CS4803/CS8803 – Empirical Methods in HCI
Spring 2010 Syllabus

Instructor: David Novick
Office Hours: TBD

Overview: This course is an introduction to qualitative and quantitative empirical methods in human-computer interaction. The course covers methods appropriate for both development and research, including observational studies, usability evaluation, assessment of effectiveness of interaction technology, and comparison of evaluation methods.


Course Outcomes
Upon successful completion of this course, students will be able to demonstrate accomplishments of knowledge and comprehension, application and analysis, and synthesis and evaluation:

1. Knowledge and Comprehension

Explain the elements and applications of:

- Contextual interviews
- Recording and analysis of users at work
- Usability testing techniques
- Empirical evaluation of user interfaces
- Hypothesis formation and experimental design

2. Application and Analysis

Apply skills of:

- Observation and analysis of people interacting with computers
- Usability testing of user interfaces
- Design and conduct of experiments evaluating effectiveness of interface technology
- Comparing the relative effectiveness of evaluation methods
- Basic statistical analysis germane to empirical methods in HCI
- Apply critical-thinking skills germane to empirical methods in HCI
- Understand and explain research papers in human-computer interaction (graduate students)
3. Synthesis and Evaluation

- Contrast the effectiveness of and know when to use different empirical methods in human-computer interaction
- Discuss the limitations of empirical methods in HCI

Standards of Conduct
You are expected to conduct yourself in a professional and courteous manner, as prescribed by the Georgia Tech Student Code of Conduct. Graded work, such as homework and tests, is to be completed independently and should be unmistakably your own work, although you may discuss your project with other students in a general way. You may not represent as your own work material that is transcribed or copied from another person, book, or any other source, e.g., a Web page. The instructor is required to—and will—report academic dishonesty and any other violation of the Standards of Conduct to the Dean of Students.

Disabilities
If you feel that you may have a disability that requires accommodation, contact the Access Disabled Program for Tech Students (ADAPTS), http://www.adapts.gatech.edu, adapts@vpss.gatech.edu.

Assignments
Reading and homework assignments will be handed out or announced in class. If you miss a class, it is your responsibility to find out what you missed. You should expect to spend at least seven hours per week outside of class on reading and homework.

Grading
Your semester grade will be based on a combination of four homework projects (partly team-based), two midterm exams, and a term paper. The final exam will consist of presentations of the term papers. Graduate students will read and present papers from the research literature and write a term paper. The approximate percentages are as follows:

Undergraduate:

- 40% Homework
- 60% Two midterms

Graduate:

- 15% Homework
- 35% Two midterms
- 30% Term paper
- 10% Research paper presentations
- 10% Final exam (presentation)