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ECT 455 E-Commerce Web Site Engineering

An introduction to Web site engineering methods and processes to support e-commerce development. Web site engineering life cycle and user-centered design, including site goals, business models, value propositions, user analysis, information architecture, interface and navigation design, usability guidelines, database, testing, hosting strategies, usage metrics, and collaborative development. Technologies for e-commerce, shopping cart, digital payments, promotion strategies, and security issues. Students will build fully functional Web sites using database and client- and server-side technologies.

Schedule including deliverable due dates is [posted here](#).

Textbooks and printed resources

Schneider, G. P. (2013) *Electronic Commerce* 10th ed. Cengage Learning.

Prerequisites

ECT 455: ECT 410 or HCI 430 or proficiency in programming

Plagiarism

The DePaul University standards for academic integrity apply in this class.

Professor

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	Topics	Reading	Due
Apr	1 Introduction, Value Chains, Team Project Requirements	Ch 1	
	8 B2C, Revenue models and strategies, Information Architecture	Ch 2	Deliverable A
	15 ERD, Twitter Bootstrap	Ch 3	Deliverable B
	22 Usability, more supporting Web technologies		Deliverable C
	29 Payment Systems, Web hosting	Ch 10, 11	
May	6 Midterm		
	13 Marketing, Usability testing	Ch 4	Deliverable D
	20 B2B, Supply chain support, Security, Legal issues	Ch 5,6,7	
	27 Mobile Commerce	Ch 8,9	Deliverable E
Jun	3 Final Exam		
	10 Final Presentation		Deliverable F Deliverable G

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Grading

Grading will be based on the following:

- 10 % Participation
- 20 % Midterm
- 30 % Final
- 40 % Team Project (25% group, 15% individual)

No late submissions.

Make up exams are oral.

Team Project Feedback

The team project is comprised of seven deliverables, due at regular intervals during the course. You will receive qualitative feedback on deliverables A through E, using the evaluation criteria listed in [team project grading sheet](#). You are welcome to modify the deliverable to follow up on the feedback and repost to the team repository web site before the final project submission.

If the deliverable is missing from the web site after its initial due date, it will be marked as missing and point deductions will be taken from the participation part of the final grade.

Team Meeting with Instructor

Each team, both online and in-class, should schedule one additional meeting in real-time with the instructor some time during weeks 4 to 6 to discuss strategies and progress on the team project. Teams should discuss possible meeting times and contact the instructor to agree on a mutually convenient time. Office hours and/or the second half of the week 6 class meeting are excellent times. Meetings are scheduled on a first-come, first-served basis. All team members are expected to participate in real time, and are encouraged to research effective communication technology for this purpose. Failure to schedule or attend this meeting will result in point deductions in the participation part of the final grade.

Team Project Evaluation Criteria

This Team Project will count toward 40% of your course grade, 15% for individual contribution, and 25% for group work. Individual scores will be based on the detailed list of responsibilities and contribution of each team member, as well as the results of [peer evaluation](#). Group work will be graded upon the completion of the project. During the term, the instructor will provide written or verbal feedback about deliverables A through E.

The final project and documentation will be evaluated according to the following criteria (total = 100 points; 25%, see team project [team project grading sheet](#)).

1. Team effectiveness -- leadership, clarity of roles and responsibilities, cohesiveness, involvement and collaboration efforts (Deliverable A, minutes, a detailed list of each member's responsibility and contribution, and peer evaluation) 10 points
2. Clarity of project scope and objectives (B) 10 points
3. Completeness of analysis (C) 15 points
4. Consistency and creativity in design (D) 15 points
5. Sound technical and budget solutions (E) 5 points
6. Complexity of solution and successful demo of prototype web site (F) 25 points
7. Effective Presentation (Deliverable F) 10 points
8. Completeness and quality of documentation (online project site, and Deliverable G) 10 points

Nonperformance as a team member

Usually, the peer evaluation and documentation, including the meeting minutes in addition to an overall desire for excellence is sufficient motivation for individuals to contribute a fair share to the team project. However, in extreme cases, individuals have been known to completely cease contributing to a team project. If this is the case, a team has the right to notify the instructor that the individual is no longer contributing and the team no longer wants the individual on the team.

This is not a decision to be made lightly, as expulsion from a team will result in the loss of 25% of the term grade. Because this is such a serious decision, any team that makes this decision will also experience a point deduction. In this situation, each remaining team member will lose 7% of the term grade.

[Peer evaluation sheet](#)

[Team project grading sheet](#)

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Team Project

This project provides experience in applying the methodology and the collaborative process for Web site engineering. Your team will act in the role of a Web consulting group which has been contracted to develop a business case and Web solutions for a client. The end product is a full document and the implementation of the proposed web site.

The project should include the following components:

1. Develop a business case for consumer-oriented Internet commerce. It can be a dot.com case or a click-and-brick case.
2. Analyze client requirements--strategies, customers/users, content, process, functions, and image.
3. Provide an information architecture of the web site.
4. Design site layout, content presentation, user interface, and transaction processing.
5. Implement your proposed site. The completeness of your site will depend on the complexity of your proposal, and the team's experience and size.
6. Each web site must include transaction processing that access databases, such as order placement and payment processing. For non profit sites, this may mean membership registration and other database driven functions.
7. Prepare a technical feasibility report.
8. Prepare a pro forma budget for implementation.
9. Propose evaluation criteria to measure the success of the web site.

