Managerial Economics (ECP 3703)

Jim Dewey

Spring 2009

My Office Hours:	Tuesday & Thursday 2:00 pm to 2:45 pm and by appointment in MAT 336.
TA Office Hours:	Anything except open problem sets: Monday-Friday 12:00-5:30 pm, MAT 218. Open problem sets, usually Monday and Tuesday evenings, details TBD.
Website:	http://lss.at.ufl.edu/. Almost all questions should be posted to the discussion board.
E-mail:	Questions related to your individual grade, ecp3703grades@gmail.com. Other questions that can't be posted to the discussion board, ecp3703help@gmail.com. Communications that can't be seen by TAs, jimd@bebr.ufl.edu. (Use rarely, expect delays.)
Text:	*Managerial Economics and Business Strategy* by Michael R. Baye. Recommended, but not required. Any edition is fine. ISBN: 978-0073375687.
Prerequisites:	Principles of Microeconomics (ECO 2023) and Survey of Calculus (MAC 2233).
Live Section:	Tuesday and Thursday, periods 8 and 9, 3:00 pm to 4:55 pm, Bryan 130.
Attendance:	Strongly encouraged at live lecture, whether enrolled in that section or not.

Please read this syllabus thoroughly. It contains important information to help you get the most out of the course. While I will do my best to help you, ultimately, you are responsible for knowing what is written here and for your performance. The course website at http://lss.at.ufl.edu/ will play a crucial role in the course. Check it very frequently for announcements, problem sets, and to monitor the discussion board.

Introduction

Welcome! Economics is the study of making decisions with limited resources. A firm's goal is to make decisions that maximize the present value of profits given limited resources. The objective of the course is to show how microeconomic analysis can inform managerial decisions. Course material is structured around these themes:

- Optimal decisions about inputs, outputs, and pricing;
- Optimal decisions in strategic situations;
- Market structure;
- Optimal decisions with imperfect and asymmetric information;
- Interpreting messy and incomplete data.

Since we have to start somewhere, some compartmentalization is inevitable. But there is a huge amount of interaction among these themes and any compartmentalization is artificial. We will continually synthesize new information to develop a comprehensive and integrated framework for analyzing and evaluating the economic decisions managers make. ***The course is inherently cumulative and very little of it has to do with learning definitions or lists of facts. This is not a survey, basic, or introductory course! It is an intermediate level course!***

Prerequisites

The course builds on material from principles of microeconomics. There is much to cover and class time is limited, so **I will assume you know principles material, including basic definitions and concepts.** If you are rusty on this material, you will need to spend time reviewing. Review material is available on the course website.

In 2007, 70% of incoming UF freshmen scored 600 or better on the math portion of the SAT, compared to 25% nationally. The course is aimed at a mathematically adept audience. We will make extensive use of elementary calculus and algebra. If you are apprehensive about math, I'm sorry, there is no way around it; mathematical thinking is integral to the course. **But, you are not alone, the TA's and I are here to help!**

I will ***briefly*** review elements of basic calculus as we need them. A summary of mathematics used in the course is available on the course website, as are some review materials. You will not fail simply because you don't remember the details of calculus. But if you are rusty you will need to spend time reviewing on your own.

Time Commitment

Success requires more than watching four hours of lecture each week. When you were admitted to UF, you were told to expect to put in 2-3 hours outside of class for every hour of lecture, or, 8-12 hours plus lecture for a 4 hour course. For most, completing and *understanding* assigned problems and studying course material *WILL ACTUALLY TAKE* that much time. This can not be put off in favor of 2 days cramming for an exam because problem sets will be due on a near weekly basis and because this is not material that can be mastered by cramming.

This is only an average. Some weeks require more, some less, as do some students. It is wise to spend as much time as needed to master all preliminary material before the first exam – a firm foundation is crucial to later success. If you get behind, it is ***extremely*** difficult to recover!

Text(s)

There is no *required* text. Everything tested is covered in lecture. No textbook is a perfect match for course content, so **don't rely solely on a book**. If you set books on shelves and never look at them unless an assignment is required out of them, save your money, because none are.

But, reading before lecture helps get the most out of lecture and using a book as a reference to clear up things missed in lecture can be a big help. I ***recommend*** *Managerial Economics and Business Strategy* by Michael R. Baye. It does a good job with most concepts and is concise and easy to read. Its only shortcoming is that it is geared to the middle of the market, while UF admits only the best and brightest. I present much material at a higher level than the main body of the text. But, the "A Calculus Alternative" insets and the appendices contain most of the more technical material, and, the body of the text is great for the main ideas and intuition.

If you buy the book, it need not be the most current edition. You should be able to find a used copy of a previous edition cheap online. A study guide is also available. If you will diligently work the relevant problems in the study guide *in addition* to those assigned through the website and the old exams, it will probably help. If you would not, save your money, it contains no silver bullets.

Introduction to Economic Analysis by Preston McAfee is free at http://www.introecon.com/. It is intended as an introductory text for the *very* mathematically advanced students at Cal Tech. Some of the math is more than we need, and the topic coverage does not match perfectly. But, it is a good resource for some of the technical material, especially since it is free and gets right to the point.

Material Delivery and Notes

PowerPoint is great for delivering some types of material, but, is decidedly ill suited to explaining the application of analytical and quantitative models in economics. Taking detailed notes, in your own words, is a **very** important way to learn. Past experience teaching this course and talking to students has convinced me that using power point or providing note shells hinders learning for vastly more than it helps. So, the primary method for delivering material is "Chalk and Talk," and I will not provide note shells. To help you follow the flow of the course, a detailed outline of course topics is on the website, as are the more involved example problems from lecture.

Course Grade - Overview

On a standard 100 point scale, eighty-four points depend on four exams. The remaining 16 depend on online problem sets and participation on the graded portion of the course discussion board. Five extra credit points are possible. The standard grading scale applies:

A	90 and above
B+	85 to 89.99
B	80 to 84.99
C+	75 to 79.99
C	70 to 74.99
D+	65 to 69.99
D	60 to 64.99
E	Below 60

I will not round grades up – please do not ask me to. Is it unfair that someone who gets 90 points getss an "A" and someone that gets 89.9 gets a "B+"? **YES!** I truly sympathize if you end up on the short end of such a comparison. But, **this happens no matter where the cut point is.** The use of the letter grade system is beyond my control. While I commiserate with you over the injustice of it, I can't do anything about it. If it were up to me, I would just report number grades and the difference between the 89.9 and 90 wouldn't matter.

Problem Sets

Diligently working practice problems will improve your exam scores and long term retention. *Approximately* 75 problems applying course material will be assigned via the course website. Almost all are worth 0.2 points (1/5th of a point) each, though some of the more involved problems are worth 0.4 points. There are also *approximately* 30 problems on review/prerequisite material worth 0.1 points each. Nineteen points are possible in total.

Working and *understanding* the problems is ***CRUCIAL*** to success. Here are some statistics of interest based on the 2,569 students who completed my course from Fall 2006 thru Spring 2008.

		Final Letter Grade			
		A	B	C	D or E
Problems Completed	95% or More	16.2%	8.9%	3.6%	0.2%
	80% to 94.9%	7.0%	11.4%	6.3%	1.1%
	70% to 80%	6.9%	8.9%	6.5%	1.3%
	Less than 70%	1.1%	4.5%	7.3%	8.9%

To get the most out of the problems, you must really understand them, not just complete them. You should watch the relevant lectures, work through the examples from lecture, and study relevant material ***before*** starting them.

Five attempts are allowed for each problem. For each attempt, the set up will be the same but the specifics will change randomly. You will not get the same numbers twice. Problem sets are due at 2:00 p.m. Thursday the week after they open unless otherwise noted. You will usually have approximately one week from the time each problem set is posted to complete it.

