Economics 8100/CRN 81173
Applied Microeconomic Analysis /Fall 2011
Bruce A. Seaman

LOGISTICS: MW: 3:00 – 4:15 P.M.; Room 304, ALC (Aderhold Learning Center); Office: 532 AYSPS (14 Marietta Street); Office phone: 404-413-0157; e-mail: bseaman@gsu.edu or secobas@aol.com. Office fax: 404-413-0145.

CATALOG DESCRIPTION: This course provides comprehensive coverage of microeconomic topics by analyzing the applications of the theory. A graphical and intuitive approach is stressed in addition to the mathematical. Topics include both standard and the new consumer theory, production and cost analysis, modern theories of the firm and markets, and basic welfare economics. Applications useful to business students are also provided.

LEARNING OBJECTIVES: By learning the theory through mastering its problem solving potential, the student gains an appreciation for economics as a way of thinking about the world and a methodology rather than merely a series of topics. Because rational choice modeling has limitations as well as demonstrated strengths, students are also exposed to criticisms (focusing especially on the growing behaviorist literature) so as to generate a more sophisticated appreciation for the use of economic analysis in research and applied problem solving. Given the varied backgrounds and degree programs of the students, students are given a wide variety of applications so as to generate a functional mastery of microeconomic techniques that they will confront in the academic literatures in their own fields.

PREREQUISITES: Econ 3910 or MBA 8403 (intermediate micro theory, or MBA micro), and Econ 6030 or Dsc 8040 (basic calculus and algebra).

TEXTS: Robert H. Frank, *Microeconomics and Behavior*, 8th Edition, McGraw-Hill, 2010. Note that the 7th edition, 2008 is also manageable and I will include information in the schedule below about that edition. Earlier editions can also be used but there will be some chapter reorganizations and content differences.

This text is designated “F” in the reading assignments.

Note: From the Preface (page xiii), you will note the website address for this text from which you can access appendices and the answers to all end of the chapter problems (accessible from the instructor's manual when you use a password that will be given in a bulletin board message on uLearn).


This text is designated “NS” in the reading assignments. The 9th edition is also manageable, although there are some chapter re-numberings and consolidations, and other changes. It is best to have the 10th edition. As with Frank, earlier editions are certainly also manageable if you stay
alert to chapter reorganizations and page number differences (but by and large the chapter 
headings and sub-headings, and the boxed examples are the same).

ADDITIONAL MATERIALS: A few carefully selected journal articles may be distributed to 
exhibit particular theoretical tools of analysis as they are actually used by researchers. ULearn is 
used to distribute various lecture supplements, exams and some readings. Therefore, please 
check the Econ 8100 ULearn pages regularly. It is an important teaching and communications 
tool for this class. Note that the most important feature on ULearn is “Discussions,” where I will 
post announcements, assignments, and attach files. I may also attach some material in separate 
folders. Finally, “My Grades” is used to record the results of exams.

Sample exams and selected solutions will be posted periodically. These will serve as problem 
sets and occasional discussion topics during class. Answers to selected end of chapter questions 
are provided in the Nicholson text (to the odd-numbered problems). For the Frank text, problem 
solutions are available on his web page using a password, as noted above.

IMPORTANT UNIVERSITY POLICY STATEMENT: The instructor is required to report any 
student who has ceased to attend class and give that student a WF (withdrawal failing) as of a 
date approximately at the mid-point of the semester. Any such student receiving financial aid 
may be required to refund any financial support. Therefore any student, who for legitimate 
reasons (illness, family crises etc.) must be absent from class for any period of time exceeding 
two (2) classes, is strongly advised to inform the instructor in advance.

COURSE PHILOSOPHY: Pedagogically, this course follows the same philosophy that has led 
to University of Chicago related scholars receiving about 30% of the Nobel Prizes in Economics. 
It is best stated as follows:

“If people do not believe that mathematics is simple, it is because they do not realize how 
complicated life is.”

John von Neumann (one of the greatest mathematicians of the 20th century, and a key 
contributor to the analysis of risk and uncertainty, and early game theory, among many areas 
across many fields). Source: His keynote address to the International Meeting of the Association 
for Computing Machinery, 1947.

