Syllabus for: PSY 436 Human Performance

Instructor: Eric J. Belky, Ph.D.

Office Hours: 10:00 AM – 11:00 AM, Tuesday, Thursday

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Class Time: 8:30AM – 9:50AM, Tuesday, Thursday

Location: 146 Straub

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Text: Engineering Psychology and Human Performance (3rd edition, 2000, Prentice Hall, Upper Saddle River, NJ) by Wickens & Hollands (please note that the 3rd edition of the text is very different from earlier editions).

Goals: In this course, we will examine the perceptual, motor and intellectual capacities and limitations of the human brain, including discussions of the neural bases of these capacities, the role of attention, the flow of information within the nervous system, and applications of performance principles to human-machine systems and clinical populations. Although the only prerequisites for the course are PSY 302 & 303, the material in the course is in many ways an extension of the material presented in other psychology courses (Cognition, Learning & Memory, Perception, Psycholinguistics, Decision Making, etc.). In addition, this course will cover many mathematical descriptions of human performance. We will be solving some simple math/statistics problems associated with the material covered in the course. However, this course will be conducted in a way that does NOT assume that you have completed these other psychology courses or your math requirements. I suggest you bring a calculator to class and tests to help you solve these problems.

How to Ace This Course: Read each assigned Chapter before class. Have a friend or lover quiz you on key terms in each chapter. Complete the self-quizzes at the end of each Chapter. If you have trouble on the quiz or concept checks, read the chapter again. Two thorough scans is all you should need.

Attend the lectures. I do not take attendance, but be advised that about 10% to 30% of the questions on each exam come from my lectures and not necessarily from the text.

Grade Schedule: Your grade for the course will be determined from the cumulative percentage of a total of 200 test points:

| Exam #1 | 40 Points |
|-----------------|-----------------|
| Exam #2 | 40 Points |
| Exam #3 | 40 Points |
| Final | 40 Points |
| Best 3 of 4 | 120 Total |
| Quiz/Homework | 40 |
| Grand Total | 160 Test Points |

Test Requirements: There will be three (3) chapter exams during the course of the semester. Each section exam will cover about two to three chapters worth of material. In addition, there will be one (1) final exam during the Final Exam period. Only the final exam will be comprehensive. All tests will each have forty (40) points of multiple choice/short answer questions plus a few extra credit questions.

Your grade will be based on the best three (3) out of the four (4) total exams. (For calculating your grade, the final exam counts the same as any of the other four exams.) This means that your lowest exam grade will automatically be dropped. The benefit to you is that a bad hair day will not adversely affect your grade. Because of this policy I must insist on the following:

I absolutely will not grant permission for any make-up exams. In other words, the final exam IS the make-up exam for any one missed section exam.

On the other hand, if you know beforehand that some legitimate obligation will call you away from class on a particular test day (say jury duty, doctor's appointment, etc.), you can inform me beforehand, and I will be happy to allow you to take the exam *earlier* than scheduled. Please notify me at least the week before the scheduled exam in order to give me time to prepare the early exam.

The best 3 out of 4 exams will constitute 75% of your grade for the class. This means that each exam is worth about 25% of your total grade points. Point-wise, each exam is worth 40 points. Note that homework and quizzes also add 40 test points to your grade.

Homework/Paper/Quiz: There will be a number of homework assignments and/or quizzes worth a varying number of homework points. Homework points will be converted into 40 test points at the end of the semester. For instance, say I assign 60 points of homework and quizzes during the semester and you complete 50 of these homework points. At the end of the semester I will convert 50 / 60 homework points into 34 / 40 test points (i.e. 83.3% of 40 test points) for the purpose of determining your overall grade. Unlike exams, in-class quizzes can be made up if the absence is due to a legitimate excuse like a doctor's appointment, etc., but you must bring a written statement explaining the absence.

Quizzes are always unnanounced because I usually use these as a gauge of attendance and an attendance motivator. The plus side is that I usually grade these very leniently.

