

INSY 5600/6600/6606 Manufacturing and Production Economics (Spring 2009)

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Textbook and Course Materials:

1. *Contemporary Engineering Economics* by Chan S. Park, 4th ed., Prentice Hall, 2007
2. Lecture Supplements will be posted on the course **Blackboard**
3. Book website: <http://www.prenhall.com/park>

Grading Policy:

- Midterm exam (March 12, 2009)– 30%
- Homework – 30%
- Final Exam (May 6, 2009)– 40%

There are a total of five sets of home assignments. Each set is worth 6 points toward your final grade. You must turn in the assignments as hard copies (typed, no hand writing) to your TA on the dates specified. Outreach student should submit the work in electronic form (PDF or WORD) via the course Blackboard. Any late submission will result in scaling the grade by 50%. No assignment will be accepted after 2 working days from the due date. Each submission should not exceed more than 5 pages (including the tables and figures). Any grading conflicts must be resolved within one week from the date on which your grades are posted.

Course Topics:

1. **Managerial & Cost Accounting (Chapters 2 & 8)**
 - a. Understanding Financial Statements (Chapter 2)
 - b. Financial Statements
 - c. Ratio analysis
 - d. Cost Concepts Relevant to Decision Making (Chapter 8)
 - e. Cost classifications

- f. Standard Cost and Variance analysis
 - g. Cost-volume-profit analysis
 - h. Estimating Manufacturing Costs
 - Labor cost/Effects of learning
 - Material cost/Inventory valuation
 - Overhead cost/Activity-based costing
 - i. Developing production budget
- 2. Evaluation of Long-Term Business and Engineering Assets**
- a. Discounted cash flow analysis (Chapter 5)
 - b. Life-Cycle cost analysis (Chapter 6)
 - c. Rate of Return analysis (Chapter 7)
- 3. Analysis of Project Cash Flows (Chapters 9,10, 11, and 15)**
- a. Depreciation
 - b. Corporate taxes
 - c. Developing project cash flows
 - d. Considering inflation in project cash flow analysis
 - e. Capital Budgeting Decisions
- 4. Project Risk and Uncertainty (Chapters 12 & 13)**
- a. Handling risk and uncertainty
 - b. Sensitivity analysis
 - c. Probabilistic analysis
 - d. Decision tree analysis
 - e. Risk simulation
 - f. Real Options Analysis
- 5. Long-Term Capacity Planning (Chapter 14)**
- a. Capital cost and operating costs
 - b. Economic service life
 - c. Equipment replacement decisions

Academic Honesty Code:

Please read the following academic honesty policy that will be enforced in this course.

Academic Honesty: All portions of the Auburn University student academic honesty code (Title X11) found in the Tiger Cub will apply to this class. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee.

Violations include, but are not limited to:

Cheating on an examination. This includes such things as copying from another's paper, using unauthorized notes, calculators, etc., or giving or receiving unauthorized aid, such as trading examinations, whispering answers, passing notes, or using electronic devices to transmit or receive information.

Plagiarism. This is using someone else's work without giving credit. It is, for example, using ideas, phrases, papers, laboratory reports, computer programs, data - copied directly or paraphrased - that you did not arrive at on your own. Sources include published works such as book, movies, web sites, and unpublished works such as other students' papers or material from a research service. In brief, representing someone else's work as your own is academically dishonest. *The risk of plagiarism can be avoided in written work by clearly indicating, either in footnotes or in the paper itself, the source of any major or unique idea or wording that you did not arrive at on your own. Sources must be given regardless of whether the material is quoted directly or paraphrased.*

Copying another student's assignment and putting your name on it is plagiarism.

Unauthorized collaboration. This is working with or receiving help from others on graded assignments without the specific approval of the instructor. *If in doubt, seek permission from the instructor before working with others.* Students are encouraged to learn from one another: Form study groups and discuss assignments, but each assignment must be individual work unless specifically stated and turned in as a group assignment.

You are encouraged to talk to one another about your assignments, however, all assignments must be done by the student(s) whose name is (are) on it!

Multiple submissions. This means using the same work to fulfill the academic requirements in more than one course. *Prior permission of the instructors is essential.*