

## Economics 705 (Advanced Econometrics I)

Instructor: Eric Mbakop  
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Lecture Location: SS 423  
Lecture Days/Time: MW 14:00 – 15:15

Office: SS 420  
Office Hours: TBD

(Fall 2019)

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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.  
Cameron and Trivedi: Microeconometrics

**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%
	100%

Part of the ASSIGNMENTS component will require students to give inclass 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.

**Reappraisal of Grades and Intellectual Honesty:**

*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>

*Statement of Intellectual Dishonesty, see Calendar K.4*

<http://www.ucalgary.ca/pubs/calendar/current/k-4.html>

*Plagiarism and Other Academic Misconduct, see Calendar K.5*

<http://www.ucalgary.ca/pubs/calendar/current/k-5.html>

**Academic Accommodations:**

The student accommodation policy can be found at: [ucalgary.ca/access/accommodations/policy](http://ucalgary.ca/access/accommodations/policy).

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities [ucalgary.ca/policies/files/policies/student-accommodation-policy](http://ucalgary.ca/policies/files/policies/student-accommodation-policy).

Students needing an Accommodation based on a Protected Ground other than disability should communicate this need, preferably in writing, to the course instructor.

**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

<http://www.ucalgary.ca/legalservices/files/legalservices/faq-students.pdf> and

[http://www.ucalgary.ca/legalservices/files/legalservices/faq-faculty\\_0.pdf](http://www.ucalgary.ca/legalservices/files/legalservices/faq-faculty_0.pdf).

**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 authorized by the instructor.

**Copyright Legislation:**

See the University of Calgary policy on Acceptable Use of Material Protected by Copyright at [www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright.pdf](http://www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright.pdf).

Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

**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 Library Block.

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