

# ECO220Y1Y, Introduction to Data Analysis and Applied Econometrics

## Economics Department, University of Toronto, with Prof. Murdock

### 1 Key Course Information for ECO220Y1Y

**Sections:** There are five sections: **L0101:** Fridays 9am-noon, **L0102:** Fridays 9am-noon, **L0201:** Fridays 10am-1pm, **L0301:** Fridays noon-3pm, and **L0401:** Fridays 2pm-5pm.

**Course site for all sections:** <https://q.utoronto.ca/courses/183576>

**Communication (tutorials, discussion hours, phone, Piazza, e-mail, help desks):** Section 13

### 2 Prerequisites, Accessibility & Help

An administrator will remove anyone missing [prerequisites](#). Note that **I cannot waive prerequisites**. For accessibility concerns *immediately* visit <http://www.studentlife.utoronto.ca/as> and also register with Accommodated Testing Services (ATS): <https://www.ace.utoronto.ca/ats/>. Our Head TA (see Section 8) can only provide accommodations as suggested by ATS. If you have trouble, seek help right away from us, your College Registrar, and/or the [Academic Success Centre](#). *For any issues that extend beyond our course, or last more than a week, contact your College Registrar immediately.*

### 3 Academic Integrity

You must understand the meaning of academic integrity and always uphold it. This link and sublinks <https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity> are required reading. We all work together to maintain academic integrity. Anyone who undermines this shared goal, *including unintentionally* because of ignorance, poor judgment, and/or confusion, can expect serious consequences. It is also your responsibility to proactively ask questions. We report *all* suspected infractions. If you have evidence of an infraction, it is your duty to us all to tell me and/or our Head TA.

### 4 Online Delivery: Requirements

- Ability to correctly convert local Toronto time to your time zone: we will *NOT* accept confusion about deadlines – always given in local Toronto time – as an excuse for lateness or missed work
- Your TCard, working U of T e-mail, and keeping up with Quercus (set your [notification settings](#))
- Regular access to a reliable laptop and/or desktop with a working microphone and webcam
  - A phone and/or a tablet is NOT sufficient for this course
- Regular access to reliable high-speed internet and reliable electricity
- A current installation of Office 365, available at no cost to current U of T students, via the page **Office 365 ProPlus:** <https://onesearch.library.utoronto.ca/ic-faq-categories/office-365-proplus>
- To be proactive to avoid technical and other difficulties, which includes submitting well before deadlines, maintaining your devices, keeping software up to date, minimizing the strains on your internet

bandwidth, learning how to scan efficiently, carefully reading all assessment instructions, and contacting your instructor/TAs immediately with any problems

- Regularly follow our Quercus site for detailed guidance, updated as our situation evolves
- Contact the [U of T Help Desk](#) immediately for technical support
- The hardware, software, and knowledge to efficiently scan your work to be uploaded
  - Most phones can scan (a separate scanner is unnecessary) to create PDF, JPG, or PNG files
  - You must scan efficiently and without creating very large files: you may need to learn about your phone or scanner, install software/updates, and/or search for solutions online

While you would likely find it convenient at times, you do NOT have to have a printer.

## 5 Readings and Textbook

Our course includes significant readings, which Section 17 lists. Important supplements are available to you at no charge. Also, we use the *2020 Business Statistics, Fourth Canadian Edition* by Sharpe, De Veaux, Velleman, and Wright. ***To complete some participation activities (see Section 12.5), you must buy our textbook through our Perusall site, where it is priced at the deeply discounted price of \$65.*** (If this presents a financial hardship for you, please complete [Assist Request](#) immediately, which is an MS Form.) Our Quercus site gives step-by-step instructions to properly register for Perusall.

The schedule page on our Quercus site gives the reading assignment for each week. ***Complete readings before watching lectures.*** The associated Perusall assignments (see Section 12.5.1) are due *before* the associated TA tutorial. Section 14 gives the weekly routine.

