NORTH CAROLINA STATE UNIVERSITY
GRADUATE COURSE ACTION FORM

NOTE: Click once on shaded fields to type data. To check boxes, right click at box, click “Properties”, and click “Checked” under Default Values.

DEPARTMENT/PROGRAM: Economics
COURSE PREFIX/NUMBER: ECG 702
PREVIOUS PREFIX/NUMBER: type previous course prefix/number here
DATE OF LAST ACTION: 9/12/1991
COURSE TITLE: Microeconomics II
ABBREVIATED TITLE: MICROECONOMICS II
SCHEDULING: Fall [ ] Spring [x] Summer [ ] Every Year [x] Alt. Year Odd [ ] Alt. Year Even [ ] Other [ ]
COURSE OFFERED: BY DISTANCE EDUCATION ONLY [ ] ON CAMPUS ONLY [x] BOTH ON CAMPUS AND BY DISTANCE EDUCATION [ ]
CREDIT HOURS: 3.0
CONTACT HOURS: Lecture/Recitation 3.0 Seminar [ ] Laboratory [ ] Problem [ ] Studio [ ] Independent Study/Research [ ] Internship/Practicum/Field Work [ ]
GRADING: ABCDF [x] S/U [ ]
INSTRUCTOR (NAME/RANK): Theofanis Tsoulouhas, Associate Professor
Graduate Faculty Status: Associate [ ] Full [x]
ANTICIPATED ENROLLMENT: Per semester 25 Max. Section 35 [ ] Multiple sections Yes [ ] No [x]
PREREQUISITE(S): ECG 701
COREQUISITE(S): type course numbers here
PRE/Corequisite for: type course number(s) here
RESTRICTIVE STATEMENT: type BRIEF statement here
CURRICULA/MINORS: Required [ ] Qualified Elective [ ]
PROPOSED EFFECTIVE DATE: Spring 2006

RECOMMENDED BY:
Department Head/Director of Graduate Programs Date

ENDORSED BY:
Chair, College Graduate Studies Committee Date

APPROVED:
College Dean(s) Date

Dean of the Graduate School Date

DOCUMENTATION AS REQUIRED
Please number all document pages
Course Justification [ ]
Proposed Revision(s) with Justification [ ]
Student Learning Objectives [ ]
Enrollment for Last 5 Years [ ]
New Resources Statement [ ]
Consultation with other Departments [ ]
Syllabus (Old and New) [ ]
Explanation of differences in requirements of dual-level courses [ ]
Proposed Revisions
ECG 702

Revision in Title/Abrreviated Title:
Current Title: Prices, Value and Welfare
Current Abbreviated Title: PRICE VALUE WELFARE

Proposed Title: Microeconomics II
Proposed Abbreviated Title: MICROECONOMICS II

Justification: We propose a title change to better reflect the content and sequencing of the course.

Revision in Description:
Current Description: Production and duality theory. Demand for and supply of factors of production. Theories of capital and interest. Welfare economics topics, including externalities, compensation, public goods and the social welfare function. General equilibrium.

Proposed Description: General equilibrium. Economics of information and uncertainty. Game theory. Mechanism design and social choice. Contract theory.

Justification: We propose a description change to better reflect the content of the course.

Revision in Syllabus:
There is no change in the syllabus of the course.
Five-Year Enrollment History

**ECG 702 Prices, Value and Welfare**  
*(Proposed Title: Microeconomics II)*

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OLD SYLLABUS

North Carolina State University
ECG 702: Microeconomic Theory
Spring 2005
Prof. Theofanis Tsoulouhas
E-mail: fanis_tsoulouhas@ncsu.edu
Home page: http://tsoulouhas.com
Course page: http://ecg702.tsoulouhas.com

Prerequisite : ECG701
Incompete Grade/Late Policy : Incomplete or late grades will only be given in legitimate cases such as medical emergencies or other special circumstances.

Tentative Course Outline

Texts

Suggested Readings
Lecture Readings
An asterisk (*) indicates minimum required reading.

Note that texts are on reserve at the library, and papers can be accessed on the Web through the library’s Electronic Reserves. Just go to my Web page and follow the links to ECG 702. You will need your Unity ID and password to proceed.

