

Fall 2019

IE 355-101: Human Factors in Industrial Engineering

Prakash Kothari

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New Jersey Institute of Technology
Department of Mechanical and Industrial Engineering

IE 355-102 Human Factors in Industrial Engineering, Fall 2019
Class Schedule: Thursday 6:00 – 9:00 pm -- Location: CKB 106

Instructor: Prakash Kothari, CIH, CSP, SMS, MS-OSHE
(973) 602-7172 pak24@njit.edu Office hours: 30 min after each class CKB 106

Lecture	Date	Topic	Readings
1	Sep 05	Introduction, History, & Systems	Ch. 1 Ch. 3: pp. 54-58 & 65-68
2	Sep 12	Human Information Processing Assignment: Quiz 1	Ch. 4
3	Sep 19	Methods Assignment: Quiz 2	Ch. 2 Ch. 3: Box 3.1 pp. 69-70
4	Sep 26	Visual & Auditory Perception Assignment: Quiz 3	Ch. 5 Ch. 7
5	Oct 03	Memory, Attention, & Mental Workload Assignment: Quiz 4	Ch. 9 Ch. 10
6	Oct 10	Decision Making Assignment: Quiz 5	Ch. 11 Ch. 12: pp. 327-328 Ch. 12: Box 12.1 pp. 331-333
	Oct 24	Midterm Exam	
7	Oct 31	Static, Dynamic, & Auditory Displays Assignment: Quiz 6	Ch. 8
8	Nov 7	Controls & Tracking Assignment: Quiz 7	Ch. 15 Ch. 16: Box 16.1 pp. 443-444
9	Nov 14	Compatibility Assignment: Quiz 8	Ch. 13
10	Nov 21	Cognitive & Motor Skills Assignment: Quiz 9	Ch. 14 Ch. 12: pp. 316-327
11	Nov 28	Hand Tools, RSI, & Anthropometry Assignment: Quiz 10	Ch. 16
12	Dec 5	Human Error, Accidents, & Warnings Assignment: Prepare your presentations	Ch. 3 Ch. 19: pp. 549-551
	Dec 5	Project Presentations	
	Dec 12	Reading Day and Project Papers Due	
	Dec 19	Final Exam	

Textbook: Robert W. Proctor & Trisha Van Zandt (2017) *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
- 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
 - Multiple choice and/or short written answer questions
 - No make-ups
- Weekly quizzes – in total: 25%
 - All quizzes are taken in class, No make-ups unless excused absence
- Final Exam – 25%
 - Second half of course
 - Closed book and closed notes, during final exam period
 - Multiple choice and/or short written answer questions
- Attendance and participation - 10%
- Project – 15%
 - Group project: groups of approximately 5 students
 - Topics reviewed via 1-paragraph written proposal (Print and 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/>

Moodle will be used for content distribution, distribution of homework, and general announcements. I do *not* plan to make much use of Moodle's interactive and chat features. Also 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*. Class announcements and study guides will also be made available on Moodle and through email.

“Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at:

<http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>.

Please note that it is my professional obligation and responsibility to report any academic misconduct to

*the Dean of Students Office. **Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university.** If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu"*