DALHOUSIE UNIVERSITY

Faculty of Science Course Syllabus
Department of Economics
ECON 4420
Microeconomic Theory
Winter 2018

Instructor:	Professor Norovsambuu Tumennasan (Norov for short)
E-mail:	**norov@dal.ca**
Teaching Assistant:	**Ali Smaili**
TA E-mail:	al476849@dal.ca
Office Address:	6206 University Ave. C11
Office hours:	Teusdays 2:35-4:05 or by appointment
Lectures	Tuesdays, Thursdays 13:05- 14:25 McCain 2170

_____

IMPORTANT DATES

February 28	**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.

DALHOUSIE UNIVERSITY

COURSE SUBJECT AREAS:

1. Consumer Theory (6 lectures)
2. Decision Making under Uncertainty (3 lectures)
3. General Equilibrium (3 lectures)
4. Game Theory (5 lectures)
5. Market Power (3 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 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.
- Finally, we recognize that many situations in economics is not perfectly competitive. We specifically study market situations in which there are only one or a few producers. In

such cases, assuming that agents are price-takers is not natural. This part uses the concepts from game theory and we will analyze whether market achieves efficiency.
- 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)
- 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)	Date
Assignments	*20*	
Midterm Exam	*30%*	*February 28*
Final exam	*50%*	*(Scheduled by Registrar)*

Conversion of numerical grades to Final Letter Grades follows the <u>Dalhousie Common Grade Scale</u>

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

If a student misses the midterm for a valid medical reason, all the weight of your midterm will be shifted to the final. If a student misses the final exam for a valid medical reason, you must notify the instructor immediately, provide appropriate medical documentation, and make arrangements to write a comprehensive exam as soon as health permits.

_____

ACCOMMODATION POLICY FOR STUDENTS

Students may request accommodation as a result of barriers related to disability, religious obligation, or any characteristic protected under Canadian Human Rights legislation. The full text of Dalhousie's Student Accommodation Policy can be accessed here:
http://www.dal.ca/dept/university_secretariat/policies/academic/student-accommodation-policy-wef-sep--1--2014.html

Students who require accommodation for classroom participation or the writing of tests and exams should make their request to the **Advising and Access Services Centre (AASC)** prior to or at the outset of the regular academic year. More information and the ***Request for Accommodation*** form are available at www.dal.ca/access.

DEPARTMENT OF ECONOMICS STATEMENT ON ACADEMIC INTEGRITY

At Dalhousie University, we respect the values of academic integrity: honesty, trust, fairness, responsibility, and respect. As a student, adherence to the values of academic integrity and related policies is a requirement of being part of the academic community at Dalhousie University.

What does academic integrity mean?

Academic integrity means being honest in the fulfillment of your academic responsibilities, thus establishing mutual trust. Fairness is essential to the interactions of the academic community and is achieved through respect for the opinions and ideas of others. "Violations of intellectual honesty are offensive to the entire academic community, not just to the individual faculty member and students in whose class an offence occurs."
(http://academiccalendar.dal.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=1&chapterid=89&topicgroupid=381&loaduseredits=False)

How can you achieve academic integrity?

* Make sure you understand Dalhousie's policies on academic integrity.

* While discussion with your fellow students is valuable, do not submit an assignment or essay that is essentially identical to an assignment or essay submitted by another individual or group.

* In assignments or essays, use an approved method of citation for any material taken directly from an existing source or any material that is a paraphrase of an existing source.

* Do not download the work of another from the Internet and submit it as your own.

* Do not submit work that has been completed through collaboration or previously submitted for another assignment without permission from your instructor.

* Do not have someone else write a test for you, or write a test for someone else.

* During a test, do not talk with other students and do not try to copy the work of another student.

What will happen if an allegation of an academic offence is made against you?

Instructors are required to report any suspected offence. The full process is outlined in the Discipline flow chart (found at http://academicintegrity.dal.ca) and includes the following:

* Each Faculty has an Academic Integrity Officer (AIO) who receives allegations from instructors.

* The AIO decides whether to proceed with the allegation and you will be notified of the process.

* If the case proceeds, you will receive a PENDING grade until the matter is resolved.

* If you are found guilty of an academic offence, a penalty will be assigned ranging from a warning to suspension or expulsion from the University and can include a notation on your transcript, failure of the assignment, or failure of the course. All penalties are academic in nature.