Our required textbook highlights important points with boxes (sometimes in the margins): take the boxes seriously, including “Just Checking.” Also, chapter openers and closers such as “What Can Go Wrong?” are always part of the required reading. Consider our textbook authors as co-instructors.

## 6 Lectures

Lectures are prerecorded and posted with the slides a week in advance of the associated TA tutorial. You may print the lecture slides (black and white is fine) or take notes electronically: these include blank space for notes. ***Take notes: slides are not notes.*** Also, like live lectures, recordings are not perfect, neither in terms of content nor production value. We will post corrections throughout the year. Ask questions on Piazza (see Section 13.1) including if you think you have spotted an error.

Success in this course requires consistent and well-directed effort. Complete each week’s lecture *before* the associated tutorial. Watch each once and limit rewinding and pausing. Over-watching lectures – e.g. watching each twice or rewinding and pausing constantly – takes away from your active practice time. Also, avoid under-watching lectures: do not skip weeks or watch at double-speed. While recordings allow new behaviors, most are a bad idea for your learning. Try to mimic your behavior in live lectures, which includes *blocking out time to watch lectures, staying on task, keeping up, and avoiding distractions.*

## 7 Friday Meeting Times and TA Tutorials

Given that lectures are prerecorded, what happens on Fridays? Of the 24 Fridays (including the make-up on Monday, April 12 for Good Friday), four are reserved for term tests. The remaining 20 are for required synchronous weekly TA tutorials (50 minutes each). On Quercus via People you sign-up for a tutorial section: we offer a range of meeting times. Conditional on TA availability and sufficient student demand, we offer additional sections outside of 9am to 5pm on Fridays. Tutorial enrollment locks at 5pm on September 24: sign-up with care, ensuring no conflicts, and thinking ahead to both the Fall and Winter terms.<sup>1</sup>

Weekly TA tutorials serve multiple purposes. First, they help you actively work with difficult course material and hone your problem solving skills to deepen your working understanding of course concepts. ***You are expected to complete the reading and watch the week's lecture BEFORE your tutorial.*** (See Section 14.) Extra practice in tutorials can help you in solving the challenging weekly (ungraded) homework and (graded) Quercus quizzes. Further, tutorials allow you to ask questions in real time. These give you regular opportunities to build real connections with some of your peers and a TA.

You are expected to regularly attend every week with your tutorial section and to participate. ***Your regular and active participation counts towards your participation mark (see Section 12.5).*** Participation includes answering any polls, contributing to the chat (via typing), answering questions verbally, and/or via other activities. Also, the first tutorial (September 10th/11th) does not count towards your mark as we settle in and adjust to the online environment, where there may be technology issues to sort out. However, tutorials will begin in earnest right away: do not miss out. Also, tutorials may evolve over the year as everyone gains experience with the group dynamics and available technologies.

## 8 Head TA

Our Head TA is Aly Somani ([aly.somani@mail.utoronto.ca](mailto:aly.somani@mail.utoronto.ca)). Among other things, Aly helps manage our graded assessments, including requests from ATS (see Section 2), missed work (see Section 12.10), and any remark requests (see Section 12.9).

## 9 The Data Analysis Course Module (DACM)

The Data Analysis Course Module (DACM) runs from September through April. You dive into real data and research and replicate key findings. There are five modules (A through E) and five quizzes (see Section 12.3.2). Our Quercus site includes the DACM Handbook, companion videos, and data files.

## 10 Ungraded Homework

In addition to readings, for each lecture the course site gives ungraded homework and solutions. Homework is a combination of assigned end-of-chapter textbook exercises and problems that I wrote to supplement the textbook. Both give you practice working with and applying course concepts. Complete weekly ungraded homework before the associated Quercus quiz.

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<sup>1</sup>You may request to switch your tutorial section via [Switch Request](#), which is an MS Form. However, it is your responsibility to sign up with care, anticipating potential conflicts, and understanding that we may be unable to grant your switch request.

