ECO206
SUMMER 2025
MICROECONOMIC THEORY

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DEPARTMENT OF ECONOMICS
UNIVERSITY OF TORONTO (STG)

COURSE OVERVIEW AND LEARNING OBJECTIVES

The word micro comes from the Greek word *μικρός (mikrós)* meaning "small". Microeconomists study economic-social phenomena at the granular, atomistic level: individual consumers' choice, individual producers' choice, interaction between consumers and producers, etc. ECO206 is a "nuts and bolts" course which equips students with analytical, mathematical and critical thinking tools to build and apply some standard microeconomic models in the following modules (*every* module in ECO206 entails optimization and comparative statics):

ECO206 SUMMER 2025 LIST OF MODULES (SUBJECT TO CHANGE)
(Un)Constrained Optimization and Comparative Statics Methods
Consumer Choice and Behavior
Market Demand
Buying and Selling
Intertemporal Consumption and Savings
Market Equilibrium
Decision Making Under Uncertainty (with and without testing) & Mechanisms for Avoiding Risk
Asset Markets and the Capital Asset Pricing Model
Mean-Variance Financial Portfolio
Production Technology
Profit Maximization
Producer Choice and Behavior
Cost Analysis
Competitive Market Equilibrium
Factor Markets and Demand
General Equilibrium
Welfare
Public Goods & Externalities
Monopoly & Price Discrimination
Oligopoly
Game Theory
Asymmetric Information

Learning Objectives: If you successfully complete this course, you will:
- o Have a solid command and deep understanding of optimization and comparative statics methods
- o Be able to use the machinery of optimization/comparative statics to build, from first principles, some standard micro models
- o Apply these models to investigate/understand real-life economic phenomena *and* succinctly express your logic – assumptions, arguments, counter-arguments –in plain, simple, direct language to a "layman" audience.

Instructor: "Ajaz" Hussain, Associate Professor (Teaching Stream)

INSTRUCTOR & COURSE E-MAIL: sayed.hussain@utoronto.ca (SEE COMMUNICATIONS POLICIES BELOW)

ZOOM OFFICE HOURS FOR *COURSE RELATED* MATTERS: 4 – 5:30 PM SUNDAYS (EXCEPT JUNE 22 – 20) AT
HTTPS://US06WEB.ZOOM.US/J/84169187467?PWD=L97KCNBGFGFBZUAJBJDFWN2VXXBJYZ.1
MEETING ID: 841 6918 7467
PASSCODE: 578834
I WILL END OFFICE HOURS IF NO STUDENTS SHOW UP IN THE FIRST 10 MINUTES. ALL ATTENDEES ARE EXPECTED TO JOIN BY 4:10 PM – I WILL NOT ANSWER QUESTIONS IF YOU JOIN THE SESSION PAST 4:10 PM.

IN-PERSON OFFICE HOURS FOR *NON-COURSE RELATED* MATTERS: BOOK AN APPOINTMENT (30 MIN SLOTS 2 – 3:30 PM, FRIDAYS:, MAY 23RD, JUNE 6TH, JULY 11TH, JULY 25TH [PLEASE, NO DOUBLE BOOKINGS ON THE SAME DAY])

QUERCUS
- o Please check your email inbox and announcements posted on the ECO206 Summer 2025 Quercus portal daily.
- o Please see Quercus course policies below.

- **[Required]** "Lecture Slides" (posted by noon on lecture days)
- **[Required]** "ECO206 Text-Chapters (with exercises and solutions), Notes, Videos, etc." posted on a rolling basis starting the first weekend of the semester.

- **[Recommended]**
  - Mathematical Methods for Economic Theory (Martin Osborne)
  - (UTM) MAT133 Course Notes
  - Wolfram Alpha (also available as an app)
- **[Optional (Advanced)]**
  - Ajaz's 2020-2021 ECO1010 Math-Stats for MA & MFE Students LEC videos and slides @ajaz-explainers
  - Models in Microeconomic Theory (Martin Osborne and Ariel Rubenstein)

