

DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING

ISEN 430: HUMAN FACTORS AND ERGONOMICS

This course is a survey of cognitive and physical ergonomics (work-study in Greek) that covers human information processing, physiological and biomechanical functioning, and implications for design of the workplace and jobs in that workplace. Examples will be drawn from industry, aerospace, assistive technology, surface transportation, and computer interaction. Human Factors and Ergonomics (HFE) is interdisciplinary with applications wherever humans interact with equipment in a system context.

Objectives of the course are:

1. Overview HFE and how it fits into engineering design and analysis
2. Study the applications of principles of HFE in design
3. Study solutions to typical design and operational problems through HFE

This course will consist of study of material in a folder of Resources, illuminated by lectures on key topics in class. The Resources Folder consists mostly of Government documents and other documents in the public domain. This Resources Folder is on the departmental “g” drive under Koppa or is on the course Website. The PowerPoint lecture “slides” are also on the g drive or website in a “Lectures 10” folder. I often change some things in lectures before presentation, so there may be some discrepancies between what you see in that folder and what you see in class. Students who are not ISEN or BMEN can open an account with the MicroLab for the duration of the semester if they do not have web access. Class attendance is **strongly encouraged**, since lecture items NOT in the readings will appear on evaluations.

Evaluations

These short-answer fill-in-the-blank closed-book evaluations will cover the material read or presented in class prior to that test but since the last test. There will be two such evaluations; one around mid-semester covering the first half of the course (Cognitive Ergonomics), the other at the end of the course during Finals, which will cover the remainder of the course (Industrial Ergonomics). There will **not** be a comprehensive final.

Homework

There will also be a number of homework assignments I call “Amusements.” These will be assigned on a sporadic basis to assist you in applying some of the principles and ideas you learn in the course. These assignments **MUST** be turned in at the appointed date and time designated on the handout sheet, unless you have an excused absence.

Grade Determination

Evaluations count 33% each, with the homework average grade counting the remaining 33%. If you must miss a scheduled evaluation, please discuss it *in advance* with me. Emergencies will be considered on a case-by-case basis. Attendance and participation in discussions will help leverage borderline grades up...or down.

Academic Integrity

Students in this class are reminded of the Academic Integrity Statement of Texas A&M University: “*An Aggie does not lie, cheat, or steal or tolerate those who do.*” Further information on Honor Council Rules and Procedures may be found at www.tamu.edu/aggiehonor

To Students with Disabilities:

The Americans with Disabilities Act (ADA) is a federal antidiscrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe that you have a disability requiring an accommodation, please contact the Department of Student Life Services for Students with Disabilities in Room 126 of the Koldus Building, or call 845-1637.

I also encourage you to discuss your situation with me in confidence so that I can better assist you in accomplishing your academic goals in this class.

PREPARED BY: Rodger Koppa P.E.

DATE: Spring, 2010