## 11 Learning Objectives: Expected Depth of Understanding

- (1) Translate between plain English and statistical terms and concepts: identify key information regardless of wording and distinguish incorrect statements from correct ones
- (2) Select and apply a suitable quantitative approach to a new situation while making your reasoning clear: may require sentences, precise statements of hypotheses, equations, calculations, fully-labeled graphs, diagrams
- (3) Proficiently read output from various statistical software packages including STATA
- (4) Use Excel to analyze data and replicate published results
- (5) Correctly interpret quantitative results for a non-technical or technical audience
- (6) Draw valid statistical conclusions and steer clear of common pitfalls
- (7) Explain what would change if a researcher made different choices or the data changed
- (8) Identify the underlying assumptions in quantitative analyses and figure out how violations affect conclusions and interpretations
- (9) Read and critically evaluate analyses without being dazzled by data, methods or jargon
- (10) Effectively apply course concepts to a wide range of contexts from popular press articles to papers in peer-reviewed academic journals
- (11) Assess available data or propose a data collection plan to address a research question
- (12) Craft compelling, concise, precise, clear, and coherent written arguments

## 12 Marking Scheme

Assessment	Weight	Writing time	Due Date(s)	Collaboration? <sup>†</sup>	Notes
Term Test #1	12.5 %	120 minutes	Fri., Oct. 23	None allowed	Section 12.2
Term Test #2	12.5 %	120 minutes	Fri., Dec. 4	None allowed	Section 12.2
Term Test #3	12.5 %	120 minutes	Fri., Feb. 26	None allowed	Section 12.2
Term Test #4	12.5 %	120 minutes	Mon., Apr. 12	None allowed	Section 12.2
Quercus quizzes	12.5 %	60 minutes each	Sept. 16 to Mar. 31	Reasonable collaboration	Section 12.3 & Section 12.3.1
DACM quizzes	12.5 %	90 minutes each	Oct. 2, Oct. 16, Jan. 22, Feb. 12, Apr. 9	Reasonable collaboration	Section 12.3 & Section 12.3.2
Short writing assignments	12.5 %	Not applicable	Nov. 20, Feb. 5, Mar. 26	None allowed	Section 12.4
Participation	12.5 %	Not applicable	Sept. 10 to Apr. 12	Not applicable	Section 7 & Section 12.5
Final examination	–	–	–	–	There is no final exam.

<sup>†</sup> For more on collaboration with your classmates, see Section 12.1. Also, recall Section 3.

**Why is there so much work?** Each new concept requires a deep understanding of previous ones. Statistics is learned by doing it. Only a fraction of your efforts can be graded by us: you are expected to grade yourself against posted solutions for homework and old tests/exams. Graded assessments ask you to *do* statistics: focus your practice time on *doing* rather than passively reviewing and reading.

Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.

The University of Toronto may adopt a replacement for Turnitin.com during our course. Be prepared for a possible switch.

## 12.1 Collaboration

There is absolutely no collaboration allowed on Term Tests #1 to #4 or the short writing assignments. Your submissions must be *entirely* your own work. Recall Section 3. For assessments that do not allow collaboration, *any* collaboration for *any* portion is a serious infraction.

However, for Quercus quizzes and DACM quizzes you *are allowed* to engage in reasonable collaboration with a small group of other people currently registered in our course. Small groups means four or fewer people in total. **What is reasonable collaboration?** Some students may meet in a physical location to prepare for and complete quizzes. Where a physical meeting is not possible and/or advisable, small groups may meet live streaming virtually, which means *entirely synchronous* communication. However, not everything is OK and we will report any suspected academic infractions.

- You may *NOT* have anyone who is not currently enrolled in ECO220Y1Y help you with any of your quizzes. Tutors (paid or unpaid), friends, family, or anyone outside our current class *cannot* help you with your quizzes.
- You may *NOT* have anyone else solve any of your quiz questions for you.
- You may *NOT* post or electronically distribute anything related to the quiz questions or answers: any collaboration must be live streaming (i.e. mimic in-person collaboration) and *only* be accessible to members of your small group.
- You may *NOT* collaborate with more than three other people on any given quiz.

