

## Faculty of Science Course Syllabus

### Department of Economics ECON 5509: Microeconomic Theory 2022/2023 Fall Course Syllabus

**Instructor:** Prof. Mutlu Yuksel, Dalhousie University, Department of Economics

**Lectures:** Studley MCCAIN ARTS&SS 2190

**Time:** Tuesday and Thursday, 14:35-15:55

**Office:** 6220 University Avenue, B24

**Phone:** 494-6767 or 494-2026 (secretaries)

**E-mail:** [mutlu@dal.ca](mailto:mutlu@dal.ca)

**Office hours:** Thursday, 13:05-14:25 or appointment

**Course Description / Introduction:** The main objective of the course is for students to be able to analyze problems in microeconomic theory at the beginning graduate level. Students successfully completing the course will be able to comfortably work standard problems in microeconomic theory using calculus-based techniques and methods. Students will be able to develop models appropriate for different problems, present them in mathematical form, derive implications of maintained assumptions, analyze changes in model structure or form, and extend models to more complicated situations. Some of the topics that will be covered include consumer theory, theory of the firm, market structures, game theory and strategic behavior, and general equilibrium analysis.

**Course Prerequisites:** Graduate standing in the Department of Economics or permission of the instructor

#### **Course Objectives/Learning Outcomes:**

- Critically analyse and explain consumers', firms', and market behaviour using mathematical tools and diagrams.
- Possess a solid grasp of the mathematics of constrained optimisation (especially Lagrange's method) and know how to apply it to solve microeconomic problems.
- Assess the microeconomic theories and models in terms of their policy implications, advantages and limitations.
- Develop models appropriate for different problems, present them in mathematical form, derive implications of maintained assumptions

#### **Supplementary Economics Texts:**

- Mas-Colell, A.M. Whinston and J.Green, *Microeconomic Theory*, Oxford: Oxford University Press [M-CWG]
- Varian, H. R. *Microeconomic Analysis*, 3rd edition, New York: W.W. Norton and Company, 1992. [V]

- Felix Munoz-Garcia, *Advanced Microeconomic Theory: An Intuitive Approach with Examples*, The MIT Press, August 2017. [FMG]
- Jehle and Reny, *Advanced Microeconomic Theory, Third Edition*, Addison Wesley Longman, 2011. [JR]

***Supplementary Math Texts:***

- Simon and Blume, *Mathematics for Economists*, W. W. Norton and Co. (1994).
- Chiang and Wainwright, *Fundamental Methods of Mathematical Economics*, Mc-Graw Hill.

**Course Assessment:**

There will be six assignments, two midterms and a comprehensive final exam.

Your grade will be based on the following:

**Assignments 12% (4 assignments\*3% each)**

**Midterm 1 24%** October 13<sup>th</sup>

**Midterm 2 24%** November 15<sup>th</sup>

**Final 40%** December 13<sup>th</sup>

*There will be NO make-ups or extensions given for exams and assignments except with prior consent from me or in the event of an unexpected emergency.*

*If you miss a midterm for any reasons, the weight will be added to your final exam.*

**Assignments:** There will be 4 assignments.

**Midterm 1:** The midterm-1 exam will only cover consumer theory.

**Midterm 2:** The midterm-2 exam will only cover producer theory.

**Final:** The final exam will cover the subject matter of the entire course. The questions are not multiple-choice. **If you miss the final exam for a valid medical reason, you must notify the instructor immediately, provide appropriate medical documentation, and make arrangements to write-up exam as soon as health permits.**

**GRADING**

No books or notes are permitted during the exams. All exams must be taken on the date and time prescribed in the syllabus unless authorized by the instructor in advance.

**GRADES ARE NOT NEGOTIABLE.** Do not contact me after the final semester grades have been posted asking me to change your grade for any reason. [Of course, if you believe your grade was posted erroneously by all means DO contact me.] Grades will be determined according to the following scale:

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

*\*Students with permanent or temporary disabilities who would like to discuss classroom or exam accommodations are asked to come and see me as soon as possible.*

### **TOPICS:**

**Consumer Theory:** J: chs 1-2.1,2.3; V: chs 7-10; M-CWG: chs 1-4; FMG: chs 1-3  
 Preference; utility; demand; constrained optimisation; income and substitution effects; Slutsky's equation; substitutes and complements; testing demand theory; the expenditure function; indirect utility functions; duality approaches; Roy's identity; compensated demand curves; consumer surplus, aggregate demand

***MIDTERM 1: October 13<sup>th</sup>***

**Producer Theory :** JR: ch 3; V: chs 1-6; M-CWG: ch. 5; FMG: chs 4  
 Technology; production functions; profit and cost functions; duality approaches; Shephard's lemma and Hotelling's lemma; short and long-run supply functions.

