# Department of Economics University of Toronto Sept 2018–Apr 2019

## Course ECO220Y1Y Quantitative Methods in Economics-L0101 & L0501

### **Time and Location**

L0101 Monday 14:00–16:00 in EM 001 (Lectures)

**Tuesday** 16:00–18:00 in MP 102 (DACM/tutorials)

L0501 Monday 11:00–13:00 in OI 2212 (Lectures)

Tuesday 16:00–18:00 in OI 2212 or MP 102 (DACM/tutorials)

See the section "Course Schedule" below on the details of the class times. Dr. Yu will teach the lectures, and the TA will teach the tutorials.

#### **Instructor** Victor Yu

E-mail victor.yu@utoronto.ca

(Please mention that you are a student in ECO220 in your email. Otherwise your email may be replied at a later time. Try to avoid attachments in your email.)

**Office hours** Tuesday 14:00–16:00 in GE164\* by appointments only.

\*Dr. Yu does not have an office at the St. George campus. If possible, please communicate with Dr. Yu using email. If you have to talk to Dr. Yu in person, please email him to book an appointment on Tuesday 14:00–16:00. Dr. Yu will book a room in the Department of Economics at 150 St. George, for the appointment. Most likely the room is GE164.

### Website Quercus

**Textbook** Sharpe, DeVeaux, Velleman, Wright: Business Statistics, Third Custom Canadian Edition for ECO220, Pearson 2017

Marking	Date	Time	Weight	Location
Scheme	Test 1 2018–10–09 (Tue)	4–6pm	14%	EX100
	Test 2 2018–11–13 (Tue)	4–6pm	16%	EX100
	Test 3 2019–01–15 (Tue)	4–6pm	16%	EX100
	Test 4 2019–03–05 (Tue)	4–6pm	17%	EX100
	Test 5 2019–04–02 (Tue)	4–6pm	(optional)*	EX100
	DACM**	_	12%	
	Final Exam		25%	

<sup>\*</sup> Test 5 is an optional test. It covers all the material in this course. If you miss one term test, the missing test score is assumed equal to test 5. If you miss more than one test, the first missing test score is assumed equal to test 5 and the other missing tests scores are zero. If you have written all 5 tests and if the lowest score of tests 1–4 is less than test 5, then this lowest score is replaced by test 5; otherwise test 5 score is discarded. It is to your advantage to write test 5.

<sup>\*\*</sup> The Data Analysis Course Module (DACM) complements our course and is required for all sections of ECO220Y1Y. It runs from September through April. You will dive into lots of real data and research and replicate key findings. There are five modules (A through E) and five online

tests. The DACM Handbook (on the DACM portal site) guides you through this required yearlong module.

W	eek Date		Char		
1	2018–09–10 (Mon)			Statistics, Data, Population, Sample	
	2018–09–11 (Tue)	DACM tutorial	Ι	L0101 No class 4-5pm; DACM 5-6pm in MP102	
				_0501 DACM 4-5pm in MP102; No class 5-6pm	
2	2018–09–17 (Mon)	Lecture 2 5		<b>Quantitative data</b>	
	2018–09–18 (Tue)	DACM tutorial		L0101 No class 4-5pm; DACM 5-6pm in MP102	
			I	_0501 DACM 4-5pm in MP102; No class 5-6pm	
3	2018–09–24 (Mon)	Lecture 3 5		<b>Quantitative data</b>	
	2018–09–25 (Tue)	Lecture 4 6	5 8	Scatterplots, Association, Correlation	
		7	' I	Linear Regression	
			Ι	L0101 No class 4-5pm, lecture 4 at 5-6pm in MP102	
			I	L0501 lecture 4 at 4-5pm in MP102; No class 5-6pm	
	<u>O</u> :	nline TEST in Da	AC	M (Module A) due September 26	
1	2018–10–01 (Mon)	Lecture 5 7		Linear Regression (continued)	
	2018–10–02 (Tue)	Course tutorial	I	L0101 4-6pm in MP102	
			I	_0501_4-6pm in OI2212	
5	2018–10–08 (Mon)	Thanksgiving D	ay,	no class	
	2018–10–09 (Tue)	Test 1 (4–6 pm	in l	EX100 for both sections)	
5	2018–10–15 (Mon)	Lecture 6 8	B	Randomness and Probability	
	2018–10–16 (Tue)	DACM tutorial	Ι	L0101 No class 4-5pm; DACM 5-6pm in MP102	
			I	_0501_DACM 4-5pm in MP102; No class 5-6pm	
7	2018–10–22 (Mon)	Lecture 7 8	3 I	Randomness and Probability (continued)	
	2018–10–23 (Tue)	DACM tutorial	Ι	L0101 No class 4-5pm; DACM 5-6pm in MP102	
			I	_0501_DACM 4-5pm in MP102; No class 5-6pm	
3	2018–10–29 (Mon)	Lecture 8 9	) I	Random Variables, Probability Distribution	
	2018–10–30 (Tue)	Lecture 9 9	) I	Random Variables, Probability Distribution	
			(	continued)	
Online TEST in DACM (Module B) due Oct 31					
	2018–11–05 (Mon)	Reading Week,	no o	class	
	2018–11–06 (Tue)	Reading Week,	no o	class	
9	2018–11–12 (Mon)	Lecture 10 1	0 8	Sampling Distributions	
	2018–11–13 (Tue)	Test 2 (4-6 pm	in F	EX100 for both sections)	
10	2018–11–19 (Mon)	Lecture 11 1	0 8	Sampling Distributions (continued)	
	2018–11–20 (Tue)	Lecture 12 1	0 8	Sampling Distributions (continued	
11	2018–11–26 (Mon)	Lecture 13 1	1 (	Confidence Intervals for Proportions	
	2018–11–27 (Tue)	DACM tutorial	Ι	L0101 No class 4-5pm; DACM 5-6pm in MP102	
	· ,			L0501 DACM 4-5pm in MP102; No class 5-6pm	
12	2018–12–03 (Mon)	Lecture 14 1		Confidence Intervals for Proportions (continued)	
L				Hypothesis Testing	

