EC 411/511 (CRN 12168/12184): Advanced Micro Theory, Fall 2009
Tue, Thurs @ 12:00pm - 1:50pm, 111 Lillis Hall

ADVANCED MICROECONOMIC THEORY

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Office hours: Tue & Thur 3:00 - 4:30 pm and by appointment

Office Hours
I will do my best to be available during my stated office hours, but you are also welcome to stop by at other times (if I am in), or request an appointment. Whenever you have a question, I will try to help.

Prerequisites
Students *must* have a full year of a regular or honors calculus sequence, MATH 253 or MATH 263 in the case of students already at the U of O. A swift introduction to calculus of functions of several variables, including partial differentiation, will be given in the first week of the course, but the going will become tough if you have not studied this topic before (e.g. in MATH 281): after all, this is an *advanced* microeconomics course. If you are uneasy about your mathematical background, please come and see me to discuss ways forward. It will also be hugely advantageous, for obvious reasons, to have taken a previous micro course such as EC 311: Intermediate Microeconomics.

Required Text & Lecture Materials
The course text is either one of these two:

Nicholson, W. (2005). *Microeconomic Theory*, 9th edn. Thomson South-Western
Nicholson, W. and Snyder, S. (2008). *Microeconomic Theory*, 10th edn. Thomson S-W

henceforth referred to as **N** and **NS** respectively. The newer edition has some marginal improvements, and is organized slightly differently, but is basically the same as far as we shall be concerned, and you could surely save money by searching online for **N** second-hand (I found copies in June 2009 at AbeBooks, Alibris, Barnes & Noble and half.com (Ebay) for under $15 including mailing). Material from parts 1-5 will be covered. This textbook is your main written resource for the course. The detailed outline overleaf describes the approximate lecture content, week by week, and indicates the location in **N/NS** of the following week's material. This should help you to prepare yourself: I shall assume that students have read the assigned chapter sections before I present material in class. Thomson South-Western also publishes a *Study Guide* for **N** (author D.C. Stapleton) with practice exercises and solutions, but I have not seen a similar guide for **NS** (yet). Lectures will be given using OHP transparencies, images of which will be made available in PDF form for you to download from either my homepage or BlackBoard. The slides deliver a lot of basic information in a compressed form - you could annotate your downloaded copies as we go along if you wish – but you will definitely need to work with **N/NS** *as well as* with these PDF pages.

Preparation & Homeworks
This course is a *very* demanding introduction to advanced microeconomics. It is extremely important to prepare for *every* class in order to keep up with the fast pace that will be set. It is strongly recommended that sample exercises from **N/NS** be attempted *prior* to class. Exercises, including some from **N/NS**, will be set as homeworks. There will be six homework assignment, spread across weeks 2 to 9. Homeworks that are handed in *on time* will be graded in a random fashion. Late homework will not be

graded and will receive a score of 0. You may help each other with homework issues, but the work you submit must be your own, obviously.

Grades

The marks for all set work will be on the scale 0-100%. I will be looking for, and rewarding, evidence of the following qualities when assigning final grades on the basis of each person's run of marks:

A^+/A	Excellent. Outstanding individual effort showing sustained high-order insight and rigorous, original analysis. Well-organized and presented.
B^+/A^-	Good. Evidence of sustained, independent, high-level thought. Confident, critical analysis of the relevant issues and clear understanding of their implications, but with some lapses. Well-presented, clearly organized and effective.
B	Competent work. Signs of organization, thought and insight, but with lapses in argument.
C^+	Narrowly conceived, uncritical, lacking focus, weakly argued or of doubtful relevance. Poorly organized.
C	Evidence of some effort but lacking a sound understanding of the subject. Inadequate research and thinking. Extensive irrelevance. A number of factual and interpretative errors.
D	Failure to understand the question, or to identify and resolve the issues it poses. Trivial or perfunctory work showing no effort, thought, reading or competence. Many errors of fact and interpretation

To the extent that the distribution of these qualities among students is fairly constant year by year, whereas the percentage marks awarded in quizzes and examinations contain a subjective element (*e.g.* they may vary by instructor), you might interpret the grade-assignment process as "curving" – but the descriptors are intended to impress upon you that there are absolute requirements as well as relative ones.

Assessment details

The course will be assessed by means of the 6 homeworks, 2 quizzes and a final. The **homeworks** will count for **30%** of the total assessed value and the **quizzes** will be worth **50%** of the total, with 20% coming from the lower quiz score and 30% from the higher. The **final exam** will count for the remaining **20%**. The homework component will be computed from the average of your homework scores (including zeros for missing or late work), but excluding the assignment with the lowest score. If a quiz is missed, a written petition explaining and documenting the reason must be submitted within a week of the missed quiz. If approved, the weight of the missed quiz (20%) will be added to the final exam score. The alternative is to have 0 points for the missed quiz. Requests for re-grades must be submitted in writing within a week of when the graded material was available for collection, and must include an argument of why you feel your answer was correct. Students taking this course as P/NP must earn a "C-" overall to receive a pass. For EC 511 students, certain problems in the homeworks, quizzes and/or final exam which are optional for undergraduates will be compulsory. 511 students are expected to master material which goes beyond the basic course content, and to demonstrate notable analytical rigor in their written work.