**Partial Equilibrium-Perfect competition:** JR: ch 4.1; V: chs 13; M-CWG: chs 10; FMG: chs 6.1  
 Industry supply under perfect competition

***MIDTERM 2: November 15<sup>th</sup>***

**Game theory:** JR: ch 7; V: ch 15; M-CWG: chs 7, 8 ; FMG: chs 8  
 Dominant strategies, Nash equilibrium.

**Imperfect competition:** JR: ch 4.2; V: chs 14, 16; M-CWG: chs 12; FMG: chs 7,8  
 Monopoly, oligopoly and comparisons with perfect competition.

**Competitive General Equilibrium:** JR: ch 5; V: ch 17; M-CWG: chs 15,16; FMG: chs 6.4  
 The market mechanism; the two fundamental theorems of welfare economics.

**Uncertainty** J: chs 2.4; V: chs 11; M-CWG: chs 6; FMG: chs 5

***FINAL: December 13<sup>th</sup>***

## **Faculty of Science Course Syllabus University Policies and Statements**

**This course is governed by the academic rules and regulations set forth in the University Calendar and by Senate**

### **Academic Integrity**

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (The Center for Academic Integrity, Duke University, 1999). As a student, you are required to demonstrate these values in all of the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity.

**Information:** [https://www.dal.ca/dept/university\\_secretariat/academic-integrity.html](https://www.dal.ca/dept/university_secretariat/academic-integrity.html)

### **Accessibility**

The Advising and Access Services Centre is Dalhousie's centre of expertise for student accessibility and accommodation. The advising team works with students who request accommodation as a result of a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (Canada and Nova Scotia).

**Information:** [https://www.dal.ca/campus\\_life/academic-support/accessibility.html](https://www.dal.ca/campus_life/academic-support/accessibility.html)

### **Student Code of Conduct**

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner—perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

**Code:** [https://www.dal.ca/dept/university\\_secretariat/policies/student-life/code-of-student-conduct.html](https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html)

### **Diversity and Inclusion – Culture of Respect**

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness

**Statement:** <http://www.dal.ca/cultureofrespect.html>

### **Recognition of Mi'kmaq Territory**

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support. Visit or e-mail the Indigenous Student Centre (1321 Edward St) ([elders@dal.ca](mailto:elders@dal.ca)).

**Information:** [https://www.dal.ca/campus\\_life/communities/indigenous.html](https://www.dal.ca/campus_life/communities/indigenous.html)

**Important Dates** in the Academic Year (including add/drop dates)

[https://www.dal.ca/academics/important\\_dates.html](https://www.dal.ca/academics/important_dates.html)

### **University Grading Practices**

[https://www.dal.ca/dept/university\\_secretariat/policies/academic/grading-practices-policy.html](https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html)

## Student Resources and Support

### Advising

**General Advising** [https://www.dal.ca/campus\\_life/academic-support/advising.html](https://www.dal.ca/campus_life/academic-support/advising.html)

**Science Program Advisors:** <https://www.dal.ca/faculty/science/current-students/academic-advising.html>

**Indigenous Student Centre:** [https://www.dal.ca/campus\\_life/communities/indigenous.html](https://www.dal.ca/campus_life/communities/indigenous.html)

**Black Students Advising Centre:** [https://www.dal.ca/campus\\_life/communities/black-student-advising.html](https://www.dal.ca/campus_life/communities/black-student-advising.html)

**International Centre:** [https://www.dal.ca/campus\\_life/international-centre/current-students.html](https://www.dal.ca/campus_life/international-centre/current-students.html)

### Academic supports

**Library:** <https://libraries.dal.ca/>

**Writing Centre:** [https://www.dal.ca/campus\\_life/academic-support/writing-and-study-skills.html](https://www.dal.ca/campus_life/academic-support/writing-and-study-skills.html)

**Studying for Success:** [https://www.dal.ca/campus\\_life/academic-support/study-skills-and-tutoring.html](https://www.dal.ca/campus_life/academic-support/study-skills-and-tutoring.html)

**Copyright Office:** <https://libraries.dal.ca/services/copyright-office.html>

**Fair Dealing Guidelines** <https://libraries.dal.ca/services/copyright-office/fair-dealing.html>

### Other supports and services

**Student Health & Wellness Centre:** [https://www.dal.ca/campus\\_life/health-and-wellness/services-support/student-health-and-wellness.html](https://www.dal.ca/campus_life/health-and-wellness/services-support/student-health-and-wellness.html)

**Student Advocacy:** <https://dsu.ca/dsas>

**Ombudsperson:** [https://www.dal.ca/campus\\_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html](https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html)

### Safety

**Biosafety:** <https://www.dal.ca/dept/safety/programs-services/biosafety.html>

**Chemical Safety:** <https://www.dal.ca/dept/safety/programs-services/chemical-safety.html>

**Radiation Safety:** <https://www.dal.ca/dept/safety/programs-services/radiation-safety.html>

**Scent-Free Program:** <https://www.dal.ca/dept/safety/programs-services/occupational-safety/scent-free.html>

**Dalhousie COVID-19 information and updates:** <https://www.dal.ca/covid-19-information-and-updates.html>