These bullets clearly prohibit posting any material related to your quizzes on social media or other platforms. *After* the quiz due date, you MAY use Piazza and you MAY include a copy of the question. Remember that all course materials, including quizzes, are copyright protected and you may not distribute them. ***If you are unclear about the meaning of reasonable collaboration or have any doubt about whether your planned method of collaboration is permissible, check with us BEFORE doing it.*** Also, collaboration is not required: many prefer to work alone for various reasons (to test themselves, find it easier to concentrate, scheduling challenges, etc.).

## 12.2 Term Tests #1 to #4

The coverage and format for each term test will be announced on Quercus two weeks in advance, including whether any late submissions are possible (and penalties). For all term tests you need your TCard, a non-programmable calculator, and pencils and erasers, but you will NOT need Excel. You must proactively avoid problems (see Section 12.6). You may have extra materials to review before term tests. The aid sheets – formulas and statistical tables – for the entire course are posted on Quercus. Remember from Section 12.1 that no collaboration is allowed. ***For any problems during a term test window, you must contact the help desk immediately.*** For issues with completing a term test, see Section 12.10.

***Topics addressed in lectures, tutorials, homework, required readings, and DACM are testable.***

If a concept appears in multiple venues, that signals high importance. Term test questions are inspired by our course materials (homeworks, lectures, Quercus quizzes, DACM, readings, etc.). Work with old tests to hone your test-taking skills and assess the required depth of understanding. Construct *full* replies for homework and old tests/exams in test-like conditions. If you cannot solve a question after a sustained effort, turn to your notes, book, and homeworks. Only as a *last resort*, ask a person or look at the solutions. Browsing solutions (or peeking) undermines your study. Use solutions to *grade* your own answers.

## 12.3 Quizzes

There are Quercus quizzes (see Section 12.3.1) and DACM quizzes (see Section 12.3.2). Reasonable collaboration is allowed (see Section 12.1). Start each quiz well before the deadline and when you have the uninterrupted time to finish it. You must submit your completed quiz *before* the deadline. See Section 12.6 on your duties to proactively avoid problems. For problems *before* the deadline, see Section 13.3. You *cannot* request an individual remark or partial credit for machine-marked questions (see Section 12.9.1).

### 12.3.1 Quercus Quizzes

Quercus quizzes help you keep up with our course *each week*. Questions are short-answer: e.g. you type an exact numeric answer. Quercus quiz questions often require calculations. However, you will NOT need Excel to answer any Quercus quiz questions: only the DACM quizzes require the use of Excel. Make sure to have your course aid sheets and a handheld calculator handy before starting each Quercus quiz. Quercus quizzes become active Mondays at noon and are due by Wednesdays at noon (i.e. a 48 hour window). They focus on the previous week's material. (Section 14 explains our typical routine). There are 19 Quercus quizzes in total over the fall and winter terms. (There are 24 weeks of classes, but there are some breaks such as for Thanksgiving and after term tests.) Once you begin a Quercus quiz, you have a maximum of 60 minutes to finish. For Quercus quizzes, we do *not* accept late submissions and there are absolutely *no* deadline extensions for *any* reason.

### 12.3.2 DACM Quizzes

There are (at least) 100 points available over the five online DACM quizzes (Modules A, B, C, D, and E) and your overall DACM mark is the sum of the points earned. Each quiz has anywhere from 15 to 25 points. DACM quizzes become active at 5pm on Thursday before the due date and are due by Friday at 5pm (i.e. a 24 hour window). Once you begin, you have 90 minutes to finish. The DACM Handbook gives guidance on how to prepare effectively. For issues with completing a DACM quiz, see Section 12.10.

## 12.4 Short Writing Assignments

The short writing assignments allow substantial revision beyond what is possible during timed assessments. You may not collaborate. Detailed instructions and expectations will be posted on Quercus with each assignment. You have two weeks to complete each. You must manage your time: you assume all risk of working on these in the final days before the Friday noon deadline. We offer a small early bird bonus for submitting *more than 24 hours before the deadline*. There is a short grace period of 5 hours after the deadline but beyond that we do *not* accept late submissions: an automatic mark of zero. There are *no* make-ups and *no* extensions for *any* reason.

