Human-Centered Design of Computer Interfaces

Graduate computer science course in Human-Computer Interaction. Students work in teams to conduct an end-to-end integrative interface design project.

PREREQUISITES

Students are strongly encouraged to have taken CS 5714 (Usability Engineering), CS 5724 (Models and Theories of Human-Computer Interaction), or HCD courses in four core areas: (1) Creative Problem Solving, (2) Computational Practices, (3) Interdisciplinary Research, and (4) Humane Understanding.

TEXTS AND SPECIAL TEACHING AIDS

Assigned reading will be drawn from the following:


Additional reading and recommended sources will be drawn from the following:


Project topics and design perspectives may be drawn from contemporary publications. Some examples are:

SYLLABUS

Students will learn problem seeking, ideation, concept selection, simulation, and prototyping. Using iterative methods, the dynamic relation of problem-seeking and problem-solving will be explored. Students will be exposed to a wide variety of methods (such as user-centered design, Delphi method of planning, morphological box, brainstorming, genre analysis, representational methods, the pattern language, rapid prototyping, structured walk-throughs, and mind maps, to name a few). Since design reviews are an essential part of designing, formal and informal reviews will be a regular part of the class.

Structurally, the class is part seminar, part lecture, and part hands-on project development. Grading will be based on seminar preparation and participation (20%), a paper in “CHI” conference format describing the project (15%), a written essay exams that are drawn from a journal maintained during the course (25%), and the design and implementation of the project (40%).

Content of Course
The topics loosely break down into four main categories: design process, design skills, philosophic underpinnings of interaction design, and design problem domain specifics.

1. Orientation and methodology 10
2. Technical skill development 15
3. Project planning & management 05
3. Domain area/topic orientation 10
4. Problem finding in domain area 05
5. Creative design solutions (ideation) 20
5. Implementation 10
6. Evaluation 15
___ Percent of course 100