Where can you turn for help?

* If you are ever unsure about ANYTHING, contact your instructor. * See http://academicintegrity.dal.ca for links to policies, definitions, online tutorials, and tips on citing and paraphrasing. * See http://writingcentre.dal.ca for assistance with proofreading, writing styles, and citations. * See http://libraries.dal.ca/research.html for a set of research tools including Subject Guides, Assignment Calculator, and RefWorks. * See http://studentservices.dal.ca for assistance with appeals and discipline procedures. * See http://senate.dal.ca for a list of Academic Integrity Officers, a discipline flow chart, and the

Senate Discipline Committee. The Policy on Student Submission of Assignments & Use of Originality Checking Software states that "any instructor may require student assignments to be submitted in both written and electronic (computer-readable) form, e.g., a text file or as an email attachment, as defined by the instructor. Use of third-party originality checking software does not preclude instructor use of alternate means to identify lapses in originality and attribution. The results of such assessment may be used as evidence in any disciplinary action taken by the Senate."

ACADEMIC INTEGRITY

Academic integrity, with its embodied values, is seen as a foundation of Dalhousie University. It is the responsibility of all students to be familiar with behaviours and practices associated with academic integrity. Instructors are required to forward any suspected cases of plagiarism or other forms of academic cheating to the Academic Integrity Officer for their Faculty.

The Academic Integrity website (http://academicintegrity.dal.ca) provides students and faculty with information on plagiarism and other forms of academic dishonesty, and has resources to help students succeed honestly. The full text of Dalhousie's **Policy on Intellectual Honesty** and **Faculty Discipline Procedures** is available here:

http://www.dal.ca/dept/university_secretariat/academic-integrity/academic-policies.html

STUDENT CODE OF CONDUCT

Dalhousie University has a student code of conduct, and it is expected that students will adhere to the code during their participation in lectures and other activities associated with this course. In general:

"The University treats students as adults free to organize their own personal lives, behaviour and associations subject only to the law, and to University regulations that are necessary to protect

- the integrity and proper functioning of the academic and non – academic programs and activities of the University or its faculties, schools or departments;
- the peaceful and safe enjoyment of University facilities by other members of the University and the public;

- the freedom of members of the University to participate reasonably in the programs of the University and in activities on the University's premises;
- the property of the University or its members."

The full text of the code can be found here:
http://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

SERVICES AVAILABLE TO STUDENTS

The following campus services are available to help students develop skills in library research, scientific writing, and effective study habits. The services are available to all Dalhousie students and, unless noted otherwise, are <u>free</u>.

Service	Support Provided	Location	Contact
General Academic Advising	Help with - understanding degree requirements and academic regulations - choosing your major - achieving your educational or career goals - dealing with academic or other difficulties	**Killam Library Ground floor** Rm G28 ***Bissett Centre for Academic Success***	In person: Killam Library Rm G28 By appointment: - e-mail: advising@dal.ca - Phone: (902) 494-3077 - Book online through MyDal
Dalhousie Libraries	Help to find books and articles for assignments Help with citing sources in the text of your paper and preparation of bibliography	**Killam Library Ground floor** Librarian offices	In person: Service Point (Ground floor) By appointment: Identify your subject librarian (URL below) and contact by email or phone to arrange a time: http://dal.beta.libguides.com/sb.php?subject_id=34328
Studying for Success (SFS)	Help to develop essential study skills through small group workshops or one-on-one coaching sessions Match to a tutor for help in course-specific content (for a reasonable fee)	**Killam Library 3rd floor** Coordinator Rm 3104 Study Coaches Rm 3103	To make an appointment: - Visit main office (Killam Library main floor, Rm G28) - Call (902) 494-3077 - email Coordinator at: sfs@dal.ca or - Simply drop in to see us during posted office hours **All information can be found on our website: www.dal.ca/sfs**
Writing Centre	Meet with coach/tutor to discuss writing assignments (e.g., lab report, research paper, thesis, poster) - Learn to integrate source material into your own work appropriately - Learn about disciplinary writing from a peer or staff member in your field	**Killam Library Ground floor** Learning Commons & Rm G25	To make an appointment: - Visit the Centre (Rm G25) and book an appointment - Call (902) 494-1963 - email writingcentre@dal.ca - Book online through MyDal We are open six days a week **See our website: writingcentre.dal.ca**