## 12.5 Participation

Participation is multidimensional and reflects an overall assessment of your productive engagement in all aspects of our course. Your regular TA tutorial participation is a significant component (see Section 7). Participation also includes Perusall (see Section 12.5.1). Other opportunities also count for participation, such as the syllabus quiz and practice term test, and these may also include surveys and/or other activities announced on Quercus. Piazza (see Section 13.1) is not required for participation, but if you stand out by asking good questions and/or posting good answers we will take this positive information under advisement in assigning your participation mark. For activities counting for participation, we do *not* accept late submissions and *no* extensions are possible for *any* reason. Further, any negative participation may result in an overall mark of **zero** for participation. This would include, but is not limited to, any behaviors that run contrary to the expectations of this syllabus (e.g. seeming to engage in unreasonable collaboration, skipping work, etc.), failing to follow instructions, and any disruptive behaviors affecting your peers, TAs, and/or me. Participation is *not* intended as easy marks. You should not expect a participation mark of 80 or higher unless your participation is consistently excellent throughout our entire course.

### 12.5.1 Perusall for Readings

Perusall enables you to engage with your classmates and get readings done on time. While it makes reading more social as you comment and respond to classmates, your marks are individual. We use it for our textbook (see Section 5) and the supplements, including the DACM Handbook. Our Quercus site explains how to sign up, our expectations, how marking works, and assignment due dates. ***Start and finish Perusall assignments WELL BEFORE the due dates.*** We do *not* accept late submissions and there are *no* make-ups and *no* extensions for *any* reason.

### 12.5.2 Participation mark and course grades

You will only learn your participation mark indirectly after the course is complete and your official course grade is on ACORN. Given your other known marks, you can deduce your participation mark. You cannot appeal your participation mark. Also, anyone e-mailing us after the course is complete with the wish for a higher course grade can expect to be directed to this syllabus with no further reply. Course grades reflect an objective and fair assessment of submitted work and are not subject to negotiation.

## 12.6 Promptly Addressing Issues and Proactively Avoiding Problems

Let us know immediately if you encounter trouble. Carefully read all assessment instructions. Regularly keep track of guidance pages on our Quercus site, which explain how to avoid problems and successfully

complete your assessments. This includes maintaining your devices, including browser software. As examples, you *cannot* use a phone or tablet or the Mobile Canvas Student App to complete quizzes, improper browser configurations can mean trouble viewing images embedded in questions and other problems that lead to lost marks, and inefficient scanning practices can lead to upload delays and lost marks. Being proactive also means not working on assessments close to deadlines when you will have little time to deal with unexpected health, technology, connectivity, or other problems. You bear all responsibility for lost marks for failing to proactively avoid problems and/or for delaying reporting any issues to us.

## 12.7 Workload

You should expect to work about 8 to 10 hours per week on our course. Spend most of your study time on actively solving problems. Here's a direct quote from course evaluations: "Practice, practice, practice. Swimming in the ocean of problems really helps."

## 12.8 Grading

Marks reflect any adjustments to the raw scores such as adding points to everyone's score or not counting an unduly difficult/confusing question. Your mark, not your raw score, best reflects the quality of your submitted work. For partial credit, part of your answer must be clearly correct, directly relevant to the question asked, and not contradicted by other parts of your answer.

## 12.9 Remark Requests

Remark requests must: (1) Be submitted to [Remark Request](#), which is an MS Form, (2) Explain WHY more points are justified, (3) Be submitted within TWO WEEKS of the work's return to the class. The entire submission may be remarked: your mark can go up, down, or remain unchanged. These are given a fair look: TAs are *not* seeking to penalize those with genuine marking concerns. Requests are reviewed *after* the two-week deadline, not immediately. We will *not* consider any remark requests after the deadline.