Chapter

Week

Date

13 2019–01–07 (Mon)	<b>Lecture 14</b> 12.1–12.10 Testing Hypotheses on proportions						
2019–01–08 (Tue)	DACM tutorial L0101 No class 4-5pm; DACM 5-6pm in MP102						
` ,	L0501 DACM 4-5pm in MP102; No class 5-6pm						
14 2019–01–14 (Mon)	<b>Lecture 15</b> 12.1–12.10 (continued)						
2019–01–15 (Tue)	Test 3 (4-6 pm in EX100 for both sections)						
	erage of Test 3 is posted in a document "Information for Test 3")						
15 2019–01–21 (Mon)	<b>Lecture 16</b> 13.1–13.4 Confidence Intervals and Hypothesis						
,	Tests for the Means						
2019-01-22 (Tue)	DACM tutorial L0101 No class 4-5pm; DACM 5-6pm in MP102						
((	L0501 DACM 4-5pm in MP102; No class 5-6pm						
16 2019–01–28 (Mon)	<b>Lecture 17</b> 13.5–13.7 (continued)						
2019–01–29 (Tue)	DACM tutorial L0101 No class 4-5pm; DACM 5-6pm in MP102						
2013 01 23 (100)	L0501 DACM 4-5pm in MP102; No class 5-6pm						
Online TEST in DA	ACM (Module C) due 6 pm, Wed Jan 30						
17 2019–02–04 (Mon)	Lecture 18 14.1–14.4 Comparing Two Means – (continued)						
2019–02–05 (Tue)	DACM tutorial L0101 No class 4-5pm; DACM 5-6pm in MP102						
	L0501 DACM 4-5pm in MP102; No class 5-6pm						
18 2019–02–11 (Mon)	Lecture 20 18.1–18.5 Inference for Regression						
2019–02–12 (Tue)	DACM tutorial L0101 No class 4-5pm; DACM 5-6pm in MP102						
2017 02 12 (166)	L0501 DACM 4-5pm in MP102; No class 5-6pm						
2019–02–18 (Mon)	Family day, no class						
2019–02–19 (Tue)	Reading week, no class						
19 2019–02–25 (Mon)	Lecture 22 18.1–18.5 Inference for Regression						
2019–02–26 (Tue)	<b>Lecture 23</b> 19.1–19.8 Understanding Regression Residuals						
,	20.1–20.4 Multiple Regression						
	L0101 No class 4-5pm, lecture at 5-6pm in MP102						
	L0501 lecture at 4-5pm in MP102; No class 5-6pm						
Online TEST in DA	ACM (Module D) due 6 pm, Wed Feb 27						
20 2019–03–04 (Mon)	Lecture 24 20.1–20.4 Multiple Regression (continued)						
2019–03–05 (Tue)	Test 4 (4–6 pm in EX100 for both sections)						
(Details on the cove	rage of Test 4 is posted in a document "Information for Test 4")						
21 2019–03–11 (Mon)	Lecture 25 20.1–20.4 Multiple Regression						
2019–03–12 (Tue)	DACM tutorial L0101 No class 4-5pm; DACM 5-6pm in MP102						
	L0501 DACM 4-5pm in MP102; No class 5-6pm						
22 2019–03–18 (Mon)	Lecture 26 20.1–20.4 Multiple Regression (continued)						
2019–03–19 (Tue)	DACM tutorial L0101 No class 4-5pm; DACM 5-6pm in MP102						
	L0501 DACM 4-5pm in MP102; No class 5-6pm						
23 2019–03–25 (Mon)	<b>Lecture 27</b> 21.1–21.6 Building Multiple Regression Models						
2019–03–26 (Tue)	DACM tutorial L0101 No class 4-5pm; DACM 5-6pm in MP102						
	L0501 DACM 4-5pm in MP102; No class 5-6pm						
24 2019–04–01 (Mon)	<b>Lecture 28</b> 21.1–21.6 Building Multiple Regression Models						
2019–04–02 (Tue)	Test 5* (4–6 pm in EX100 for both sections)						
	* Optional. See Page 1 for details.						
· · · · · · · · · · · · · · · · · · ·	erage of Test 5 is posted in a document "Information for Test 5")						
Online TEST in DACM (Module E) due 6 pm, Wed Apr 3.							
2019–04–06 to 2019	2019-04-06 to 2019-04-30 Final exam period						

## **Exercises from textbook**

Work out at least 10 odd-numbered exercises from each chapter in the textbook. The more questions you work on, the better you will understand the material.

## **Statistics Tables**

We use the following statistics tables in this course:

- Standard Normal Table
- Student's *t*–table
- *F*–table

These tables are posted in Blackboard and they will be attached to your tests and the final exam. These statistics tables look different than the statistics tables in the textbook. Make sure that you know how to read the statistics tables posted in Quercus.