Prerequisite
Read Chs. 1-4 in Jehle and Reny and Chs. 1-5 in Mas-Colell et al.

The Economics of Uncertainty and Information
(*) Mas-Colell, Ch. 6.
(*) Jehle and Reny, Ch. 2.4.
Varian, Ch. 11.
Laffont, Chs. 1-3,8.

Introduction to Game Theory
(*) Mas-Colell, Chs. 7,8,9.
(*) Jehle and Reny, Ch. 7.
Varian, Ch. 15.
(*) Gibbons, Chs. 1-3.

Application: Oligopoly
(*) Mas-Colell, Ch. 12.
(*) Jehle and Reny. Ch. 4.2.1-4.2.2.
Varian, Chs. 15,16.
Molho, Part 2.
(*) Gibbons, Chs. 1-3.

General Equilibrium, Welfare Economics and Resource Allocation
1. Introduction to General Equilibrium Theory and Resource Allocation
Varian (Intermediate), Chs. 28-30.
(*) Mas-Colell, Chs. 10,15.

2. Existence
(*) Mas-Colell, Ch. 17, and the mathematical appendix.
(*) Jehle and Reny, Chs. 5.1-5.3, and the mathematical appendix.
Varian, Chs. 17,18,21, and the mathematical appendix.
The New Palgrave: Efficient Allocation.

3. Walras-Arrow-Debreu Equilibria and Pareto Efficiency
(*) Mas-Colell, Chs. 10,11,16.
Varian, Chs. 17,18,24.

4. Core Theory
(*) Mas-Colell, Ch. 18.
(*) Jehle and Reny, Ch. 5.4.
Varian, Ch. 21.
5. Aggregate Demand and Uniqueness of Equilibria
(*) Mas-Colell, Ch. 17.
(*) Varian, Chs. 18,21.
Hildenbrand and Kirman, Ch. 6.

Resource Allocation Mechanisms
1. Design of Performance Standards
Varian (Intermediate), Ch. 30.
(*) Jehle and Reny, Ch. 6.
(*) Mas-Colell, Ch. 21.
Varian, Ch. 22.
The New Palgrave: Decentralization.

2. Introduction to Implementation
(*) Mas-Colell, Chs. 22.
(*) Molho, Part 4.

3. Implementation with Incomplete Information
(*) Mas-Colell, Ch. 23.
(*) The New Palgrave: Incentive Compatibility; Mechanism Design; Revelation of Preferences.
Kreps, Ch. 18.
(*) R. Myerson, "Bayesian Equilibrium and Incentive Compatibility: An Introduction." Chapter 8 in Hurwicz, Schmeidler and Sonnenschein.

Introduction to Auction Theory
(*) Mas-Colell, Ch. 23.
(*) Jehle and Reny, Ch. 9.
(*) Molho, Chs. 14,15.
   http://www.nuff.ox.ac.uk/users/klemperer/Survey.pdf
   http://www.nuff.ox.ac.uk/users/klemperer/WhyEveryEconomist.pdf

Introduction to Contract Theory
1. Introduction
(*) Mas-Colell, Ch. 13.
(*) Jehle and Reny, Ch. 8.
(*) Molho, Parts 1-3.
(*) The New Palgrave: Adverse Selection; Implicit Contracts; Hidden Actions, Moral Hazard and Contract Theory; Incentive Contracts; Moral Hazard; Principal and Agent.
Varian, Ch. 25.
Laffont, Chs. 10, 11.


2. Labor/Agency Contracts

(*) Mas-Colell, Ch. 14.

(*) Laffont and Martimort, Chs. 1-5.

Varian, Ch. 25.

Salanié, Chs. 1, 5.


**Tentative Course Grading Procedure**

First Midterm Exam: 20%
Second Midterm Exam: 35%
Final: 45%

Study groups are encouraged. The final exam is cumulative.

**Lecture Topics and Tentative Schedule**

(Approx. # of classes is shown on the left.)

