Note: This syllabus may represent a past offering of this course and future course offerings may differ.

HCDE 455: User Interface Design

Instructor: Trond Nilsen
Quarter/Year: Fall 2010
Course Schedule: Mondays, Wednesdays, and Fridays from 12:30 – 1:20
Course URL: http://courses.washington.edu/ie455

Course Description

This course addresses the fundamentals of designing interfaces between humans and complex machines, notably computer systems. Topics include

- Models of human-computer interaction
- The interface design process
- Hardware, software, and human factors elements associated with the design and use of interfaces
- Sensory, perceptual, cognitive and psychomotor aspects of human-computer interaction in real and virtual environments.

Course Objectives

Practical group work will be emphasized to help students develop skills that will allow them to work effectively on interdisciplinary design teams in industry. The course may include invited lecturers to give students further insight to the practical aspects of designing and assessing interfaces in various settings. Other advanced topics will be presented as time permits.

Grading and Assignments

Design Problems 20%
Arcade Game Project 30%
Group Interface Design Project-Class Presentation 10%
Group Interface Design Project Report 40%

Design Problems

During the course of the quarter several short design problems will be assigned involving a fundamental interface issue. Some design problems will assigned to be done quickly in class (e.g. 5-10 minutes), others outside of class (e.g. during the Lab period). Thorough analysis and creativity are expected for the design problems assigned outside of class. Most design problems can be accomplished with a short one-page write-up with an accompanying sketch. Succinctness is a virtue – your insight, clarity of thought,
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and ability to express your ideas clearly and effectively will be assessed.

Arcade Game Project

For this project, take a pocket full of quarters to your local video game parlor or arcade. (Note: it is important to go to an arcade or location-based entertainment environment for this project, as an analysis of the environment will be an important part of your write-up.) Choose a game that you are not familiar with, and read the instructions. Make an attempt to play the game based on the instructions and knowledge you have of how other electronic games are played. Then replay the game (several times, but do not get hooked!) again using additional knowledge that you have obtained from your experiences. This must be a “real” arcade game and not a game on your computer or home video game system. Both the Health Sciences Student Center and Husky Union Building have arcade game rooms; however, you can go wherever you want. Prior to playing the games it is important to read the articles listed below, as you will need to use them to analyze, characterize and critique your game.

Game Design Critique

For this project, you will critique the interface of game at local video game parlor, arcade or other location-based entertainment venue. You will choose a game that you are not familiar with, attempt to play the game based on the instructions and knowledge you have of how other electronic games are played, and then assess its interface according to a series of questions provided to you in the assignment handout.

You will be asked include discussion of the environment in your assessment; therefore, the game selected must not be a game played on your computer or in your home. Both the Health Sciences Student Center and Husky Union Building have arcade game rooms. Gameworks in downtown Seattle is another popular choice.

Group Interface Design Project

For this project, you will be assigned to a three or four-person group on Friday October 2. The assignment of groups will be based on an experience/interest questionnaire given on the first day of class. Each group will be assigned a specific interface design problem to work on for the rest of the quarter. In the event that the group desires to work on a different design problem, it must be approved by the instructor, and there must be a unanimous agreement among members of the group. A group wishing to change its assigned project must recommend a new project by the end of class on Friday 9 Oct.