

# Economics 357 (L01) (Intermediate Economic Theory – Microeconomics II)

Instructor: J. Church Phone: 403-220-6106 Email: jrchurch@ucalgary.ca Lecture Location: AD 142 Lecture Days/Time: MWF 10:00-10:50

Office: SS442 Office Hours: MW 11:00-12:00 (or by appointment) V

Winter 2024

### **Course Description:**

This course is the second in a pair of courses designed to acquaint students with microeconomic theory. Microeconomics is concerned with a systematic understanding of the choices of individuals, firms, and organizations. It seeks to address the social consequences of the behaviour of economic agents. This course will extend and build on the theory of the consumer, the theory of the firm, and the theory of perfect competition introduced in Economics 301. The theory of general competitive equilibrium will be studied intensively. Particular attention will be devoted to its efficiency and welfare properties. Social choice theory (what should be the allocation of resources) and public choice theory (how government policy is determined). Market failures from imperfect competition, externalities, public goods, and informational asymmetries.

### **Course Learning Outcomes:**

Students who successfully complete this course will further develop their mastery and understanding of the methodology of microeconomic theory by applying it to the following topics.

- (i) Extensions to Consumer Theory: Intertemporal Choice, Asset Markets, Uncertainty, Risky Assets, Insurance
- (ii) Market Power: Monopoly, Price Discrimination
- (iii) Imperfect Competition and Game Theory: Prisoner's Dilemma and Nash equilibrium; Cournot, Bertrand, and Collusion
- (iv) General Equilibrium and the Fundamental Theorems of Welfare Economics: Exchange Economy; Production and General Equilibrium (2x2x2 and Robinson Crusoe)
- (v) Social Welfare and Economic Equity: Bergson Social Welfare Functions; Arrow's Impossibility Theorem
- (vi) Market Failure I, Externalities: Tragedy of the Commons, Pigouvian Taxes and Subsidies, Property Rights, The Coase Theorem
- (vii) Market Failure II, Public Goods: Optimality Condition; Private Financing and the Free Rider Problem
- (viii) Market Failure III, Asymmetric Information: Adverse Selection, Moral Hazard, Principles and Agents

(ix) Public Choice: Government Failure

## **Course Outline:**

- 1) Introduction
  - a) Objective and Overview
  - b) Methodology
  - c) Pareto Optimality and Gains from Trade
- 2) Topics in the Theory of the Consumer
  - a) Intertemporal Choice
  - b) Asset Markets
  - c) Uncertainty
  - d) Risky Assets
- 3) Imperfect Competition and Game Theory
  - a) Prisoner's Dilemma and Nash
  - b) Cournot, Bertrand, and Collusion
- 4) General Equilibrium and the Fundamental Theorems of Welfare Economics
  - a) Exchange Economy
  - b) Production and General Equilibrium
    - i) Robinson Crusoe
    - ii) 2X2X2
- 5) Social Welfare and Economic Equity
  - a) Social Welfare Functions
  - b) Arrow's Impossibility Theorem
- 6) Market Failure I: Market Power
  - a) Monopoly in General Equilibrium
- 7) Market Failure II: Externalities
  - a) Tragedy of the Commons
  - b) Pigouvian Taxes and Subsidies
  - c) Property Rights
  - d) The Coase Theorem
- 8) Market Failure III: Public Goods
  - a) Optimality Condition
  - b) Private Financing and the Free Rider Problem
- 9) Market Failure IV: Asymmetric Information
  - a) Adverse Selection
  - b) Moral Hazard
  - c) Principles and Agents
- 10) Public Choice: Government Failure

# Prerequisites/Corequisites:

Econ 301

# Required Textbook(s):

Hal Varian, Intermediate Microeconomics: A Modern Approach, 9th ed., Norton 2014.

# **Recommended Textbook(s):**

Roberts, R. 2001. *The Invisible Heart*. Cambridge: MIT Press. Spufford, F. 2010. *Red Plenty*. London Faber and Faber.

## **Books on Reserve:**

The list of reserve titles, if any, is posted at the course D2L site.

## **Required Access to Technology:**

None.

## Desire2Learn:

This course will make use of the Desire2Learn (D2L) platform. Students who are registered in the course can log on at <u>http://d2l.ucalgary.ca</u> through their student centre. Please note that D2L features a class e-mail list that may be used to distribute course-related information. These e-mails go to your University of Calgary e-mail addresses only.

# **Tutorials:**

Students are expected to attend the weekly tutorial section to which they have been assigned. During the tutorials, the TA will discuss pre-assigned questions and additional material relevant to the course that is not covered in lectures. The discussion section is Monday from 13:00-13:50 in ENE 243.