2 Information and uncertainty.

3 Introduction to game theory.

3 Application: Oligopoly.


1 First Midterm Exam.
3 General equilibrium theory.
   Walrasian equilibrium in a pure exchange economy. Walrasian equilibrium in a production economy with free disposal.
5 Existence of competitive equilibrium: mathematical preliminaries.
   The gross substitutability assumption. Index analysis.
Properties of aggregate excess demand in pure exchange economies.
Economies with Leontief technologies.
   Constant returns to scale technologies. Leontief technologies. The non-substitution theorem. The price corollary to the non-substitution theorem.
3 Pareto efficiency.
   Pareto efficiency. Strong Pareto efficiency.
   The core of an exchange economy.
1 Second Midterm Exam.
3 Social Choice-Mechanism design-Implementation.
1 Auction theory.
3 Contract theory.
   Labor Contracts with asymmetric information and bankruptcy. Agency contracts with hidden action.
Final Exam.

Additional readings
The Economics of Uncertainty and Information

General Equilibrium, Welfare Economics and Resource Allocation
1. Introduction to General Equilibrium Theory and Resource Allocation
2. Existence

3. Core Theory

4. Aggregate Demand and Uniqueness of Equilibria

Resource Allocation Mechanisms
1. Introduction to Implementation
A. Postlewaite, "Implementation via Nash Equilibria in Economic Environments." Chapter 7 in Hurwicz, Schmeidler and Sonnenschein.

2. Implementation with Incomplete Information


**Introduction to Auction Theory**


The New Palgrave: Auctions.


**Introduction to Contract Theory: Labor/Agency Contracts**

Lars Stole’s Lectures on the Theory of Contracts: [http://gsblas.uchicago.edu/lectures.html](http://gsblas.uchicago.edu/lectures.html)


Learning Objectives
the end of this course students will be able to:

- Read and comprehend current literature on the microeconomics of general equilibrium, welfare economics, game theory, the economics of uncertainty, and information theory.

- Formulate correct answers to questions on these same topics that appear on the written comprehensive exam in microeconomics for economics PhD students.

- Develop logically consistent economic models suitable for analysing a research question worthy of an economics PhD dissertation.

Tentative Course Outline

Texts
(1) A. Mas-Colell, M.D. Whinston and J.R.Green, Microeconomic Theory, Oxford, 1995. (Required.)

Suggested Readings
(1) G. Debreu, Theory of Value, 1959.

Lecture Readings
Prerequisite

Read Chs. 1-4 in Jehle and Reny and Chs. 1-5 in Mas-Colell et al.

The Economics of Uncertainty and Information

(*) Mas-Colell, Ch. 6.
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Varian, Chs. 17,18,21, and the mathematical appendix.
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4. Core Theory
(*) Mas-Colell, Ch. 18.
(*) Jehle and Reny, Ch. 5.4.
Varian, Ch. 21.

5. Aggregate Demand and Uniqueness of Equilibria
Resource Allocation Mechanisms

1. Design of Performance Standards

Varian (Intermediate), Ch. 30.
(*) Jehle and Reny, Ch. 6.
(*) Mas-Colell, Ch. 21.
Varian, Ch. 22.

The New Palgrave: Decentralization.

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(*) Molho, Part 4.

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(*) Jehle and Reny, Ch. 9.
(*) Molho, Chs. 14, 15.
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http://www.nuff.ox.ac.uk/users/klemperer/WhyEveryEconomist.pdf

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1. Introduction

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(*) Molho, Parts 1-3.
(*) The New Palgrave: Adverse Selection; Implicit Contracts; Hidden Actions, Moral Hazard and Contract Theory; Incentive Contracts; Moral Hazard; Principal and Agent.

Varian, Ch. 25.
Laffont, Chs. 10, 11.


2. Labor/Agency Contracts
(*) Mas-Colell, Ch. 14.
(*) Laffont and Martimort, Chs. 1-5.
Varian, Ch. 25.
Salanié, Chs. 1, 5.

Tentative Course Grading Procedure
First Midterm Exam:   20%
Second Midterm Exam:  35%
Final:     45%
Study groups are encouraged. The final exam is cumulative.

