

**Faculty of Science Course Syllabus  
Department of Economics  
ECON 6609  
Advanced Micro Theory**

**Instructor:** Professor Norovsambuu Tumennasan (Norov for short)

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**Office Address:** 6206 University Ave. C11  
**Office hours:** Tuesdays 14.35-15.55

**Lectures** TR 1:05- 2:25

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***IMPORTANT DATES***

**March 2  
TBD**

**MIDTERM EXAM  
Final**

**Prerequisites: ECON 5509 or instructor's permission**

**COURSE DESCRIPTION:**

This course in microeconomic theory is required in the general Ph.D. program. The students learn classic models of decision making under uncertainty and market failure.

**COURSE SUBJECT AREAS:**

1. Preliminaries
  - 1.1 Decision Making under Uncertainty
  - 1.2 Non-Cooperative Game Theory: representations of games (extensive form and normal form), solution concepts (dominance and Nash Equilibrium), static

games of complete and incomplete information, dynamic games, subgame perfection, dynamic games of incomplete information

## 2. Market Failures

2.1 Externalities and Public Goods: bilateral externalities, presence of public goods, multilateral externalities, externalities with incomplete information

2.2 Market power or Imperfect Competition: Monopoly, static oligopolies, repeated oligopolistic competition, entry, precommitment decisions, the competitive limit

2.3 Asymmetric Information: adverse selection, signaling, screening, moral hazard

- We start introducing 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 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.
- One of the main assumptions of classic general equilibrium model is the all consumptions or productions are private. In reality, one's consumption or production decision affects others' well-beings. The usual examples are externality goods or public goods.
- Another assumption of general equilibrium theory is that all economic agents are price-takers. However, this is not the case outside of the perfectly competitive markets. In other words, we study market situations in which there are only one or a few producers. This part uses the concepts from game theory and we will analyze whether market achieves efficiency.
- Another assumption is that all the agents have the same information regarding the goods they purchase or sell. What happens if some have this information but not others. Such cases occur in lemon's market, insurance market and labor market.

### **Learning Objectives:**

Students should be able to apply formal and disciplined arguments when analyzing economic problems. In addition, students should be able to write a model appropriate for the situations in which they are interested.

### **Examination:**

Written examination of 2 hour duration

The exam difficulty will be about the same as the homework assignments.

### Homework:

There will be several non-graded assignments. You are highly encouraged to work on these assignments.

### Literature:

- Mas-Colell, A., Whinston, M., & Green, J., 1995, *Microeconomic Theory*, Oxford University Press (MWG)

### Course Assessment

Component	Weight (% of final grade)	Date
<i>Midterm Exam</i>	<b>40%</b>	
<i>Final exam</i>	<b>60%</b>	

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

A+ (90-100)	A (85-89)	A- (80-84)	B+ (77-79)
B (73-76)	B- (70-72)	F (<70)	

### 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.

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## **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](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](http://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&loadusercredits=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](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](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 free.

Service	Support Provided	Location	Contact
<b>General Academic Advising</b>	Help with - understanding degree requirements and academic regulations - choosing your major - achieving your educational or career goals - dealing with academic or other difficulties	<b>Killam Library Ground floor</b> Rm G28 <b>Bissett Centre for Academic Success</b>	In person: Killam Library Rm G28 By appointment: - e-mail: <a href="mailto:advising@dal.ca">advising@dal.ca</a> - Phone: (902) 494-3077 - Book online through MyDal
<b>Dalhousie Libraries</b>	Help to find books and articles for assignments Help with citing sources in the text of your paper and preparation of bibliography	<b>Killam Library Ground floor</b>  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: <a href="http://dal.beta.libguides.com/sb.php?subject_id=34328">http://dal.beta.libguides.com/sb.php?subject_id=34328</a>
<b>Studying for Success (SFS)</b>	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)	<b>Killam Library 3<sup>rd</sup> floor</b>  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: <a href="mailto:sfs@dal.ca">sfs@dal.ca</a> or - Simply drop in to see us during posted office hours  <b>All information can be found on our website: <a href="http://www.dal.ca/sfs">www.dal.ca/sfs</a></b>



<b>Writing Centre</b>	Meet with coach/tutor to discuss writing assignments (e.g., lab report, research paper, thesis, poster) <ul style="list-style-type: none"><li>- Learn to integrate source material into your own work appropriately</li><li>- Learn about disciplinary writing from a peer or staff member in your field</li></ul>	<b>Killam Library</b> <b>Ground floor</b> Learning Commons & Rm G25	To make an appointment: <ul style="list-style-type: none"><li>- Visit the Centre (Rm G25) and book an appointment</li><li>- Call (902) 494-1963</li><li>- email <a href="mailto:writingcentre@dal.ca">writingcentre@dal.ca</a></li><li>- Book online through MyDal</li></ul> We are open six days a week <b>See our website: <a href="http://writingcentre.dal.ca">writingcentre.dal.ca</a></b>
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