

COURSE SYLLABUS

YEAR COURSE OFFERED: 2015
SEMESTER COURSE OFFERED: Summer
DEPARTMENT: SCE-Natural Sciences-Environmental Sciences
COURSE NUMBER: INDH 4321
NAME OF COURSE: Ergonomics and Workplace Design
NAME OF INSTRUCTOR: Dr. Magdy Akladios

The information contained in this class syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

Learning Objectives

1. Apply the fundamental principles and the practice of industrial hygiene to address the health of workers, the community, businesses, government, education/research, or other work environments;
2. Anticipate, recognize, and evaluate hazardous conditions and practices affecting people, property and the environment, develop and evaluate appropriate strategies designed to mitigate risk;
3. Communicate and interact effectively with technical and non-technical audiences;
4. Integrate ethical, social, current, and global issues and responsibilities in their practice;
5. Work individually or on a team to critically analyze and address complex problems in occupational health;
6. Recognize that the practice of industrial hygiene requires ongoing learning, and undertake appropriate activities to address this need.

Major Assignments/Exams

Homeworks	20%
Project/Presentation	20%
Exam1	20%
Exam2	20%
Exam3 (Final)	20%
Total	100%

Required Reading

- Kroemer, K.H.E.; and Grandjean, E. 1999, 5th Edition (or newer). Fitting the Task to the Human. Taylor & Francis Inc., Philadelphia, PA.
- Class notes available online

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Recommended Reading

Journal articles related to the topic.

List of discussion/lecture topics

#	Date	Topic
1	June 9	From Dr. Akladios' website: Intro & History of HF/Ergo.
2	June 10	From Dr. Akladios' website: Ch 1: Muscular Work + Ch2: Nervous Control of Movements
3	June 11	Ch 3: Improving Work Efficiency + Ch 4: Body Size (Anthropometry)
4	June 16	Anthropometry HW due + Ch6: Physiology & Heavy Work
5	June 17	Exam 1 (Covers: Intro, Ch1, 2, 3, 4, and 6) ...Starts at 7pm
6	June 18	Review Exam 1 Q/A + Risk Factors (from various outside sources)
7	June 23	Ch 7: Handling Loads + NIOSH Lifting Equation
8	June 24	Ch 8: Skilled Work + Ch 19: Vibration
9	June 25	Students to work on Projects
10	June 30	Exam 2 (Covers: Ch 7: Handling Loads, NIOSH Lifting Equation, Risk Factors, Ch 8: Skilled Work + Ch 19: Vibration) ...Starts at 7pm
11	July 1	Review Exam 2 Q/A + Ch 16: Night Work & Shift Work (Circadian Rythms)
12	July 2	Human Factors concepts and Cognitive Ergonomics
13	July 7	Ch 11: Fatigue
14	July 8	Project Presentations
15	July 9	Final Exam (Covers: Ch16-Circadian Rythms, HF, Ch17-Vision, and Ch18-Light) ...Starts at 7pm