Final numerical grades will be translated to letter grades as follows:

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Lecture Topics and Tentative Schedule
(Approx. # of classes is shown on the left.)
2 Information and uncertainty.
3 Introduction to game theory.
   Static games of complete information. Iterated elimination of dominated strategies. Dominant strategy equilibrium. Nash equilibrium in pure and mixed strategies. Static

3 Application: Oligopoly.


**First Midterm Exam**

3 General equilibrium theory.

Walrasian equilibrium in a pure exchange economy. Walrasian equilibrium in a production economy with free disposal.

5 Existence of competitive equilibrium: mathematical preliminaries.


The gross substitutability assumption. Index analysis.

Properties of aggregate excess demand in pure exchange economies.

Economies with Leontief technologies.

Constant returns to scale technologies. Leontief technologies. The non-substitution theorem. The price corollary to the non-substitution theorem.

3 Pareto efficiency.

Pareto efficiency. Strong Pareto efficiency.


The core of an exchange economy.


**Second Midterm Exam.**

3 Social Choice-Mechanism design-Implementation.


1 Auction theory.


3 Contract theory.

Labor Contracts with asymmetric information and bankruptcy. Agency contracts with hidden action.

**Final Exam.**

**Additional readings**
The Economics of Uncertainty and Information

**General Equilibrium, Welfare Economics and Resource Allocation**

1. Introduction to General Equilibrium Theory and Resource Allocation


2. Existence


3. Core Theory


4. Aggregate Demand and Uniqueness of Equilibria


**Resource Allocation Mechanisms**

1. Introduction to Implementation


A. Postlewaite, "Implementation via Nash Equilibria in Economic Environments." Chapter 7 in Hurwicz, Schmeidler and Sonnenschein.


2. Implementation with Incomplete Information


Introduction to Auction Theory


The New Palgrave: Auctions.


Introduction to Contract Theory: Labor/Agency Contracts

Lars Stole’s Lectures on the Theory of Contracts: [http://gsblas.uchicago.edu/lectures.html](http://gsblas.uchicago.edu/lectures.html)


Class Policies

Attendance

1. Excuses for anticipated absences must be cleared with the instructor before the absence. Examples of anticipated situations where a student would qualify for an excused absence are:

a. The student is away from campus representing an official university function, e.g., participating in a professional meeting, as part of a judging team, or athletic team. These students would typically be accompanied by a University faculty or staff member.

b. Required court attendance as certified by the Clerk of Court.

c. Religious observances as verified by Parents & Constituent Services (515-2441). For more information about a variety of religious observances, visit the Diversity Calendar.

d. Required military duty as certified by the student's commanding officer.

2. Excuses for emergency absences must be reported to the instructor as soon as possible, but not more than one week after the return to class. Examples of emergency absences are:

a. Illness or injury when certified by an attending physician. Physicians on the Student Health Service staff do not provide written excuses. Because of student confidentiality, information can only be released directly by the Counseling Center or Student Health Services in case of crisis or with the student's written authorization.

b. Death or serious illnesses in the family when documented appropriately. An attempt to verify deaths or serious illness will be made by Parents & Constituent Services (515-2441) at the request of the instructor.

For a full statement of the University Attendance Policy, see http://www.ncsu.edu/policies/academic_affairs/pols_regs/REG205.00.4.php

Disabled Students: In accordance with Section 504 of the Rehabilitation Act of 1973 (“Rehab Act”), the Americans with Disabilities Act of 1990 (“ADA”), and state law, North Carolina State University (hereinafter NC State) is required to accommodate an otherwise qualified individual with a disability by making a reasonable modification in its services, programs, or activities. This regulation addresses the eligibility of students for academic accommodations in educational programs, services, and activities at NC State, as well as the provision of such accommodations to students with various types of disabilities. For a full review of NCSU’s policy toward students with disabilities, please see: http://www.ncsu.edu/policies/academic_affairs/courses_undergrad/REG02.20.1.php

Academic Integrity/Student Conduct: This course will be held in accordance with the University’s academic integrity standards as outlined in the Code of Student Conduct. Please review the Code in its entirety at: http://www.ncsu.edu/policies/student_services/student_discipline/POL11.35.1.php.