There will be a number of writing assignments counting toward your homework grade. At least one of these will be a research review paper. Exact instructions for completing this assignment follow later in this syllabus.

General guidelines for writing assignments: Always type your assignments. I do not accept hand written assignments. NEVER e-mail me your written assignments. If you cannot make it to class on the due date, you can always turn in the assignment to the Psychology Department Office in Straub Hall either before of after class on the due date.

Extra Credit: There will often be a few extra credit questions added to exams. As of this time, there will be no other provision for extra credit. It is possible that the instructor might change his mind regarding this possibility. If this occurs, the instructor promises to announce this within three weeks of the start of the term.

Academic Honesty: Exams are all closed book, no notes. In addition, students must follow these university guidelines when submitting assignments:

"All work submitted in this course must be your own and produced exclusively for this course. The use of sources (ideas, quotations, paraphrases) must be properly acknowledged and documented. For the consequences of academic dishonesty, refer to the Schedule of Classes published quarterly. Violations will be taken seriously and are noted on student disciplinary records. Additionally, the following specific requirements will be expected in this class: (enter specific requirements). If you are in doubt regarding the requirements, please consult with the instructor before you complete any requirement of the course."

Suspected incidents of cheating will be dealt with according to university guidelines found at the following location:

http://www.uoregon.edu/~stl/programs/student_judi_affairs/academic-dishonesty.htm

It is the official policy of the University of Oregon that all acts of alleged academic dishonesty by students be reported to the Director of Student Conduct and Community Standards in the Office of Student Life (346-1141). These guidelines allow the Instructor to assign a failing grade for the assignment or even a course grade of F to students found guilty of cheating on an exam. The Instructor may waive this right if the student agrees to complete a remedial assignment, as sanctioned by the University of Orgeon.

Learning accommodations: Instructors will accommodate students with documented disabilities and will comply with individualized instructions provided by Disabilities Services. However, students must take the initiative in discussing arrangements with the instructor in the first week of class and providing documentation as soon as it is available. Students without a documented disability who are experiencing learning difficulties are encouraged to consult Disabilities Services (164 Oregon Hall; 346-1155). Without documentation, special accommodations are not guaranteed and are to be made at the discretion of the instructor.

Disability Services Voice: 541-346-1155 TTY: 541-346-1083

Email: disabsrv@uoregon.edu Web: http://ds.uoregon.edu/

Students for whom English is a Second Language: If you are a non-native English speaker and think you may have trouble in this course due of language difficulties, please see the instructor as soon as possible to make special arrangements.

Tentative Schedule: (subject to change)

| April 1, 3 | Chapter 2, Introduction to Psychophysics | |
|----------------------|--|-----------------------------|
| April 8 April 10 | Chapter 2, Introduction to Psychophysics Chapter 3, Visual Perception and Attention | |
| April 15 April 17 | Chapter 3, Visual Perception and Attention Chapter 4, Spatial Displays | |
| April 22 April 24 | Exam #1 Psychophysics of Hearing | |
| April 29 May 1 | Psychophysics of Hearing. Chapter 6, Language and Communications | Paper topic due |
| May 6 May 8 | Chapter 6, Language and Communications Chapter 9, Selection for action | |
| May 13 May 15 | Chapter 9, Selection for action Exam #2 | |
| May 20 May 22 | Chapter 7, Memory and training Chapter 7, Memory and Training | Paper draft due for editing |
| May 29 June 1 | Chapter 8, Decision Making Chapter 8, Decision Making | Return paper to author |
| June 3 June 5 | Review or open Exam #3, | Research paper due |

8:00AM, Friday, June 13

Final Exam:

Term Paper Writing Assignment

Students will be required to write a 5-7 page (double-spaced, 1 inch margins, 10-12 point font) term paper that describes, compares and contrasts two journal articles that address a single topic relevant to human performance. I suggest that you use the textbook as a source for selecting a general topic, followed by library, PsychINFO, and Medline searches for the selection of the two articles (for online assistance in your search, see http://libweb.uoregon.edu/guides/psychology/). Note: One of the articles must be an article referenced in your textbook. The other can be any article related to the first. The referenced articles must be empirical in nature, with data collected to investigate a specific question related to the topic of interest (*i.e.*, no review or summary articles). In addition, the two articles must have been published after 1980, and they must have been written by different groups of authors (that is, no researcher can be listed as an author on both articles).

