Course Description: Human-Computer Interaction (SYST 469-003)
Music/Theater Building 1005
Wednesday, 7:20 PM – 10:00 PM

Instructor: Jack Laveson, Ph.D., CPE, CHFP
Phone: 703-577-7398 (cell); E-Mail Address: jlaveson@gmu.edu
Virtual Office Hours: Available for real-time chat by appointment through e-mail

Teaching Assistant: Arushi Verma; E-Mail Address: averma11@gmu.edu

Text: J. Preece, Y. Rogers, & H. Sharp. *Interaction Design: Beyond Human-Computer Interaction* (4th edition). Wiley & Sons, 2015. Students can access a compatible online version of this book (3rd edition) through the GMU Library at no cost – http://magik.gmu.edu/cgi-bin/Pwebrecon.cgi?BBID=2941995. The online version cannot be downloaded to e-readers. Your instructor will identify the minor differences between the versions in class.

Prerequisites: STAT 250, and IT 206; the prerequisites require a minimum grade of C, and the prerequisites are enforced by the registration system. *Students will be using hypothesis testing as well as the t-test and chi-square test learned in STAT 250.*

This course will cover the principles of human-computer interaction (HCI) including information processing design, cognitive models, ergonomics, and design metaphors. Students will learn to evaluate interface design in terms of usability (effectiveness, efficiency, and satisfaction). At the end of the course, students will understand the user interface design process, the basic concepts and principles of HCI, be able to recognize good and bad interaction designs, and be able to perform a high-level usability evaluation of interactive products. *(Students who receive credit for SYST 470 may not receive credit for this course.)*

Student Evaluation Criteria for Course Grade (Grading Rubric): Numeric grades are posted on Blackboard, and the final letter grade is posted on Patriot Web based on the following weighting and grading scale:

Mid-term Exam	30%
Class Project	25%
Final Exam	30% (only on material after the mid-term)
Redesign Proposal	10%
Lecture Homeworks	2.5%
Statistics Homework	2.5%

Grading scale: A+ = 98-100; A = 93-97; A- = 90-92; B+ = 87-89; B = 83-86; B- = 80-82; C+ = 77-79; C = 73-76; C- = 70-72; D = 60-69; F = below 60.

Exams: The exams will cover material from the study guide (at the end of each PowerPoint lecture), the student project process, and class discussions. Exam questions will be short-answer, and multiple choice (including true/false). The exams are closed book and closed notes. Laptops and other electronic devices cannot be used to take the exams and quizzes.

Class Project: Students will work in groups (of their choosing) to complete a class project. The project is an evaluation of two existing interactive products based on data obtained from participants (also known as subjects, or users) during a field study that your group will conduct. (A field study is performed where the product is used.) The project will be guided by usability goals, and uses knowledge learned from class to determine if there are differences in the usability of the products. Projects will be presented orally (time permitting) during the last two weeks of class, and presentation dates will be randomly assigned. You must discuss your project topic and methodology with me to make sure that it is acceptable. Projects are graded on the process you used to arrive at a result/conclusion. All students in a group are expected to equally contribute to the project; if identified, non-participants will receive a lower grade.

Homework: Lecture homeworks are based on reading assignments and class discussions, and are graded by being submitted on time. The statistics homework is based on statistical tests covered in STAT 250, and is graded by *both* the number of correct answers, and being submitted on time. Homework must be received by Blackboard on the due date by 7:20 pm (class start time). Late homework is not accepted as homework answers are discussed in class.

Redesign Proposal: You will prepare a technical proposal describing the redesign of a product discussed in the first lecture. The proposal will include the reasons for the redesign, a description of steps of the redesign process (what you are going to do), the expected output of the process, and a schedule showing the relationship of the steps (but NOT estimated time, nor level of effort/personnel hours). The proposal is due on the last day of classes, Saturday, December 12th.

Attendance: Your instructor will take attendance near the end of every class. Good attendance, either by being present, or by having an excused absence, will be worth extra-credit points; there are no other extra credit opportunities. Because you may need to miss a class, or leave early due to the complexities of student life, your instructor will accept reasonable explanations for absences and early departures. (Note that your instructor is the final arbiter of what is a reasonable explanation.) You must submit excused absence and early departure requests within a week of the absence/early departure by e-mail to jlaveson@gmu.edu.

Honor Code: GMU is an Honor Code university; please see the University Catalog for a full description of the code and the honor committee process.

Disabilities: If you are a student with a disability and you need academic accommodations, please contact the Office of Disability Services (ODS) at 703-993-2474, or http://ods.gmu.edu.

Communicating with students: Your instructor uses your GMU e-mail account to communicate with you. Thus you must frequently check your e-mail.

Course Materials: Lectures, readings, and related materials will be posted on Blackboard. Blackboard also will be used for homework submissions.

