

COURSE NUMBER: IE 5512, 4 credits	COURSE TITLE: Applied Ergonomics
TERMS OFFERED: Spring	PREREQUISITES: Upper Division IT or graduate student
TEXTBOOKS/REQUIRED MATERIAL: Konz, S. and Johnson, S., <i>Work Design: Industrial Ergonomics</i> , Scottsdale, AZ: Holcomb Hathaway, 2000	PREPARED BY: Professor Caroline C. Hayes DATE OF PREPARATION: May 22, 2007
COURSE LEADER(S): TBA	CLASS/LABORATORY SCHEDULE: Individual groups of students work out their own schedule with representatives from local industrial firms. CONTRIBUTION OF COURSE TO MEETING PROFESSIONAL OBJECTIVES: 100% engineering topics
CATALOG DESCRIPTION Small groups of students work on practical ergonomic problems in local industrial firms. Projects cover a variety of ergonomic issues: workstation design, equipment and tool design, back injuries and material handling, cumulative trauma disorders, illumination and noise, and safety.	COURSE TOPICS: Topics vary between student groups, but typically include the following: <ol style="list-style-type: none"> 1. Ergonomics of workstation design 2. Cumulative trauma disorders 3. Manual material handling 4. Noise measurement and abatement 5. Analysis of illumination and design improvements 6. Analysis of accident statistics 7. Machine guarding and safety 8. Analysis of chemical hazards and hazard control 9. Development of a corporate safety program 10. Analysis and reporting of ergonomic design solutions.

COURSE OBJECTIVES	<ol style="list-style-type: none"> 1. Provide students with an opportunity to work on real ergonomic problems in local companies. 2. Let students try to apply ergonomic principles, methods, and theory to real-life situations with various constraints. 3. Teach students to utilize a variety of available information sources. 4. Teach effective written and verbal reporting. 5. Teach appropriate methods of data collection and analysis, observation, interview, and use of questionnaires.
COURSE OUTCOMES	<p>(Letters shown in brackets are linked to program outcomes a-k)</p> <ol style="list-style-type: none"> 1. Obtain an appreciation for and practical exposure to real ergonomic problems and solutions [a, b, c, e, k]. 2. Gain experience working with open-ended real engineering problems with various constraints [a, b, c, e, k]. 3. Learn to effectively communicate results and recommendations, both verbally and in terms of written reports to the companies [b, g]. 4. Gain experience working as a team member and interacting with company engineers, managers, and shop-floor employees [d]. 5. Learn different methods and sources for obtaining data and information [a, b, i].
ASSESSMENT TOOLS:	Written reports, verbal presentations, perceived effort and contribution.

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Nature of Changes

1. *The course leader is no longer Professor Tarald O. Kvålseth.*
2. *No other changes were made.*