Department of Industrial and Information Management-Graduate Program  
Institute of Information Management  

R359100 Cognitive and Organizational Ergonomics (認知與組織人因工程)  
Spring 2013 (102 學年度第 2 學期)

1. **This mission of the College** is to serve business and society in the global economy through developing professionally qualified and socially responsible business leaders as well as through advancing the frontiers of knowledge in business management.  

2. **The strategic objective of Department of Industrial and Information Management-Graduate Program /Institute of Information Management** is to Cultivate industrial and information management professionals who possess TIP (Technological knowledge, Innovative foundation, and Perceptive learning).  

**Graduate Program Learning Goals** (goals covered by this course are indicated by checks):

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**Instructor:** Brandon Lin  
**Office Hours:** Mon 14:00 – 16:00 or by appointment  
**Email:** brandonl@mail.ncku.edu.tw  
**Phone:** 06-2757575 ext.53310  
**Class Time & Location:** Wed 13:10 ~ 15:00  
Fri 9:10 ~ 10:00  

**Prerequisite:** No  

**Course Description:**  
This is a graduate-level course offered for students interested in human factors and ergonomic from the perspectives of practitioners in industries. The two-third part of the course focuses on the psychological part of ergonomics, a.k.a. cognitive ergonomics. First, research methods commonly adopted in related disciplines will be introduced on the basis of diverse research questions. After covering the fundamental knowledge of human’s visual sensory, auditory, and tactile system, students will learn the major design principles in displays and controls. Models of human information processing will be presented with an emphasis on the attention and perception. Students will have opportunities to conduct usability evaluation and quantify user experiences in the field of human-computer interaction (HCI). The rest of class will spend on sociotechnical system and organizational ergonomics, especially in their application to healthcare systems.
Course Objectives:

Students will gain fundamental understanding and applied knowledge that allows them to further explore diverse domains in cognitive and organizational ergonomics.

Course Content (subject to change):

1. Introduction
2. Research methods
3. Design and evaluation methods
4. Human-computer interaction
5. Usability engineering
6. Visual sensory systems
7. Auditory, tactile, and vestibular system
8. Cognition
9. Decision making
10. Displays and controls
11. Macroergonomics - environment, social, and technical system
12. Stress and workload
13. Human errors
14. Participation
15. Assessing work system processes
16. Applications in healthcare and patient safety

Textbook:


References:


Course Requirement:

- Participation is a must. You will learn to actively contribute to the group’s knowledge. Each person’s input is encouraged and will be rewarded.
- Homework assignments and laboratory reports need be handed in before the class starts. Overdue works will be penalized unless the permission is granted beforehand.
- The exam is closed book with one page of cheat sheet.
- Class materials will be given on the course website site
  http://moodle.ncku.edu.tw
**Academic Integrity:**

Academic integrity is the pursuit of scholarly activity free from fraud and deception and is the educational objective of this institution. Academic dishonesty includes, but is not limited to, cheating in exams, plagiarism, fabrication of information or citations, facilitating acts of academic dishonesty by others, unauthorized possession of exams, submitting work of another person, or work previously used without informing the instructor, or tampering with the academic work of other students.

In this course, students are expected to respect other students’ dignity, rights and property. As this course contains a significant laboratory component, students are also expected to help create and maintain an environment in which all can succeed through the fruits of their individual efforts. All exam work for the course must reflect individual effort and no form of academic integrity violations will be tolerated.

**Grading Policy:**

(*Including a grading scheme for AACSB Multiple Assessment: )

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