Course Description
The field of Human-Computer Interaction draws in researchers from many disciplines. Here at Maryland, our HCI Lab has had faculty and students from departments including Computer Science, Psychology, the iSchool, English, Sociology, Business, and Art. Individual project teams tend to have similar combinations of disciplines represented. These teams also work with “end users” who come from diverse populations such as medical doctors, children, older adults, and others. You yourselves as a class represent 7 of the 10 colleges for undergraduates here at the University. How does such a diverse group work together when designing new technologies for and with the people for whom the technologies are being built? This course will explore and answer that question!

We will explore the idea that to create a good and useful tool, you need to understand the people who will come to use it, and the tasks they want to accomplish with it. We will see that a cross-disciplinary team works best when each member contributes their unique view and skills to the whole. We will also see that to make a creation usable, you need to learn what mistakes might be common and then design to avoid them from happening. You will develop an understanding of these through the course readings, lectures, exercises, discussions, and projects.

While there will be an implementation component, it is important to note that this class is not focusing on programming or building but rather focusing on the things that should be done when designing what you want to program or build. The group projects will have working prototypes as one of their outcomes, but you will find that much of the design work will happen using "paper prototyping" via art supplies and graphical tools such as Photoshop and that much of your time will be spent working with potential users.

Unlike many traditional courses where there is a single set of learning outcomes expected for all students who enroll, you will find that while there are some uniform goals this course also sets different goals for you based on your background. For example, students with non-technical backgrounds will gain new insight into technology, students with technical backgrounds will gain new insight into the power of diversity in technology projects, and students with diverse backgrounds will learn how to shape them.
**Course Topics Include**
- Defining the field of Human-Computer Interaction and exploring how it grew to include such diverse fields
- HCI -vs- User Interface Software and Technology
- Exploring the history of HCI through classic/historic readings
- Psychology of Everyday Things
- User-centered design
- Task-centered design
- Idea-ation/Brainstorming/Prototyping
- Team building across disciplines
- Overview of rapid prototyping tools (software and hardware)
- Project management
- Graphical Design
- Finding the strengths in both qualitative and quantitative evaluation (social science versus natural science approaches)
- The future direction of HCI and UIST in a more technologically diverse society

**Some Student Learning Outcomes**
Students completing this course will:
- obtain an understanding of how the areas of psychology and psychopathology connect to the design of hardware and software.
- gain a perspective of how the field of Human-Computer Interaction has grown and evolved as the technology as well as the users and their tasks have changed, and be able to discuss issues that have remained constant for decades as well as new issues designers face today.
- have the background, vocabulary, and experience to express to others the importance of elements of HCI such as task-centered and user-centered design.
- have the skills needed to search for historic and research project examples of what the industry sees as “new” ideas.
- both have experiences in taking an idea and bringing it to the level of a low-fidelity prototype, as well as using the appropriate assessment techniques and technologies to evaluate the design of both prototype and production software.
**Major Course Deliverables**

**Individual Journal:** As you read the assigned papers and articles, you will need to add a brief summary of each and your thoughts on the way it relates to course topics to your journal. As you work on your team project you will use the journal to help documented your contributions to the project, the progress being made on the project, and what lessons you have learned through working on the project. I would also like you to make special note of anything that surprised you as you are reading things or working on things. The journal will take the form of a Google Doc which you will share with me and which will be reviewed regularly.

**Semester Project:** There will be a group project where the students will start with an idea for a new piece of software and work through the process of user and task analysis, low-fidelity design, and testing of that design.

**Class Presentations and Reports:** There will be several in-class presentations and written reports. Some of these will be group presentations/reports related to the semester project. Some of these will be individual presentations.

**Individual Work:** There will be individual homework assignments to explore specific topics that are covered as well as reflection essays based on their readings. There will also be a written midterm and final exam. The final exam will include a take-home written portion regarding perceptions of yourself and other members of your discipline in connection to technology design as a result of the semester’s experiences.

**Readings**

There will be readings (academic, newspaper, and magazine articles, book excerpts) posted on the class website during the semester. These will come from (at least) psychology, computer science, sociology, English, and ergonomics. Examples include:

- "Psychology of Everyday Things" by Donald Norman
- “Leonardo’s Laptop” by Ben Shneiderman
- "Universal Principles of Design" by Lidwell, Holden, and Butler
- “100 Things Every Designer Needs to Know About People” by Susan Weinschenk
Class Website
http://www.cs.umd.edu/class/fall2012/hdcc208f/

Grading Distribution (tentative with adjustments possible)
Class participation: 10%
Individual journal and homework assignments: 30%
Semester team project and written reports: 30%
Midterm and Final Exam: 30%
(any adjustments will be discussed in class and then announced)

Academic Honesty
The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. The University of Maryland Honor Pledge reads: I pledge on my honor that I have not given or received any unauthorized assistance on this assignment/examination. Unless you are specifically advised to the contrary, the Pledge statement should be handwritten and signed on the front cover of all papers, projects, or other academic assignments submitted for evaluation in this course. Students who fail to write and sign the Pledge will be asked to confer with the instructor.

Special Needs
If you have a registered disability and wish to discuss accommodations, please email the instructors by the end of the second week of class. Disabilities can be registered through Disability Support Services (4-7682 or 5-7683 TTY/TDD).

Religious Observance
It is the student’s responsibility to inform the instructor by email of any religious observances that will conflict with your attendance, assignment deadlines, or final exam. The student should provide emailed notification to the professor by the end of the second week of the term; the notification must identify the religious holiday(s) and the date(s). If this notification is not given to the instructor by this date, all missed assignments, quizzes, and exams are subject to grade penalties.