*
- Goldsborough, Reid, "Weaving Web Sites that Others Will Want to Use," *Community College Week: 13, no. 12 (2001): 17*
- Grant, Angelynn, "Site-Seeing: A Visual approach to Web Usability (Book)," *Communication Arts: 45, no. 6 (Nov 2003): 264*
- Kim, Yong Jin, Rajiv Kishore, Sanders, and G. Lawrence, "From DQ To EQ: Understanding Data Quality in the Context of E-Business Systems," *Communications of the ACM 48, no. 10 (Oct 2005): 75-81*
- Langley, Nick, "Let usability come before design," *Computer Weekly (July 2004): 36-36*
- Tagiello, Greg and Katie Atkinson, "Improving Web Usability," *Association Management: 56 (Jun 2004 Supplement): 16-20*

ITT Tech Virtual Library > Periodicals > Full Text Journal

These are listed as reference and are not required reading.

- **Computerworld**

Articles on advanced technology, desktop computing, workgroup computing, networking, application development, management, the marketplace and timely news of note aimed at major users and major buyers of computer products and services.

Data Communications

Feature articles, case studies, special reports, commentary, product leaders and news of note for individuals with active involvement in network planning and development, design and implementation or management.

EWeek

Helps enterprise IT managers to do their jobs today.

InfoWorld

Articles, weekly features, product reviews, comparisons, benchmarks and technology updates on computing.

Inter@ctive Week

The national weekly newspaper of corporate computing; feature articles, interviews, commentary, business profiles, hardware, software, networking, buyers' guides, and timely news of note.

International Journal of Electronic Commerce

First scholarly journal devoted exclusively to advancing the understanding & practice of electronic commerce. Offers an integrated view of the field covering the areas of management information systems, computer science, economics & sociology.

Journal of Organizational Computing & Electronic Commerce

Publishes research articles concerned with the impact of computer & communication technology on organizational design, operations & performance.

- **Online**

Landmark articles on core subjects, reports on new databases, search tips and techniques, product testing and reviews, case histories of installations, special searching topics and new trends and technologies on all aspects of online information systems.

PC Magazine

Connection point for technology buyers making brand decisions for their companies. Aims to analyze, evaluate & review all technology solutions that build a modern business.

All links to web references outside of the virtual library are always subject to change without prior notice.

EVALUATION & GRADING

COURSE REQUIREMENTS

1. Attendance and Participation

Regular attendance and participation are essential for satisfactory progress in this course.

2. Completed Assignments

Each student is responsible for completing all assignments on time.

3. Team Participation (if applicable)

Each student is responsible for participating in team assignments and for completing the delegated task. Each team member must honestly evaluate the contributions by all members of their respective teams.

Evaluation Criteria Table

The final grade will be based on the following weighted categories:

Categories	Weights (%)
Minor Assignment	5%
Discussion	25%
Writing Assessments	30%
Project Phase 1	8%
Project Phase 2	32%
Total	100%

Grade Conversion Table

Final grades will be calculated from the percentages earned in class as follows:

A	90 - 100%	4.0
B+	85 - 89%	3.5
B	80 - 84%	3.0
C+	75 - 79%	2.5
C	70 - 74%	2.0
D+	65 - 69%	1.5
D	60 - 64%	1.0
F	<60%	0.0

COURSE OUTLINE

Note to the Students:

- 1) The numbers included in the “Activity Type” column denote the week number and lesson number in which the activity is assigned. For example, 1-1 included in the first row indicates a discussion that you need to participate in Week 1.
- 2) Multiple activities of the same type are included in certain weeks. For example, Week 1 has two writing assessments called 1-1a and 1-2b respectively.

3) Readings:

- For all weeks, except week 1, it is recommended that you complete the assigned readings before attending the class.
- **Week 1.** All the concepts will be covered in the class; therefore, the specified readings are merely for your reference. However, if you miss the first class, you will need to review the reference material for Unit 1.
- The textbook being referred in the following table is:

Lazar, Jonathan, *Web Usability: A User-Centered Design Approach*, Pearson Education, Inc., 2006.

