

University of Toronto
ECO227Y1Y
QUANTITATIVE METHODS IN ECONOMICS
2008-2009
Lectures: Thursday, 5:00-7:00 p.m., LM162
Tutorials: Thursday, 7:00-8:00 p.m., LM162

Instructors:

Frank Yang (Fall)

Department of Economics

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Office Hour: F12-1

Course Website (Fall): <http://www.chass.utoronto.ca/~zfyang/eco227/>

Junichi Suzuki (Spring)

Department of Economics

Office: Sidney Smith Hall, Room 5016H

Telephone: (416) 978-4417

E-mail: j.suzuki@utoronto.ca

Office hours: Will be announced in spring

Textbook:

R. Larsen and M. Marx, *An Introduction to Mathematical Statistics and Its Applications*, Fourth Edition, Prentice Hall. ISBN: 0131867938

Prerequisites:

ECO100Y1(70%);MAT133Y1(63%)/(MAT123H1(63%),124(63%))/MAT135Y1(60%)/MAT137Y1(55%)/MAT157Y1(55%);

Prerequisites are strictly checked and enforced and must be completed **before** taking a course. It is the student's responsibility to check the prerequisites before enrolling in any course. By taking this course you acknowledge that you will be removed from the course at anytime if you do not meet all requirements set by the Department of Economics. See [Faculty of Arts and Science Calendar](#) for details.

Course Outline:

This course provides an introduction to probability theory and advanced statistical methods intended for economics specialist. The course largely consists of two parts. In Fall, we study various concepts that are useful to characterize distribution of random variables. These concepts include independence, expected value, variance and some particular

distributions. In Spring, we study methods that attempt to *infer* characteristics of random variables from observed data. These methods include hypothesis testing, regression and analysis of variance.

Tutorials:

Teaching assistants will hold a one-hour tutorial section after lectures. The TAs will go over selected questions from the textbook and return term tests.

Marking Scheme

There are four problem sets, three term tests and one final exam.

Each of your best **three** problem sets is worth 1% of the total grade. Each of your best **two** term tests is worth 25% of the total grade. The dates for the term test and problems will be announced in advance.

Final exam is two-hour long and accounts for the 47% of the total grade. Final exam covers the entire course and both instructors submit questions.

Policies on Missed Problem Sets and Tests

Late submission of problem sets will not be accepted under any circumstances. Instead, we only count the best three problem sets for the total grade as shown above.

If you miss one **term** test for **any** reason, your term test grades are based on the other two term tests according to our making scheme described above. If you miss more than one term tests for **any** reason, you earn zero credit for at least one missed term test, again, according to our making scheme. There are **no** makeup tests for term tests.

If you miss the **final** exam for reasonable reasons, you must initiate petitions about incomplete or missed final examinations within five working days after the end of the examination period. Note that **late petitions and requests for deferred examinations based on travel, employment or personal plans will not be considered**. See <http://www.artsandscience.utoronto.ca/ofr/calendar/rules.htm#petitions> for the details of this process.

Email Policy (Fall)

Email is to be used as a last resort. Please check the webpage frequently for announcements. Please also check the course webpage and course outline first. If you have a question regarding the material, please come and see me or the TA during office hours.

Note that you must provide your name and student number in your email or your email will be ignored.

-Email policy for spring can be different and will be announced at the first lecture in spring.

Academic Misconduct:

Students should note that copying, plagiarizing, or other forms of academic misconduct will not be tolerated. Any student caught engaging in such activities will be subject to academic discipline ranging from a mark of zero on the assignment, test or examination to dismissal from the university as outlined in the academic handbook. Any student abetting or otherwise assisting in such misconduct will also be subject to academic penalties.

Economics Study Centre

The Centre provides a place where first- and second-year students can meet and study with peer mentors who are selected from the ranks of third- and fourth-year Economics and Commerce students who have taken the same courses, often with the same instructors, in a mutually beneficial peer mentoring program. Students who participate in the Centre have the opportunity to work one-on-one or to form study groups, as well as develop academic and personal skills. The Centre is also a place for students across all four years to meet. The Centre's peer study groups complement the more problem- and test-oriented course tutorials and aid centres that are staffed by graduate students. The Centre will be open from 2:00-6:00 pm Monday – Friday beginning in late September. Exact times and location will be announced shortly at

<http://www.economics.utoronto.ca/index.php/index/undergraduate/load/studyCentre>

Course Calendar for Fall semester (tentative)

	Date	Contents
1	9/11	Sample Space (2.2)
2	9/18	Probability (2.3, 2.4)
3	9/25	Independence, Combinatorics (2.5, 2.6, 2.7)
4	10/2	Binomial Probability (3.2)
5	10/9	Random Variable (3.3, 3.4)
6	10/16	Expected Value, Variance (3.5, 3.6)
7	10/23	[First Term Test], Joint probability (3.7)
8	10/30	Combining Random Variables (3.8, 3.9)
9	11/6	Covariance, Conditional Probability (11.4, 3.11)
10	11/13	Moment Generating Function, Poisson Distribution (3.12, 4.2)
11	11/20	Normal Distribution (4.3)
12	11/27	Geometric Distribution, Gamma Distribution (4.4, 4.6)
13	12/4	Second Term Test

Course calendar in spring will be available in the first lecture of the spring semester.



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COURSE PREREQUISITES

Under Faculty of Arts and Science regulations, students are responsible for fulfilling prerequisites and corequisites. Students enrolled in courses for which they do not have the published prerequisites may have their registration in those courses cancelled at any time without warning.

The Department of Economics supports this requirement and strictly enforces it. It is the student's responsibility to check the prerequisites before enrolling in any course. Any student who lacks one or more prerequisites for any 200+ series ECO course but decides to enrol anyway will eventually be identified through a prerequisite check and removed from the course. It may then be too late to enrol in another course, which may add time to complete the degree requirements. Please note that instructors cannot waive prerequisites.

Students who believe they have completed courses equivalent to the published prerequisites at another institution or at the University of Toronto at Scarborough must submit a transcript from that institution to Ms. Robbie Innes, Undergraduate Administrator, or to Ms. Sarah Kim, Commerce Assistant. This should be done as early as possible, preferably prior to enrolling in a course. Failure to do so will inevitably result in the student being removed from the course, usually after classes have started. Please note that a "letter of permission" from your home institution or campus means that you will receive a transfer credit upon completion of a course offered on the St. George campus but not that you are authorized to enrol in the course. Only the Department of Economics on the St. George campus can issue such authorization.

If a student has formally been granted a transfer credit for a specific course, that transfer credit will automatically be accepted for prerequisite purposes.

Requests to waive prerequisites are very rarely approved and only under the most exceptional circumstances. If, after reading this notice, you still decide to submit such a request, you should arrange a meeting with Ms. Robbie Innes (Undergraduate Administrator) or Ms. Sarah Kim (Commerce Assistant) and bring a copy of your full academic record to that meeting.

François R. Casas
Professor & Undergraduate Associate Chair