MARKING SCHEME		
COURSE GRADE	**ASSESSMENT**	**DETAILS**
40%	Best Two out of Three 3-hour In-Person Crowdmark Tests (EACH TEST = 20%)	- Tentative schedule and subject to change; see schedule for coverage: - Test 1: 6 – 9 pm, Mon June 2nd in location TBA - Test 2: 6 – 9 pm, Wed July 2nd in location TBA - Test 3: 6 – 9 pm, Mon Aug 11th in location TBA - Aids allowed: a scientific calculator (no sharing) and a formula sheet (TBD whether the students make their own formula sheet or are provided with one). - See Crowdmark section of course policies. - Students who miss a Mid-Term Test (or Tests) must complete the "Missed Test Form" which will be posted at 11 PM on the test-date and open for submissions for 72 hours. Students who miss a test due to a medical reason must submit proof of a self-declared absence on ACORN or a VOI; Students who miss a test for non-medical reasons must arrange to have their College Registrar/Accessibility Services send an e-mail to sayed.hussain@utoronto.ca within 48 hours of the test start time. Conditional on approval from the department/course staff, such students will be given one opportunity to "makeup" the missed test(s) by taking a 3-hour (in-person) restricted Cumulative Makeup Midterm Test from 6 – 9 PM on Wed, August 13th in a location TBA. There is no makeup for the makeup and under no circumstances will the weight of the missed test(s) shifted to the final exam.
22%	Projects 1 & 2 (EACH PROJECT = 11%)	- Each project is a writing assignment based on a micro-model/application. - Dates tentative and subject to change: - Project 1: released Mon June 16th; due through Quercus by 4 pm, Mon July 7th - Project 2: released Mon July 21st; due through Quercus by 4 pm, Wed August 6th - Penalty for late submissions: 50% of the entire Project grade per submission within each 24 hours slot past the deadline. - You are expected to start working on the project right away and should save/backup project files on a "cloud drive". We will NOT grant extensions or accommodations for "tech issues", "stolen/lost/crashed laptops", "relationship problems" etc. - Penalty for Business-report submitted as a non-OCR pdf file: 50% of the Project grade. - Do NOT e-mail project files. See Quercus section of course policies.
8%	Best Four out of Five Crowdmark HWs (EACH HW = 4%)	- Dates tentative and subject to change: See Course Schedule - Penalty for late submissions: 100% of the entire HW grade per submission within each 24 hours slot past the deadline.
30%	3-Hour In-Person Comprehensive and Cumulative Crowdmark Final Exam	- During the August "Finals-Period" at a time/date/location TBA by A+S. - Aids allowed: a scientific calculator (no sharing) and a formula sheet (TBD whether the students make their own formula sheet or are provided with one). - See Crowdmark section of course policies.
		- Conditional on public health regulations, in the event of no in-person tests/exams, we reserve the right to give "online exams" through Crowdmark (See Crowdmark section of course policies.) - Your mark on a test/exam reflects any adjustments to the raw scores such as adding points to everyone's score or not counting an unduly difficult/confusing question. Your mark, not your raw score, best reflects the quality of your submitted work. - You will be given the opportunity of requesting a re-grade of *any* assessment – see re-grade requests section of course policies.

COURSE SCHEDULE
(Subject to Change)

CLASS	DATE	CLASS?	DETAILS
1	MON-5-MAY	CLASS	
2	WED-7-MAY	CLASS	
3	MON-12-MAY	CLASS	
4	WED-14-MAY	CLASS	
	MON-19-MAY	NO CLASS	
5	WED-21-MAY	CLASS CANCELLED	
6	MON-26-MAY	CLASS	
7	WED-28-MAY	CLASS	
8	MON-2-JUN	CLASS	TEST 1 (COVERS MATERIAL THROUGH MON 26-MAY)
9	WED-4-JUN	CLASS	HW 1 POSTED
10	MON-9-JUN	CLASS	HW 1 DUE
11	WED-11-JUN	CLASS	HW 2 POSTED
12	MON-16-JUN	CLASS	HW 2 DUE PROJECT 1 POSTED
13	WED-2-JUL	CLASS	TEST 2 (PRIMARILY COVERS MATERIAL FROM WED-28-MAY THROUGH MON-16-JUNE)
14	MON-7-JUL	CLASS	PROJECT 1 DUE
15	WED-9-JUL	CLASS	HW 3 POSTED
16	MON-14-JUL	CLASS	HW 3 DUE
17	WED-16-JUL	CLASS	HW 4 POSTED
18	MON-21-JUL	CLASS	HW 4 DUE PROJECT 2 POSTED
19	WED-23-JUL	CLASS	HW 5 POSTED
20	MON-28-JUL	CLASS	HW 5 DUE
21	WED-30-JUL	CLASS	
	MON-4-AUG	NO CLASS	
22	WED-6-AUG	CLASS	PROJECT 2 DUE
23	MON-11-AUG	CLASS	TEST 3 (PRIMARILY COVERS MATERIAL FROM MON-7-JULY THROUGH WED-6-AUG INCLUDING PROJECTS 1 AND 2)
	WED-13-AUG		MAKEUP TEST FOR MISSED TESTS
	AUGUST FINAL EXAMS		CUMULATIVE AND COMPREHENSIVE FINAL EXAM (TBA)

