The mission of the Department of Industrial and Information Management is to Cultivate quality professionals with enthusiasm and global perspectives.

General Program Learning Goals (goals covered by this course are indicated):

- Graduates should be able to communicate effectively verbally and in writing.
- Graduates should solve strategic problems with a creative and innovative approach.
- Graduates should demonstrate leadership skills demanded of a person in authority.
- Graduates should possess a global economic and management perspective.
- Graduates should possess the necessary skills and values demanded of a true professional.

Instructor:

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Room 61313
Phone: +886-6-2757575 ext. 53130
Office hour: Monday 10:30 – 12:00 Thursday 16:00 – 17:30

Course Description:

This is a junior-level course offered for students pursuing a baccalaureate degree in industrial and information management. It exposes students to the fundamental of human factors & ergonomics (HFE), the science of studying the interactions between human and other elements of the system. The course can be further divided into three separate parts. At first, the knowledge of anatomy and physiology will be introduced, as well as the principles of physical ergonomics related to our daily activities. The following course will spend on the psychological part of ergonomics, a.k.a. cognitive ergonomics. The basic theories applied to human information processing, controls and displays, and mental workload will be presented. The rest of course will cover several applications of HFE in occupational health and safety, such as workplace design, prevention of worked-related musculoskeletal disorders.

Course Learning Goals:

Equip students the ability to utilize the principles of HFE to increase the overall performance of a system and simultaneously improve human well-being
Content Summary (subject to change):

1. Introduction and history
2. Musculoskeletal principles
3. Anthropometry
4. Manual work and energy expenditure
5. Low back and NIOSH lifting guideline
6. Cumulative trauma disorders – risks and evaluation tools
7. Workplace design - illumination, noise, and heat stress
8. Information theory and processing model
9. Design for displays and controls
10. Usability and human computer interaction

Textbooks:

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.
- Both exams are closed book and notes.
- 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:

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