Do not wait until the last minute! If you wait until the day a problem set is due but find the website is unavailable or another problem occurs, you will be out of luck! No late work is accepted. *NO EXCEPTIONS. NO APPEALS.* (You should do the work for practice even if you miss a due date.) This policy is *necessary* due to the sheer size of the class, but, plenty of *extra points* are available if you miss a problem set, as discussed in more below.

For some, the problems may seem a bit overwhelming at first, for two reasons. First, it may take a while for some of you to get comfortable with the math. Second, and more importantly, figuring out how to get started can take a while. This is where most of the economics takes place – using the information given to set up the problem correctly. Once you have done a few, they will get easier. It will just take puzzling over them until you get comfortable.

Since the computer will pick random numbers for each problem attempt, actual calculations will often be very messy, and you will need to carry many decimals (six or more) at every step to avoid missing a question due to rounding. You should work each problem on paper but either perform calculations in a spreadsheet or carry all variables to the end and perform all calculations in one step. This will save a great deal of frustration.

Graded Discussion Board Posts

Graded DB posts count for up to 6 points total. The primary way to earn credit is to post an *analysis* relating to an article on the graded DB category by

me, a TA, or a student. The purpose is to foster careful analytical thinking and writing about applications of course material. Opinion may be part of your post, ***but for credit you must*** make clear and correct use of relevant course material to analyze some part of the article. You must also make the links between your comment, the article, and the topic of that DB clear. The very best analyses will earn 2 points, the equivalent of 10 problems. To earn near 2 points, a well written, carefully thought out, logically correct analysis reflecting 5 hours or so of hard work is expected. Most "good" posts will earn closer to 1 point. Posts that seem to be an attempt to throw something together in the hopes of getting a little credit will earn 0 points.

You may receive *up to* 0.4 points (2/5^{ths}) for posting a *response* to someone else's analysis that extends their reasoning or points out a flaw in it. These responses must be polite, professional, correct, and related to the topic to earn credit. You may receive *up to* 0.4 points for posting an article of your own. Only the *very* best responses and articles will earn 0.4 points. Partial credit is awarded at the grader's discretion. If you are interested in a thread, but have already posted an *analysis* or a *response* and wish to make another brief *comment*, you may do so. These ***may*** earn 0.1 points.

Space is limited. You may post at most: 1 *analysis* per topic and 2 total, 1 *response* per topic and 3 total, 1 *article* total, and 4 *comments* total. Additional posts will not be graded and a 0.5 point penalty will apply for each violation.

Additional detailed instructions will be posted on the course website. Consult them carefully!

Each topic will become available when we have covered the related material. "Topic" refers to a whole content area under which multiple articles will be available for analysis. There will be 10-12 topics. The DBs must be locked in order to grade them, so they will remain open only about two weeks each. To keep the grading task manageable, any topic will be closed if and when it reaches 200 total posts. Do not put off making your post, or the topic may close before you make it.

A TA will be assigned to grade each DB. It will take up to two weeks to grade a DB, then time to process and post the grades. So, grades will not be available until approximately 4-6 weeks after the topic is opened (2-3 weeks students to post, 2 weeks for the TAs to grade the DB, and 1 week for processing and posting the grades.) This also means grades for the last 2 topics will likely not be available until final course grades are posted - if you wait until the last topics to post, do not expect to know your grades until then.

Exams

Dates are:

Exam 1 (E1)	Tues, February 3rd	8:20 p.m.
Exam 2 (E2)	Wed, March 4th	8:20 p.m.
Exam 3 (E3)	Mon, April 13th	8:20 p.m.
Final (E4)	Tues, April 28th	8:00 p.m.

Exams 1-3 will consist of 15-20 multiple choice questions accounting for 60% of each exam and two short answer questions accounting for the other 40%. The final will consist of approximately 35 multiple choice questions. Exams 1 and 2 are inherently comprehensive due to the nature of the material. Exam 3 and the final exam are both inherently and explicitly comprehensive.

You may do well right from the start or you may take a while to get up to speed. You may have a bad day on an exam. You may do better on short answer questions than on multiple choice questions or vice versa. The exam weighting is designed to make allowances for all these possibilities. Both the final exam and exam 3 can override an earlier exam, if higher. In addition, your average score on the six short answer questions from the first three exams (expressed out of 100 and denoted below by SA) can also replace exam scores. The final exam is mandatory and counts for at least 21% of your grade. The remaining 63% of your grade based on exams is determined by: highest 3 of *Max*(E1,E2), E2, E3, E3, SA, SA, and E4.

If you do well early, E3 and E4 will count once each. If you do better latter, E3 and E4 can count twice each, replacing both E1 and E2. (Since E3 and E4 are cumulative, if you do well on them, that means you did eventually learn the material covered by E1 and E2.) Similarly, E2 can replace E1. Obviously doing well on E1 or E2 does not mean you know the material covered after E2, so earlier exams can't replace later exams.

If you do better on short answer questions, your short answer average will replace the lowest 2 of the first 3 exams and count for half of the other of the first 3 exams. Thus, short answer questions would count for 52.5% of your total grade while multiple choice questions count for 31.5%. If you do best on multiple choice exams, the final, which is all multiple choice, will replace the lowest of the first 3 exams, and, the other two are half multiple choice. In that case, multiple choice questions will count for 63% of your grade and short answer questions will count for 21%.

Grading Short Answer Questions

I can not grade all the short answer questions myself. I will make up a scoring rubric and a TA will grade each short answer question. Another TA will re-grade the question. You will receive the higher of the two scores. I instruct graders to err on the side of more partial credit, rather than less.

Posting Exam Scores

We will work hard to finish grading ASAP. Please do not email us to inform us that grades are not posted - we know! I hope to post grades within 8 days, but it may take longer. Please be patient.

Exam Make Up Policy

The final is mandatory. If you miss E3 and have taken both E1 and E2, E4 will replace E3. If you miss E1, E2, or both, E3 or E4 will replace them. To maintain exam security, and because it takes about 20 hours to write an exam, there are no other make ups for these exams – it is simply infeasible to offer one. If you miss one of these exams for a reason for which university policy calls for a make up, the option for later exams to replace the 0 qualifies as that make up opportunity. You do not need to notify anyone that you will miss the exam or provide any documentation. The re-weighting is automatic.

If you miss the mandatory final, or both E3 *AND* E2 ***without*** documentation of a reason considered valid by university policy, you will receive a ***0*** for the missed exam(s). If you can provide documentation of a valid excuse, you will receive an "I" in the course and take the corresponding exam(s) next fall.

Do I Curve Exams?

Generally, 75 on a typical 100 point scale is thought of as "typical". In my view, since this is an upper level course and UF admits students of above average ability, the "typical" grade should be a bit higher. I add points to each test to bring the median exam score among those completing 80% of assigned problems to approximately 78-80 (a guideline, not a rule). That brings the median point total of those getting full credit for problems and DBs to about 85 (when exam re-weighting is factored in), the dividing line between a "B" and a "B+". Exam scores are capped at 100, surplus points earn extra credit.

With 4 choices on each multiple choice question, random guessing would give a score of about 25. If scores are spread out "evenly" across the 75 point range from25 to 100, so the test is equally informative about the progress of the top and bottom half of students, the median score would be 25+75/2=62.5. I try to write the exam to have a pre-adjustment median around 65 or so, but the actual median may be a bit higher or lower. That means the "adjustment" is typically around 10-15 points, sometimes a bit larger or smaller.

Surplus Points and Extra Credit

Nineteen points are possible from the problems (including review problems). Six more are possible from graded discussion board posts. All 25 of these potential points can count toward the 16 points of your base grade that depend on problems and discussion board posts. It is not necessary to get every point to get "full" credit. It is possible to earn up to 5 extra credit points by accruing more than 16 of these 25 points. It is also possible to earn extra credit with exam scores over 100. The first 2 *surplus* points (that do not count toward your base grade) earn 0.75 extra credit points each. Additional surplus points earn 0.5 extra credit points each.

Course Grade - Calculation

With all exam scores capped at 100, total points from exams are:

$$Exams=0.21\cdot[E4+Highest\_3\_of(E1,E2,E3,E3,SA,SA)]$$

Points from problems and discussion boards are:

$$Pr\&DB=Min(Problem\_Points+DB\_Points,16)$$

Surplus points are:

$$Surplus=0.21\cdot[Max(E1-100,0)+Max(E2-100,0)+Max(E3-100,0)+Max(E4-100,0)]+Max(Problem\_Points+DB\_Points-16,0)+(any\ other\ surplus\ points\ if\ applicable).$$

Extra credit points are:

$$XC=Min(0.75\cdot Surplus,0.5+0.5\cdot Surplus)$$

Total points are:

$$Total=Exams+Pr\&DB+XC$$

A spreadsheet grade calculator with these formulas built in will be available on the course website.

Exam Procedures and Conduct

- Room assignments are posted before each exam.
- Arrive early. If late by less than 20 minutes, the penalty is equal to 1/2 the number of minutes you were late. If more than 20 minutes late, you will not be allowed in the exam room.
- Bring your UFID or your exam will not be accepted.
- You may bring a basic non-scientific, non-financial calculator or one of the following simple non-programmable one line scientific or financial calculators: HP 10BII, TI BAII, HP 30S, TI 30 XA. No programmable or 2-line versions like the TI 30 XII! No other calculators.
- Follow the proctor's instructions exactly. Failure to do so will result in penalties.
- If you keep working when the proctors tell you to stop, you will be penalized at least 10 points.
- If you have anything visible other than an approved calculator, pens, pencils, and a straight edge, you will receive a substantial penalty.
- If a cell phone or pda rings or vibrates loudly, you will receive a 10 point penalty.
- Those taking the class away from Campus must comply with additional test center guidelines.
- I take academic honesty very seriously. I do everything I can to make sure cheaters face very serious consequences. Please don't try it!

The Contract

We each have responsibilities in this course. I am responsible for doing the best job I can in teaching the material and assessing student performance. We are all responsible for maintaining professional demeanor and treating one another with respect. You are responsible for keeping up with the material, seeking help in a timely fashion if needed, and understanding the ground rules of the course. You are also responsible for not engaging in any form of cheating, and I am responsible for taking appropriate action should cheating occur. I'll do my best to hold up my end of the contract, and I hope that you will do the same.

Student Learning Outcomes

ECP 3703 contributes to the Student Learning Outcomes in the College's Academic Learning Compact.

Accounting

1. Understand individual business disciplines and their relationship to the global business environment.
5. Understand the basic concepts of cost and managerial accounting and its role in business.
6. Apply mathematical concepts and technology to interpret, understand and communicate quantitative data.
8. Analyze and interpret economic and financial events for internal decision-making purposes

Business Administration, General Studies

1. Knowledge of the basic business functions of accounting, decision sciences, economics, finance, management and marketing.
3. Interpret, understand and communicate quantitative concepts.
5. Effectively communicate concepts and ideas in spoken and written form.

Business Administration, Online Program

1. Analyze a firm's decisions regarding prices, outputs, inputs, and other micro and macro variables.
8. The influence of the international environment on business decision making.
10. Interpret, understand and communicate quantitative concepts.

Decision and Information Sciences

2. Understand each individual business discipline.
8. Apply statistical and mathematical tools to analyze quantitative data.

Economics

1. Understand the basic business functions of accounting, statistics, operations management, economics, finance, management and marketing.
2. Understand the implications of utility maximization for the behavior and choices of households and how households respond to incentives.
3. Understand the implications of profit maximization for the behavior and choices of firms in the short run, the long run and a variety of market structures.
4. Understand the meaning and implications of market efficiency.
8. Interpret, understand and communicate quantitative concepts.

Finance

3. Understand individual business disciplines and their relationship to the domestic and global business environment.
5. Understand basic operating decisions that require financial analysis such as working capital management and capital budgeting.
7. Understand the tradeoffs involved in deciding how to finance a business and how to pay out profits to investors.
9. Apply mathematical concepts to interpret, understand and communicate quantitative data.
10. Analyze and interpret economic and financial events for internal decision-making purposes.

