

**Faculty of Science Course Syllabus  
Department of Economics  
ECON 4427  
Market Design  
Fall 2023**

<b>Instructor:</b>	Professor Norovsambuu Tumennasan (Norov for short)
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<b>Office Address:</b>	6206 University Ave. C11
<b>Office hours:</b>	Wednesdays 11.30 – 13.00 or by appointment
<b>Lectures</b>	TH 13.05-14.25 (LSC-Psychology P4208)

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***IMPORTANT DATES***

**TBA  
TBA**

**MIDTERM EXAM  
Final EXAM**

**Course Description**

The course studies how the organization of centrally administered markets affects their performance. The students learn several mechanisms that are currently used and evaluate their properties. The course has a strong emphasis on applications, e.g., the allocation of students to public schools, interns to hospitals or organ donors to recipients.

**Course Prerequisites**

ECON 3700 or Math 2001 or by instructor's permission.

Maturity in mathematics is expected. This course has a minimum grade requirement of C for their prerequisite courses.

## Course Objectives/Learning Outcomes

The students should be able to

- Identify the desirable properties (e.g., stability, efficiency, and strategy proofness) that the allocation mechanisms in a given market should satisfy
- Evaluate the importance of incentive issues in various markets
- Apply and use the mechanisms such as deferred acceptance, top trading cycles, serial dictatorship, and probabilistic serial dictatorship in appropriate settings
- Analyze and assess whether a given mechanism in a given market satisfies one or more desirable properties

## Course Content

- Marriage Market --- One-to-one matching
- College Admissions Model --- Many-to-one Matching
- Housing Market
- School Choice Problem
- Kidney Exchange
- Dynamic matching markets
- Matching with Contracts

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## Course Materials

- Two Sided Matching by A.E. Roth & M. Sotomayor, Econometric Society Monographs, published by Cambridge University Press, 1990
- Lecture Notes supplemented by research articles. Please check the course website frequently for new announcements.

## Course Assessment

Component	Weight (% of final grade)
<i>Midterm</i>	<b>30%</b>
<i>Final exam</i>	<b>50%</b>
<i>Assignments</i>	<b>20%</b>

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

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

There will be four homework problem sets, and each of these is worth 5% of your grade. Assignments must be done individually and handed in before or on the due date.

**Course Policies**

Policy on Missed Materials: Assignments will NOT be accepted after the due date, unless there is a valid reason for the delay. If a student miss midterm for a valid medical reason, all the weight of your midterm will be shifted to the final. If you miss the final exam for a valid reason, you must notify the instructor immediately and make arrangements to write a comprehensive exam as soon as health permits.