

**ECONOMICS 3110 SD**  
**ADVANCED MICROECONOMIC ANALYSIS**  
**Spring 2015**  
**12:05-1:25 TR, Skiles 154**

***TIBOR BESEDEŠ***

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**Course Objectives:**

This course expands on the topics of the introduction microeconomics course: the purchasing behavior of consumers and the production and selling behavior of firms. We will analyze consumer behavior and derive consumer's demand. We will rigorously analyze behavior of firms in different market structures. We will then examine economic welfare under different market structures and the effect government policies can have.

In each case, it is shown how behavior that economics predicts can be described by a solution to an optimization problem, or "rational maximization." This class will add an analytical approach to the descriptive approach of the introductory course. You will learn to use mathematical models in modeling of economic concepts. This will enable you to rigorously analyze economic problems and understand discussion of economic concepts and phenomena in the media. This class will also equip you with the required tools to excel in higher level electives.

**Specific Learning Objectives:**

Knowledge:

- How markets function – supply and demand, elasticity
- The consumer's problem – preferences, budget constraint, utility maximization, optimal bundle, derivation of the demand curve
- The firm's problem – production functions, costs, profit, output decision, derivation of the supply curve
- Analysis of how markets function – interventions in the market and resulting distortions
- Market structures – perfect competition, monopolistic competition, oligopoly, monopoly
- Pricing strategies for imperfectly competitive firms
- Strategic considerations in firm behavior
- Sources and analysis of market failure – imperfect competition, asymmetric information, public goods, externalities

Skills:

- Graphical and mathematical analysis
- Use of calculus to solve problems and models
- Problem solving methods as applied to economic theory
- Ability to apply analytical tools to economic concepts and ideas

- Critical thinking and logic

Perspectives:

- Understanding the functioning of markets in a broad context
- Adopt a greater appreciation of firms' and consumers' decision-makings at a fundamental level
- Appreciation for the functioning of competitive markets and the role of government intervention

**Textbook:**

1. Goolsbee, Austan, Steven Levitt, and Chad Syverson, *Microeconomics*, 1<sup>st</sup> ed., with LaunchPad access, Worth Publishers. (*required*)

You can purchase the textbook in any format you want (paper, e-book). However you decide to purchase the textbook, you *must* purchase access to LaunchPad.

**Accessing LaunchPad for the course:**

Go to <http://www.macmillanhighered.com/launchpad/gls1e/1228118>

**Notes:**

*LaunchPad:* All homework will be assigned and graded on LaunchPad. You can purchase access to it or register an access code by going to the above link.

*T-Square:* The main medium of communication will be T-Square. All course announcements, grades, exam solutions, and other information will be posted there.

**Prerequisites:**

Prerequisites are designed to protect you from taking courses that you are unprepared to successfully complete. You should follow the recommended prerequisites closely. The following courses are prerequisites for this course. You are expected to have mastered the material covered in these courses *before* taking this course.

Principles of Economics (ECON 2100 or ECON 2105 and ECON 2106)

**Recommended Prerequisite:**

While there is no calculus prerequisite for this class, you should be aware some calculus tools will be used during the semester (primarily ordinary and partial derivatives). Whenever these tools will be used they will be quickly explained. For more in depth coverage, you should look at a calculus textbook.

**Grading:**

Grades will be based on two exams, a *comprehensive* final exam, and periodically assigned homework. The final exam will be given at the time scheduled by the Institute. If you have a conflict with another final, certain accommodation can be made. Please see me two weeks before the final exam if that is the case. *There will be no make-up exams under any circumstances.* An exam that is missed will be considered an F, unless you have been prevented from taking the exam by forces outside of your control. In such cases (illness, car accident, family emergencies,

Institute functions) some form of documentation will have to be provided in order for you not to receive an F. Provided an exam is missed for a valid reason, your grade on the final exam will serve as a substitute for the missed exam.

Each homework assignment consists of several problems, usually multiple choice, which can be mathematical in nature or will require you to analyze a problem and provide an answer/explanation applying the tools learned in the classroom. All homework will be announced, assigned and, completed through LaunchPad. It will be ***your responsibility to check LaunchPad for new homework assignments*** and to complete them by the due date. You can ask questions about homework in class, during office hours, via email at any point before it is due. You will have at least a week to complete homework assignments. The lowest homework grade will be dropped.

Exams will consist of up to ten short answer problems. If your answer to an exam problem requires several steps and/or calculations, you need to show your work. An answer without shown work is not sufficient and you will not receive full credit. Exams will be graded and returned within two weeks.

***There will be no special extra credit or extra work of any kind for the purpose of raising a grade during or after the course.*** This is to ensure that everybody has equal opportunities to earn their grade and that grades are based on work during the course. There are typically 10% extra credit points on each exam (on an exam worth 100 points, you can actually receive a maximum of 110, so that you can miss 10 points and still receive the maximum grade of 100).

The final grade is calculated as follows:

Homework	<b>15%</b>
Midterm Exam 1	<b>25%</b>
Midterm Exam 2	<b>25%</b>
Final Exam	<b>35%</b>

Each exam is graded on a curve with a C average. If the average on an exam is better than a C no curve will be applied.