## PASS:

Econ 357 is part of the Peer Assisted Study Session ("PASS") program funded by the Student Success Centre and the Department of Economics. PASS sessions for Econ 357 are offered weekly during which students work collaboratively, guided by a PASS Leader, on difficult concepts. PASS offers alternative approaches and strategies to develop an understanding of the course material. The PASS Leader for ECON 357 has recently taken the course, attends lectures, and has been trained to facilitate collaborative learning and group study. PASS sessions are about students working together to understand course material and develop better academic habits. Students who attend PASS regularly have higher course GPAs and lower DFW rates than those who do not.

### **Grade Determination:**

Midterm Exam	20%
Assignments	30%
Final Exam	50%
	100%

### **Examination Details:**

Tests and exams WILL NOT involve multiple choice questions.

Programmable calculators, cellphones, textbooks, course notes, and other electronic devices will not be allowed during the writing of tests or final examinations. Students are reminded that simply being able to access their cellphone during an exam is academic misconduct.

The exact date for the in-class midterm will be announced at least one week in advance.

### **Grading Policies:**

The official grading system will be used. See <u>http://www.ucalgary.ca/pubs/calendar/current/f-1-1.html</u>.

Students must receive a passing grade on the final exam to pass the course. Students committing academic misconduct during the final exam will not receive a passing grade for the course.

If a student's letter grade on the final exam exceeds their midterm(s) letter grade, the weight of the midterm(s) is (are) transferred to the final exam. The student must have written the midterm(s) or provided supporting documentation for the absence(s).

As per the Writing Across the Curriculum Statement in the Calendar, writing and grading thereof will be a factor in the evaluation of student work. <u>See https://www.ucalgary.ca/pubs/calendar/current/e-2.html</u>.

THERE WILL BE NO MAKEUP OR DEFERRED QUIZZES/TESTS/EXAMS under any circumstances, nor may the quizzes/tests/exams be written early. Students unable to write the quizzes/tests/exams because of documented illness, family emergency, religious observance, or university-sanctioned event will have the weight shifted to the final examination; otherwise a grade of zero will be assigned.

The final examination will be comprehensive, scheduled by the Registrar, held in a classroom, and last 2 hours. If a student cannot write their final exam on the date assigned by the Registrar's Office, they need to apply for a deferred exam <a href="https://www.ucalgary.ca/pubs/calendar/current/g-3-4.html">https://www.ucalgary.ca/pubs/calendar/current/g-3-4.html</a>. Under no circumstance will this be accommodated by the Department.

Any student work which remains undistributed after the last day of classes will be available to students through the instructor's office during the instructor's office hours.

## **Reappraisal of Grades:**

For Reappraisal of Graded Term Work, see Calendar I.2 http://www.ucalgary.ca/pubs/calendar/current/i-2.html

For Reappraisal of Final Grade, see Calendar I.3 http://www.ucalgary.ca/pubs/calendar/current/i-3.html

# Academic Misconduct and Intellectual Honesty:

Academic Misconduct refers to student behavior that compromises proper assessment of students' academic activities and includes: cheating; fabrication; falsification; plagiarism; unauthorized assistance; failure to comply with an instructor's expectations regarding conduct required of students completing academic assessments in their courses; and failure to comply with exam regulations applied by the Registrar.

Statement of Intellectual Honesty, see Calendar K.3 https://www.ucalgary.ca/pubs/calendar/current/k-3.html

Plagiarism and Other Academic Misconduct https://ucalgary.ca/student-services/student-success/learning/academic-integrity

# Academic Accommodations:

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services. SAS will process the request and issue letters of accommodation to instructors. Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their instructor. The full policy on Student Accommodations is available at

https://www.ucalgary.ca/legalservices/sites/default/files/teams/1/Policies-Accommodation-for-

Page 5

<u>Students-with-Disabilities-Procedure.pdf</u> and <u>https://www.ucalgary.ca/legal-</u> services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf.

# Freedom of Information and Protection of Privacy (FOIP) Act:

Personal information is collected in accordance with FOIP. Assignments can only be returned to the student and will be accessible only to authorized faculty and staff. For more information, see <a href="https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/faq-privacy-faculty-members.pdf">https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/faq-privacy-faculty-members.pdf</a> and <a href="https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/faq-privacy-faculty-members.pdf">https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/faq-privacy-faculty-members.pdf</a> and <a href="https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/faq-privacy-faculty-members.pdf">https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/faq-privacy-faculty-members.pdf</a>

# Internet and Electronic Communication Device Information:

The use of cell phones for any purpose in class is prohibited. Computers and tablets may be used for note taking only unless otherwise authorizes by the instructor.