COURSE POLICIES

E-MAIL COMMUNICATIONS

ECO206 → Students:

- ECO206 uses the University's learning management system Quercus to post information about the course such as important announcements and updates. As such, you must check Quercus Announcements page and your UofT e-mail inbox daily. Please ensure that your Quercus settings are configured to "receive notifications" *and* that you have registered your UofT (not Google, Yahoo, etc.) e-mail account and are not forwarding e-mails to an external e-mail account.
- It is imperative to inform us asap by e-mail sayed.hussain@utoronto.ca of *any* changes to your name and/or e-mail address on file on ACORN, Quercus, or Crowdmark. **Penalty for violating this policy: 5% of your overall course grade.**

Students & UofT Staff → ECO206:

- Please send course-related (succinct and to the point) e-mails from your UofT e-mail account to sayed.hussain@utoronto.ca with your Student ID # and name in the subject line.
- You should ONLY e-mail with regards to official, urgent, or personal/confidential matters. In particular:
    - DO NOT e-mail questions about information that is readily available on the syllabus (we will not reply to such e-mails)
    - DO NOT e-mail questions about course-related materials/items. Instead, utilize office hours and ask these questions in class (advice: *never* ask long/complicated questions after class)
    - DO NOT e-mail Quercus/Crowdmark assessments -- if you experience a glitch submitting assessments online, take a screen shot and e-mail it and the assessments files to us and notify by e-mail that you experienced a technical issues submitting the assessment.
    - Unless specifically requested, DO NOT e-mail confidential documents such as physician medical notes etc.
    - DO NOT send messages from the Quercus "messaging system".

- **Reminder:** University of Toronto email accounts are governed by the institution's codes of conduct, meaning that the University has recourse to address any inappropriate communications (e.g., racist, aggressive, threatening, harassing, etc.) between students and other students as well as with the instructor and course staff.

QUERCUS

- ECO206 uses the University's learning management system Quercus to post, collect, and grade some assignments (such as the projects).
- Submissions in "pdf" format *must allow for OCR* (Optical Character Recognition): do not submit pdf files generated, for example, from Canva.com.
- Quercus/Turnitin Plagiarism Detection Tool: *Students will be required to submit their writing assignments (ex: projects) to Turnitin (via the Quercus course portal) for a review of textual similarity and detection of possible plagiarism. In making a submission, students assignments to be included as source documents in the reference database. These will be used solely for the purpose of detecting plagiarism. If you have an objection to the use of Turnitin for the submission of your work, please e-mail sayed.hussain@utoronto.ca to book an appointment with the instructor at least two weeks prior to the submission deadline to discuss alternative arrangements.*
- SPECIAL NOTE ABOUT GRADES POSTED ONLINE: Please also note that any grades posted are for your information only, so you can view and track your progress through the course. No grades are considered official, including any posted in Quercus at any point in the term, until they have been formally approved and posted on ACORN at the end of the course. Please contact me at sayed.hussain@utoronto.ca as soon as possible if you think there is an error in any grade posted on Quercus.

CROWDMARK

- *"This course will use Crowdmark, a collaborative online grading tool for marking and providing feedback on assessments in conjunction with Quercus. Crowdmark provides efficiencies with grading, data recording, returning term assessments and handling regrade requests. Copies of student work marked in Crowdmark, including grading and feedback, will be available online to students for at least one year. Digital (i.e., online) copies will serve as the authoritative record for course administrative purposes, and paper copies of assessments scanned and uploaded to Crowdmark will be destroyed after the term has ended and final grades are approved. If you have questions about how your information is stored on Crowdmark, please contact me at sayed.hussain@utoronto.ca"*

MISSED CLASSES

- It is the Faculty's policy that students who miss classes, for legitimate reasons or otherwise, are responsible for making up the missed material and should not expect an instructor or TA to re-teach them the material.

