

INDE 549 A/ENVH 549 A: Human Factors In Engineering Design

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Instructor

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Office hours: Wednesdays: 10:00 to 11:00 am (or by appointment)
G10A Mechanical Engineering Building (MEB)
Seattle, WA 98195

Course Information

Meeting times: 2:30 to 3:40 TuTh

Meeting room: MEB 235

Required reading materials:

1. Notes for revisions to *An Introduction to Human Factors Engineering* (on canvas)
2. Journal article readings (on canvas)

Objectives of the Course

The objective of this course is to describe research methods that are observed in the area of human factors. The class is designed to provide you a better understanding of what is required to design a product or service to match the cognitive capabilities and limitations of the user population. The major focuses will be on safety, productivity, functionality, and usability. The class will review weekly journal articles on research methods and design issues related to operator performance given functional, psychological, physiological, and environmental constraints.

Weekly Quizzes: Students are expected to read the material before class. Weekly quizzes will be administered on canvas. There will be a pre and post quiz. Students are expected to take the pre-quiz before class each week. The post-quizzes for the first half can be taken anytime before the midterm. The post-quizzes for the second half can be taken anytime before the last class. The quizzes will be focused on the class readings.

Weekly readings: Each week, students will write a one page summary of the weekly readings, that DOES NOT reiterate the abstract, but presents the pros OR cons of the paper. Each student will have the opportunity to present his or her view on the selected reading for that week. The summary is to UPLOADED BEFORE the beginning of the class on the specified due date. Points WILL BE TAKEN off for grammatical/spelling errors. The remaining part of lecture will be discussion format where all are expected to participate.

Final project and presentations: A final group project will be prepared. Each group will consist of 4 people with each group presenting on the last day of the class to the undergraduate class. The instructions are included on the course website. Your grade for the project will be weighted based on the individual peer evaluation.

Class Participation:

You are expected to participate in class. All course material (included HW and project assignments) is on canvas. You have a responsibility to help create a classroom environment where all may learn. This means that you will treat other members of the class with the courtesy you hope to receive. The points for participation will be allocated according to the following basis: attentiveness and contributions to class discussions, and student responses to periodic in-class requests to clarify and identify confusing topics, potential quizzes, and exam questions.

Grading

Quizzes	10
Write-ups of readings	10
Class discussions/participation	10
Take-home midterm	20
Final Project	
Part I	5
Part II	10
Part III	15
Presentation	5
Final Paper	15

NO CELL PHONES or LAPTOPS/COMPUTERS are to be used or turned on in the classroom unless noted.

Academic honesty

Students will be held to the highest standards of academic honesty. There are specific actions that are considered academic dishonesty, cheating or fraud. I follow the list outlined on the following website: <https://faculty.washington.edu/mlg/students/cheating.htm> (<https://faculty.washington.edu/mlg/students/cheating.htm>)

Students who conduct any of the behavior outlined in the above website will receive a failing grade in the course. If any of the items outlined on the website is unclear, it is up to the student to clarify any and all information outlined in this syllabus with me.

Collegiate Policies

For each quarter hour credit in the course, students are expected to spend 2-3 hours per week preparing for the class sessions. Given that this class is 3 credit hours, the standard out-of-class preparation is 6-9 hours.

Students with disabilities

Under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, instructors must make reasonable accommodations for students who have physical, mental, or learning disabilities. Therefore, if you require seating modifications or testing accommodations or accommodations of other class requirements, please let me know so that appropriate arrangements may be made.

Date	Details	
Tue Mar 29, 2016	Course Overview & Chapter 1 (https://canvas.uw.edu/calendar?event_id=889865&include_contexts=course_1040383)	2:30pm to 3:50pm
Thu Mar 31, 2016	1 Applied CTA (Militello and Hutton) (https://canvas.uw.edu/courses/1040383/assignments/3237731)	due by 2pm
	Design Methods (Ch 2) (https://canvas.uw.edu/calendar?event_id=889866&include_contexts=course_1040383)	2:30pm to 3:50pm
Tue Apr 5, 2016	Quiz 1 Pre-Lecture: Ch 1 & 2 (https://canvas.uw.edu/courses/1040383/assignments/3244889)	due by 2pm
	Design Methods (Ch 2) w INDE 351 (https://canvas.uw.edu/calendar?event_id=889863&include_contexts=course_1040383)	2:30pm to 3:50pm
Thu Apr 7, 2016	Linda will be out of town (https://canvas.uw.edu/calendar?event_id=889864&include_contexts=course_1040383)	12am
	2. Evaluation of Subjective Mental Workload: (https://canvas.uw.edu/courses/1040383/assignments/3237733)	due by 2pm
Tue Apr 12, 2016	Quiz 2 Pre-Lecture: Ch 3 & 4 (https://canvas.uw.edu/courses/1040383/assignments/3244911)	due by 2pm
	Test & Evaluation (Ch 3) (https://canvas.uw.edu/calendar?event_id=889867&include_contexts=course_1040383)	2:30pm to 3:50pm
Thu Apr 14, 2016	3. Modeling the Control of Attention in Visual Workspaces (https://canvas.uw.edu/courses/1040383/assignments/3237734)	due by 2pm
	Visual Sensory Systems (https://canvas.uw.edu/calendar?event_id=889868&include_contexts=course_1040383)	2:30pm to 3:50pm
Tue Apr 19, 2016	Quiz 3 Pre-Lecture: Ch 5 (https://canvas.uw.edu/courses/1040383/assignments/3245266)	due by 2pm
	Visual Sensory Systems (w/INDE 351) (https://canvas.uw.edu/calendar?event_id=889869&include_contexts=course_1040383)	2:20pm to 4:20pm
	Part I CTA (https://canvas.uw.edu/courses/1040383/assignments/3240540)	due by 11:59pm
Thu Apr 21, 2016	Reading #4 (https://canvas.uw.edu/courses/1040383/assignments/3237737)	due by 2pm

