



ECON\*6010 Microeconomic Theory II  
Winter 2025  
0.5 Credits

### General Course Information

<b>Instructor:</b>	Rene Kirkegaard
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<i>Office Location</i>	MCKN 707
<i>Office Hours</i>	By appointment.
<i>Department/School</i>	Department of Economics and Finance
<b>Class Schedule:</b>	Tuesdays and Thursdays, 1:00-2:20, ANNU 002.
<b>Pre-requisites:</b>	ECON*6000

### Course Description

#### Overview:

This is a course on uncertainty and information in economics. We begin with a discussion of how uncertainty and incomplete information is modeled using probability distributions. We review how such distributions can meaningfully be compared and discuss some useful mathematical techniques. The larger part of the course focuses on the strategic interaction of asymmetrically informed agents. Thus, we cover classic topics such as adverse selection and its attendant problems (signaling and screening). We then turn to contract theory and mechanism design. In both cases, one party can alter the rules of the game and thereby manipulate other agents' incentives and ultimately the final outcome.

#### Course Outline:

The following course outline is tentative and may be modified at any time. Only readings from the textbook are listed. Journal articles and other references are added as the term progresses.

The course is in four parts. We will mainly focus on the material from MWG. Time permitting, we will also explore two or three of the topics listed below (using journal articles). However, we will not have time to cover all the topics. Numerous topics are listed in part to illustrate that the basic theory can be extended in many directions and that it has many applications. The material listed as background reading is entirely optional. You may consult this for more background on a topic or if you feel you are inadequately prepared for the main parts of the course.

**Part I: Preliminaries (no strategic interaction). Choice under uncertainty; Comparing and interpreting distributions.**

MWG, Section 6.C and 6.D.

**Background reading** (expected utility and choice under uncertainty): MWG, Sections 6.A and 6.B.

**Topics:** Other stochastic orders, several sources of uncertainty, background risk.

**Part II: Adverse Selection, Signaling, Screening.**

MWG, chapter 13.

**Background reading** (game theory): MWG, chapters 7,8,9.

**Topics:** Strategic information transmission (cheap talk). Single-crossing conditions, monotone comparative statics, supermodular games.

**Part III: Principal-agent models.**

MWG, chapter 14.

**Topics:** Bayesian persuasion, information design in auctions. Majorization and concavification/convexification.

**Topics:** The Informativeness Principle, Blackwell informativeness and garbling, team production, career concerns, relational contracting, behavioural contract theory.

**Part IV: Mechanism design and implementation.**

MWG, chapter 23.

**Background reading** (social choice/welfare economics): MWG, chapters 21, 22.

**Topics:** Order statistics, ironing, asymmetric auctions, information acquisition in auctions, market design, matching, equilibrium concepts in mechanism design.

Course Learning Outcomes

**Upon successfully completing this course, you will:**

Obtain and demonstrate mastery of microeconomic theory through the formulation and analysis of a variety of economics models.

Demonstrate an ability to communicate complex economic arguments effectively in writing.

## Course Assessment

<b>Assessment 1:</b>	50%	4 assignments	Due Sunday January 26, February 9, March 23, April 6.
<b>Assessment 2:</b>	20%	Midterm	Thursday, February 13, in class.
<b>Assessment 3:</b>	30%	Final exam	TBD

## Teaching and Learning Practices

<b>Lectures</b>	Students are expected to attend all lectures and to read ahead. The material is challenging, and it is best to be prepared for lectures. Questions during lectures are welcomed and expected.
<b>Office hours</b>	Students are strongly encouraged to make full use of office hours. This is a good place for in-depth discussions and tips for problem solving.
<b>Assignments</b>	<p><i>Assignments are to be typed in LaTeX and submitted in .pdf format.</i> These are the “industry standards” in the discipline. Longer derivations and figures may be written by hand and then scanned and attached to the pdf file. Typing your answers promotes more careful writing and editing.</p> <p>Students are invited to work on assignments in groups, but each student must type and hand in their own answers.</p>

## Course Resources

### Required Text:

Microeconomic Theory, by Mas-Colell, Whinston, and Green (MWG), Oxford University Press, 1995.

The textbook is on reserve at the library. It is listed at \$189.99 (+tax) on Amazon.ca.

### Other Resources:

Journal articles, when appropriate, will be listed on CourseLink.

## Course Policies

### Grading Policies

Late assignment will not be accepted. If assignments are missed for valid medical or personal reasons, the weight may be transferred to the final exam. Such requests are to be quickly communicated via email to the instructor.

Students who find themselves unable to meet course requirements by the deadlines or the criteria expected because of medical or personal reasons, should review the regulations on academic consideration in the Academic Calendar and discuss their situation with the instructor, program counselor or other academic counselor as appropriate.

#### Missed Assignments:

A grade of zero will be assigned if you fail to submit an assignment, unless you are ill or have other compassionate reasons. Please read your Undergraduate Calendar for the regulations regarding illness and compassionate grounds. Please note, vacation travel, moving house, or outside work commitments will not be accepted as valid reasons for missing deadlines.

If you have religious observances which conflict with the course schedule or if you are registered with Student Accessibility Services, please contact the course instructor in order to make arrangements for your assessment if appropriate.

## University Policies

### Academic Consideration

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for Academic Consideration:

<https://www.uoguelph.ca/registrar/calendars/graduate/current/>

### Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not

excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Graduate Calendar:

<https://calendar.uoguelph.ca/graduate-calendar/general-regulations/academic-misconduct/>

### **Accessibility**

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact Student Accessibility Services as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email [sas@uoguelph.ca](mailto:sas@uoguelph.ca) or see the website: <https://wellness.uoguelph.ca/accessibility/>

### **Course Evaluation Information**

Please refer to the [Blue by Explorance system](#).

### **Recording of Materials**

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

### **Drop date**

The last date to drop one-semester courses, without academic penalty, is **Friday, April 4, 2025**. For regulations and procedures for Dropping Courses, see the Academic Calendar:

<https://calendar.uoguelph.ca/graduate-calendar/general-regulations/>