
Manufacturing Systems
Course Number: IME470
Spring 2008

Course Descriptions:

This course covers the basic understanding of manufacturing systems that integrate machines, material handling systems, computer control systems and other resources to produce various products. Analytical aspects of manufacturing systems will be a key focus of entire course. In addition to the analysis, scheduling and planning for manufacturing systems will also be discussed.

Prerequisite:

IME 365, 370, and IME 375 or consent of instructor.

Class Meeting:

TR 2:00-3:15 (EB1024)

Instructor:

Dr. Sohyung Cho, Assistant Professor in Industrial and Manufacturing Engineering

E-mail: scho@siue.edu

Phone: 650-2817

Office Hours: TR noon-2:00 or by appointment

Text Book:

MP Groover, Automation, Production Systems, and Computer-Integrated Manufacturing, 3/E, 2007, Prentice Hall

Course Schedule*

1. Manufacturing system – Overview	1 week
2. Science of Manufacturing	2 weeks
3. Single State Manufacturing Cells	1 week
4. Manual Assembly Lines	3 weeks
5. Automated Production Lines	1 week
6. Mid-term Exam	SIUE Calendar
7. Manufacturing Scheduling a. Single machine scheduling b. Solution methods for scheduling: DP, B&B, Heuristics c. Scheduling of general manufacturing systems (Flow shop and Job shop)	4 weeks
8. Performance Comparison of Manufacturing Systems	2 weeks
9. Lean Manufacturing Systems	1 week
10. Project Presentation	Final Week
11. Final Exam	SIUE Calendar

*** The schedule is subject to sudden changes.**

Grading Policy:

Test 1: 30%, Test 2: 30%, HW&Quiz: 20%, PJT: 20% (Total 100%)

>90% - : A

80-89%: B

70-79%: C

60-69%: D

<50%: F

Quizzes:

There will be several unannounced quizzes given during the semester. You will not be allowed to make up missed quizzes under any circumstances except medical situations with doctor's note.

Project:

A semester project will be completed by group of 2 or 3 students. The project statement will be handed out within the first two weeks of class. The project is to be turned in by the given due date (TBA). Late projects will receive zero credit.

Late Assignments:

Late assignments will not be accepted in any circumstances.

Collaboration:

If collaboration is to be allowed on an assignment, that fact will be announced verbally in class, and as a written statement in the problem assignment. Unless it is specifically stated otherwise, you are to assume that each assignment is to be completed individually. If two or more students turn in similar assignments, each of those involved in the collaboration will receive zero credit on that assignment.

Missed Tests:

Only an extreme emergency (hospitalization, etc.) will be considered to be a valid reason for missing a test. Tests missed without a valid reason will be assigned a grade of zero. For a make-up test to be arranged, the instructor must be notified at least one week in advance.

Academic Conduct:

Cheating on examinations, submitting work of other students as your own, or plagiarism in any form will result in penalties ranging from an F on the assignment to expulsion for the university, depending on the seriousness of the offense.

<http://www.siue.edu/policies/3c3.shtml>