

Advanced Production of Computer - Based Training
InsDsg 617 Syllabus

Instructor Contact Information:

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Class Textbook:

“Dreamweaver MX Application Development.” By Michael Meadhra 2002

ISBN : 0-672-32403-2

Optional: “Web Style Guide: Basic Design Principles for Creating Web Sites 2nd Edition” By Patrick J. Lynch, Sarah Horton ISBN: 0-300-07675-4

“Trends and Issues in Instructional Design and Technology” Robert A. Reiser, John V. Dempsey ISBN 0-13-022297-6

“Software Project Survival Guide” By Steve McConnell ISBN 1-57231-621-7

Course Description: This course reinforces and builds upon the students' basic knowledge of creating interactive applications. Through a combination of tutorial lab exercises and assignments students will learn how to understand and assess the capabilities of various web-based and multimedia tools, design efficient and structurally sound programs, and deliver multimedia content over various media. The course will focus on:

- Working collaboratively on projects, where students experience the various stages of a project's life cycle, from analysis and design to development and implementation.
- Developing skills in Macromedia Dreamweaver, Fireworks, and Flash to produce a computer-based training prototype.
- Developing the instructional design component of a computer-based training program.

Instructional Methodologies: The course uses a “distributed learning” approach that incorporates both virtual and face-to-face meetings. A variety of instructional methods, including group interaction, lectures, demonstrations and student produced projects are incorporated. Emphasis is placed on allowing learners to determine their own goals and to facilitate the construction of knowledge based upon making connections to prior knowledge and experiences. In addition lab activities are designed to give students the opportunity to learn Macromedia Dreamweaver and Flash.

Advanced Production of Computer - Based Training InsDsg 617 Syllabus

Method of Evaluation: Students performance will be determined by their participation in class, their understanding of the course reading material, a midterm project proposal and an evaluation of their final project. Grades are based upon the following criteria:

- Class participation and completion of lab exercises (10%)
- Participation in online forums (30%)
- Final project proposal (30%)
- Final web-based training prototype (30%)

Midterm Project proposal: Student groups will produce a paper based upon a topic they have selected that will describe the following:

- A description of the project to include the goals, instructional objectives and student outcome.
- A scope and sequence document that documents the deliverables presented in the final prototype.
- A project schedule that lists the individual responsibilities, group deliverables, and work estimates.

Final Project: Student groups will produce a medium size project on a topic of their choice. The project will include .

- A computer-based training environment produced in Macromedia Dreamweaver or Flash.
 - A 500 word description which explains: the context for your project. A description of the content and learning challenges and the teaching.
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Course Syllabus:

1. **Introduction:** The course begins with an e-Learning overview which defines e-learning and how computer-based training fits into the larger industry. Students are introduced to the concept of “distributed learning” a blended approach which incorporates both virtual and face-to-face meetings. They will use the Prometheus course management system tutorial and fill out a skills survey.
 - Lab: Dreamweaver overview, open UMass sever accounts.
2. **Defining roles:** Medium to large scale computer-based training projects involve the contributions of many individuals. A team consisting of a project manager, technical editor/course manager, subject matter expert, instructional designer, multimedia/graphics designer, webmaster/system analyst must be formed and roles defined that assist in managing a group, maintaining organization, tracking progress and meeting deadlines. This requires a systematic approach to design and methods.

Advanced Production of Computer - Based Training

InsDsg 617 Syllabus

- Lab: Frames, links and images.
3. **Project Selection & Planning.** Tools for collaboration, Project check-in procedures initiated. Site Architecture and navigation will be examined.
- Lab: Cascading Style Sheets and concept mapping using *Inspiration*, [Groove Collaborative software](#) will be explained.
4. **Project management** to gain practical experience in managing the initial stages of a software project development cycle including the analysis of an educational challenge(s), drafting a design solution, and building the on-line educational environment or component of the environment outlined a the design proposal
- **Lab:** Macromedia Fireworks as a tool for image manipulation.
5. **Information Design** is defined as the art and science of preparing information so that it can be used by human beings with efficiency and effectiveness. Its primary objective is to design interactions with equipment that are easy, natural, and as pleasant as possible. This involves solving many of the problems in the design of the human computer interface.
- **Lab:** Navigation screens using java scripting and behaviors in Dreamweaver
6. **Graphics Design Principles:** Visual Hierarchy is the process of taking stock of your content and determining their relative importance and then designing areas that grab attention to a lesser or greater degree. General concepts of screen design and layout will be examined as they relate to the creation of a computer-based learning.
- **Lab:** Screen Design and layout
7. **Midterm**
- **Lab:** Project Review
8. **User-centered Design Principles** The user-centered approach to software design and development involves a number of key activities throughout the development of the software including involving users, obtaining their feedback on the design and use of the system, providing prototypes for users to try out and re-designing in light of user feedback and comments. The benefits of this approach include increased productivity, enhanced quality of work, reductions in support and training costs and improved user health and safety.
- **Lab:** Xml, and dhtml,
9. **Designing for Interaction:** Server-side applications allow for the creation of dynamic web-pages using remote servers. They allow for online assessment, feedback systems and content customization.
- **Lab:** Introduction to server scripting using sql, php and coldfusion

Advanced Production of Computer - Based Training InsDsg 617 Syllabus

10. Universal Design, ADA Compliance: The primary goal of these guidelines is to promote accessibility. However, following them will also make Web content more available to all users, whatever user agent they are using (e.g., desktop browser, voice browser, mobile phone, automobile-based personal computer, etc.) or constraints they may be operating under (e.g., noisy surroundings, under- or over-illuminated rooms, in a hands-free environment, etc.)

11. Open Lab:

12. Open Lab: In addition to the lab activities students will be assigned peer-to-peer groups and virtually review their prototypes.

13. Open Lab:

14. Final Presentations: Students will present their final projects to the entire class and discuss the challenges and successes that they have encountered.

Resources:

<http://www.zvon.org/xxl/xhtmlBasicReference/Output/Xhtml>

<http://msdn.microsoft.com/webservices/building/xmldevelopment/basics/default.aspx> xml

http://www.gse.harvard.edu/~t525_web/lab_materials/javascript_dhtml/javascript_pt1_pub.html java and Dhtml

<http://www.w3schools.com/>

<http://www.arts.unsw.edu.au/education/CLT.HTML> cog load