HUMAN FACTORS IN SYSTEM DESIGN
PSYCHOLOGY 734
SPRING 2006

Instructor:	Chris Monk	**Office Hours:**	Wednesday 6:15-7:15
Phone:	(703) 993-3408		By appointment
Email:	cmonk@gmu.edu	**Class Time:**	Wednesday 4:30-7:10
Office:	2059 David King	**Class Location:**	David King 2072

Course Objectives

The goal of this seminar is to introduce students to the role and contributions of human factors to the design process. More than simply user interface or interaction design, the focus will be on the design of multi-component systems of which the user is one component. The assignments are intended to give students experience in "thinking" like a human factors professional. Accordingly, some of the challenges of being a human factors specialist will also be incorporated. Though not a methods course, students will gain plenty of hands-on experience that they will hopefully find valuable once in professional environments. Issues related to professional human factors career will also be covered.

Textbooks (required)

Casey, S. (1993). *Set Phasers on Stun and Other True Tales of Design, Technology, and Human Error: And Other True Tales of Design, Technology, and Human Error*. Santa Barbara, CA: Aegean.

Cooper, A. (2004). *The Inmates Are Running The Asylum: Why High-Tech Products Drive Us Crazy and How to Restore the Sanity*. Indianapolis, IN: SAMS.

Norman, D. (2002). *The Design of Everyday Things*. New York, NY: Basic Books. [originally published as *The Psychology of Everyday Things* in 1988]

Additional articles will be assigned as well.

Course Requirements and Grading

Individual Project: Each student will complete an individual design project, which will contribute 30% towards the student's course grade. This project will include both a written report and oral presentation to the class. Details regarding the project will be provided in class.

Group Project: The group project will be a subsystem integration project where each student in a team will be responsible for a designated subsystem within the larger system (System and subsystems will be provided). The group project will contribute 30% towards the student's course grade. This project will include both a written report and oral presentation to the class. Details regarding the project will be provided in class.

Participation: Class participation is essential, as we will be discussing a variety of system design and evaluation processes, approaches, and components. Each student or teams of students will be expected to lead a discussion of a topic, as well as provide examples of successful and unsuccessful systems along with an explanation. Participation will contribute 20% towards the student's course grade.

Homework: There will be regular assignments to investigate system design and evaluation issues in the daily lives of students. A short write-up will be due each class, and notable examples will be discussed in class. These assignments will contribute 20% towards the student's course grade.

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 important that each student adhere to the Honor Code. For this course, group collaboration (such as the group project) is expected, but each student will produce his or her own papers and homework assignments. If you have any questions about what is permitted and what is not, please see your instructor.

Attendance

This seminar will largely be discussion-based, and therefore attendance is essential. Lack of attendance will affect a student's Class Participation grade (and likely the homework assignments as well).

Special Accommodations

If you are a student with a disability and you need academic accommodations, please see me and contact the Disability Resource Center (DRC) at 703-993-2474. All academic accommodations must be arranged through that office.

Course Outline

Any schedule changes or changes in assignments will be announced in class in advance. After an absence, students are responsible for contacting the instructor to obtain accurate information.

Week	Topic	Reading
1/25	Intro to HF in system design	
2/1	System design process, function allocation	
2/8	Human Operator/User Issues	
2/15	Human Operator/User Issues	
2/22	Errors, Failure, Safety	
3/1	Interface Design Issues	
3/8	Project Presentations	
3/15	Spring Break	
3/22	Design Evaluation	
3/29	Design Evaluation	
4/5	Communicating Design	
4/12	Solving problems: Design vs. Research	
4/19	Professional issues	
4/26	Group Presentations	
5/3	Loose Ends	

Important Dates

First Day of Classes	Jan. 23
Last Day to Add	Feb. 7
Last Day to Drop	Feb. 24
Elective Withdrawal Period	Feb. 25 – Mar. 24
Spring Break	Mar. 12 – 19
Last Day of Classes	May 6