

Call #	07294	Location	102 Stocker
Class	10:10 am – 11:00 am MWF	E-mail	shahn@ohio.edu
Instructor	Nihar Shah	Office Hours	9:00 am – 10:00 am MTWF
Office	280 Stocker		
Web	https://ise.ad.ohiou.edu/		

Description Design of work systems and measurement of work. Topics include job methods, operation analysis, charting techniques and schematic models, stop-watch time study, work sampling, predetermined time systems, standard data, incentive wage systems, and learning curves.

Textbook Work Measurement & Methods Improvement, Lawrence S Aft, Wiley Inter-Science (2000), ISBN: 0-471-37089-4.

Course Objectives

- Design an efficient sequence of operations
- Develop a left-hand/right-hand chart for given manual operations
- Develop and interpret a process chart for given operations
- Balance operations to form efficient workstations
- Design a manual workstation
- Design and perform a work sampling study
- Design and perform a time study
- Determine appropriate work allowances
- Develop time standards from the results of a time study
- Apply a predetermined time system to determine a standard time
- Calculate the learning curve for a task
- Identify basic ergonomic concerns in designing a manual work area
- Identify means for insuring worker safety
- Select the appropriate manual tools for a particular application
- Identify concerns in the physical design/layout of a display or control
- Express ideas clearly in writing

Grading Policy There are four sections that will determine your final grade:

Homeworks	40%
Quizzes	10%
Midterms (2)	30%
Final	20%

You are required to score at least 40% in each section to get a passing grade. E.g. if the homework assignments total up to 300 points, you are required to score at least 120 points from all your assignments.

Grading Scale The following point scale will be used to assign the final grade:

		A	93.00 - 100.00	A-	90.00 - 92.99
B+	87.00 - 89.99	B	83.00 - 86.99	B-	80.00 - 82.99
C+	77.00 - 79.99	C	73.00 - 76.99	C-	70.00 - 72.99
D+	67.00 - 69.99	D	63.00 - 66.99	D-	60.00 - 62.99
		F	< 60.00		

Computer Usage Familiarity with Microsoft Word and Microsoft Excel is required for this class. Microsoft Excel will be used for data analysis when solving problems in the class. Students may be required to solve homework problems using Excel. Homework assignments must be typed using Microsoft Word or other word processing packages.

Homework Submission Homework must be submitted online only in PDF or Microsoft Word / OpenOffice Writer format. Necessary charts, graphs and images must be included as a part of your homework and not in separate files. Unprofessional or sloppy submissions will be penalized. Submission of Excel files will not be graded and no points will be awarded if a student does not submit the correct file.

Attendance Policy Attendance will not be taken but students are expected to be present for all class periods. **It is the student's responsibility to be aware of what was discussed in class.** Missed homework submissions and exams will not be allowed except in case of medical reasons.

Surprise quizzes may be held at any point during the course. Unless prior permission for leave of absence has been obtained, a student will not be allowed to make up a missed quiz.

Academic Misconduct You are required to work **individually** on every assignment. Academic dishonesty will not be tolerated. If you copy from another person, plagiarize, turn in someone else's work as your own, or otherwise fail to maintain a high standard of academic honesty as defined in the Ohio University Student Handbook, you will receive a 0 on the assignment and the case will immediately be referred to the Ohio University Judiciaries.

Tentative Schedule

Week	Topic
1	Introduction to Work Design
2	Method Analysis
3	Graphical Productivity Analysis
4	Work Methods Improvement
5	Time Study
6	Standard Data Systems
7	Predetermined Time Systems
8	Work Sampling
9	Introduction to Ergonomics
10	Review