Requirements

- This needs to be a new project, not a redesign of a previous site.
- You are not restricted to the technologies discussed in class, but the final site must be accessible through the team repository that you set up in DeliverableA.

Milestones and Deliverables

For each team project deliverable, list each team member's contribution. It is expected that some team members will devote more time and effort to certain but not all deliverables. However, the contribution of each member (15% of the course grade) should balance out over the entire project. In another words, a team member needs to take on a "fair" amount of responsibility throughout the project, as judged by other team members, in order to earn a satisfactory grade for contribution. Each deliverable should provide information about the contribution of each team member. Each member should have some programming responsibility for the final project.

Each team will create a project Web site in the assigned project account and publish each deliverable. You will send the project URL to the instructor as part of the first Deliverable. Please note that ASP.NET 2.0 accounts are on ECTWEB2 server.

DL Teams: Each DL team should schedule at least two consultation meetings with the instructor about project progress, one meeting for Deliverable C (between weeks 4 and 6) and one meeting for Deliverable D or prototype (between weeks 5 and 7).

Deliverable A: Team Organization Statement

1. Form a project team of four to six members.
2. Each team should have members performing roles of project lead, analyst, designer, technical support, media/graphic design, programmer, and scribe. Each team member is required to participate in the development of the prototype web site and project presentation. Each member should perform multiple roles.

3. Each team member should create a one-paragraph biography that summarizes relevant skills and experience.
4. Create a Team Organization Statement which should include a statement of mutual agreement regarding communication methods, commitment to timely completion of tasks, and right to release members who do not contribute to the project.
5. On ectweb2.cs.depaul.edu, create a team repository web site to host all of your deliverables. On your site, create links for each of the following:
 - Deliverable A
 - Deliverable B
 - Deliverable C
 - Deliverable D
 - Deliverable E
 - Deliverable F
 - Deliverable G

All of the links can be dead links at present, with the exception of Deliverable A. In subsequent weeks you will create documents appropriate for each subsequent deliverable and post them on or before the due date.

6. Create a document, reachable from your "Deliverable A" link that contains the following
 - Name and biography of each team member
 - Roles that team member will assume
 - Team Organizational statement.
7. The project leader should email the instructor the link to the repository Web site by 11:59pm of second week class meeting.
8. Due: Week #2

Deliverable B: Business Case Statement

- Post a 1-2 page statement about the client's business case.
- Present the proposed site's value proposition, business models (sources of revenues), market competitions, intended customers, and the rationale for using the Internet solutions. If the project involves several phases, discuss each phase and focus analysis on the immediate phase. For multi-channel strategies, discuss how online and off-line channels work in your case.
- Due : Week #3

Deliverable C: Requirements Analysis and Specification Document

- Prepare an analysis of goals and message, content, structure and interpretation, sensorial design, and market testing.
- This document should include a draft of (a) information architecture for the site, and (b) the detailed flow chart for transaction processing (catalog, order creation, order capture, payment authorization, order fulfillment)-- a flow chart showing the detailed process steps.
- Due: Week #4

Deliverable D: Detailed Design

- Perform content and interface design.
- Create content
- Integrate look and feel--sketches of layouts, graphics and template.
- Accommodate advertising
- Revise information architecture chart.
- Perform low fidelity (paper) prototyping. (optional)
- Post a document of revised information architecture chart, draft page layouts/templates, page description, ERD and data tables, and sources of content.
- Due: Week #5

Deliverable E: Technical and Budget Feasibility Report

- Determine technical solutions and requirements for hosting web site and maintenance. Explain rationale for your choice of ISP service.
- Prepare a pro forma budget for project implementation, including technology, planning, programming, production, promotion and maintenance. Show one-time and continuing
- Propose at least five criteria for measuring the web usage and business success of this web site. Explain the rationale for selecting these criteria.
- Due: Week #8

Deliverable F: Project Web Site and Presentation

- Implement the proposed web site.
- Perform response time and usability testing.
- Publish the results and project documentation.

- List team members' names and tools used in creating the prototype.
- Present the project prototype in class. Each team member should have a speaking part.
- DL teams are also required to make in-class presentation by at least one team member. If there is schedule conflict, the team should arrange a different date for presentation with the instructor.
- Indicate the tools and technology used in developing this project.
- Provide details about the environment for site testing (i.e., browser type and version, and display setting).
- Due: Week #11

Deliverable G: Project Documentation

- Make necessary revision of all deliverables.
- Revise Deliverable A or provide a revised task responsibilities at the end of the documentation.
- Post final project documentation on the ectweb2 course server.
- ~~Provide a complete set of project documentation in a 3-ring binder.~~
- Include presentation materials and a copy of your web site in the final document.
- Provide the complete URLs for the project site and deliverable site ~~and password.~~
- Provide a list of responsibility of each member for the deliverables and the final project.
- List the programming responsibility of each member of the final project.
- Keep a copy of the project files and deliverables for your own record.
- Due: Week #11

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Organizations

- [Ecommerce Trade Association](#) is the largest trade association dedicated to e-commerce education.
- [Women in Ecommerce](#) has been empowering women to use the Internet to promote their business via social media, Internet marketing, affiliate marketing, search engine optimization, mobile marketing, and training

Web links from the text

- [Cengage site](#)

Online tutorials and examples

- [Shopping Card](#), setting up a shopping card in ASP.Net.
- [Product Catalog](#), Product Catalog ASP.NET Demo by Telerik Reporting
- [Credit Card Validator](#) from codeproject.com.