“The course tries to present a rigorous and systematic statement of the principles economists 
have developed to understand the allocation of resources. The emphasis, however, has been on 
the value of these principles in understanding the world about us. (And) the most efficient way 
to learn economic theory is to solve the many problems that test one's understanding.”

Gary Becker (Nobel Prize 1992), from the Preface to his Economic Theory, Alfred A. 

“These days a book in microeconomics cannot contain a single derivative, or even very many 
equations, yet send the message that the form of economics is its scientific substance. The 
students learn economic calculus before they learn to reason economically, and their capacity for 
reasoning is permanently damaged. The point is not to banish formal training from economics,
but to place it at the right stage of the educational process.”

Deirdre McCloskey (Univ. of Illinois; formerly of the University of Chicago and the University of Iowa) from the Preface of her text cited above.

“I wrote Microeconomics and Behavior in the conviction that the teaching of intuition and the teaching of technical tools are complements, not substitutes. Students who learn only technical tools rarely seem to develop any real affection for our discipline, and even more rarely do they acquire that distinctive mindset we call ‘thinking like an economist.’ By contrast, students who develop economic intuition are stimulated to think more deeply about the technical tools they learn and to find more interesting ways to apply them. Most important, they usually end up liking economics.”

Robert Frank (Cornell Univ.; Ph.D. UCLA), from the Preface of the text (p. ix), exhibiting the perspective of one lucky enough to be educated by that “classic” text of non-technical rigor, University Economics, by UCLA professors Armen A. Alchian and William R. Allen, Wadsworth, 1967.

“In almost anyone else's hands, this model would have got bogged down in a mathematical morass of matrix inverses and fixed points. It needed Krugman's deeper understanding of the problem to cut it down to its essentials and express the argument in simple diagrams. As he himself says, ‘often the truest sophistication is finding a way to express novel ideas with no more than a diagram or a numerical example.’”


COURSE REQUIREMENTS: A 24-hour take-home midterm exam plus a 24-hour take-home final exam are scheduled. A practice quiz may also be given before the mid-term. The exams are distributed via uLearn or email addresses and must be completed within 24 hours. An optional second exam will also be given prior to the final exam. That optional exam is designed to possibly improve the grade on the midterm exam (Exam I); see the following section. Note that the exams are not formally comprehensive, but focus on new topics. Assigned problems should be completed to prepare for the exams, but will not be graded. Class discussion is encouraged. Classes are missed strictly at your own risk, given the supplemental material to be presented and the problems to be discussed. The university Policy on Academic Honesty (Section 409) fully applies to all graded work, and any violation of this policy will result in very severe penalties. You absolutely must work on exams independently.

COURSE GRADING POLICY: The exams are weighted roughly equally. However, a somewhat higher weight is assigned to the final exam if that grade is higher than the midterm exam. Also, for those taking the optional second exam, that grade is averaged with the midterm grade to generate a “modified” midterm grade (but this can only improve your grade or leave it unchanged; it cannot lower your grade, so taking it is totally risk-free). Also, the numerical scores on all exams are translated into a letter grade based on the average performance, i.e., the letter grades are “curved” (e.g., if the average is 75 and the range is 45 to 94, an 82 is likely to become a B+ and a 48 a C-/D+), but this translation will vary with each grade distribution). This
courses follows the policy of the university in assigning + and – grades consistent with Georgia State University on such grading. The final grade is calculated essentially by translating the letter grades back into simpler numerical equivalents on a scale of 0 to 12 (A+ = 12, B = 8, C+ = 6, etc.) and averaging them back into a letter grade using any applicable weights as described above.

OFFICE HOURS: No formal office hours are kept, but appointments are easily made, and emailed questions are promptly answered. After class is also a good time.

COURSE SCHEDULE: (Problems will be assigned separately, but not graded; they will frequently be discussed in class); October 7 is the last day to withdraw and receive a “WP.”

NOTE: The course syllabus provides a general plan for the course; deviations may be necessary and will be announced if they occur. An ongoing updated schedule will be posted every Friday as an AGENDA for the following week. Please recognize that the posted updated agenda will always supersede the specific schedule below, although the topics and organization are as identified here in the syllabus.

<table>
<thead>
<tr>
<th>DATES</th>
<th>TOPICS AND ASSIGNED READING</th>
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<tbody>
<tr>
<td>(Excludes Appendices unless specifically included; those are generally optional).</td>
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<tr>
<td>08/22:</td>
<td>Introduction/Background/Logistics.</td>
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<tr>
<td>08/24:</td>
<td>The core concepts of micro-theory; initial applications; the four alternative interpretations of a demand curve/function.</td>
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<td></td>
<td>F: Chs. 1 and 2 (temporarily skip Appendix; to be covered later)</td>
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<td></td>
<td>NS: Ch. 1 (Review Ch. 2 for some useful mathematical background, especially basic optimization concepts and calculus review, elasticity, the Lagrangian multiplier method, and homogeneous and homothetic functions. While the other topics are important in microeconomic theory, the mathematics of those techniques is not explicitly relied upon in this particular course).</td>
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<tr>
<td>08/29:</td>
<td>Alternative interpretations of demand functions continued: Errors that can be made even by economists regarding the meaning of opportunity cost; other early examples.</td>
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<td>Conclude reading from 08/24</td>
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<td>Posting on uLearn of modest additional reading: Complexities in the interpretation of opportunity cost (extensions of Frank Ch. 1 examples).</td>
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<tr>
<td>08/31:</td>
<td>Formal unconstrained vs. constrained maximization analysis as applied to consumer choice theory.</td>
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F: Ch. 3 (plus Appendix)
NS: Review Ch. 2 for some useful mathematical background, especially basic optimization concepts and calculus review, elasticity, the Lagrangian multiplier method, and homogeneous and homothetic functions. While the other topics are important in microeconomic theory, the mathematics of those techniques is not explicitly relied upon in this particular course.
NS: Ch. 3
NS: Ch. 4 to Example 4.1 on p. 121

09/05: No Class; Labor Day Holiday

09/07: Additional sample problems; catch-up on reading/lecture topics; Income vs. Substitution effects

F: Ch. 4 to p. 109 (to p. 108 in the 7th edition).
NS: Ch. 5 to p. 148; pp. 155-158

09/12: Income vs. substitution effects continued; Hicks vs. Slutsky; Compensating vs. Equivalent variations in income

F: Ch. 4 continued to p. 109 (108 7th edition)
F: Ch. 5, The Gas Tax and Rebate example and debate; pp. 140-142.
NS: Ch. 5, p. 155 - 158

09/14: Extension of income/substitution effect analysis to math derivations and applications; derivations of compensating vs. equivalent variations in income; consumer surplus; revealed preference introduction

Readings posted on uLearn: Varian Ch. 8, “Slutsky Equation” and Ch. 14, “Consumer Surplus” (focus on sections 14.7 and 14.8, and the examples pp. 260-261).
NS: Ch. 5, pp. 165-172
F: Ch. 5, section on “consumer surplus”

09/19: More constrained optimization problems; labor markets and inter-temporal choices

F: Ch. 5, sections not yet covered, but temporarily skip: “Using Price Elasticity of Demand,”
F: Ch. 14 (“The Supply of Labor,” pp. 464-470); Overtime problem; see uLearn
NS: Ch. 16, pp. 573-577
09/21: Demand and elasticities; functional forms (Cobb-Douglas and others)

NS: Ch. 4, p. 121 (Example 4.1) to end
NS: Ch. 5, pp. 148-154; pp. 158-161
F: Ch. 4, pp. 109 – end (plus Appendix); F: Ch. 5, “Using Price Elasticity; 153-155
F: Ch. 12, review again pp.377-384 (provides further overview of price, elasticity and marginal revenue relationships). Also, N: Ch. 11, 359-365 for the same reason.

09/26: Relationships among elasticities and further applications; Sample exam problems

NS: Ch. 5, pp. 161-165
NS: Ch. 6 to p. 191
Supplemental lecture notes posted on uLearn

09/28: More consumer surplus applications; Revealed preference theory applications; the “Alchian-Allen Theorem”

NS: Ch. 5, pp. 165-end (review again)
Agricultural policy example posted on uLearn
Discussion of sample exam problems
Some Evidence on the Alchian and Allen Theorem...” Bertonazzi et a Economic Inquiry, July 1993

10/03: Cognitive limitations; the debate about taste formation and stability; intro to the Lancaster attributes model of consumer choice, and the Becker household production model extension

F: Ch. 7 (at least to p. 219; clarification provided when we get to this chapter)
NS: Ch. 6, pp. 191-end.
uLearn posting on Lancaster analysis
uLearn posting of lecture notes regarding the Becker model and examples

10/05: Catch-up; further clarifications; further practice for midterm exam

Exam I to be tentatively posted Wednesday 10/05, due 24 hours later (three posting times will be available and must be requested by individual students: 5 PM; 7 PM; 9 PM, but we will discuss this schedule). Preliminary grading information can be available by 10/07 if requested.

10/10: Return and discuss Exam I (note that the optional exam is typically distributed about two weeks after this date, and that optional exam will cover both the topics of Exam I, and any new topics covered since the midterm and up to the distribution date of the optional exam).
10/12: Introduction to Uncertainty and attitudes toward risk (standard approach):

F: Ch. 6 (focus on von-Neumann and Morgenstern analysis)
NS: Ch. 7

10/17: Continue analysis of attitudes toward risk; more examples. The economics of risk: alternative viewpoints; cognitive limitations (Kahneman-Tversky and the “Behaviorists”); comparison to standard approach; cognitive limitations and economic modeling

Complete F: Ch. 6 and NS: Ch. 7
F: Ch. 8
uLearn distribution of further articles re: behavioral economics
uLearn posting re: Rawls *Theory of Justice*

10/19: Conclude discussion of behaviorist challenge; Begin overview of production and cost theory; Modern theory of the firm vs. traditional neoclassical theory. (Optional exam targeted for this week; distributed by 5:00 PM on Thursday 10/20; due by 5:00 PM Friday 10/21).

F: Ch. 9
NS: Ch. 9

10/24: Production and cost applications continued; extension to theory of the firm and short-run industry supply derivation

F: Ch. 9 continued; plus Ch.10; also F: Ch. 11 (to p. 350)
NS: Ch 9 continued, plus 10; also NS: Ch. 11; and NS: Ch. 12 to p. 406
uLearn supplemental lecture notes

10/26: Long run industry/market analysis; short run vs. long run producer surplus; economic profits vs. factor rents; review of uLearn handout problems

F: Ch. 11 pp. 350 to end; F: Ch. 15, pp. 517-518 (“Economic Rent”)
NS: Ch. 12 pp. 406-421

10/31: Sample exam; supplemental discussion of relationship between short and long-run analysis; how to analyze exogenous supply shocks; tax analysis

F: Ch. 11; F: Appendix Ch. 2; also uLearn supplemental lecture notes
NS: Ch. 12; pp. 421-end
NS: Ch. 13, pp. 466-475

11/02: Monopoly analysis
F: Ch. 12
NS: Ch. 14

11/07: Monopoly/market power applications continued; price discrimination; tying contracts and other strategies

F: Ch. 12 concluded
NS: Ch. 14 (focus on Example 14.5 and 14.6, and related uLearn lecture supplements)

11/09: Other models with market power; traditional models of imperfect competition

F: Ch. 13; pp. 426-435
NS: Ch. 15; to p. 537

11/14: Game theory and other extensions to imperfect competition modeling

F: Ch. 13 pp. 413-426.
NS: Ch. 15, pp. 537 to end

11/16: Labor and input market analysis

F: Ch. 14 (skip previously covered labor supply section)
NS: Ch. 16 (pp. 576-end)

11/21 and 11/23: No classes; Thanksgiving Holiday vacation

11/28: Input analysis continued; more sample exam problems

F: Ch. 14 (plus Appendix)
NS: Ch. 16 concluded

01/130: Selected further topics in welfare economics; externalities; property rights;

F: Ch. 6 (specific pages to be clarified in weekly agenda)
NS: Ch. 19 (specific pages to be clarified in weekly agenda)

12/05: Review for final exam; additional discussion of sample exam problems.

The open-book home final exam will tentatively (subject to our discussion) be distributed on Wednesday 12/7, due 24-hours later. Some flexibility is again available based on individual schedules.