# **Copyright Legislation:**

See the University of Calgary policy on Acceptable Use of Material Protected by Copyright at <u>https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Acceptable-Use-of-Material-Protected-by-Copyright-Policy.pdf</u>. Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

# **Recording of Lectures:**

Recording of lectures is prohibited, except for audio recordings authorized as an accommodation by SAS or an audio recording for individual private study and only with the written permission of the instructor. Any unauthorized electronic or mechanical recording of lectures, their transcription, copying, or distribution, constitutes academic misconduct. See <u>https://www.ucalgary.ca/pubs/calendar/current/e-6.html</u>.

# Instructor Intellectual Property:

Course materials created by instructors (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the instructor. These materials may NOT be reproduced, redistributed or copied without the explicit consent of the instructor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing.

# **Important Dates:**

Please check: <u>http://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html.</u>

# Student Organizations:

Faculty of Arts Students' Association (F.A.S.A.):

Economics Department Representative Office: SS 803, E-mail: <u>econrep@fasaucalgary.ca</u> and Web: <u>www.fasaucalgary.ca</u>.

Society of Undergraduates in Economics: <u>https://www.ucalgarysue.com/</u>.

Society of Undergraduates in Economics is a student run organization whose main purpose is to assist undergraduate economics students to succeed both academically and socially at the University of Calgary. Services include access to the exam bank, career events such as Industry Night and information sessions, mentorship programs, and social events for members. They invite you to join by contacting SUE at <u>sue@ucalgarysue.com</u>

## Faculty of Arts Program Advising and Student Information Resources:

- Have a question, but not sure where to start? The Arts Students' Centre is your information
  resource for everything in Arts! Drop in at SS102, call them at 403-220-3580, or email them at
  <u>artsads@ucalgary.ca</u>. You can also visit the Faculty of Arts website at
  <u>http://arts.ucalgary.ca/undergraduate</u>, which has detailed information on common academic
  concerns, including program planning and advice.
- For registration (add/drop/swap), paying fees and assistance with your Student Centre, contact Enrolment Services at 403-210-ROCK [7625] or visit them in the MacKimmie Tower.

## Student Support and Resources:

- See <a href="https://www.ucalgary.ca/registrar/registration/course-outlines">https://www.ucalgary.ca/registrar/registration/course-outlines</a> for information on campus mental health resources, the Student Ombuds Office, Student Success Centre, Safewalk, and Emergency Evacuation and Assembly.
- Online writing resources are available at <u>https://ucalgary.ca/student-services/student-</u> <u>success/writing-support</u>.

### Notes:

- 1. Students are responsible for all assigned material, e.g., supplementary material posted on D2L, regardless of whether or not the material was covered in class.
- 2. Students are reminded that this course has a calculus prerequisite and calculus compatible notation will be used. This course makes extensive use of high school level algebra. Students do not need to have an intimate knowledge of calculus to complete this course. It can easily be argued that NO knowledge of calculus is required beyond if y=x^2 then dy/dx=2x. Please note, however, that calculus compatible notation will be used. This course makes extensive use of high school level algebra.
- 3. Economic theory provides the structure, or framework, for economic inquiry. For this reason, Econ 301 and 357 are the two most important courses majors in economics complete at the University of Calgary.

Economic theory has four elements that students are expected to master:

(i) Students will become familiar with the foundation of economic reasoning. This involves a fundamental assumption—that individuals make choices based on their perception of their self-interest. The consequence of this assumption is that individual choices and actions depend on incentives. In turn, incentives depend on the interaction of preferences and constraints on time, income, technology, and ability. This framework explains how choices can be understood in terms of their incremental or marginal costs and benefits and how changing an individual's perception of either incremental costs or benefits will change behaviour.

(ii) Students will master equilibrium analysis which involves aggregating over the choices of individuals and ensuring that the choices of individuals are consistent—that what individuals plan to do they are in fact able to do. Equilibrium analysis underlies how economists explain resource allocation in the economy.

(iii) A key part of equilibrium analysis is comparative statics: asking how the equilibrium will change when conditions change.

(iv) Students will understand the strengths, limitations, and value judgments that underlie the notion of efficiency. Efficiency is the yardstick by which economists measure the social desirability of resource allocation.

- 4. A detailed list of topics and readings will be provided. Required and recommended readings will be drawn from the textbooks, from titles on reserve in the library, electronically from the internet and the library's collection, and handouts posted to D2L.
- 5. Students will be given at least one week to complete each assignment. Late assignments will never be accepted. In cases of documented illness, family emergency, religious observance, or a university-sanctioned event, extra weight will be given to the final examination.

JRC 2023-11-21