LATE SUBMISSIONS AND MISSED TESTS

- **Penalties:** Barring "valid accommodation requests (outlined below) the penalties for late/messed/missed submissions (ex: projects) are specified in the Marking Scheme. No accommodations will be made for late/missed course work due to "technical issues" (ex: computer viruses, hard drive crashes, stolen laptop [never the LV bag!], lost/corrupt/incompatible files, or the machine ate my homework). It is *your* responsibility to begin working on assessments "as soon as possible"
- **Documentation for Extensions or Make-up Tests**: Students who miss a Mid-Term Test (or Tests) must complete the "Missed Test Form" which will be posted at 11 PM on the test-date and open for submissions for 72 hours. Students who miss a test due to a medical reason must submit proof of a self-declared absence on ACORN or a VOI; Students who miss a test for non-medical reasons must arrange to have their College Registrar/Accessibility Services send an e-mail to sayed.hussain@utoronto.ca within 48 hours of the test start time. Conditional on approval from the department/course staff, such students will be given one opportunity to "makeup" the missed test(s) by taking a 3-hour (in-person) restricted Cumulative Makeup Midterm Test from 6 – 9 PM on Wed, August 13th in a location TBA. There is no makeup for the makeup and under no circumstances will the weight of the missed test(s) shifted to the final exam. Students who do not qualify for writing the make-up tests will receive a grade of zero for the missed test.
- Students who miss the final exam must petition the Faculty of Arts and Science for permission to write a deferred examination at a later date – for details, contact your College registrar.

RE-GRADE REQUESTS

- A form for submitting re-grade requests will be one week after the assessment has been returned to students. The form must be completed within 72 hours of being posted. We will not consider/accept re-grade quests outside of this window.
- It is important that you clearly articulate why your response merits additional marks. Pointing to specific passages in either the "chapters", lecture videos, or notes is highly recommended.
- When you submit a re-grade request, we will re-read the *entire* assessment and y**our mark could go up, down, or remain unchanged.**

GENERATIVE AI

- You may use generative artificial intelligence tools for learning and practicing the concepts in this course, but these tools may NOT be used for completing assignments in this course.
- The use of generative artificial intelligence tools or apps for assignments in this course, including tools like ChatGPT, Gemini, Microsoft Copilot and other AI writing or coding assistants, is prohibited.
- The knowing use of generative artificial intelligence tools, including ChatGPT, Gemini, Microsoft Copilot and other AI writing and coding assistants, for the completion of, or to support the completion of, an examination, term test, assignment, or any other form of academic assessment, may be considered an academic offense in this course.
- Representing as one's own idea, or expression of an idea, that was AI-generated may be considered an academic offense in this course.
- Students may not copy or paraphrase from any generative artificial intelligence applications, including ChatGPT, Gemini, Microsoft Copilot and other AI writing and coding assistants, for the purpose of completing assignments in this course.
- The use of generative artificial intelligence tools and apps is strictly prohibited in all course assignments unless explicitly stated otherwise by the instructor in this course. This includes ChatGPT, Gemini, Microsoft Copilot and other AI writing and coding assistants. Use of generative AI in this course may be considered use of an unauthorized aid, which is a form of cheating.
- This course policy is designed to promote your learning and intellectual development and to help you reach the course learning outcomes.
- See The Vice-Provost's Generative Artificial Intelligence in the Classroom: FAQ's

USE OF CELL PHONES AND LAPTOPS IN CLASS

- Technology can support student learning, but it can also become a distraction. Research indicates that multi-tasking during class time can have a negative impact on learning.
- Out of respect for your fellow students in this class, please refrain from using laptops or mobile phones for purposes unrelated to the class. Do not display any material on a laptop which may be distracting or offensive to your fellow students

COPYRIGHTS

- Students are reminded that all course materials – including lecture slides, videos, and cases – are the intellectual property of the instructor and are protected by copyright law.
- Do not download, copy, or share any course/student materials/videos without the explicit permission of the instructor.
- You cannot tape, record, or photograph/take videos of lectures -- see Section 3.2 in the A&S Academic Handbook and CTSI Guidelines on Recording Lectures and Class Sessions .