Management

2. Understand each individual business discipline.
3L. Understand legal and ethical considerations in corporate governance.
4. Apply mathematical concepts to analyze, understand and communicate quantitative data.

Marketing

1. Consumer Behavior: Understand consumer motivations and decision processes.
7. Marketing Strategy: Understand corporate objectives, competitor analysis and competitive strategies.

Assurance of Learning Goals and Objectives

ECP 3703 contributes to goals and objectives spelled out for the College's AACSB Assurance of Learning process.

Goal 1: Demonstrate competency in and across business disciplines
- Objective I: Demonstrate knowledge and understanding of elements of economics, finance, accounting, marketing, operations management, organizational behavior, and business statistics.
- Objective II: Apply knowledge of business concepts in decision-making.

Goal 2: Apply appropriate problem solving and decision making skills
- Objective I: Specify and implement a framework for identifying a business problem.
- Objective II: Develop alternative solutions and a set of criteria by which to evaluate them.
- Objective III: Assess the outcomes of a course of action and make appropriate adjustments.

Help

My Office Hours

Feel free to visit during my drop-in office hours each Tuesday and Thursday. If you have a conflict with my office hours, but want to see me, I'll do my best to schedule an appointment in person or by phone.

Teaching Assistant Office Hours

The TAs can provide additional explanation of course content during TA office hours. They will not go over specific open problems in general office hours. Unless you have made an appointment ahead of time with someone that has access to stored exams – which are locked up – they will not be able to go over your specific short answer responses. They will never debate your short answer scores with you – all contested grades come to me and my grade is final.

Open Problem Set Help Sessions

TAs will hold sessions to help with open problem sets, usually on Monday and Tuesday evenings, details TBA. Sessions will proceed by explaining the general approach to the problems, possibly working through the related problems from lecture, and answering specific questions. Do not expect to see a step by step solution to the assigned problems at the help sessions, there will not be one. The TAs are there to help you figure out how to do the problem on your own. While they are there to help any way they can, they are not instructors, and may not be able to clear up every question you may have. Learning is ultimately your responsibility.

Discussion Board and Course E-mail

If you take the time to ask a clear question, and **post it to the appropriate discussion board topic on the course website, the TAs or I will post a response as soon as possible**. Please make sure your question is not already answered on the board before posting. Please feel free to respond to questions and comments posted by other students, or, to elaborate on their questions! If you ask a question from old exam, please include the original exam question text in your post. Thanks!

If there is a clear reason not to place a communication on the discussion board and it is not grade-related, send an e-mail to ecp3703help@gmail.com (or stop by during office hours). **If you have a question pertaining to your individual grade**, send an e-mail to ecp3703grades@gmail.com.

The course discussion board is the fastest and most reliable way to get answers for almost all questions. Other methods will lead to greater delays!

Disabilities

UF strives to provide effective, reasonable accommodations for those with disabilities. Students requesting classroom accommodation must first register with the Dean of Students Office, who will provide documentation to the student to provide to the Instructor when requesting accommodation.

Broad Course Outline

The outline below is tentative and may change as the semester progresses. The reading information refers to chapter numbers, and "r" means only the relevant portion of the chapter. A much more detailed outline is on the course website.

Topic	Baye
Introduction	1, 12r
Overview of Profit Maximization	3r
Demand Approximation and Regression	3r
Cost	5
Game Theory	10
Exam 1 – About Here	
Homogenous Product Oligopoly	9
Differentiated Products	9
Perfect Competition	8
Applications of Supply and Demand	2, 3
Market Structure Wrap Up	7
Exam 2 - About Here	
Advanced Topics in Strategy	13
Advanced Pricing	11
Uncertainty and Information Value	12r
Econometrics & OVB	
Individual Behavior	4
Expected Utility, Insurance	12r
Asymmetric Information and Contracts	12r, 6
Exam 3 - About Here	
Firm Structure, Free Riding, Hold Up	6r
Special Topics	14
Final Exam	