### 12.9.1 No Individual Remark Requests for Machine-Marked Questions

We will *not* consider individual remark requests for machine-marked questions: if there is an error in a question and/or answer then all submissions will be remarked and/or some other general adjustment made. For numeric questions, often people are upset when they are close, but outside the margin of error: for example, the question asks for an answer accurate to at least the nearest third decimal place, the correct answer is 0.041, but you type 0.042 (or 0.0416) and are marked wrong. You *cannot* request partial credit or a remark in such a case. Precisely meet all requirements. Requirements are set with care and with sound pedagogical reasons (e.g. to catch mistakes that happen to give answers that are close to correct).

## 12.10 Accommodations for Tutorials, Quizzes, and Term Tests

Complete work as scheduled in Section 12. Any missed work earns a mark of zero. This section explains special accommodations for: illness, injury, personal/family problems, enrolling after the course has begun, religious reasons, extracurricular conflicts, technology problems, internet or power outages, quarantine issues, accessibility concerns, and/or other challenging situations. ***For any issues that extend beyond our course, or last more than a week, you MUST contact your College Registrar immediately.***

To accommodate students who cannot attend up to two weekly TA tutorials, we drop the two worst weeks in computing your participation mark. This also accommodates students who attend under difficult circumstances and/or miss part of a tutorial due to technology and/or other issues.

To accommodate students who cannot complete up to two Quercus quizzes, we drop the two lowest Quercus quizzes in computing your overall Quercus quizzes mark. This also accommodates students who submit in difficult circumstances, including encountering technology and/or other problems.

For ONE entirely missed DACM quiz or ONE entirely missed term test, complete ALL of these steps.

**First Step:** Complete [Missed Term Test or Missed DACM Quiz](#), which is an MS Form. *It must be submitted **AT LEAST SIX HOURS BEFORE THE DUE TIME** for the missed DACM quiz or the missed term test.* For example, if the due time is 5pm on Friday, October 2, the LATEST you can request an accommodation is that *morning*: 11am on Friday, October 2. It is unacceptable to fail to show up for an important engagement without advance notice. In extreme circumstances (e.g. being arrested), we may accept a later form, but unconvincing reasons for not submitting earlier are factored in when assessing your performance. We do NOT wish to see any document completed a doctor or other professional. All questions in the MS form are *required*.

**Second Step:** Check your U of T e-mail. If an immediate resolution is possible, we may e-mail you quickly. Otherwise, within one week of the missed work you should receive an e-mail from our Head TA (see Section 8). Follow any instructions in it. Not seeing an e-mail from us is *not* an acceptable excuse for your failure to follow any time-sensitive or other instructions.

**Third Step:** Complete a *cumulative* make-up to be scheduled by us.

Your performance on both the make-up and other graded course work, as well your MS Form submission and correspondence, will be taken under advisement in determining your final course grade. We do not report marks for make-ups. However, after all regular course work is complete and returned, we will report the mark assigned for the original missed assessment.

Failing to complete all three steps above, regardless of the reason, results in a mark of zero on the original missed work. We do *not* accept late submissions and there are *no* make-ups for the make-up and *no* extensions for *any* reason.

Accommodations for missing more work than addressed above are *extremely limited*: (1) an *ongoing and substantial* injury, illness, or personal/family problem *seriously affecting* the student's ability to complete term work across all courses over an *extended period of time* where the student's **College Registrar** writes to me after meeting with the student and formally requests an accommodation on the student's behalf or (2) *more than one* conflict *not* related to injury, illness or personal/family problems where I am contacted by the student *very far in advance* (e.g. an athlete who notifies me in September of international competitions conflicting with work). In these *limited situations*, I will consider whether accommodations can still meet all course requirements or whether the student must be advised to drop the course and retake it when able to complete the required work. Any such extraordinary accommodations are at my discretion and may involve completing work at an alternate time, an oral and/or other assessment, re-weighting, and/or may be contingent on performance on other work.

