

Fall 2019

IE 355-103: Human Factors in Industrial Engineering

Harry E. Blanchard

Follow this and additional works at: <https://digitalcommons.njit.edu/mie-syllabi>

Recommended Citation

Blanchard, Harry E., "IE 355-103: Human Factors in Industrial Engineering" (2019). *Mechanical and Industrial Engineering Syllabi*. 25.
<https://digitalcommons.njit.edu/mie-syllabi/25>

This Syllabus is brought to you for free and open access by the NJIT Syllabi at Digital Commons @ NJIT. It has been accepted for inclusion in Mechanical and Industrial Engineering Syllabi by an authorized administrator of Digital Commons @ NJIT. For more information, please contact digitalcommons@njit.edu.

New Jersey Institute of Technology
Department of Mechanical and Industrial Engineering

IE 355-103 Human Factors in Industrial Engineering, Fall 2019
Class Schedule: Saturday 9:00 am – 12:00 pm -- Location: CKB 106

Instructor: Harry E. Blanchard, PhD

(732) 784-3857 heb@njit.edu Office hours: Thurs. 12:00 – 12:30 CKB 106 or appointment

Lecture	Date	Topic	Readings
1	Sep 7	Introduction, History, & Systems Assignment: Practice Quiz	Ch. 1, Ch. 3: pp. 54-59 & 66-70
2	Sep 14	Methods (Moodle Lesson - <i>No class session</i>) Assignment: Quiz 1	Ch. 2, Ch. 3: Box 3.1 (pp. 71-72)
3	Sep 21	Human Information Processing Assignment: Quiz 2	Ch. 4
4	Sep 28	Visual & Auditory Perception Assignment: Quiz 3	Ch. 5, Ch. 7
5	Oct 5	Memory, Attention, & Mental Workload Assignment: Quiz 4	Ch. 9, Ch. 10
6	Oct 12	Decision Making + Exam Review Assignment: Quiz 5	Ch. 11, Ch. 12: pp. 325-326, Ch. 12: Box 12.1 (pp. 329-330)
	Oct 19	Midterm Exam (in class)	Note: no lecture, exam only
7	Oct 26	Static, Dynamic, & Auditory Displays Assignment: Quiz 6 & Outlines due	Ch. 8
8	Nov 2	Controls & Tracking Assignment: Quiz 7	Ch. 15, Ch. 16: Box 16.1 (pp. 441-442)
9	Nov 9	Compatibility Assignment: Quiz 8	Ch. 13
10	Nov 16	Cognitive & Motor Skills Assignment: Quiz 9	Ch. 14, Ch. 12: pp. 314-316
11	Nov 23	Hand Tools, RSI, & Anthropometry Assignment: Quiz 10	Ch. 16
12	Dec 7	Human Error, Accidents, & Warnings + Project Presentations	Ch. 3, Ch. 19: pp. 545-548
	Dec 21	Final Exam (in class) + Project Papers Due	Note: 1 per group this year

Textbook: Robert W. Proctor & Trisha Van Zandt (2008) *Human Factors in Simple and Complex Systems*, Third Edition. CRC Press ISBN 978-1482229561

- All required readings are in the textbook
- Yes, you need a copy of the textbook. Yes, you probably need the third edition.
- The text can be purchased or rented, also can be purchased or rented as a Kindle e-book

Evaluation:

- Midterm Exam – 25%
 - Lectures and reading up to exam day
 - Closed book and closed notes, in-class exam (may change to on-line)
 - Multiple choice and/or short written answer questions
 - No make-ups
- Weekly quizzes – in total: 25%
 - All quizzes are taken on Moodle
- Final Exam – 25%
 - Second half of course
 - Closed book and closed notes, during final exam period (may change to on-line)
 - Multiple choice and/or short written answer questions
- Project – 25%
 - Group project: groups of approximately 5 students
 - Topics reviewed via 1-paragraph written proposal (Moodle/email)
 - Proposals due after midterm (proposals are not graded)
 - Presentations on last day of regular class (one per group)
 - Each group must also submit a single combined paper
 - Grade is combination of your paper and group presentation

I expect all students to follow the NJIT Student Honor Code (i.e. no cheating on exams); this is enforced.

Class Website:

Moodle will be used for this class: <http://moodle.njit.edu/>

Canvass should redirect you to Moodle. If not, inform me immediately. Moodle will be used for content distribution, on-line testing, distribution of homework, and general announcements. I do not make much use of Moodle's interactive and chat features. I do not use Moodle for your semester grade, only for quizzes; *ignore* Moodle's overall grade reports.

Lecture slides will be available on Moodle in PDF format *on the morning of each lecture day or earlier.* Announcements and study guides will also be made available on Moodle and through email.