

Special Topics: Usability

Syllabus

PSY 710 Sec. 003, Fall Term 2010

Led by: Mike WOGALTER
Tuesdays 1:30 - 4:15 pm
Room: 1218 SAS Hall
3 Credit Hours

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Course Objectives

Usability is intimately tied to Human Factors and Ergonomics. A fundamental goal is to produce a good fit of products, equipment, environments, and tasks with people. Design development should consider people's abilities and limitations. This course will explore ways that usability analyses and measurement can contribute to design through analysis and testing. A specific emphasis will be on ways to convey information quickly, accurately, and meaningfully. A secondary emphasis will be on methods used to produce consumer-product and environmental designs. This is a seminar course in which class time will be spent discussing the readings assigned for that week. Students will lead certain classes. Students will bring in questions and comments concerning the readings to prompt class discussion. An individualized usability research project will be conducted and a written summary produced.

Readings

There are 5 books we will be using:

Krug, S. (2006). *Don't make me think: A common sense approach to web usability, 2nd Edition*. Berkeley, CA: New Riders. ISBN-10: 0321344758; ISBN-13: 978-0321344755. Available online through NCSU library.

Hoekman, R. Jr. (2007). *Designing the obvious: A common sense approach to web application design*. Berkeley, CA: New Riders. ISBN-10: 032145345X; ISBN-13: 978-0321453457. Potentially available online at <http://www.safaribooksonline.com> using login email: wogalter@gmail.com; PW: usability

Lidwell, W. & Manacsa, G. (2009). *Deconstructing product design: Exploring the form, function, usability, sustainability, and commercial success of 100 amazing products*. Beverly, MA: Rockport Publishers. ISBN-10: 1592533450; ISBN-13: 978-1592533459.

Tullis, T. & Albert, W. (2008). *Measuring the user experience: Collecting, analyzing, and presenting usability metrics*. Burlington, MA: Morgan Kaufmann. ISBN-10: 0123735580; ISBN-13: 978-0123735584. <http://measuringuserexperience.com>

Johnson, J. (2010). *Designing with the mind in mind: Simple guide to understanding user interface design rules*. Burlington, MA: Morgan Kaufmann. ISBN-10: 012375030X; ISBN-13: 978-0123750303.

Additionally, readings will include primary source materials, i.e., empirical research articles. Students will assist in choosing the specific articles; they will be determined later.

Prerequisites

Graduate student status in a masters or Ph.D. program at NC State, except by permission of the instructors. This course is mainly geared to Human Factors and Ergonomics graduate students, but graduate

students in design, education, technical communication, industrial engineering, and computer science are welcomed to enroll. Advanced undergraduates will also be considered. Persons outside these areas or of different matriculation status at NC State wishing to enroll should get permission of the instructor.

Class participation

Because of the nature of the course, i.e., a seminar, your participation in class is essential. You should be prepared to speak up and add to each meeting's discussion. Class participation will be worth 20% of the final course grade. Also, see "Attendance policy" below.

You are strongly encouraged to critically read the assigned readings twice: Once before making up questions (discussed below) and again before coming to class. It is recommended that you take handwritten notes (and comments) about the readings as you go through them. Review them before coming to class. Remember to bring the readings assigned for the week to class.

Leader assignments

Students will be responsible for leading discussion of __ sessions during the semester. Leaders will give a succinct summary and description of the readings summarize the readings and then follow this up with leading the class in questions/comments from class members using methods to enhance the likelihood of high quality discussion. Leaders should become "experts" regarding their assigned sections. Leaders might want to use the time effectively in different creative ways such as showing visual aids (e.g., overheads, hand-outs, and/or computer projector) to assist in presentation or to search for other source materials to develop better, more informative discussions. Leaders are responsible in making sure that the discussion is fruitful and well paced. There will be a 10 minute break near the midpoint of each class meeting (around 2:40 PM). Students are asked to promptly return after the mid-class break (2:50 PM).

Discussion questions

Each person is required to bring in a set of questions and substantial discussion comments about the readings of that week. It is your chance to find out answers and impressions from peer classmates. The questions/comments should deal with aspects of the texts and articles that you do not understand and need clarification, or simply to stimulate discussion, etc.

Written research project

Students are required to complete a written research project on a topic that has the instructor's approval. The project can be focused on any area of scientific merit with respect to the human factors in design. Students are encouraged to include newly-collected or already-collected data in their paper. Students are encouraged to use the format directed by the *Human Factors Author's Guide* (downloadable at WWW.HFES.org) or the *Publication Manual of the American Psychological Association*. The written report should contain a title page, abstract, review of relevant literature (related to the problem being addressed, purpose of the research (and the reasoning behind it), method (description of the materials and procedure), results (expected or found), discussion/implications of the research, and references, i.e., comparable in form to the papers read in the class). The report should be no longer than 10-12 double-spaced pages of text (excluding supporting figures and tables). Other kinds of projects may be acceptable and will require approval of the instructor. A written proposal (only a half page to a page is necessary) should be submitted by **Oct 5**. Please make one or two appointments to talk to the instructor about potential ideas before submitting a proposal. Class discussions will generate potential project ideas. The chosen project must be doable given the time constraint of one semester to start and complete the work. The proposal is worth 3% of the course grade. The final written portion of the assignment will be worth 47% and is due **December 14**.

Attendance Policy

Students will be expected to attend every class meeting. Missing a single class is like missing a week's worth of classes. Student attendance is important because seminar discussions are only as good as the people who attend and participate. Therefore, students should note that 20% of the course grade is allocated to class

participation. Obviously, it is difficult to participate when you are not present. Additionally, with three unexcused absences there will be in an automatic penalty of 5% subtracted from the percentage total of the course grade for each additional absence. Avoid missing any classes.

Grading

All students are expected to do and turn in their own work. Academic integrity is expected. Dishonorable behavior will not be tolerated and when necessary will be pursued through the University's judicial channels.

The grading scale is shown below:

98-100	A+
92-97.9	A
90-91.9	A-
88-89.9	B+
82-87.9	B
80-81.9	B-
78-79.9	C+
72-77.9	C
70-71.9	C-
Less than 70%	F

A summary of the percentage worth of each of the course components follows:

Discussion Leadership	15%
Class participation (including weekly questions/comments)	35%
Project proposal	3%
Written project	47%
TOTAL	100%

Calendar for Usability

<i>Date</i>	<i>Book Author(s)</i>	<i>Readings Page #s</i>	
		<i>1st Half</i>	<i>2nd Half</i>
August 24 –	[Course Introduction]		
August 31 –	Krug	1-49	50-95
September 7 –	Krug	96-145	145-197
September 14 –	Hoekman	1-51	53-108
September 21 –	Hoekman	109-178	179-246
October 5 –	Tullis & Albert	1-36	36-81
October 12 –	Tullis & Albert	81-121	123-158
October 19 –	Tullis & Albert	158-190	191-227
October 26 –	Tullis & Albert	227-262	263-298
November 2 –	Lidwell & Manacsa	1-53	54-105
November 9 –	Lidwell & Manacsa	106-159	160-215
November 16 –	Johnson	1-50	53-95
November 23 –	Johnson	97-132	133-178
November 30 –	TBA		