Usability Analysis and Product Redesign
Psychology 734
Fall 2011

Instructor: Robert Youmans, Ph.D.	Office Hours: Wednesdays 10-11AM and by appointment
Phone: (703) 993 -5627	Class Time: Thursdays 4:30-7:10PM
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Course Objectives

The goal of this seminar is to introduce students to contemporary approaches used by human-factors professionals when they analyze products to facilitate user-interaction improvements. Although many techniques for assessing usability have been suggested, this seminar will focus on methods that have been shown to be reliable, valid, cost effective, and adaptable to a variety of systems and products. The issues and techniques reviewed are intended for graduate students with interests in actively conducting academic or industry research. The primary objective is to provide students with valid, reliable, and marketable human-factors testing and design techniques that will be of benefit in both academic and industry settings.

Textbooks and Reading Assignments

No textbook will be required for this course. Reading assignments will consist of approximately 30 peer-reviewed journal articles, technical readings, and other published reports. All reading materials will be made available online via the course webpage (see above) during the semester. A detailed list of due dates for completing reading assignments will be made available on the first day of the semester. Because of the large number of reading assignments, students are encouraged to schedule regular times during the week for reading and taking notes on the articles, and to discuss them with classmates prior to class when possible. Students are always encouraged to attend my office hours to discuss any of the topics related to the course, including reading assignments. All reading assignments should be completed before class.

Course Assignments and Grading

Weekly Assignments and Reading Quizzes: Students will complete regular graded assignments to investigate system design and evaluation issues, and will complete periodic (unannounced) quizzes on the reading material. There will be approximately 10 weekly assignments during the semester, and will include informal presentations to the class, reading quizzes, project analyses, reaction papers, and other assignments. These assignments, in combination, will contribute 40% towards students' course grade.

Individual Project: Each student will complete an individual analysis and redesign project, which will be documented with a written report and oral presentation to the class. Details regarding the project will be provided in class. The project will contribute 40% towards students' course grade.

Participation: Class participation is essential to this course, and students are encouraged to become active participants in the class by reading course assignments, thinking about the readings, and bringing questions and comments to class. Students are also encouraged to engage with classmates and the professor outside of class. Participation during class will contribute 20% towards students' course grade.

Attendance

Attendance at all scheduled seminars and class activities is essential for successfully learning the concepts covered by this course, and is required. Students must arrive on time, and ready to participate at the start

of the class. As a courtesy, one unannounced/unexcused absence will be allowed for each student, after which each additional unexcused absence will result in the loss of one letter grade per day. In addition, it is highly advised that you contact me BEFORE all absences to accommodate any assignments or other graded material that might not be completed due to the absence. Any assignments that are delayed due to an unexcused absence, even a first offense, will receive no credit unless other arrangements have been made in advance.

GMU Honor Code
George Mason University has an Honor Code that each student accepts as a condition of enrollment. This code is consistent with APA's ethical principles for working professionals, and it is required that each student adhere to the Honor Code. For this course, group collaboration (such as during a group project or during routine discussions of reading assignments) is expected and encouraged, but all students are required to produce original work on all assignments unless otherwise noted. Plagiarism, academic dishonesty, and other failures to follow the GMU honor code will result in disciplinary actions that are likely to include receiving a failing grade for this course, along with referral to the GMU Honor Committee for further review and documentation of the offense. A lack of knowledge about what constitutes a violation of the GMU honor code is not a defense against possible violations; it is your responsibility as a GMU student to review and adhere to this code. If you have ANY questions about plagiarism or the GMU honor code, I encourage students to review the code for themselves at http://academicintegrity.gmu.edu/honorcode/ or to see me so that I may provide clarification.

Performing at Your Best
Learning Accommodations: It is my policy, as well as the university's, to accommodate all students with disabilities that might affect their learning, course participation, or assignment completion. If you are a student with a disability and you need academic accommodations, please feel free to speak with me about making appropriate accommodations and contact the Disability Resource Center (DRC) at 703-993-2474, or online at http://ods.gmu.edu/ Most academic accommodations will be arranged through that office.

Stress and Academics: Let's face it, being a student today can at times be stressful, and life events can create anxiety or depression that can hurt anybody's academic performance. GMU is committed to helping students maintain their emotional well-being through the GMU Counseling and Psychological Services (CAPS) office, located online at: http://caps.gmu.edu/ and by telephone at: 703-993-2380. CAPS services are free to Mason students, and include one-on-one stress and anxiety counseling, and highly regarded Academic Skills Workshops that can teach students how to 'study smarter' and make the most of your investment in higher education.

Improving Academic Writing: Strong writing is a skill that is learned through guided instruction and practice. Strong writing skills are likely to be a benefit for students pursuing academic or industry careers in most domains. Students who seek to improve their academic writing are encouraged to do so by visiting the GMU Writing Center. Information can be found online at: http://writingcenter.gmu.edu/

Course Outline
This course will cover a range of topics related to Human Factors in system design and evaluation, including Heuristic Evaluations, Keystroke Level Modeling, Applied Cognitive Task Analysis, Concurrent Think Aloud, Retrospective Probing, SHERPA, fundamental design principles, evaluation methods, usability testing, and professional issues. A more detailed schedule of readings, assignments and topics by date will be made available in class. Any schedule changes or changes in assignments will be announced in advance.