ACCESSIBILITY ACCOMMODATIONS

- The University provides academic accommodations for students with disabilities in accordance with the terms of the Ontario Human Rights Code. This occurs through a collaborative process that acknowledges a collective obligation to develop an accessible learning environment that both meets the needs of students and preserves the essential academic requirements of the University's courses and programs. Students with diverse learning styles and needs are welcome in this course. If you have a disability that may require accommodations, the first step is to contact Accessibility Services.

RELIGIOUS ACCOMMODATIONS

- As a student at the University of Toronto, you are part of a diverse community that welcomes and includes students and faculty from a wide range of cultural and religious traditions. I will make every reasonable effort to avoid scheduling tests and compulsory activities on religious holidays not captured by statutory holidays.
- Further to University Policy, if you anticipate being absent from class or missing a major course activity (such as a test or in-class assignment) due to a religious observance, please let us know by e-mailing to sayed.hussain@utoronto.ca as early in the course as possible and with sufficient notice (at least two to three weeks) so that we can work together to make alternate arrangements.

STUDENTS WITH DISABILITIES OR ACCOMMODATION REQUIREMENTS

- Students with diverse learning styles and needs are welcome in this course.
- If you have an acute or ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) at the beginning of the academic year.
- Without registration, you will not be able to verify your situation with your instructors, and instructors will not be advised about your accommodation needs.

- AS will assess your situation, develop an accommodation plan with you, and support you in requesting accommodation for your course work. Remember that the process of accommodation is private: AS will not share details of your needs or condition with any instructor, and your instructors will not reveal that you are registered with AS.

SPECIFIC MEDICAL CIRCUMSTANCES

- If you become ill and it affects your ability to do your academic work, let me know right away by sending an e-mail to to sayed.hussain@utoronto.ca with "supporting documents" (either the Absence Declaration (via ACORN) form or the University's Verification of Student Illness or Injury (VOI) form).
- Note: The VOI indicates the impact and severity of the illness, while protecting your privacy about the details of the nature of the illness. If you cannot submit a VOI due to limits on terms of use, you can submit a different form (like a letter from a doctor) provided it is an original document and contains the same information as the VOI (including dates, academic impact, practitioner's signature, phone and registration number). Additional information on the VOI available here and additional information on the Absence Declaration Tool available here.
- If you get a concussion, break your hand, or suffer some other acute injury, you should register with Accessibility Services as soon as possible.

ACCOMMODATION FOR PERSONAL REASONS

- There may be times when you are unable to complete course work on time due to non-medical reasons. If you have concerns, please inform me by e-mail (to sayed.hussain@utoronto.ca) *and* consult your College Registrar's office on how best to deal with this situation.

MENTAL HEALTH AND WELL-BEING

- As a student, you may experience challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating and/or lack of motivation, financial concerns, family worries and so forth. These factors may affect your academic performance and/or reduce your ability to participate fully in daily activities. Everyone feels stressed now and then and is a normal part of university life. Some days are better than others, and there is no wrong time to reach out. An important part of the University experience is learning how and when to ask for help. Please take the time to inform yourself of the available resources listed at http://studentlife.utoronto.ca and http://www.studentlife.utoronto.ca/feeling-distressed.

"ACADEMIC INTEGRITY": FOR *ANYTHING* WHICH COUNTS TOWARDS YOUR COURSE GRADE

- It is a course requirement that you have read the *Code of Behaviour on Academic Matters* (a complete outline of the University's policy and expectations).
- All suspected cases of academic dishonesty will be investigated following procedures outlined in *Code of Behaviour on Academic Matters* and the consequences of an academic offense can be severe. **Being unaware of the policies or what is considered unauthorized collaboration (e.g., plagiarism) is not a defense and you are expected to seek out additional information on academic integrity.** If you have questions or concerns about what constitutes appropriate academic behavior or appropriate research and citation methods, please contact me at to sayed.hussain@utoronto.ca and also visit the Academic Integrity website.
- In ECO206:
  o You may not receive assistance from another individual. This includes, but is in no way limited to, any online forum or other digital communication as well as any tutoring or assistance service. Attending "review sessions" organized by a self-described tutoring service during an assessment's availability window is an academic offence and we *will* report all suspected cases of academic misconduct to the Department of Economics and Dean's Office.
  o In *any* course assessment, including "Projects", you cannot: collaborate with anyone else, receive assistance from another individual, or "purchase/obtain" the assessment online (even if you submit a "paraphrased" version)

EQUITY, DIVERSITY, AND INCLUSION

- The University of Toronto is committed to equity, human rights, and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities.