DALHOUSIE UNIVERSITY

Faculty of Science Course Syllabus
Department of Economics
ECON 4420
Microeconomic Theory

Instructor:	Professor Norovsambuu Tumennasan (Norov for short)
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Office Address:	6206 University Ave. C11
Office hours:	Wednesdays 14:00-15:30 or by appointment
Course Delivery:	In Person
Lectures	MW 10:05- 11:25 A1 Maxwell House

IMPORTANT DATES

Feb 12	**MIDTERM EXAM**
Scheduled by Registrar	**FINAL EXAM**

Prerequisites: ECON 2200, 2210, 3700 MATH 1000, 1010

COURSE DESCRIPTION:

The first part of the course aims at extending the economics toolbox from the earlier microeconomic courses (such as consumer theory and general equilibrium theory) to richer settings.

The second part of the course deals with how people make decisions when one needs to worry about other people's goals and incentives. We will then apply game theoretic approach to non-perfectly competitive situations.

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COURSE SUBJECT AREAS:

1. Consumer Theory (6 lectures)
2. Decision Making under Uncertainty (3 lectures)
3. General Equilibrium (4 lectures)
4. Social choice (5 lectures)
5. Game Theory (5 lectures)

- The first topic studied in the class is individual decision making. This is the building block of many economic models which are usually interactions of individual decision makers pursuing their private interests. We study both the preference-based and choice-based approaches in this part. Under the preference-based approach, the decision maker is assumed to have a preference relation over her set of possible choices that satisfies certain rationality assumptions. The choice-based approach, on the other hand, focuses on the decision maker's observed choices. We will be able to discern the choices of the rational decision makers from those of irrational ones. We will also show when an individual's preference relation can be represented by a utility function, which is usually taken for granted in all areas of economics.
- We next introduce uncertainty into the theory of individual decision making. Here we give the justification for the use of expected utility which is the predominantly used form of utility function in all areas of economics. We define the risk and how risk is measured for given agents. Lastly, we consider whether lotteries can be ranked in the same way for risk averse individuals. This part of the class has many applications in the economics of finance or accounting.
- In the section on general equilibrium, we consider market economies where all the agents are endowed some goods and can trade with each other. The market equilibrium is an outcome of a market economy in which the agents pursue their private interests and take the market price as given. We study the existence of market equilibrium as well as the first and second theorem of welfare economics. The first theorem states that each market equilibrium is Pareto efficient as long as the agents are self-interested and price-takers. The second theorem, on the other hand, states that each Pareto efficient allocation can be achieved as a market equilibrium if appropriate transfers are arranged. This part of the class has applications in macro or financial economics.
- In this section, we consider the issues involved with constructing social preferences that depend on individuals' preferences.
- In the section on game theory we study how individuals make decisions when the decisions of the agents affect each other's well-beings. We will consider many different strategic situations and introduce proper concepts used in these situations.

- Here it should be emphasized that the course studies many fundamental issues that are central to other areas of economics. The course gives justifications to many assumptions that other economics classes usually take for granted.

Learning Objectives:

Students should be able to apply formal and disciplined arguments when analyzing economic problems.

Part I

- Analyze decisions of consumers and producers:
  - Reflect on the underlying assumptions in consumer theory.
  - Analyze individual decision making using tools from constrained maximization, duality theory and revealed preferences.
  - Identify the properties for a range of specific functions for utility
- Analyze the functioning of market economies in a general equilibrium setting:
  - Derive different properties of market economies using the concept of competitive equilibrium
  - Memorize the concept of Pareto optimality and analyze economic systems using the welfare theorems.

Part II

- Classify various strategic situations into different games and apply appropriate solution concepts in each type of game.
- Analyze non-competitive market situations using game theoretic concepts.

Examination:
Written examination of 2 hour duration
The exam difficulty will be about the same as the homework assignments.

Homework:
There will be six homework assignments: three graded and three non-graded. You are highly encouraged to work on these assignments.

Literature:

- Jehle, G., & Reny, P., 2001, *Advanced Microeconomic Theory*, 2nd edition, Addison-Wesley (JR)

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- Varian. H.R., 1992, Microeconomic Theory, W.W. Norton & Company.
- Mas-Colell, A., Whinston, M., & Green, J., 1995, *Microeconomic Theory*, Oxford University Press (MWG)

Course Assessment

Component	**Weight (% of final grade)**
Assignments	***20***
Midterm Exam	***30%***
Final exam	***50%***

Conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale

A+ (90-100)	**B+** (77-79)	**C+** (65-69)	**D** (50-54)
A (85-89)	**B** (73-76)	**C** (60-64)	**F** (<50)
A- (80-84)	**B-** (70-72)	**C-** (55-59)	

Course Policies

The weight of any missed component is shifted to the final. If a student misses the final exam for medical or other reasons, you must notify the instructor immediately to arrange a make-exam.

University Policies and Statements

Recognition of Mi'kmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel, and support. Visit or e-mail the Indigenous Student Centre at 1321 Edward St or elders@dal.ca. Additional information regarding the Indigenous Student Centre can be found at: https://www.dal.ca/campus_life/communities/indigenous.html

Internationalization

At Dalhousie, 'thinking and acting globally' enhances the quality and impact of education, supporting learning that is "interdisciplinary, cross-cultural, global in reach, and orientated toward solving problems that extend across national borders." Additional internationalization information can be found at: https://www.dal.ca/about-dal/internationalization.html

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Academic Integrity

At Dalhousie University, we are guided in all our work by the values of academic integrity: honesty, trust, fairness, responsibility, and respect. As a student, you are required to demonstrate these values in all the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity. Additional academic integrity information can be found at: https://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Student Accessibility Centre is Dalhousie's centre of expertise for matters related to student accessibility and accommodation. If there are aspects of the design, instruction, and/or experiences within this course (online or in-person) that result in barriers to your inclusion, please contact the Student Accessibility Centre (https://www.dal.ca/campus_life/academic-support/accessibility.html) for all courses offered by Dalhousie with the exception of Truro. For courses offered by the Faculty of Agriculture, please contact the Student Success Centre in Truro (https://www.dal.ca/about-dal/agricultural-campus/student-success-centre.html)

Conduct in the Classroom – Culture of Respect

Substantial and constructive dialogue on challenging issues is an important part of academic inquiry and exchange. It requires willingness to listen and tolerance of opposing points of view. Consideration of individual differences and alternative viewpoints is required of all class members, towards each other, towards instructors, and towards guest speakers. While expressions of differing perspectives are welcome and encouraged, the words and language used should remain within acceptable bounds of civility and respect.

Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness (Strategic Priority 5.2). Additional diversity and inclusion information can be found at: http://www.dal.ca/cultureofrespect.html

Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner - perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution. The full Code of Student Conduct can be found at: https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

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Fair Dealing Policy

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Originality Checking Software

The course instructor may use Dalhousie's approved originality checking software and Google to check the originality of any work submitted for credit, in accordance with the Student Submission of Assignments and Use of Originality Checking Software Policy. Students are free, without penalty of grade, to choose an alternative method of attesting to the authenticity of their work and must inform the instructor no later than the last day to add/drop classes of their intent to choose an alternate method. Additional information regarding Originality Checking Software can be found at: https://www.dal.ca/about/leadership-governance/academic-integrity/faculty-resources/ouriginal-plagiarism-detection.html

Student Use of Course Materials

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