Given that the final exam is cumulative, you will be rewarded if your grade on the final exam improves relative to the two midterm exams. Specifically, you will receive 10% of the relative improvement added to the final grade is calculated. As an example, suppose you received a 70 on the first midterm, a 90 on the second one, and a 90 on the final exam. Furthermore, suppose your homework average is 80. In that case, your final grade would be  $80 \cdot 0.15 + 70 \cdot 0.25 + 90 \cdot 0.25 + 90 \cdot 0.35 = 83.5$ . Given you received a higher grade on the final relative to the first midterm, the bonus points you would receive would be  $(90 - 70) \cdot 0.1 = 2$ . These two points would make your final grade 85.5. Note that in this scenario there are no bonus points relative to the second midterm as that grade is the same as the final exam grade. In case your grade on the final exam is lower than either midterm exam grade, **no** points will be deducted. An excel spreadsheet with the formula to calculate your grade will be made available during the semester.

Final grades are determined using the standard scale:

- A – 90-100%
- B – 80-89.99%
- C – 70-79.99%
- D – 60-69.99%
- F – 0-59.99%

Final grades are **not** rounded up. Hence, 89.89 is a **B not** an A. The only exception to this policy is if your grade on final exam is the higher grade. For example, if your final grade is 89.74 and your grade on the final exam is 90 or higher, then your final grade would then be rounded up to an A. If your grade is 79.89 and your grade on the final exam is 80 or higher, then your final grade would be rounded up to a B.

If you are taking this class pass or fail, a grade of C or higher is a passing grade. If you earn a D or an F, you will be given a failing grade for the course.

**Exam dates** are as follows:

- Exam 1 – Tuesday, February 10
- Exam 2 – Tuesday, March 31
- Final Exam – **Thursday, April 30, 11:30am – 2:20pm**

**Attendance:**

While attendance will not be graded, I strongly encourage you to attend classes, as performance in the class is usually highly correlated with attendance.

**Course Rules:**

- It is considered common courtesy to include your name when sending me an email. Especially when your email contains a question.
- Please come to class on time. It is disrespectful and disruptive to me and everyone else if somebody strolls into class late.
- If you need to leave early, please inform me before the class begins.
- Refrain from being distracted during lectures.
- Please **turn off** all electronic devices such as **cell phones, pagers, and beeping watches**.
- Laptop use. You are free to use a laptop or tablet pc for the purpose of **note taking only**, not for any other purpose. You should be warned that this class makes intensive use of graphs. If you are unable to quickly reproduce graphs on your computer you may fall behind during the lecture. In such a case, a laptop as a note taking tool is a disadvantage.

**Students with disabilities:**

Georgia Tech offers accommodations to students with disabilities. If you need a classroom accommodation, please make an appointment with the ADAPTS office ([www.adapts.gatech.edu](http://www.adapts.gatech.edu)). If you have an accommodation letter from the ADAPTS office and require accommodations, please see me in my office during office hours or by setting up an appointment with me.

**Academic Honesty:**

Cheating is **unacceptable**. You are hereby reminded that you have pledged to uphold the honor code as follows:

*Having read the Georgia Institute of Technology Academic Honor code, I understand and accept my responsibility as a member of the Georgia Tech community to uphold the Honor Code at all times. In addition, I understand my options for reporting honor violations as detailed in the code.*

Should you be caught cheating in this class you will be prosecuted according to the honor code and policies and procedures established by the Honor Advisory Council. Should you have any questions about this do not hesitate to contact me.

**Collaboration policy:**

*Homework* - Since homework is a learning tool you are allowed and encouraged to work together with other students as long as you write up and turn in your own solutions.

*Exams* – Exams are given to evaluate your understanding and command of the material. They are an assessment tool. As such they must reflect your own knowledge, and not that of students sitting around you or things written on cheat sheet and other cheating tools. During the exam, mind your own work and do not look in other students' exams. Should you be found guilty of cheating on an exam you will be penalized. Exam is **not** a collaborative effort.

**General Information and Disclaimers:**

I plan to cover as much as possible during the course of this class. While I will mostly follow the textbook, I may add some material that is not contained in it. In that case, your lecture notes will contain all the relevant information that you will need on exams. If you are having trouble with the material you are strongly encouraged to come see me during office hours. I strongly encourage you to work on the problems assigned in class as well as others in the textbook and study guide. This will not only help you come exam time but also enable you to truly understand the material.

The course outline below is a provisional one and subject to change. The topics included on each exam will depend on how quickly we cover the material. Hence exams can include more or less material than what is stated below. Exam dates may change under extraordinary circumstances only and any changes will be properly communicated to you in class and via announcements on T-Square.

The syllabus is not subject to change.

## **COURSE OUTLINE AND READING ASSIGNMENTS**

Week	Date	Chapter	Assignment due
1	6-Jan	1	
	8-Jan	2	
2	13-Jan	2	
	15-Jan	3	Chapter 2
3	20-Jan	3	
	22-Jan	4	Chapter 3
4	27-Jan	4	
	29-Jan	4/5	Chapter 4
5	3-Feb	5	
	5-Feb	5	Chapter 5
6	10-Feb	<b>Exam 1</b>	
	12-Feb	6	
7	17-Feb	6/7	Chapter 6
	19-Feb	7	
8	24-Feb	8	Chapter 7
	26-Feb	8	
9	3-Mar	9	Chapter 8
	5-Mar	9	
10	10-Mar	10	Chapter 9
	12-Mar	10	
11	17-Mar		Spring Break
	19-Mar		Spring Break
12	24-Mar	11	Chapter 10
	26-Mar	11	
13	30-Mar		Chapter 11
	31-Mar	<b>Exam 2</b>	
14	2-Apr	12	
	7-Apr	12	
15	9-Apr	12/13	Chapter 12
	14-Apr	13	
16	16-Apr	14	Chapter 13
	21-Apr	14	
17	23-Apr	17	Chapter 14
	30-Apr	Final Exam @ 11:30am	