**I E   4344/5338     Section 001/002 Spring   2014**

Tues/Thu: 2:00pm -2:50pm (lecture) and Tues/Thu: 3:00-4:20 (lab)  
Room: WH   402(lecture) and lab 425(lab)

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| **1. Instructor:** | S. N. Imrhan, Ph.D., P.E., MIEHF. |
| **2. Office Location:** | 420Q Woolf Hall |
| **3. Office Hours:** | Mon & Wed – 10:30 p.m..- 12:00 noon and 2:30-3:30 p.m.; and Tues/Thu - 11:00-12:00 noon. |
| **4. Phone:** | 817-272-3167 |
| **5. Fax:** | 817-272-3406 |
| **6. Mailbox:** | 19017 |
| **7. Email:** | [imrhan@uta.edu](mailto:imrhan@uta.edu) |
| **8. Instructor WWW Site:** | ie.uta.edu |
| **9. Link to Additional      Course Info:** | See BLACKBOARD |

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| **10. Course Prerequisites:**  IE 3301, or graduate standing, or instructor’s consent |
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| **11. Required Readings/Materials:** |
| Course Text book: Fitting the Human: Introduction to Ergonomics by Karl Kroemer (latest edition – see bookstore)  Reference book: Preventing Aches and Pains from Computer Work by Sheik N. Imrhan; published by 'authorhouse.com' . |
| **12. Course Description:** |
| Study of (i) the interaction between people and their work, encompassing machines, the environment and work methods, and (ii) the methods of designing human-task machine-environment systems for achieving health, safety, and efficiency and enhancing productivity. |
| **13. Course Learning Goals/Objectives:** |
| At the end of this course students should be able to: i. Measure, analyze, and evaluate factors that influence health, safety, efficiency and productivity in the workplace. ii. Design work systems that promote a safe and healthy work environment and enhance efficiency and productivity. |
| **14. Attendance and Drop Policy:** |
| Regular and punctual attendance is required of all students. See UTA's undergraduate or graduate catalog for more details. Since class discussions (student-instructor and student-student) are an important part of the course absence and lateness will be penalized. |
| **15. Tentative Lecture/Topic Schedule (course content):** |
| 1. Introduction -- definition and scope  2. Methods of development and use of HF data  3. Introduction to human anatomy and physiology (Not in textbook – class notes)  4. Physical stress and work  5. Anthropometry , work physiology and biomechanics  6. Manual materials handling  7. Hand tool design and repetitive motion injuries  8. Workplace design and posture  9. Information input and processing  10. Visual display of static and dynamic information  11. Auditory, tactual and olfactory displays  12. Controls  13. Mobile devices - usability |

These topics are dealt with in the above sequence in detailed PPT notes, available to you on BLACKBOARD. Some topics may not be in the main textbook and the above sequence is not exactly the same as the sequence of topics in the main textbook.

**Specific Course Requirements with descriptions**

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| **1. Quizzes** (number and type): |
| No short quiz is planned but surprise quizzes may be given for extra points – not more than 3 for 5 points each. |
| **2. Examinations** (number and type): |
| There will be 2 exams:  1. Exam 1 (Thursday, March 6 at 2:00 p.m.) -- 100 points. Topics 1-7 and all lab materials (1 ½ hr).  2. Exam 2 (Final Exam) May 6 at 2:00 p.m.: Topics 7-13 and all lab materials for the semester. (1 ½ hr) |
| **3. Final Examination: The f**inal exam is exam 2 above. It is not comprehensive. |
| **4. Other Graded Assignments (Homework / Projects / Labs / Research Papers):** |
| 1. Laboratory reports and participation in student-student group lab discussions- 60 points  2. Lecture/lab attendance and participation in class discussions (10 points)  **For graduate students only**: An extra semester project – to be discussed before the middle of the semester (30 points)  Laboratory Exercises: You will complete 8-10 lab exercises consisting of (i) viewing tapes on HF/E in work situations (ii) conducting quantitative experiments. Some experiments will be reported as individual efforts, others as group efforts, depending on the amount of work involved and level of difficulty. You will be given a separate detailed handout for each laboratory exercise. (See above for grading.) |
| **5. Missed Exams, Quizzes and Makeup Work:** |
| There will be no make-up examination nor make-up lab, unless proof of personal or family emergency, or illness, is furnished. You must meet me on the first day of your return to UTA, or as soon as possible after that, to discuss any unexcused absence from exams or labs. Sending an email stating that you will be absent or late for anything does not constitute an acceptable ‘excuse’ by the instructor, but it is encouraged. If you are granted any make-up exam, it may be given during the last week of class and may be comprehensive. Students who have jobs must discuss with their employers any conceivable conflicts between their work and course examinations. If employers cannot help resolve these conflicts, students must discuss the problem(s) with me as early as possible (preferably, at least 2 weeks before the date of the exam).  **6. Some Important Dates**  See UTA ‘Graduate Calendar’ for more details.  First day of class; Late registration ending; Census date; Spring ; Last day to drop course; Advising and Registration for Summer and Fall; Final exam week. |
| **7. Grading Format Weighting / Point Value of Assignments and Examinations:** |
| Letter grades will be awarded as follows for the semester average %: A=90-100 %; B=80-89.9 %; C=70-79.9 %; D=60-69.9 %; F= below 60 % |
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**FOR ALL COURSES**

**Americans With Disabilities Act**   
  
The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 93112 -- The Rehabilitation Act of 1973 as amended. With the passage of new federal legislation entitled Americans With Disabilities Act - (ADA), pursuant to section 504 of The Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

As a faculty member, I am required by law to provide **"reasonable accommodation"** to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with **informing faculty at the beginning of the semester and in providing authorized documentation through designated administrative channels.** (SEE SECTIONS ON ACADEMIC DISHONESTY AND SUPPORT SERVICES IN SYLLABUS ON WEB PAGE.)  
  
**Academic Dishonesty**   
  
It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University.   
  
"Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts." (Regents’ Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22)   
  
**Student Support Services Available**   
  
The University of Texas at Arlington supports a variety of student success programs to help you connect with the University and achieve academic success. These programs include learning assistance, developmental education, advising and mentoring, admission and transition, and federally funded programs. Students requiring assistance academically, personally, or socially should contact the Office of Student Success Programs at 817-272-6107 for more information and