Unit	Lsn	Lesson Title	Reading (Pages from the textbook)	Activity Types			
				Minor Assignment	Writing Assessment	Discussion	F

Unit	Lsn	Lesson Title	Reading (Pages from the textbook)	Activity Types			
				Minor Assignment	Writing Assessment	Discussion	F
1	1	Introduction to Web Usability	Reference Textbook: Chapter 1, Pages 1 – 2, 5 – 7, 16 – 23		1-1a 1-1b (Due Unit 2)	1-1	
2	2	Defining the Mission and Target User Population	Textbook: Chapter 2, Pages 29 – 49	2-1	2-1	2-1	
3	3	Requirements Gathering - What Information is Needed?	Textbook: Chapter 3, Pages 51 – 69		3-1a 3-1b	3-1	
	4	Methods for Requirements Gathering	Textbook: Chapter 4, Pages 75 – 95				
4	5	Information Architecture and Site Navigation	Textbook: Chapter 5, Pages 103 – 128		4-1	4-1	
5	6	Page Design	Textbook: Chapter 6, Pages 135 – 154	5-1	5-1		
6	8	Physical Design	Textbook: Chapter 8, Pages 187 – 202		6-1	6-1	
7	7	Designing for Universal Usability	Textbook: Chapter 7, Pages 159 – 182		7-1	7-1	
8	9	Usability Testing	Textbook: Chapter 9, Pages 205 – 229		8-1a 8-1b	8-1	

Unit	Lsn	Lesson Title	Reading (Pages from the textbook)	Activity Types			
				Minor Assignment	Writing Assessment	Discussion	F E
9	10	Implementation and Marketing	Textbook: Chapter 10, Pages 235 – 249	9-1		9-1	
10	11	Maintaining and Evaluating Web sites	Textbook: Chapter 11, Pages 251 – 267		10-1	10-1	
11	Project Phase II Presentation						

INTENT/INTERFACE

User satisfaction is integral to the success of a Web site. The E-Commerce Technology and System Design course addresses this aspect. The course aims to help students design a Web site with universal usability.

To give the students hands-on experience of working on Web site development projects, the course is centered on a project involving the creation and hosting of a Web site with Universal Usability.

The course starts by reacquainting students with project management techniques and the Project Management Body of Knowledge (PMBOK) so that they can work on their Web site development projects as independent project managers. Combining these two domains — ecommerce design and development and project management — will enable students to be more marketable.

To make these two dynamic learning processes effective, this course has been carefully designed to simulate (as closely as possible) the “real” world. Consequently, the student will be put into situations where some weeks have more tasks than others and as a result,

will require more of their time. This approach will encourage the student to look at the overall scope and time line (or life cycle) of this course, just like a project manager might look at the overall scope and time frame of a project. In the real world, deliverables are not evenly divided over the duration of the project in terms of demands on time and effort. Some weeks are heavy while others are light. As a result of this, the Project Manager is forced to look into future weeks to ascertain what tasks can be brought forward into earlier weeks to take advantage periods of low workload. It is this “real” world concept that is reflected in this course.

Giving the student a “heads-up” on this strategy becomes an important teaching methodology. The allocation of time will vary between students, as some students will manage their time better than other students.

As interaction within a team is integral to the success of a project, students will be made to discuss each other’s views and comments with the help of discussion questions. They will also review each other’s Web site and provide constructive comments for their improvement.

Graded discussion questions help students in understanding the importance of defining the mission of Web sites and deciding on appropriate requirements information gathering methods. Discussions are also used to help students identify factors that are important in coming up with a usable and aesthetic design for a Web site. Students will learn to develop Web pages and deploy their Web sites with the help of the project.