

**ECON 530 Operations and Managerial Economics**  
**Andrews University – Portland Site**  
**Spring 2008**  
**Three Semester Credits**  
**Dr. Samuel Kim L. Chuah**

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Office Hours: TBA.  
Office Phone: 269-471-3453.  
Class Location: TBA.  
Class Time: 9:00 a.m. - 12:00 noon, 1:30-4:30 p.m. S.; 6:30 - 9:30 p.m., MTWTh.  
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**COURSE DESCRIPTION:** The course explores how managers make economic and operations decisions at various managerial levels: estimate consumer demand for the firm's products, costs of production in the long run and short run, impact on revenues and profits due to changes in economic variables, the level of employment that maximizes profits, and the firm's response to external stimuli such as government regulations, competitors pricing strategies, and environmental issues. The course also looks briefly at project management techniques in the management of the operations process learned in production and operations management.

**COURSE OBJECTIVES:** On satisfactory completion, students will be able to

1. determine, given a set of information pertaining to a firm's product, using relevant economic models, the firm's status in terms of demand for its products, scheduling of production to meet estimated demand, cost estimation, employment and output decisions, pricing and profit prospect.
2. use various statistical and non-statistical procedures in estimation and forecasting to achieve the above objective.

**BACKGROUND AND PREREQUISITE:** In preparing students to achieve the above objectives, the instructor will use mathematical and statistical models to elaborate on important economic concepts and managerial tools. Even though this course will not be highly theoretical, a fair amount of theoretical justification needs to be provided for the models used in the analysis. Students are assumed to have completed, at the undergraduate level, pre-calculus, statistics, operations management, and an introductory microeconomics course.

**COURSE REQUIREMENTS & ASSIGNMENTS:** The following measurable instruments are used to evaluate if the objectives of the above course have been achieved:

1. Preview Problem Sets: There will be a practice module for every major topic covered. Each module is made available on the Managerial Economics website hosted by <http://www.aplia.com> a week before the session, until the end of the week of the session. Ten modules are required, and will take up 10% of the final grade. There is no make-up module, unless there is documented evidence of widespread and significant internet problem.
2. Review Problem Sets: There will be a graded module for every major topic covered. Each module is made available on the Managerial Economics website hosted by <http://www.aplia.com> ending one week after the session. Ten modules are required, and will take up 20% of the final grade. There is no make-up quiz, unless there is documented evidence of widespread and significant internet problem.
3. Tests: There are two tests consisting of analytical/decision-making problems. The tests will take up 45% of the final grade. The schedule and coverage of these tests are tentatively set as follows:
 

Test 1 (25%): 03/16/2008. Sunday. Chapters 1-7.  
 Test 2 (20%): 03/23/2008. Sunday. Chapters 8-9, 11, 13.
4. Assignments: These are assigned items from end-of-chapter “Problems and Applications”, due as indicated in the Appendix for Problem Sets. No late assignment will receive credit. The keys to these assignments will be posted soon after the due date. Ten assignments are required, making up 15% of the final grade. Only three items in each problem set are required and graded. Additional solved items will not be graded, but a solution key will be provided for comparison.
5. Project. Select from among the projects listed in the appendix or, if preferred, construct your own. The focus of the projects is on operations management issues and/or economic estimations. The proposal must be written in a format similar to the existing projects. Each project can be done by a group consisting of about five members, and a report in term paper format is expected together with peer evaluation of individual efforts to be submitted at an agreed upon date. The project takes up 10% of the final grade.

**EVALUATIVE CRITERIA AND GRADING SYSTEM:** The final score is computed based on the following formula:

Preview problem sets	10%
Review problem sets	20%
Tests	45%
Assignments	15%
Project	10%

The following absolute scale is adopted for the assigning of the final letter grade:

A	[0.94 1.00]	C+	[0.75 0.79]
A-	[0.90 0.93]	C	[0.70 0.74]
B+	[0.87 0.89]	C-	[0.65 0.69]
B	[0.84 0.86]	D	[0.50 0.64]
B-	[0.80 0.83]	F	[0.00 0.49]

**INSTRUCTIONAL METHODS:** The textbook chosen is very readable. Students are strongly encouraged to read ahead before coming to class. This is important for classroom interaction. Lectures and problem-solving sessions will be utilized to introduce concepts and analytical procedures. Class activities are utilized for illustration. Videos may be used to show integration of concepts in the real world. Group discussion is encouraged in working on the assignments. However, assignments must be completed and submitted individually.

**TEXTBOOK:** (Required). Michael R. Baye. *Managerial Economics and Business Strategy*. 5 ed. New York, N.Y.: McGraw-Hill & Irwin. 2006.