Religious Observances: It is the policy of George Mason University to make every reasonable effort to allow members of the university community to observe their religious holidays without

academic penalty. Students will be given an opportunity, whenever feasible, to make up within a reasonable time any academic assignment that is missed due to individual participation in religious observances. It is the student's responsibility to inform the instructor of any intended absences for religious observance in advance.

Other Useful Campus Resources:

- Writing Center: A114 Robinson Hall; 703-993-1200; http://writingcenter.gmu.edu/
- University Libraries: "Ask a Librarian", http://library.gmu.edu/mudge/IM/IMRef.html
- Counseling And Psychological Services (CAPS): 703-993-2380; http://caps.gmu.edu/
- University Policies: The University Catalog, http://catalog.gmu.edu/, is the central resource for university policies affecting student, faculty, and staff in university affairs.

Schedule: (This schedule is subject to revision before and during the course.)

Week 1	(***9/2***)	What is Interaction Design? (Ch. 1)
Week 2	(***9/9***)	Understanding and Conceptualizing Interaction (Ch. 2), and conclusion of What is Interaction Design? (Ch. 1)
Week 3	(***9/16***)	Cognitive Aspects (Ch. 3)
Week 4	(***9/23***)	Establishing Requirements (Ch. 10)
Week 5	(***9/30***)	Design, Prototyping and Construction (Ch. 11)
Week 6	(***10/7***)	Introducing Evaluation (Ch. 13) & Evaluation Studies: From Controlled to Natural Settings (Ch. 14)
Week 7	(***10/14***)	Mid-term Exam (covering chapters 1, 2, 3, 10, 11, 13, & 14, and classroom discussions)
Week 8	(***10/21***)	Designing a Usability Study (instructor provided resources)
Week 9	(***10/28***)	Interaction Design in Practice (Ch. 12)
Week 10	(***11/4***)	Data Gathering (Ch. 7)
Week 11	(***11/11***)	Evaluation: Inspections, Analytics, and Models (Ch. 15)
Week 12	(***11/18***)	The Process of Interaction Design (Ch. 9)
	(***11/25***)	Thanksgiving recess (no class)
Week 13	(***12/2***)	Student presentations
Week 14	(***12/9***)	Student presentations
Week 15	***(12/16)***	Final Exam (covering only material after the mid-term – usability study procedures, chapters 12, 7, 15, & 9, and classroom discussions)

Please read the following GMU Honor Code and sign at that the end that you have read it; then return the signed copy to the instructor. It is expected that you abide completely with the provisions of the Honor Code provided herein. Signing also acknowledges that you have received a copy of the syllabus.

Honor Code

To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of George Mason University, and with the desire for greater academic and personal achievement, we, the members of George Mason University, have set forth the following code of honor.

I. The Honor Committee

The Honor Committee is a group of students elected from the student body whose primary and indispensable duty is to instill the concept and spirit of the Honor Code within the student body. The secondary function of this group is to sit as a hearing committee on all alleged violations of the code.

II. Extent of the Honor Code

The Honor Code of George Mason University deals specifically with cheating and attempted cheating, plagiarism, lying, and stealing.

A. Cheating encompasses the following:

1. The willful giving or receiving of an unauthorized, unfair, dishonest, or unscrupulous advantage in academic work over other students

2. The above may be accomplished by any means whatsoever, including but not limited to the following: fraud; duress; deception; theft; trick; talking; signs; gestures; copying from another student; and the unauthorized use of study aids, memoranda, books, data, or other information

3. Attempted cheating

B. Plagiarism encompasses the following:

1. Presenting as one's own the words, the work, or the opinions of someone else without proper acknowledgment

2. Borrowing the sequence of ideas, the arrangement of material, or the pattern of thought of someone else without proper acknowledgment

C. Lying encompasses the following:

The willful and knowledgeable telling of an untruth, as well as any form of deceit, attempted deceit, or fraud in an oral or written statement relating to academic work. This includes but is not limited to the following:

1. Lying to administration and faculty members

2. Falsifying any university document by mutilation, addition, or deletion

3. Lying to Honor Committee members and counsels during investigation and hearing. This may constitute a second charge, with the committee members who acted as judges during that specific hearing acting as accusers

D. Stealing encompasses the following:

Taking or appropriating without the permission to do so, and with the intent to keep or to make use of wrongfully, property belonging to any member of the George Mason University community or any property located on the university campus. This includes misuse of university computer resources (see the Responsible Use of Computing Policy section in the "General Policies" chapter). This section is relevant only to academic work and related materials.

Students must report all alleged violations to the Honor Committee. Any student who has knowledge of, but does not report, a violation may be accused of lying under the Honor Code.

I have read the above GMU Honor Code and agree to abide by its provisions:

Signature: _____ **Date:** _____

Print Name: _____