Department of Economics
University of Toronto
Summer 2021

Course **ECO220Y1Y Introduction to Data Analysis and Applied Econometrics**
Sections L0101 and L0301

Instructor **Victor Yu**
E-mail **victor.yu@utoronto.ca**
(Please mention that you are a student in ECO220 in your email. Otherwise you will get my reply in only one sentence "what course are you taking?")

Office hours: Due to COVID-19, there are no in-person office hours. Please email Dr. Yu regarding this course.

Website **Quercus**

Time and Location

- **L0101** **Lecture** **Monday and Wednesday 10:00–12:00 online in Quercus.**
  Tutorial **Friday 10:00–12:00 online in Quercus**
- **L0301** **Lecture** **Monday and Wednesday 13:00–15:00 online in Quercus.**
  Tutorial **Friday 10:00–12:00 online in Quercus**

Dr. Yu teaches the lectures, the TAs teach tutorials. Some tutorials will be used as lectures in case the lectures fall behind.

Textbook **The course is based heavily on lectures (both videos and notes) posted in Quercus. Students must watch the lecture videos and study the lecture notes for the course material. The textbook is:**

- **Sharpe, DeVeaux, Velleman, Wright: Business Statistics, Fourth Canadian Edition, Pearson 2022. You may use the 3rd edition.**

A reference book at the same level of the textbook is:

- **Lind, Wathen, Marchal, Waite: Basic Statistics for Business and Economics, 6th Canadian Edition, McGraw Hill, 2018.**

Class Format **All scheduled classes on Monday, Wednesday and Friday are replaced by**

(i) Lecture Videos. Two lecture videos with corresponding lecture notes are posted in Quercus each week for 12 weeks. Each lecture video is about 2 hours. Students are expected to watch the lecture videos and study the lecture notes in order to understand the course material. Lecture videos and notes will remain in Quercus for the whole semester.

(ii) Question and Answer (QA) sessions. Dr. Yu answers questions from students during the following QA sessions:

- **L0101 Wednesday 11:00–12:00 in Bb Collaborate, Quercus.**
- **L0301 Wednesday 13:00–14:00 in Bb Collaborate, Quercus.**

- **Students from these two sections are free to attend any QA sessions. Note that a QA session may last more than 1 hour based on the questions from the students. There is also a possibility of no attendance or no questions from students. QA sessions are NOT recorded, therefore they will NOT be posted in Quercus.**

- **Students can email Dr. Yu at all times for any question regarding the course. In the email, please indicate that you are currently enrolled in ECO220.**

(iii) Tutorials on Friday 10:00–12:00 are taught by the teaching assistants. Details will follow.

Marking Scheme		Date 2021	Time	Weight	Location
	Test 1	**May 28 (Fri)**	**10:00–12:30**	**15%**	**Online in Quercus**
	Test 2	**June 17 (Thu)**	**9:00–11:30**	**20%**	**Online in Quercus**
	Test 3	**July 23 (Fri)**	**10:00–12:30**	**30%**	**Online in Quercus**
	Final Exam			**35%**	**Online in Quercus**

- If you know ahead of time that you cannot write a test at the above specified time, email Dr. Yu before the test and state your reason.
- If you miss one test, the test score is assumed equal to your final exam score.
- If you miss more than one test, the first missing test score is assumed equal to your final exam score, and the other missing test scores are assumed equal to zero.
- If you miss the final exam, you need to file a petition to the Faculty of Arts and Science (FAS) to write a deferred final exam. FAS (not the instructor) makes the decision to approve or disapprove the petition.

Course Schedule

Week	2021	Lecture	Chapter (based on the textbook by Sharpe)
1	**May 03 (Mon)**	**Lecture 1**	**1–4 Statistics, Data, Population, Sample**
	May 05 (Wed)	**Lecture 2**	**5 Quantitative data**
	May 07 (Fri)		Tutorial 1: Introduction to Excel
2	**May 10 (Mon)**	**Lecture 3**	**6 Scatterplots, Association, Correlation**
	May 12 (Wed)	**Lecture 4**	**7 Linear Regression**
	May 14 (Fri)		Tutorial 2: Do some exercises using Excel
3	**May 17 (Mon)**	**Lecture 5**	**8 Randomness and Probability**
	May 19 (Wed)	**Lecture 6**	**8 (continued)**
	May 21 (Fri)		President's day, no class
4	May 24 (Mon)		Victoria day, University closed, no class
	May 26 (Wed)	**Lecture 7**	**9 Random Variables, Probability Distribution**
	May 28 (Fri) Test 1, 10:00–12:20 online in Quercus		
5	**May 31 (Mon)**	**Lecture 8**	**9 (continued)**
	June 02 (Wed)	**Lecture 9**	**10 Sampling Distributions**
	June 04 (Fri)		Tutorial 3: Exercises using Excel
6	**June 07 (Mon)**	**Lecture 10**	**10 (continued)**
	June 09 (Wed)	**Lecture 11**	**11 Confidence intervals for Proportions**
	June 11 (Fri)		Tutorial 4: Exercises using Excel
7	**June 14 (Mon)**	**Lecture 12**	**11 (continued)**
	June 16 (Wed)		Study day, no class
	June 17 (Thu) Test 2, 9:00–11:20 online in Quercus		

8	**July 05 (Mon)**	**Lecture 13**	**12 Testing Hypotheses on proportions**
	July 07 (Wed)	**Lecture 14**	**12 (continued)**
	July 09 (Fri)		Tutorial 5: Exercises using Excel
9	**July 12 (Mon)**	**Lecture 15**	**13 Confidence Intervals and Hypothesis Tests for the Means**
	July 14 (Wed)	**Lecture 16**	**13 (continued)**
	July 16 (Fri)		Tutorial 6: Exercises using Excel
10	**July 19 (Mon)**	**Lecture 17**	**13 (continued)**
	July 21 (Wed)	**Lecture 18**	**14 Comparing Two Means**
	July 23 (Fri) Test 3, 10:00–12:20 online in Quercus		
11	**July 26 (Tue)**	**Lecture 19**	**18 Inference for Regression**
	July 28 (Wed)	**Lecture 20**	**19 Understanding Regression Residuals**
	July 30 (Fri)		Tutorial 7: Exercises using Excel
12	Aug 02 (Mon)		Civic Holiday, no class
	Aug 04 (Wed)	**Lecture 21**	**20 Multiple Regression**
	Aug 06 (Fri)		Tutorial 8: Exercises using Excel
13	**Aug 09 (Mon)**	**Lecture 22**	**20 (continued)**
	Aug 11 (Wed)	**Lecture 23**	**20 (continued)**
	Aug 13 (Fri)		Tutorial 9: Exercises using Excel
14	**Aug 16 (Mon)**	**Lecture 24**	**21 Building Multiple Regression Models**
	Final Exam Aug 18-30 (to be assigned by the Faculty of Arts and Science)		

Exercises from textbook

Work out at least 10 exercises from each chapter in the textbook. The answers are in Appendix A of 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
- Chi Square table

These statistics tables are posted in Quercus and students need to use these tables for their tests and the final exam. ***These statistics tables may look different than the statistics tables in the textbook. Make sure that you know how to read the statistics tables before writing the test and the final exam.***