**BIBLIOGRAPHY:**

Berenson, Mark L. & David M. Levine. *Basic Business Statistics: Concepts and Applications*, 6 ed. Englewood Cliffs, NJ: Prentice-Hall, Inc. 1996.

Berk, Kenneth N. & Patrick Carey. *Data Analysis with Microsoft Excel*. Pacific Grove, CA: Brooks/Cole Publishing Company. 1998.

Brickley, James A., Clifford W. Smith, Jr., and Jerold L. Zimmerman. *Managerial Economics and Organizational Architecture*. 3 ed. New York, NY: McGraw-Hill Irwin. 2004.

Brown, William S. *Introducing Econometrics*. St. Paul, MN: West Publishing Company. 1991.

Dielman, Terry E. *Applied Regression Analysis for Business and Economics*. 4 ed. Belmont, CA: Brooks/Cole Thompson Learning. 2005.

Gather, Norman, & Greg Frazier. *Production and Operations Management*. 9 ed. OH: South-western College Publishers. 2002.

Griffiths, William E., R. Carter Hill, and George G. Judge. *Learning and Practicing Econometrics*. NY: John Wiley & Sons, Inc. 1993.

McGuigan, James R., R. Charles Moyer, and Frederick H. deB. Harris. *Managerial Economics: Applications, Strategy, and Tactics*. Ohio: South-Western, Thompson Corporation. 2005.

Meredith, Jack R. & Scott M. Shafer. Operations Management for MBAs. 2 ed. New York, NY: John Wiley & Sons, Inc. 2002.

Thomas, Christopher R. & S. Charles Maurice. Managerial Economics. 8 ed. New York, NY: McGraw-Hill Irwin. 2005.

**COURSE CONTENT AND SCHEDULE:** The following is a tentative schedule.

I.	Introduction.		4 hrs
	1. Fundamentals.	03/09/08	
	2. Market Forces: Supply & Demand	03/09/08	
II.	Demand and Forecasting.		5 hrs
	3. Quantitative Demand analysis.	03/09/08	
	4. Theory of individual Behavior.	03/10/08	
III.	Production, Cost, and the Firm		15 hrs
	5. Production and Cost.	03/11/08	
	6. Organization of the Firm.	03/12/08	
	7. Nature of Industry.	03/13/08	
	Test 1	03/16/08	
	Projects	03/16/08	
IV.	Competition and Markets		18 hrs
	8. Competitive, Monopolistic, & Monopolistic competitive.	03/17/08	
	9. Oligopoly.	03/18/08	
	11. Pricing Practices.	03/19/08	
	13. Business Strategies.	03/20/08	
	Test 2	03/23/08	
	Projects	03/23/08	

**APPENDIX FOR ASSIGNMENTS:** Each submission of a chapter exercise assignment must include 3 items from those assigned below. Assignment grades are recorded in percentages, and maximum grade for each individual submission is 100%. Students are expected to know how to solve all items assigned by test times, even though some were not submitted for grading. Problem solving items in tests will be similar to concepts and procedures covered in the

homework assignments.

chapter	problem item numbers	due date
1	10, 12, 14, 16, 18	03/10/2008
2	10, 12, 14, 16, 18	03/10/2008
3	10, 12, 14, 16, 18	03/11/2008
4	10, 12, 14, 16, 18	03/11/2008
5	10, 12, 14, 16, 18	03/12/2008
6	10, 12, 14, 16, 18	03/13/2008
7	10, 12, 14, 16, 18	03/14/2008*
8	10, 12, 14, 16, 18	03/18/2008
9	10, 12, 14, 16, 18	03/19/2008
11	10, 12, 14, 16, 18	03/20/2008
13	10, 12, 14, 16, 18	03/21/2008*

**POLICY ON HONESTY & INTEGRITY:** Andrews University, as a Seventh-day Adventist institution, expects students to demonstrate the ability to think clearly and exhibit personal moral integrity in every sphere of life. Honesty in all academic matters is a vital component of personal integrity. Breaches in academic integrity principles are taken seriously by the University. Acts of academic dishonesty as described in the University Bulletin are subject to incremental disciplinary penalties with redemptive intent. Such acts are tracked in the office of the Vice President for Academic Administration. Repeated and/or serious offenses will be referred to the Committee on Academic Integrity for further recommendations on penalties.

All submissions of assignments, quizzes, and tests, are expected to be the product of individual work. Copying from any source, consultation of any sort, verbal, oral, or otherwise, are not allowed unless explicit permission is given. Violation may result in zero credit for the assignment, quiz, test, or the course depending on severity, and may be subject to university policy.