PSY 435: HUMAN FACTORS (HF)

Tuesday & Thursday: 1:30-2:45, St. Joseph's, Rm 235, 3 Credits, 29 meetings + final.

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Graduate Assistant: Regina Shia, St Joe's, RM 305, 229-2175, RShia1@excite.com


Reserved Readings: Available at Reserved Desk in library

COURSE OBJECTIVES:
1. Provide a general overview of the area and introduction to the human factors literature.
2. Introduce you to techniques used by human factors personnel and provide principles related to the design of equipment for human use.
3. Provide you with some "hands-on experience" in which we will address an HFE issue on our campus or an area of interest.

ASSIGNMENTS:

1. RELATED FINDINGS: During each class, starting Feb 1st, each student is to be prepared to formally present a human factor related issue (such as a design deficiency) which he/she has uncovered. My objective is to make you aware of human factor issues in your daily life. The presentation should be between 5-10 minutes but a maximum of 10 minutes. A brief statement (one page max, with a copy of the source material) describing the problem or issue is required for the first presentation. The material is due when you make your presentation.

   To reduce the search area, the first presentation should be obtained from one of the issues of Consumer Reports which will be assigned to you. You should clearly state the problem or issue and propose a solution or describe/evaluate the proposed solution and discuss trade-offs.

   The second related finding should come from personal experience (preferred) or the broader literature (sources such as newspapers, magazines, TV reports). If the deficiency was described in a newspaper or magazine then the clipping or a copy should be stapled to the statement page. Viewgraphs, sketches, etc are expected. Examples taken from textbooks, readings, journals, etc are not acceptable. Since this material will be presented later in the term, the quality of your material/presentation is expected to improve. Note that the second presentation is worth more than twice the first. Your second related findings report (max two pages plus figures, attachments, etc) should be more complete in that you should provide not only a detailed description of the problem, but possible solutions and appropriate references.

2. DESIGN PROJECT: This semester you will work on one of several design projects. The project will be a team project, that is tasks will be assigned and individuals will report back to the team. The team will establish priorities, distribute tasks, set schedules, hold each other accountable, etc. The purpose of this exercise is to expose you to a real world task, performed by psychologists as part of a team. On April 19th or 24th (depending on the date assigned) each team will produce a product, which they will present to interested parties and the class. During the course of this assignment you may have the opportunity to become familiar with some graphics packages (Mac and IBM). Each team will have a weekly meeting outside of classtime, during which the team will develop a schedule, discuss progress, present deliverables, identify action items, etc. A formal presentation and a written report are required.

   Team members will evaluate each other's performance, which will be reflected in your final grade. Teams will be provided with a work area (St Joes, Room 10). Room 10 is intended to serve as a common site for your meetings and is an area in which you can brainstorm and share/store materials.

HFESYLBS.01
3. **READINGS:** During the term, selected readings will be assigned, students who have not read the material by the assigned time and do not submit the requisite written critique/ summary/form at the end of the discussion class will lose all points for that reading. Expect to discuss these readings in class. If there is a legitimate reason why an assignment will not be completed on time, let me know in advance.

**MISCELLANEOUS:**

1. Learning should be exciting and challenging. Learning requires work. I will attempt to provide you some of the excitement and challenges; I hope you will add to the excitement and provide challenges. We will all be required to work and learn from each other.

2. I will provide you with a list of terms, which you should learn during the semester. Many of them will be on your examinations, but they **will not** be the only items on your examinations.

3) Team Member evaluations are due Feb 27, March 27 and April 24. You will be provide with a critique sheet on which you will evaluate the performance of your team members. You will have a 100 points to distribute as you see fit among the members of your team (excluding yourself). I will not count the results of the evaluation submitted on Feb 27, but I will share the findings with individuals who receive low ratings, so they can improve their performance.

3. I will loan materials to you. You will sign them out and return them to me no later than April 17, unless we have previously agreed otherwise. I need them back for use by myself and other students. Failure to return the materials will result in an incomplete, until material is returned. If the material is returned after April 29th, your final grade will be reduced by one letter grade.