A short paragraph (approx. 100-200 words) describing the chosen topic and articles (please include full references, and attach Xeroxed copies of the first page of the chosen articles) is due near the middle of the term (see the course outline, below), and will account for 5% of the term paper grade. *After this date, you may not change your chosen topic and articles without the instructor's consent.*

The paper should include:

- 1) An introduction to the general topic.
- 2) a summary of the articles in your own words, including the question under investigation, the hypothesis being tested, the methods used, the findings, and the conclusions drawn by the authors.
- 3) a comparison of the two articles, describing how the findings of one either support, conflict, or extend the findings of the other.
- 4) a discussion of the merits and deficits of the articles, including suggested ways that the deficits could have been avoided. For example, questions such as these should be addressed: Is the question an interesting one, and is it framed properly? Is the hypothesis valid and defensible? Are the methods appropriate to address the question? Are the findings clear and interpreted appropriately? Are the authors' conclusions warranted, given the findings?
- 5) an overall assessment of the significance and quality of the contribution of the articles to the field of human performance and the specific topic addressed.
- 6) Xeroxed copies of the two articles that are summarized.

In regards to formatting (e.g., title page, font size, margins, page numbers, citations and references), the paper should be written in APA style (reference copies of the APA Publication Manual are available in many of the University Libraries). However, you are not required to have separate sections for the introduction, methods, results, etc. (i.e., it is acceptable to have the text as one flowing document, not broken into sections). *The paper should be in your own words* – as a general rule, I do *NOT* allow any quotations (even properly cited ones), since their inclusion prevents you from demonstrating that you understood the quoted material.

In order to improve the quality of papers, and to provide you with experience editing, papers will be peer edited. On the day that the paper is "due for edit", you will turn your paper in at the beginning of class. At the end of class, you will be given someone else's paper to edit. You will have 4 days to edit the other student's paper, then you will bring the paper to the class and return it to the student. Your paper, meanwhile, will have been edited by someone else. You will then

have a few more days to consider the corrections, incorporate those you think are good, revise the paper, and then turn in your "final version" of the paper AND the corrected original. Your grade on the paper will be based mainly on the final version, but your original will be considered too, in order to prevent people from turning in sloppy first drafts. Your editing will also be evaluated, and you will receive points toward your final grade for it. Guidelines for editing will be distributed in class (see also the Blackboard web site).

Important note: *ALWAYS keep a copy of your paper, either on disk, or a hard copy!*Your peer editors are, on average, no more reliable than you, perhaps less so, and they may misplace or forget your paper. If your peer editor does not return your edited paper to you, you will not be penalized (except that your paper will not have the benefit of having been edited – you may wish to ask a friend in the class to edit your paper for you), but you will still be responsible for turning in an original and final version of the paper when it is due. Also, please keep in mind that just as the quality of students in this course varies, so does the quality of editing. Taking bad advice from a peer editor is no excuse for errors in a paper.

Papers are due at the beginning of class on the day they are due. If you don't turn your paper in before the start of class, it will not be eligible for peer editing, and you will not be given a paper to edit (so you will lose your peer editing points). If you cannot be in class the day a paper is due for peer editing, you may turn in the paper early so that you will be eligible for the peer editing system, but it is your responsibility to arrange to pick up the paper you are to peer edit from me. If you cannot be in class the day peer edited papers are to be returned to their authors, you can also return the edited paper early.

The term paper grade will be determined by the quality of 1) the paragraph describing the term paper topic (5%), 2) the final paper (90%), and 3) the peer edit that you provide another student (5%);

Finally, plagiarism will not be tolerated, and will be dealt with according to official University policy (see section on Academic Honesty below).