# Econ 6112: Fundamentals of Microeconomics

Dr. Jesse Bull

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**Lecture:** T TH 12:30 – 1:45pm, Convocation Center 117, Fall 2019.

**Examinations:** There will be a midterm examination (October 8th) and a final examination at the University-scheduled time.

**Grading:** based on a midterm (about 35%), a final (about 45%), and homework (about 20%).

**Course Objectives:** This course will focus on microeconomic theory. Conceptual and fundamental understanding will be emphasized. Success in this course will require the development of your intuition and mathematical problem solving skills. A strong understanding of mathematical concepts, such as multivariate calculus, will be essential.

This is the first course in the microeconomics sequence, and will provide a basis for the next two courses. Further, it will provide some of the standard knowledge needed for some advanced courses and the profession.

**How to do Well:** Although most of the problem set problems will not be graded, it is the best practice for the exams. I strongly encourage you to do many problems in order to understand the abstract concepts that we will cover.

Two homework assignments (the problems will be announced in class) will be graded.

**Learning Outcomes:** As a result of this course it will be possible to analyze problems faced by consumers in their selection of goods and services when they posses a great deal of information at their disposal and in basic settings with more limited information. In addition the analysis pertains to both static and dynamic settings. Producers output and input decisions will be soluble. It will be possible to analyze cost minimization and profit maximization problems in both the short and long runs. This course also provides a framework to determine the prices and quantities of goods and services in a market setting that is competitive and one that is monopolistic. Further it will be possible to analyze the optimality or social welfare properties, and considerations of market failure such as public goods and externalities.

**Required Readings:**

Mas-Colell, Whinston, and Green (1995), *Microeconomic Theory.* ISBN: 9780195073409.

Mas-Colell, Whinston, and Green is a very thorough text that is a very good reference. My lectures will provide more intuition. However, you may still find other texts helpful for providing more intuition. One such text (primarily for consumer and producer theory) is

Nicholson and Snyder (2007), *Microeconomic Theory: Basic Principles and Extensions*, tenth edition

or an earlier edition, such as,

Nicholson (2004) *Microeconomic Theory: Basic Principles and Extensions*, ninth edition.

For our coverage of game theory, another text that you will find to be very helpful by providing an appropriate level of formality and good intuition is

Watson (2013), *Strategy: an Introduction to Game Theory*, third edition. ISBN: 9780393918380.

**Administrative Issues:**

1. If you have a documented disability, please bring your documentation and come to talk to me as soon as possible so that I can make suitable accommodations for you. If you believe that you have a disability and desire accommodation, please register with the Disability Resource Center, GC 190 as soon as possible. For information on the steps for academic accommodation, please see http://drc.fiu.edu/.

2. Any student found guilty of academic misconduct will earn a grade of an F for the course. In addition to this academic sanction that I will impose, the Academic Integrity Office will be asked to also impose a disciplinary penalty. This will follow University procedures. Please see http://integrity.fiu.edu and the Student Handbook for more information.

3. You will only need a pen or pencil for exams. Exams are closed book and you may not use notes. Exams are completely electronic-free: no calculators, headphones, cell phones, ipods, etc. are to be used during an exam.

4. If you arrive late to an exam, I will allow you to take the exam in the time that remains as long as no one has turned in his/her exam and left the room. If a classmate has already turned in his/her exam and you arrive late, you will earn a zero on the test.

5. Any request for a regrade of an exam must be made within one week of the exam being returned. If there is a mistake adding up the points on your exam and it is brought to my attention within one week of the exam being returned, I will correct it. However, if you believe an exam has not been graded properly and you request a regrade within one week of the exam being returned, I will regrade your entire exam. The regraded score will be your grade for the exam. You may not ask for another regrade or go back to your first grade.

   To request a regrade, you must write a brief explanation (on a separate sheet of paper) that states which problem you believe was incorrectly graded, describes the part of your answer you believe warrants additional points, and is signed (and dated) by you. You may not ask for a regrade of your exam if you have added to or changed any answer on your exam.

# Topics

1. Consumer Theory

   (a) Consumer Preferences

      i. Axioms of rational choice
      ii. Utility functions
      iii. Level curves of utility functions—indifference curves
      iv. Marginal rate of substitution

   (b) Common Utility Functions: Cobb-Douglas, Leontief, Perfect Substitutes, CES

   (c) The Budget Constraint

   (d) Utility Maximization and Demand Functions

   (e) Comparative Statics of Demand

      i. Income Changes
      ii. Price changes (income and substitution effects)
      iii. Compensated price changes and compensated demand functions
      iv. Slutsky equation
      v. Demand relationships among goods
      vi. Measures of consumer welfare

2. Producer Theory

   (a) Production, cost, and profit maximization

   (b) Duality

   (c) Supply

3. Game Theory (focus on simultaneous and independent move games)

   (a) Representing games

   (b) Dominance and best response

   (c) Nash equilibrium

4. Public goods

   (a) Discrete and continuous cases

   (b) Samuelson condition

   (c) Funding and political considerations

    (d) Groves-Clarke mechanism

5. Common resource problems

    (a) Sources of problem

    (b) Nash equilibrium

    (c) Welfare implications

6. Team production

    (a) Deterministic case

    (b) Verifiability assumptions

7. Externalities

    (a) Standard analysis

    (b) Discrete and continuous cases

    (c) Coase Theorem and bargaining

8. Other topics (such as hold up and mechanism design) as time permits