4. During this course, we will do a variety of "interesting" exercises. Some will require you to gather data from your friends. None of the data will be of a sensitive nature.

5. Regina Shia is my Graduate Assistant and will schedule access to the computers in our Lab (Room 333B or C) and St Joseph's Room 10. If you have problems with any of the software or hardware please see Regina or me.

6. If there are problems/conflicts/concerns, please let me know as soon as they arise. The sooner you tell me about them the sooner they will be resolved. Molehills can turn into mountains very quickly. Communication helps us to solve problems. Please see me during office hours or call me to schedule a meeting at our mutual convenience. If I am not available, my trusty phone answering system or E-MAIL will record your message, be sure to leave your phone number so I can contact you. If the issue is significant and can't wait, call me at home.

7. Honor Code applies. Submission of copied work is unacceptable. Teamwork during the course is expected. Help each other but do your own work. Give credit where credit is due. No plagiarism.

8. Attendance: Try not to miss any classes. If you must miss a class please arrange for a classmate to collect handouts, assignment materials, etc for you. Examinations may be rescheduled for valid reasons only.
### PSY 435: HUMAN FACTORS
### COURSE SCHEDULE- Winter 01
(Subject to Change)

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>4 Jan-25 Jan</td>
<td>Introduction</td>
<td>CH 1, 2 &amp; 3</td>
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<tr>
<td>30 Jan</td>
<td>Exam 1</td>
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<tr>
<td>30 Jan-20 Feb</td>
<td>Human Capabilities</td>
<td>CH 4, 5, 6 &amp; 13</td>
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<td>6 Feb</td>
<td>Related Findings 1 begins</td>
<td>Consumer Reports</td>
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<tr>
<td>22 Feb</td>
<td>Exam 2</td>
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<tr>
<td>22 Feb-27 Mar</td>
<td>Decision Making, Displays, and Controls</td>
<td>CH 7, 8, 9 (Skip 275-285)</td>
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<td>18 March</td>
<td>Standar Symposium</td>
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<td>27 March</td>
<td>Exam # 3/ Honda Tour (optional)</td>
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<td>27 March-17 April</td>
<td>Chapters 10-12 (selected portions, particularly workstation layout)</td>
<td>Chapters 14-19 (depending on time constraints and interests)</td>
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<td>12-16 Mar</td>
<td>Spring Break</td>
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<td>12 April-16 April</td>
<td>Easter Recess</td>
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<td>17 April or 19 April</td>
<td>Design Project Presentations</td>
<td>Return Borrowed Materials</td>
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<td>24 April</td>
<td>Wrap-up Class, Review &amp; Critique</td>
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<tr>
<td>April 30 (Monday)</td>
<td>Exam # 4; 12:00-1:50</td>
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**NOTE:** Chapters 10, 11 & 12 deal with anthropometry, biomechanics and work physiology and cannot be discussed in depth within the time available.
Grading:

Readings  100 Points (4 @ 25 points each)
Exam 1  100 Points
Exam 2  100 Points
Exam 3  100 Points
Exam 4  100 Points
Mini-Assignments  100 Points
  Link Analysis  20
  Functional Analysis  25
  Task Analysis  30
  Stereotypes  25
Related Findings  50 Points
  #1: 15 points  (Consumer Reports)
  #2: 35 points  (Your Design Deficiency)
Design Project  250 Points
Team Member Evals  100 Points (Feb 27, March 27 and April 24)
TOTAL  1000 Points

Conversion:
A: > 900
B: < 900 but > 800
C: < 800 but > 700
D: < 700 but > 600
F: < 600

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For your information the following titles of quality work done by students in this course are provided:

Quality Related Findings (Second Presentation):
  Redesign of product flow on an assembly line
  The Killer Door (with photos)
  Library Door with Pull signs
  Material Flow in KU Dining Facilities
  Bowling Shoe distribution and collection reorganization
  Redesign of a Repair Manual for a Vacuum
  Problems with a parts form.
  Redesign of the fire alarm response procedure in Kettering Hall