This mission of Department of Industrial and 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):

- Graduate students should be able to communicate effectively verbally and in writing.
- Graduate students should solve strategic problems with a creative and innovative approach.
- Graduate students should demonstrate leadership skills and ethics demanded of a person in authority.
- Graduate students should possess a global economic and management perspective.
- Graduate students 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: Tue 3:00 PM – 5:00 PM
            Thr 11:00 AM – 12:00 PM

Course Description:

This course is a graduate-level course offered for students interested in human factors and ergonomic from an applied perspective. The first part of the course focuses on the occupational biomechanics of human work. The knowledge of work physiology will be covered in the second half of the course, specially emphasized on the energy expenditure.

Course Learning Goals:

Students will gain applied knowledge that allows them to further explore diverse sub-domains in physical ergonomics. The gained knowledge of human strengths, capabilities, and limitations would be valuable resources when they need to redesign a workplace, work tasks and human-machine interface in the real world.

Content Summary:

1. Musculoskeletal system
2. Anthropometry
3. Mechanical work capacity
4. Bioinstrumentation
5. Electromyography
6. Biomechanical models
7. Manual materials handling
8. Methods of evaluating manual work
9. Circulatory system
10. Respiratory system
11. Physical work capacity
12. Metabolic modeling
13. Physiological strain and fatigue
14. Motion study

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. An individual cheat sheet up to one page of A4 size only.
– Class supplements/sample exams 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.

Academic misconduct is not tolerated in this course. Note that, while individuals may talk about their assignments, each person/group must write up their original report. Any violation of academic integrity will be thoroughly investigated and dealt with severely.

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 for AACSB Multiple Assessment:**

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<tr>
<th>Category</th>
<th>HW 15%</th>
<th>Midterms 30%</th>
<th>Lab 15%</th>
<th>Project Report 20%</th>
<th>Presentation/Participation 20%</th>
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<td>☑ Oral Commu./ Presentation</td>
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<td>☑ Written Communication</td>
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