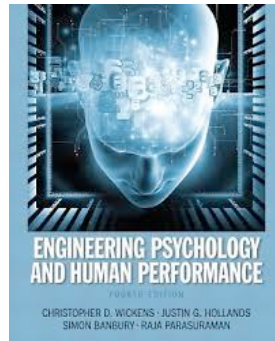


PSY 436 Human Performance

CRN: 47749 (4 credits)

MTWR 12-1:50 in 11 PAC

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Course Description

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, etc.). In addition, this course will cover many mathematical descriptions of human performance. *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.*

Course Objectives

This course has both substantive and methodological objectives. By the end of the course, students should have a broad familiarity with human factors psychology and the ways in which psychological research and methodology have been applied to address human factors problems. Students should be able to read the relevant literature and perform simple human factors analyses using standard psychological and statistical methods, Cognitive Task Analysis, and Signal Detection Theory.

Course Pre-Requisites

Successful completion of Psychology 303 (Research Methods) is a pre-requisite for this course. We will review important methodological factors as they apply to human performance, but this should not be 'new' material to you.

Textbook

Required Books (1):

Wickens, C.D., Hollands, J.G., Banbury, S., & Parasuraman, R. (2013). *Engineering Psychology and Human Performance* (4th ed.). Upper Saddle River, NJ: Pearson.

Note that we will only be using selected chapters from the textbook (i.e., chapters 1,2,3,4,6,7,9,11). A course packet for the selected chapters can be found in the bookstore, at a price significantly less than the entire textbook. Note that in the course packet, the above chapters are re-numbered 1-8.

Blackboard

Blackboard will be used in this course as an online resource for the syllabus, powerpoint lecture slides, assignments, study guides, additional/supplemental readings, and weblinks. It is recommended that you frequently check Blackboard in order to stay up to date on the course materials that are posted from week to week. Please note that while you may have access to the lecture slides ahead of time, attending class will be crucial to doing well in the course. The blackboard site for this course can be found at: <http://blackboard.uoregon.edu>.

Course Format

The material in this course will be presented through a combination of assigned reading from the text and additional handouts, class lectures, in-class discussion, and demonstrations. Lecture material and readings will have some overlap, but will not be replications of each other; some lecture material will not be covered in the readings and vice versa. You are expected to do the assigned reading *before* the class period in which it is due. Reading the material before the corresponding lectures will help your performance in two ways. First, discussions of the material during lecture will be more fruitful if you have at least a general understanding of the material beforehand, helping you to ultimately comprehend and retain the material. Second, questions drawn from the assigned readings will be included on the regularly scheduled quizzes.

Course Components

Quizzes (30 points):

There will be 7 quizzes throughout the term worth 6 points each. They will consist of 3 multiple-choice questions (worth 2 points each) and will be based on both lecture and textbook material. Of the seven quizzes, the two with the lowest scores will be dropped, with the total score of the remaining five (up to 30 points) counting toward your final grade. No make-up quizzes will be offered; if you miss a quiz, that grade will be one of the two that will be dropped. Be sure to keep the quizzes for later study materials, as some of the quiz questions may appear on exams.

Participation Activities (20 points):

Five times throughout the term, we will do an in-class participation activity. The activities will be based on in-class demonstrations, topic discussions, and real-world applications of human performance related topics. A participation worksheet will be given with each activity, which is due at the end of class that day. Each activity is worth 5 points and, since they are based on in-class participation, cannot be made up. However, one of the activities will be dropped (if you happen to miss one) so that only the highest 4 will count toward your final grade (20 points total, for 4 activities).

Exams (250 points):

There will be three exams throughout the term (see course calendar for specific dates), two midterms (worth 75 points each) and a final exam (worth 100 points). Each exam will cover the textbook chapters listed in the course calendar in addition to the lecture material we covered in class. The exams will consist of multiple-choice, matching, fill-in-the-blank, and short answer questions. The final exam will contain questions drawn from the entire course, but with a greater focus on material covered after the second midterm. Study guides will be handed out one week prior to the exam date, and you will not need to bring scantron forms. **No make-up exams will be given without evidence of a valid excuse**, and the final cannot be taken earlier or later than the time listed in the University final exam schedule – if you know in advance that you cannot take all exams on the appointed dates (see the course schedule below), do not take this course! If unforeseen circumstances during the term prevent you from taking an exam, notify the instructor immediately.

Human Performance in the Real World Paper (50 points):

Early on in the term, students will select a topic of interest related to a human performance issue in the real world (e.g., signal detection among radiologists, cockpit displays/human error in airplane pilots, eye-witness testimony, cell phone use/distraction while driving, stress effects in air traffic controllers, optimizing training in athletes and military personnel, human error involved in major disasters/crashes, etc.). After selecting a topic, students will find two articles related to the topic (with at least one being an empirical study published in a journal; come see your course instructors if you have any questions regarding your article choices). Students will then write a 1-2 page paper introducing the topic, summarizing the articles, and explaining that factors that are related or contribute to the human performance related issue (based on the articles). Formal guidelines will be handed out in class.