Schedule of assessments

Quiz 1, week 4: Thursday October 22nd
Topics: choice, demand, comparative statics, relationships among goods

Quiz 2, week 8: Thursday November 19th
Topics: production, costs, profit maximization, perfect competition, market equilibrium

Final exam: this comprises questions covering the whole of the course and has been unavoidably scheduled for 8:00am – 10:00am on Wednesday 9th December 2009.

Academic Integrity

In the quizzes, you may refer to lecture notes and to your copy of **N/NS**, but no other form of assistance or source of information (including communication with other students) will be permitted. The final examination is likely to be closed-book. Foreign students may use approved English-language dictionaries in the final exam. Any violations of academic integrity involving a quiz or exam will result in a failing grade for the course. In addition, a complaint will be filed with the University's Hearing Board.

Students with Special Needs

If you have a documented disability and anticipate needing accommodations in this course, please make arrangements to meet with me soon. Please request that the Counsellor for Students with Disabilities send a letter verifying your disability.

Detailed Course Outline

The purpose of the course is to analyze first the behavior of consumers and firms, then the interaction of consumers and firms in different types of markets. By the end of the term you should have a solid grounding in the relevant theory, and you should be able to solve a wide range of related economic problems. At base, the aim is to give you a clear understanding of the nature and scope of formal microeconomic analysis as an applicable scientific tool. The course is taught by means of 2 weekly one-hour 50 minute lecture presentations. Below is an *indication* of the schedule of topics, week by week (the actual rate of delivery may vary, depending how we get along):

To be read ahead of the first week's lectures: Chapters 1 and 2 in **N/NS**

WEEK 1: Economic Models and Optimization

For you to read about: positive & normative analysis, value & price, partial & general equilibrium, uncertainty, imperfect information. In class: calculus review, elasticities, chain rule, 1st & 2nd order conditions, partial derivatives, implicit function theorem, envelope theorem, constraints, Lagrangian approach, duality, inequality constraints, Kuhn-Tucker conditions, quasi-concavity.

To be read before Week 2's lectures: N/NS, chapters 3 & 4

WEEK 2: Preferences, Utilities and Choice

Axioms of rational choice. Utility. Marginal rate of substitution, marginal utility. Substitutes, complements, elasticity of substitution. Homothetic preferences. Utility-maximization, 1st & 2nd order conditions, corner solutions. Indirect utility function. Lump sum tax principle. Expenditure function.

To be read before Week 3's lectures: N/NS, chapter 5

WEEK 3: Comparative Statics

Normal & inferior goods, substitution & income effects, Giffen paradox. Compensated (Hicksian) & uncompensated (Marshallian) demands. Slutsky equation. Compensated & uncompensated price elasticities. Compensating variation, equivalent variation, consumer surplus. Revealed preference theory.

To be read before Week 4's lectures: N/NS, chapter 6

WEEK 4: Demand Relationships Among Goods

Gross substitutes and complements: asymmetry. Net substitutes and complements: symmetry. Substitutability with many goods. Composite commodity theorem.

Quiz 1 on Consumer Theory on Thurs October 22nd

To be read before Week 5's lectures: N, chapters 7, 8 *or* NS, chapters 9, 10

WEEK 5: Production and Cost Functions
Marginal & average physical product. Marginal rate of technical substitution. Returns to scale. Technical progress. Accounting & economic costs. Perfectly competitive factor markets, derived demands. Total, average & marginal cost functions. Shephard's lemma. Short & long run cost functions, envelope result.

To be read before Week 6's lectures: N, chapter 9 *or* NS, chapter 11

WEEK 6: Profit Maximization
Modeling firms' behavior: "marginal" decisions. Marginal revenue and elasticity, inverse elasticity rule. Short-run supply. Profit function. Envelope results. Producer surplus in the short run.

To be read before Week 7's lectures: N, chapters 10, 11 *or* NS, chapter 12

WEEK 7: Perfect Competition
Short, very short runs: equilibrium, comparative statics. Long-run: entry, exit; equilibrium, comparative statics; constant/increasing/decreasing-cost industries. Ricardian rent, long run surplus. Price controls, tax incidence, deadweight loss, gains from international trade, effects of a tariff.

To be read before Week 8's lectures: N, chapter 12 *or* NS, chapter 13

WEEK 8: General Equilibrium
Assumptions. General equilibrium. Edgeworth box, production possibility frontier, comparative statics. Trade policies. Walras' Law. Existence of general equilibrium price vector. Efficiency concepts.
Quiz 2 on Market Equilibrium on Thur Nov 19th

To be read before Week 9's lecture: N, chapter 13 *or* NS, chapter 14

WEEK 9: Monopoly
Barriers to entry, monopoly power, profit maximization & inverse elasticity rule. Comparison with perfect competition: welfare losses. Product quality. Price discrimination, market separation, 3rd-degree price discrimination, two-part tariffs. Natural monopoly, regulation.
No class on Thursday: Thanksgiving

To be read before Week 10's lectures: N, chapters 14, 15 *or* NS, chapters 8, 15

WEEK 10: Models of Imperfect Competition + *some game theory*
Cartel, Cournot & conjectural variations models. Price & Stackelberg leadership. Game theory: Nash equilibrium (only). Cooperation and repeated games. Trigger strategies.

Peter Lambert
August 2009