



Department of Psychology
PSYC 637 Topics in Engineering Psychology
Topic: Medical Human Factors
Winter 2008

Lecture (LEC 01), Tuesday 2:00-5:00 p.m., Admin. 248

COURSE OUTLINE

Instructor: Dr. Jeff Caird

Office: Admin. 222

Telephone: 220-5571

Hours: T, Th: 10:30 to 11:00 a.m.
or by appointment

E-mail: jkcaird@ucalgary.ca

Course Description: Classic and current papers that encompass core topics in medical human factors will be reviewed and discussed. A group project is an integral course experience. Previous exposure to literature on ergonomics and human factors is helpful, however, not required. The instructor reserves the right to limit entry into the course. The readings for the course will be available by the instructor.

Topics to be covered:

1. Introduction and Historical Context
2. Systems Design
3. Safety Culture
4. Physical Ergonomics
5. Medical Devices
6. Human Error
7. Labels and Icons
8. Team Work and Training
9. Methods (e.g., Simulation, Usability)
10. Ethics, Philosophy & Law

Objectives:

The primary objective of this course is to learn and to be able to articulate a broad understanding of medical human factors. The process set forth to achieve this objective will be to review classic and current papers that cover a representative set of topics within the field. A secondary objective is to provide an environment where skill in the application of basic and applied psychological research to medical systems can be developed. Discussion of papers and working on a group project are integral processes that service this objective.

Class Paper Presentations and Participation:

The instructor will usually give a broad overview of a particular area of knowledge. A more in-depth paper will then be assigned within a particular domain. An individual presenter will be responsible for leading the class discussion on assigned papers. The whole class is expected to actively participate in these discussions. Each student will be expected to present a minimum of three papers over the semester. A presentation is not limited to a brief overview, general impressions, outstanding significance of the paper, limitations of the paper, theoretical and empirical significance, logical extensions of thought, and so forth. After a brief presentation, questions should be posed that direct the discussion of the class towards the key issues or findings of the paper. The aim of paper presentations is to learn how to present and to learn how to critique papers. Students will be evaluated on both their presentations and class participation.

Group Project:

One of the necessary skills in Human Factors is to complete projects in a short period of time. A number of processes take place in a group project; namely: 1) finding and reading the appropriate literature; 2) figuring out what information is relevant to the questions that your group wants to answer; 3) testing the relevant variables. Thus, groups will select a topic area by **January 29th**, present their findings on **March 18th**, and submit their papers on **March 25th**.

Examination:

- 1) The final take-home exam will cover all lectures and readings. It is designed to test your ability to apply human factors knowledge to particular problems. At the appropriate time, example questions will be discussed.

Distribution of Grades:

Class Participation	20%
Group Project	40%
Final Exam	40%
Total	100%

Readings:

Obtain from the bookstore and read entirely for class on January 22nd:

Vicente, K. (2003). *The human factor*. Toronto: Vintage Canada.

Papers for each week will be provided by the instructor.

Schedule of Lecture Topics:

Topic	Date
1. Organizational Meeting	January 15 th
2. Introduction to Med. HF	January 22 nd
3. Human Error	January 29 th
4. Methods	February 5 th
5. Medical Devices	February 12 th
Reading Week (Class does not meet.)	February 19 th
6. Physical Ergonomics	February 26 th
7. Training and Teamwork	March 4 th
8. Stress and Fatigue	March 11 th
9. Group Presentations	March 18th
10 Medication Errors	
Group Project Papers	March 25th
11 Labels and Icons	April 1 st
12 Organizations and Safety Culture	April 8 th
13 Ethics, Philosophy and Law	April 15 th
Take Home Final	TBA

Important Dates:

Group Proposals Due:	January 29th
Group Project Presentations:	March 18th
Group Project Papers:	March 25th
Final Exam:	TBA: 5 Days from Handout
Reading Week (No class)	Feb. 17th to 24th
Good Friday (No class)	March 21st (Friday)
Lectures End	April 18th (Friday)

The last day to withdraw from a course and **still receive a refund** is January 25th, 2008 (Friday).

The last day to **withdraw** from the class is April 18th, 2008 (Friday).

The Relationship of 637 to the University of Calgary Curriculum Objectives

This course addresses all of the core competencies and redesign features through lecture content, course requirements, collaborative learning exercises and laboratories.

Final Grading Scale:

Numerical scores for each component will be totaled to calculate the final grade. Final course grades will be assigned according to the scale below. "Curving-down" will not be performed on the distribution of grades.

A+	96-100%	B+	80-84%	C+	67-71%	D+	54-58%
A	90-95%	B	76-79%	C	63-66%	D	50-53%
A-	85-89%	B-	72-75%	C-	59-62%	F	0-49%

IMPORTANT Class Policies:

- 1.) Your research papers are due on the day listed. Late assignments will not be accepted. Exam make-ups and late assignments will be considered for "university valid" excuses and only with sufficient documentation. Make-up exams will be essay only and more difficult than the exam given to the whole class.
- 2.) When questions arise about a particular laboratory, paper, or exam score, a student must discuss their work with the instructor within two weeks after it has been returned. Failure to pick-up assignments when they are returned is not a valid excuse. After two weeks re-evaluation will not be considered.
- 3.) Any tape recordings of lectures must be approved by the lecturer and students in this course may be asked to participate in departmentally approved studies.
- 4.) Intellectual honesty is the cornerstone of the development and acquisition of knowledge and requires that the contribution of others be acknowledged. Consequently, plagiarism or cheating on any assignment is regarded as an extremely serious academic offense. Students should examine sections of the University Calendar which present a Statement of Intellectual honesty and definitions and penalties associated with Plagiarism/Cheating/and Other Academic Misconduct.

Reappraisal of Grades

A student who feels that a piece of graded term work (term paper, essay, test, etc.) has been unfairly graded, may have the work re-graded as follows. The student shall discuss the work with the instructor within fifteen days of being notified about the mark or of the item's return to the class. If not satisfied, the student shall immediately take the matter to the Head of the department offering the course, who will arrange for a reassessment of the work within the next fifteen days. The reappraisal of term work may cause the grade to be raised, lowered, or to remain the same.

If the student is not satisfied with the decision and wishes to appeal, the student shall address a letter of appeal to the Dean of the faculty offering the course within fifteen days of the unfavourable decision. In the letter, the student must clearly and fully state the decision being appealed, the grounds for appeal, and the remedies being sought, along with any special circumstances that warrant an appeal of the reappraisal. The student should include as much written documentation as possible.

Plagiarism and Other Academic Misconduct

Intellectual honesty is the cornerstone of the development and acquisition of knowledge and requires that the contribution of others be acknowledged. Consequently, plagiarism or cheating on any assignment is regarded as an extremely serious academic offense. Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Students should examine sections of the University Calendar that present a Statement of Intellectual honesty and definitions and penalties associated with Plagiarism/Cheating/Other Academic Misconduct.

Academic Accommodation

It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and **have not** registered with the Disability Resource Centre, please contact their office at 220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course.

Absence From A Test

Make-up exams are NOT an option without an official University medical excuse (see the University Calendar). You must contact the instructor before the scheduled examination or you will have forfeited any right to make up the exam. At the instructor's discretion, a make-up exam may differ significantly (in form and/or content) from a regularly scheduled exam. Except in extenuating circumstances (documented by an official University medical excuse), a makeup exam is written within two (2) weeks of the missed exam.

A completed Physician/Counselor Statement will be required to confirm absence from a test for health reasons. The student will be required to pay any cost associated with the Physician Counselor Statement.