Course Points and Grading

Quizzes: 30 points

Assignments: 20 points

Midterm Exam 1: 75 points

Midterm Exam 2: 75 points

Final Exam: 100 points

Term Paper: 50 points

Total Points: 350

Final course grades will be assigned based on your total percentage points in the course (i.e., your final point total/350), based on the table below. Note that extra credit is not offered in the course.

GRADE	PERCENTAGE		GRADE	PERCENTAGE
A+	99-100%		C	72-77.9%
A	92-98.9%		C-	70-71.9%
A-	90-91.9%		D+	68-69.9%
B+	88-89.9%		D	62-67.9%
B	82-87.9%		D-	60-61.9%
B-	80-81.9%		F	59.9% and Below
C+	78-79.9%			

NO WORK OF ANY KIND WILL BE ACCEPTED AFTER FRIDAY, AUGUST 15th

Course Expectations

Academic Honesty:

Group discussion outside of class is encouraged. However, all work submitted in this course must be your own and produced exclusively for this course. Copying or paraphrasing information from any source, print or electronic, without citation, is plagiarism. The use of sources must therefore be properly acknowledged and documented. The consequences of academic dishonesty will be taken seriously (e.g., an 'F' in the course and a report to the Office of Student Conduct) and are noted on student disciplinary records. If you are in doubt regarding any aspect of these issues, please come and speak with me.

Academic Responsibility:

Attendance is critical to earning a good grade for the course. I do not take roll, however, it is very important that you show up to class to participate. This class will be guided by University Policies that entails a standard of responsibility, honesty, and integrity for me, your classmates, and the work that you do. This also means that you should do your absolute best to attend every class meeting, and to come to class prepared and ready to participate in our discussions. There will be topics in lecture that may not be in the textbook, and there will be exam questions based on lecture material. In addition, there will be certain things we shall do in class (demonstrations, videos, etc.) to which exam questions will apply, and therefore, you must show up if you wish to do well on the exams..

Due Dates and Late policies:

Due dates for the term paper are contained in the course outline. A term paper turned in after its deadline will be marked down 10% for each day late, and will not be accepted after 5:00pm on Friday, August 15th of finals week.

Student Accommodations

Accessible Education Center:

If you have a documented disability and anticipate needing accommodations in this course, please make arrangements to meet with the instructor as soon as possible. Also, please request that a counselor at the Accessible Education Center (uoaec@uoregon.edu, tel. 541-346-1155) send a letter verifying your disability. For a list of resources provided by the Accessible Education Center, please see <http://aec.uoregon.edu>.

Students for Whom English is Not Their Native Language:

If you are a non-native English speaker and think you may have trouble in this course due to language difficulties, please see the instructor as soon as possible to make any necessary special arrangements.

Academic Learning Services:

If you have difficulty with the course materials at any time, you are encouraged to contact the instructor for assistance. In addition, the resources of the Academic Learning Services (<http://als.uoregon.edu/services/services.html>) can be invaluable to students that require assistance in, for example, perfecting good study habits or honing their writing skills.

Course Calendar

Week	Date	Lecture Topic	Chapter Readings	Exams/Quizzes/Activities
1	M ~ July 21	Course Overview; Introduction to Engineering Psychology and Human Performance	Chapter 1	Quiz 1 (take-home)
	T ~ July 22	Signal Detection and Absolute Judgment	Chapter 2	Quiz 1 due
	W ~ July 23	Signal Detection and Absolute Judgment	Chapter 2	Quiz 2 Activity 1
	Th ~ July 24	Attention in Perception and Display Space	Chapter 3	Quiz 3
2	M ~ July 28	Attention in Perception and Display Space	Chapter 3	Quiz 4 Activity 2
	T ~ July 29	Midterm Exam 1 (Chapters 1-3)		Midterm Exam 1
	W ~ July 30	Spatial Displays	Chapter 4	Activity 3
	Th ~ July 31	Language and Communications	Chapter 5	Quiz 5
3	M ~ Aug. 4	Memory and Training	Chapter 6	Activity 4
	T ~ Aug. 5	Memory and Training	Chapter 6	Quiz 6
	W ~ Aug. 6	Midterm Exam 2 (Chapters 4-6)		Midterm Exam 2
	Th ~ Aug. 7	Selection of Action	Chapter 7	Activity 5
4	M ~ Aug. 11	Selection of Action	Chapter 7	
	T ~ Aug. 12	Mental Workload, Multitasking, Stress, and Individual Differences	Chapter 8	Quiz 7
	W ~ Aug. 13	Final Exam Review		Human Perf. Paper Due
	Th ~ Aug. 14	Final Exam Thursday, August 14th at 1:00 (Chapters 7-8, & Comprehensive)		