

.: Syllabus for CS321: Human Computer Interaction Design

Textbook:

1. Statistics for the Behavioral Sciences: Seventh Edition by Frederick J Gravetter, Larry B. Wallnau
2. Data Analysis and Graphics using R: An example based approach: Second Edition by John Maindonald and John Braun
3. Interaction Design: beyond human-computer interaction: Second Edition by Yvonne Rogers, Jenny Preece, and Helen Sharp

Software:

- A programming language of your choosing that can easily make user interfaces
- R (a statistical programming language): <http://www.r-project.org/>

Rationale:

Computer software facilitates humans when completing tasks. Tasks vary widely, from communication between individuals and social networking to mission critical tasks like space shuttle launches and preventing nuclear meltdowns. Human-Computer interaction is a scientific discipline for analyzing and studying how humans complete computer based tasks and how we can better facilitate them. The primary goals in this course are 1) to increase your intuition for designing interfaces and 2) to help you understand how to use metrics and evidence to analyze the interface choices you make.

Student Learning Outcomes:

- Demonstrate knowledge of general human-computer interaction principles.
- Demonstrate basic proficiency with the programming language R.
- Demonstrate knowledge of evidence based HCI approaches (e.g., statistical analysis, experimental design)
- Practice working cooperatively on a team to create a user interface for a given product.
- Practice version control, task management, and bug tracking practices.

Assessment:

- (15%) Midterm Exam
- (15%) Final Exam
- (25%) Individual Statistics Assignments
- (40%) Team Usability Project
- (5%) Attendance

No late exams or assignments will be accepted without prior approval.

Research Points:

In order to give students some idea about conducting research, the computer science department is requiring students in certain classes to obtain research points. I feel making this a part of the curriculum is important for two key reasons, 1) it is critical for students in a scientific discipline to learn how to *conduct* research at a basic level, and 2) any research that involves human performance has a practical need for obtaining participants, otherwise the discipline ceases to exist. **You are**

required to obtain three research points for this course. If you do not gain the research points, you will receive an incomplete for the course until you do. In order to obtain a research credit, you must choose one of the following activities:

1. Participate in a professional empirical study. Most of the time, studies are short, taking anywhere from ten minutes to 2 hours. All studies are reviewed and approved by the Human Subjects Review Program. You will receive one research point per hour of study completed,
2. Write a short, 1-2 page paper on a research topic of your choosing (with my approval and for one point). The paper will be judged as pass (you receive a research point) or fail (you do not). This means that if you did not obtain any research points through studies, you need to complete 3-6 pages of papers.

To be clear, *participating in an empirical study is always optional*. Further, if you opt to write a paper instead of participating in a study, you will not be penalized.

Research Point No show policy:

High no show rates can be extremely detrimental both to the time of the proctor (usually me), and sometimes to an experiment. If you decide that you would like to obtain your research points through participating in an empirical study, and you sign up for a date and time, you are expected to show up. If you do not physically appear to participate, without giving 24 hour notice and with exceptions for emergencies (at my discretion), you will be required to complete an additional research point.

Grade Distribution:

A	Greater than 90%
B	80% to < 90%
C	70% to < 80%
D	60% to < 70%
F	Less than 60%

Attendance:

HCI courses are strongly collaborative and require the active participation of a team. Not attending class can make it difficult for your team members to participate in any group activities. For this reason, attendance in this class is required. I will take attendance at the beginning of each class period. You are allowed to miss up to one day without penalty. Any subsequent missed day will lower your final grade by 1 percentage point (maximum of five).

ADA Statement:

Students who have special needs or disabilities that may affect their ability to access information and/or material presented in this course are encouraged to contact me or appropriate on campus entities for additional disability-related educational accommodations.

Caveat:

The schedule and procedures for this course are subject to change. It is the student's responsibility to learn of and adjust to changes.