## 13 Communication

For interactive opportunities to ask questions, make sure to utilize these online supports:

- (1) Weekly TA tutorials (see Section 7)
- (2) TA discussion hours
- (3) Discussion hours with Prof. Murdock: online or via telephone 416-946-0656 (I have remote access)

***For timely and direct answers to your course curriculum and/or personal questions, use discussion hours.*** We say “discussion hours” rather than “office hours” to signal that discussion of content and/or how you are doing are welcome. However, we use MS Forms for any remark requests (see Section 12.9) and missed work (see Section 12.10). Among other modes of communication, three deserve special mention: Piazza (Section 13.1), e-mail (Section 13.2), and help desks (Section 13.3).

### 13.1 Piazza

Register for Piazza via Quercus (left toolbar). The TAs and I work to ensure proper usage, flag some postings, and answer some questions. ***The emphasis is on student-to-student Q&A.*** However, we *will* answer questions requiring an instructor’s response (e.g. about the syllabus). If you have questions while watching the lecture recordings, post them in that week’s folder in Piazza, first checking if someone else has already asked the same question. For example, put questions about Lecture 3 in the Week 3 folder, along with any about Quercus Quiz 3. Piazza includes folders for other common topics, such as DACM and tests. Give a descriptive title to your Piazza post: for example, “Lecture 23, Slide 7: Meaning of R-squared?” rather than “Help with lecture.”

### 13.2 E-mail

First, remember to use discussion hours for any questions, including personal ones, and/or Piazza for content questions. Piazza is a substitute for e-mail. To promptly notify me of an issue affecting our course (e.g. broken link on our course site), my e-mail is [jennifer.murdock@utoronto.ca](mailto:jennifer.murdock@utoronto.ca). I will not explain course content nor reveal anything of general interest via a private e-mail exchange. ***For any question that would interest other people, you must post on Piazza if you are hoping for an electronic reply.*** Also, use discussion hours and TA tutorials for questions.

It is *not* appropriate to e-mail me for more marks or a higher course grade: see Section 12.9 and Section 12.5.2. Also, before e-mailing me about missed work, see Section 12.10. For administrative matters (e.g. prerequisites) contact either the Undergraduate Administrator in Economics ([ugadministrator.economics@utoronto.ca](mailto:ugadministrator.economics@utoronto.ca)) or your College Registrar. E-mail is appropriate in *limited* circumstances: please do not take offense if my reply simply reminds you of this section and/or directs you to Piazza.

### 13.3 Monitored Help Desk and Live Help Desk

For issues during quiz and test windows, immediately use the [Monitored Help Desk](#), which is an MS Form. For term tests, we plan to also offer live help desk hours. It is your responsibility to immediately *report* any issues even though our *reply* may be delayed (and especially during nighttime hours in Toronto). Also, for assessments with a completion window, you bear the risk of submitting close to the deadline.

## 14 Weekly Routine

See the detailed schedule in Quercus. To summarize, here is the usual weekly routine:

- (1) Complete the week's Perusall assignments for the textbook, course supplements, and/or the DACM Handbook. (See Section 12.5.1.) Our Quercus site gives all readings by week for the entire course.
- (2) Watch the week's lecture videos and any DACM companion videos assigned that week.
- (3) Either attend your TA tutorial and complete your DACM quiz (when applicable) OR write your term test (when applicable). Section 12 gives the dates with a DACM quiz or a term test. In weeks with a term test you do not also have TA tutorials.
- (4) Complete the ungraded homework by the following Monday at noon. You may also work on the ungraded homework before attending your TA tutorial. (See Section 10.)
- (5) Complete the weekly Quercus quiz (see Section 12.3.1).
- (6) Restart at Step 1 right away.

