

## Economics 715 (L01) (Advanced Econometrics II)

Instructor: Eric Mbakop  
Phone: 403 210 6619  
Email: eric.mbakop@ucalgary.ca

Lecture Location: SS423  
Lecture Days/Time: MF 11:00 – 12:15

Office: SS 420  
Office Hours: TBD

(Winter 2022)

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### Course Description:

This is a first year graduate course covers the theoretical underpinnings of identification, estimation and inference in modern microeconometrics. The course is divided into two parts. The first part provides a review of probability theory and mathematical statistics. Topics covered will include: expectation and conditional expectations; families of distributions and transformations; statistical theory, and the fundamental results of asymptotic theory that underlie identification and inference in modern econometrics. The second part of the course will be devoted to estimation and testing procedures. This section will mainly focus on the Ordinary Least Squares Estimator (OLS), The Maximum Likelihood Estimator (MLE) and the Generalized Method of Moments (GMM). We will discuss the assumptions that underlie each and their resulting finite sample and asymptotic properties. If time permits, the course will end with a brief introduction to nonparametric regression and density estimation.

### Course Objectives/Learning Outcomes:

By the end of the course, students will have a strong understanding of the theory that underlies the most commonly applied estimation techniques in econometrics. Students will be able to not only use “pen and paper” to derive properties of estimators, but will be able to use computational methods to evaluate the estimators.

### Prerequisites/corequisites:

Econ 615

### Required Textbook(s):

Bruce Hansen: Econometrics (available online)

### Recommended Textbook(s):

Wooldridge: Econometrics of Cross Section and Panel Data.

### Desire2Learn:

This course will make use of the Desire2Learn (D2L) platform. Students who are registered in the course can log on at <http://d2l.ucalgary.ca> 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.

**Grade Determination/Assessment:**

ASSIGNMENTS	30%
MIDTERM EXAM (DATE TBD)	30%
FINAL EXAM	40%
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	100%

Part of the ASSIGNMENTS component will require students to give inclass (online) presentations of their solutions to some homework problems.

**Grade Determination and Final Examination Details**

Department of Economics Criteria for Letter Grades. Economics professors use the following criteria when assigning letter grades:

Grade	Grade Point Value	Description		Grade	Grade Point Value	Description
A+	4.00	Outstanding		C+	2.30	All grades below "B-" are indicative of failure at the graduate level and cannot be counted toward Faculty of Graduate Studies course requirements. Individual programs may require a higher passing grade.
A	4.00	Excellent-superior performance, showing-comprehensive understanding of subject matter		C	2.00	
A-	3.70	Very good performance		C-	1.70	
B+	3.30	Good performance		D+	1.00	
B	3.00	Satisfactory performance		D	1.00	
B-	2.70	Minimum pass for students in the Faculty of Graduate Studies		F	0	

**Grading Scale**

A+	95 – 100	B	73 – 76	C-	60 – 62
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A passing grade on any particular component of the course is not required for a student to pass the course as a whole.

There will be a department scheduled final examination, held in a classroom, lasting 2 hours. Non-programmable calculators WILL be allowed during the writing of tests or final examinations.

Tests and exams will not involve multiple choice questions.

**Absence from a Test/Exam**

THERE WILL BE NO MAKEUP OR DEFERRED QUIZZES under any circumstances, nor may the quizzes be written early. Students unable to write the quizzes 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. If a student cannot write their final exam on the date assigned by the Department, they need to arrange for a deferred exam with the department.

**Notes:**

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.

**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:**

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.

Student committing academic misconduct during the final exam will not receive a passing grade for the course.

For information on the Student Academic Misconduct Policy, Procedure and Academic Integrity, please visit: <https://www.ucalgary.ca/pubs/calendar/current/k-3.html>

**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/legal-services/university-policies-procedures/accommodation-students-disabilities-procedure>

**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 <https://www.ucalgary.ca/legal-services/access-information-privacy>

**Copyright Legislation:**

See the University of Calgary policy on Acceptable Use of Material Protected by Copyright at <https://www.ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy> Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

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.

**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 <https://www.ucalgary.ca/pubs/calendar/current/e-6.html>.

**Important Dates:**

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

**Student Organizations:**

Faculty of Grad Studies website: <http://grad.ucalgary.ca/home>

Graduate Students Association: <http://gsa.ucalgary.ca/>

Professional Development for Grad Students

Workshops and resources can be found at <http://www.ucalgary.ca/mygradskills/>

Economics Graduate Association: <http://econ.ucalgary.ca/ega/>

**Student Support and Resources:**

- See <https://www.ucalgary.ca/registrar/registration/course-outlines> 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 <https://ucalgary.ca/student-services/student-success/writing-support>.
- 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.

EDM

2021-12-14