	Auditory, Tactile, Vestibular (https://canvas.uw.edu/calendar?event_id=889870&include_contexts=course_1040383)	2:30pm to 3:50pm
Tue Apr 26, 2016	Autonomous Agents (https://canvas.uw.edu/calendar?event_id=889872&include_contexts=course_1040383)	1pm to 4pm
	Quiz 4 Pre-Lecture: Ch 6 (https://canvas.uw.edu/courses/1040383/assignments/3245269)	due by 2pm
Thu Apr 28, 2016	5. Human error: models and management (Reason) (https://canvas.uw.edu/courses/1040383/assignments/3237738)	due by 2pm
	Cognition (https://canvas.uw.edu/calendar?event_id=889873&include_contexts=course_1040383)	2:30pm to 3:50pm
	IRB Certification (https://canvas.uw.edu/courses/1040383/assignments/3237739)	due by 11:59pm
Tue May 3, 2016	Cognition (https://canvas.uw.edu/calendar?event_id=889875&include_contexts=course_1040383)	2:30pm to 3:50pm
	Part II Design Requirements (https://canvas.uw.edu/courses/1040383/assignments/3240544)	due by 11:59pm
Thu May 5, 2016	Quiz 1 Post-Lecture: Ch 1 & 2 (https://canvas.uw.edu/courses/1040383/assignments/3244901)	due by 2pm
	Quiz 2 Post Lecture: Ch 3 & 4 (https://canvas.uw.edu/courses/1040383/assignments/3245263)	due by 2pm
	Quiz 3 Post-Lecture: Ch 5 (https://canvas.uw.edu/courses/1040383/assignments/3245268)	due by 2pm
	Quiz 4 Post-Lecture: Ch 6 (https://canvas.uw.edu/courses/1040383/assignments/3245270)	due by 2pm
	Decision Making (https://canvas.uw.edu/calendar?event_id=889876&include_contexts=course_1040383)	2:30pm to 3:50pm
Tue May 10, 2016	Decision Making (https://canvas.uw.edu/calendar?event_id=889877&include_contexts=course_1040383)	2:30am to 3:50pm
	Quiz 5 Pre-Lecture: Ch 7 (https://canvas.uw.edu/courses/1040383/assignments/3245272)	due by 2pm
	Take Home Midterm (handed in class on May 5) (https://canvas.uw.edu/courses/1040383/assignments/3237702)	due by 2pm
Thu May 12, 2016	6. Conditions for Intuitive Expertise: A failure to disagree (Kahneman & Klein) (https://canvas.uw.edu/courses/1040383/assignments/3237740)	due by 2pm
	Displays (https://canvas.uw.edu/calendar?event_id=891929&include_contexts=course_1040383)	2:30pm to 3:50pm
Tue May 17, 2016	Quiz 6 Pre-Lecture: Ch 8 (https://canvas.uw.edu/courses/1040383/assignments/3245274)	due by 2pm
	Displays (https://canvas.uw.edu/calendar?event_id=891930&include_contexts=course_1040383)	2:30pm to 3:50pm
	Part III Construct Protoype (https://canvas.uw.edu/courses/1040383/assignments/3240546)	due by 11:59pm
Thu May 19, 2016	Displays (https://canvas.uw.edu/calendar?event_id=891943&include_contexts=course_1040383)	2:30pm to 3:50pm
	Reading #7 (https://canvas.uw.edu/courses/1040383/assignments/3237741)	due by 2:59pm
Tue May 24, 2016	Quiz 7 Pre-Lecture: Ch 9 (https://canvas.uw.edu/courses/1040383/assignments/3245276)	due by 2pm
	Controls (https://canvas.uw.edu/calendar?event_id=891944&include_contexts=course_1040383)	2:30pm to 3:50pm
Thu May 26, 2016	Controls (https://canvas.uw.edu/calendar?event_id=891945&include_contexts=course_1040383)	12am
	Reading #8 (https://canvas.uw.edu/courses/1040383/assignments/3237742)	due by 2pm
Tue May 31, 2016	HCI (https://canvas.uw.edu/calendar?event_id=891946&include_contexts=course_1040383)	12am
	Quiz 8 Pre-Lecture: Ch 10 & 11 (https://canvas.uw.edu/courses/1040383/assignments/3245278)	due by 2pm
Thu Jun 2, 2016	HCI (https://canvas.uw.edu/calendar?event_id=891947&include_contexts=course_1040383)	12am

[Quiz 5 Post-Lecture: Ch 7 \(https://canvas.uw.edu/courses/1040383/assignments/3245273\)](https://canvas.uw.edu/courses/1040383/assignments/3245273)

due by 2pm

[Quiz 6 Post-Lecture: Ch 8 \(https://canvas.uw.edu/courses/1040383/assignments/3245275\)](https://canvas.uw.edu/courses/1040383/assignments/3245275)

due by 2pm

[Quiz 7 Post-Lecture: Ch 9 \(https://canvas.uw.edu/courses/1040383/assignments/3245277\)](https://canvas.uw.edu/courses/1040383/assignments/3245277)

due by 2pm

[Quiz 8 Post-Lecture: Ch 10 & 11 \(https://canvas.uw.edu/courses/1040383/assignments/3245279\)](https://canvas.uw.edu/courses/1040383/assignments/3245279)

due by 2pm
