#### **Economics 410-002**

## Intermediate Microeconomic Theory

Summer Session II (2015)

**Instructor:** Eddie Watkins

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Time and Place: Monday-Friday, 9:45-11:15 AM, Kenan Laboratories B125. 6/22/2015-

7/23/2015.

Office Hours: TBD by class consensus. Phillips Annex 207.

**Prerequisites:** ECON 101. MATH 231 or STOR 113. You should be familiar with the material covered in the first half of the introductory class and be comfortable taking derivatives.

**Textbook:** Intermediate Microeconomics with Calculus ( $1^{st}$  Edition), by Hal R. Varian.

Other Resources: Other books you might find useful, *Microeconomics*, Besanko and Braeutigam. *Microeconomics: Theory and Applications with Calculus*, Perloff. *Intermediate Microeconomics-The Science of Choice*, Petranka.

Communication: All class assignments and resources will be posted to Sakai. Email is the best way to reach me outside of class.

Course Objectives: The principal goal of this course is to teach you to analyze how agents make decisions. A secondary goal is to help you to develop critical thinking skills that are broadly applicable to other fields of study and professional settings. The 4 main sections we will cover are consumer theory, producer theory, equilibrium and game theory.

- 1. Consumer Theory: How do consumers choose between the vast array of goods in the market? How does behavior change when income and prices change?
- 2. Producer Theory: How much output should a firm produce? What is the least expensive way to do so?
- 3. Equilibrium: How are prices determined? How do prices and quantities differ when the market is perfectly competitive versus monopolistic?
- 4. Game Theory: How do outcomes change when agents behave strategically?

Grading: Your final grade will be determined by

1. Participation: 5%

2. 2 Midterms: 50% (30% for higher score)

3. Final Exam: 30%

4. Homework: 15%

Grading Scale: Final grades will be assigned on the following scale (out of 100).

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A 93-100% C 73-77%
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A- 90-93% C- 70-73%

B+ 87-90% D+ 67-70%

B 83-87% D 60-67%

B- 80-83% F <60%

C + 77-80%

I reserve the right to move these cutoffs downward to appropriately reflect student's understanding of the material given performance on the exams.

**Homework**: There will be 5 homeworks assigned throughout the session (approximately 1 per week). Each student must turn in his/her own homework; however, group work is allowed. Homework is due at the beginning of class, late homeworks will not be accepted.

**Exams**: There will be 2 midterms and a final. The final exam will be cumulative. The date for the final is **July**  $27^{th}$  **8 AM in our classroom**.

The dates for the midterms (in class) are  $\mathbf{July}\ 2^{nd}$  and  $\mathbf{July}\ 17^{th}$ .

The weight of any missed midterm will be reassigned to the final, i.e. your final is worth 50% if you miss 1 and 80% if you miss both.

Attendance at the final exam is mandatory. The Chair of the Economics Department asks summer instructors not to change the date of a final exam unless the student has a compelling and document personal reason. In that case, the make-up exam will be administered on a date later than the scheduled final. It will be set at a date and time that is convenient for both student and instructor.

Class Attendance and Participation: Class attendance is strongly encouraged. Given the fast pace of summer classes, missing 2 classes is equivalent to missing an entire week during the normal academic year.

Your participation grade will be determined by attendance and attentiveness in class. You are encouraged to ask questions about the material during class. Occasionally I will give ungraded quizzes, to gauge your understanding of the material. This will help you figure out what concepts you understand and will help me tailor my teaching to any issues that may arise.

My goal is to maintain an atmosphere conducive to learning for all students. As such, neither cell phones nor computers will be allowed in class.

**Honor Code:** All students are expected to abide by the UNC Honor Code. If you are not familiar with the code, you should consult http://honor.unc.edu to learn more.

# Course Outline (Reference in Varian)

#### Math Review:

- Calculus (Mathematical Appendix)
- Constrained and Unconstrained Optimization (Mathematical Appendix)

## Consumer Theory:

- Preferences (Ch. 3)
- Utility Functions (Ch. 4)
- Budget Sets (Ch. 2)
- Consumer Choice (Ch. 5)
- Demand (Ch. 6)
- Income and Substitution Effects (Ch. 8)

## Producer Theory:

- Production Functions (Ch. 19)
- Profit Maximization (Ch. 20)
- Cost Minimization (Ch. 21)
- Cost Curves (Ch. 22)

## . Equilibrium:

- Perfect Competition (Ch. 23)
- Short Run vs Long Run (Ch. 24)
- Market Equilibrium (Ch. 16)
- Monopoly (Ch. 25)
- Oligopoly (Ch. 28)

## Game Theory:

• Basics (Ch. 29)

## Advanced Topics (Time Permitting):

• Potential topics include: Intertemporal Choice (Ch. 10), Uncertainty (Ch. 12), Risky Assets (Ch. 13), Monopoly Behavior (Ch. 26), General Equilibrium (Ch. 32), Externalities (Ch. 35), Public Goods (Ch. 37), Asymmetric Information (Ch. 38),