### 14.1 Week 2 example of the weekly routine

Consider Week 2 as an example. Lecture 2 videos and the DACM Module A.1 companion videos are posted by Friday, September 11. Before a TA tutorial on Thursday/Friday, September 17/18, which would cover Week 2 material, complete the Perusall assignment for Sections 5.1 - 5.6 in our textbook (that week's reading assignment) and watch the Lecture 2 and DACM Module A.1 videos. Finish the ungraded HW 2 by Monday, September 21. Finally, complete Quercus Quiz 2, which opens at noon on Monday, September 21, no later than noon on Wednesday, September 23.

Remember that our Quercus site gives a detailed schedule for the entire course in calendar form, which visualizes the weekly routine and the rhythm of our course.

## 15 Economics Study Centre

The [Economics Study Centre](#) supports ECO220Y. Learning assistants (LAs) are undergraduates who have done very well in their ECO courses. I will alert you to specific LAs that took ECO220Y with me. For in-depth questions, use our course TAs.

## 16 Anticipating Challenges and Changes

Make your best efforts starting immediately and on every assessment and every participation opportunity. Do not count on future work to achieve the course grade you are hoping for.

Beyond challenges that may affect you, all dates and details in this syllabus are subject to adjustment should your professor become incapacitated, should any of our teaching assistants be unable to work, and/or should other situations arise that disrupt our original plans for the course. Also, any such changes may not be subject to a vote and may be unilateral. Be prepared for disruptions.

## 17 Topics and Required Readings

Required readings include supplements created for our course (marked in boldface below and available on Quercus) and our textbook. Chapter numbers reference our textbook and any exclusions are noted. We typically finish through Chapter 11 in the Fall term and the rest in the Winter term. Readings are done via Perusall (see Section 12.5.1).

- ***Prerequisite Review for ECO220Y1Y, 2020/21*** pages 1 - 43
- ***The DACM Handbook for ECO220Y1Y, 2020/21*** pages 1 - 175
- Chapter 1: *An Introduction to Statistics*
- Chapter 2: *Data*
- Chapter 3: *Surveys and Sampling*
- Chapter 4: *Displaying and Describing Categorical Data*
- Chapter 5: *Displaying and Describing Quantitative Data*
- Chapter 6: *Scatterplots, Association, and Correlation*
- SW11: Chapter 1, *Economic Questions and Data* pp. 1 - 13 from *Introduction to Econometrics, Third Ed.*, 2011, by James H. Stock and Mark W. Watson
- Chapter 7: *Introduction to Linear Regression*
- ***Logarithms in Regression Analysis with Asiaphoria for ECO220Y1Y, 2020/21*** pages 1 - 28
- Chapter 8: *Randomness and Probability*
- Chapter 9: *Random Variables and Probability Distributions* (Excluding Sections 9.7 *The Poisson Distribution*, 9.12 *The Exponential Distribution*, and “Normal Probability Plots” pp. 280-2)
- ***Normal Table: Read it, Use it for ECO220Y1Y, 2020/21*** pages 1 - 7
- Chapter 10: *Sampling Distributions*
- Chapter 11: *Confidence Intervals for Proportions*
- Chapter 12: *Testing Hypotheses About Proportions*
- Chapter 13: *Confidence Intervals and Hypothesis Tests for Means*
- Chapter 14: *Comparing Two Means*
- Chapter 18: *Inference for Regression* (Excluding “How does the Normal probability plot work?” pp. 607-8)
- Chapter 19: *Understanding Regression Residuals*
- Chapter 20: *Multiple Regression*
- Chapter 21: *Building Multiple Regression Models* emphasizing Sections 21.1 *Indicator (or Dummy) Variables*, 21.2 *Adjusting for Different Slopes – Interaction Terms*, and *Quadratics* (online) (Excluding “Residuals and Standardized Residuals” and “Influence Measures” pp. 737-9)

***Make sure to visit the Perusall and Readings page in Quercus.*** Also, an optional (and recommended) reading, sometimes referenced in lectures, is “Belief in the Law of Small Numbers” by Amos Tversky and Daniel Kahneman published in 1971 in *Psychological Bulletin* (TK71).<sup>2</sup>

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<sup>2</sup>This is an academic journal article co-authored by a winner of the Nobel prize in economics.