IEE 4160
OPERATIONS CONTROL
Course Syllabus

Catalog Data: A comprehensive introduction to the terminology, systems, and procedures used in operations management.

Text: Production and Operations Analysis. Steven Nahmias, Waveland.
Reference: Integrated Production and Inventory Control. Bedworth and Bailey.Wiley and Sons.

Coordinator: Dr. Bob White, Professor

Prerequisites by topic:
1. Probability and statistics. IEE 2610 or equivalent.
2. Linear programming. IEE 3110 or equivalent.
3. Learning Curves, cost accounting IEE 2010 or equivalent.
4. Computer simulation. IEE 3300 or equivalent.

Course Objectives	**Performance Criteria (department)[1] Course**
1. Demonstrate an ability to design and conduct experiments and analyze and interpret data.	(B3) Aggregate planning lab assignment.
2. Apply industrial engineering tools to successfully model and solve complex problems.	(K3) Successfully formulate and solve the linear programming portion of the aggregate planning lab assignment.
3. Work together in a team to model an operations control system and effectively communicate the results in a written report.	
4. Develop the skills necessary to be able to select and use engineering tools to solve problems.	

Topics:

Week 1-4 Analysis of forecasting systems.
Week 5,6 Aggregate planning systems
Week 7-11 Deterministic and stochastic inventory systems
Week 12-14 Sequencing and scheduling systems

Schedule:

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WEEK	TEXT MATERIAL
1	Chapter 1
2	2
3	2
4	2
5	3
6	3
7	4
8	4
9	5
10	5
11	6
12	7
13	8
14	8

This is an approximate schedule. The schedule may vary as the semester progresses. Changes will be discussed in class.

Evaluation:

Midterm Exam	25%
Final Exam	25%
Labs	30%
Class Participation and Homework	5%
Wall Street Journal Quizzes	5%
Pass FE Exam	10%

A student must pass both the lecture and lab portions of the course with a passing grade in order to pass the entire course.

Lab:

Lab assignments will be made periodically. These assignments will provide an opportunity for students to analyze open ended engineering design problems applying the principles learned in the lectures. All lab assignments will be done using appropriate computer programs. Comprehensive lab reports will be required. These lab reports will be graded on technical content, presentation, and correct syntax and grammar. A team lab project will be given later in the semester. Students must demonstrate sufficient mastery of the material in their individual labs to be allowed to participate in the team project.

Grading Scale

The following are the APPROXIMATE points required for the corresponding grades. Actual points required may vary slightly.

A	800	C	640
BA	760	DC	600
B	720	D	560
CB	680		

Extra credit points will apply only if the point total from all other sources is 560 or greater. Students must pass both the lab and lecture portions of the course to receive an overall passing grade.

Fundamentals of Engineering Examination:

All students are required to take the fundamentals of engineering examination. This exam is an integral part of this class and you will be not given a grade in IEE 4160 unless you take this exam. If you pass this exam, you will receive 100 points. You are required to register for the exam yourself. Visit NCEES.org for details.

Cell Phone Use: Cell phone use is not permitted during class. Please be sure your phone is turned off and put away during class.