ECO220Y1Y, Introduction to Data Analysis and Applied Econometrics

Economics Department, University of Toronto, with Prof. Murdock, 2021/22

1 Welcome and a Quick Intro to ECO220Y1Y

Welcome to my favorite course! You have the chance to gain essential analysis and exposition skills – ours is a practical course – and learn about what many economists really do. If you're curious about how to analyze data, which kinds of questions researchers ask in a variety of fields of economics, and how to present and interpret results, then this is the course for you. While you'll need to hone your preexisting reading, writing, and quantitative analysis skills and while some of the new skills are challenging to acquire and require substantial practice, our TAs and I are your allies. Your classmates are also your allies: make an extra effort to socialize and form new connections. Working together we can be successful.

Our course is coordinated across the six lecture sections. Sections LEC0301, LEC0401, and LEC0501 share this syllabus and our Quercus site (https://q.utoronto.ca/courses/237123). All six sections write a common final exam and participate in the Data Analysis Course Module (DACM) where you dive into real data and research and replicate key findings. Our DACM Quercus site (https://q.utoronto.ca/courses/241862) includes the DACM Handbook, companion videos, and data files.

2 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, 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

3 For Everyone: Accessibility, Absences, and Help

Our course design anticipates that many of you will face a wide variety of non-trivial challenges at some point. Also, while you may have ongoing needs and be registered with accessibility services, others are not or have needs outside the mandate of that office. Accommodations are part of the design of the course. If you require further accommodation, remember to register with both https://studentlife.utoronto.ca/department/accessibility-services/ and Accommodated Testing Services (ATS): https://lsm.utoronto.ca/ats/. Our Head TA (see Section 12.8) can only provide accommodations from ATS.

Everyone may use the Academic Success Centre. ***Everyone must officially declare ALL absences:*** https://help.acorn.utoronto.ca/blog/ufaqs/declare-an-absence/. If you find yourself in a particularly challenging situation, you will need to ***work with your College Registrar***. They can provide comprehensive guidance and, when appropriate, contact your professors for you while guarding your privacy. This requires *working closely with* your College Registrar, and not merely having them restate your requests to your professors. Remember, for significant challenges, which last more than a week, work with your College Registrar immediately. Also, there are limits to the situations that we can accommodate: in some cases the only option is to drop our course.

4 Academic Integrity

Please do not create a horrible situation for yourself, your classmates, our TAs, and me. Even if you are suffering stress, under extreme pressure, far behind, facing failure, and/or lacking self-confidence, cheating is not worth it. Infractions can take many, many agonizing months to resolve and sanctions can be severe. We must all work together supporting the integrity of our course and U of T. Read this link and sublinks https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity.

5 Readings and Textbook

Section 17 lists the readings and Quercus gives each week's assignment. For our required textbook – *2020 Business Statistics, Fourth Canadian Edition* by Sharpe, De Veaux, Velleman, and Wright – you may buy:

- the bound hardcover textbook that also includes an access code for the eText and MyLab Statistics from the U of T Bookstore for $189.99 (ISBN 9780135582084),
  - Note: MyLab Statistics, which comes with this first option, is *NOT* required. To gain access to the Pearson eText with this option, enter our Course ID murdock20797 in MyLab.
- the eText directly from Pearson for $49.99 (ISBN 9780136964032),
- the unbound loose-leaf print version directly from Pearson for $65.00 (ISBN 9780135469019), OR
- a used copy of the *Fourth Canadian Edition*. Older editions or the US / international editions are not good substitutes: they are missing topics and do not match the numbering in our book. However, the *Third Canadian Edition* is an acceptable substitute: only some end-of-chapter exercises differ.

Our textbook highlights important points with boxes (sometimes in the margins): take the boxes seriously, including "Just Checking." Also, don't skip "What Can Go Wrong?" See Quercus for more on readings.

6 Prerequisites

An administrator will remove anyone missing prerequisites. Note that I cannot waive prerequisites.

7 Pre-Recorded Lectures

Lectures are pre-recorded and usually posted with the slides by Friday each week, starting September 10. Complete readings before watching lectures. Watch the lecture before the associated workshop and tutorial the following week. (See Section 11.) Mimic your behavior in live lectures: *block out a regular time to watch, stay on task, keep up, and avoid distractions.* See Quercus for more on lecture videos.

8 Friday Meeting Times and TA Tutorials

We have no group activity Friday, September 10: read this syllabus and work on the Week 1 readings and lecture. Some Fridays are reserved for term tests and DACM Quizzes. Other weeks feature required online synchronous TA tutorials (50 minutes each). Do not schedule any conflicts on Fridays from 9-11am. TA tutorials help you actively work with difficult course material and deepen your working understanding of course concepts. Also, you can connect with other people in our course. Your regular and active participation counts towards your participation mark (see Section 12.3). This includes answering any polls, contributing to the chat (via typing), answering questions verbally, and/or via other activities. Tutorials may evolve over the year as everyone gains experience with the group dynamics and available technologies.

For tutorials, we offer extra options beyond 9am to 11am on Fridays. On Quercus via People you sign-up for a tutorial section. Tutorial enrollment locks at 4pm on September 23: sign-up with care, ensuring no conflicts, and thinking ahead to the Winter term.[1] Complete the reading, watch the week's lecture, and complete the homework before your TA Tutorial. (See Section 11.) See Quercus for more on TA tutorials.

9 Tuesday / Wednesday Meeting Times and Workshops

Most Tuesdays (LEC0301 and LEC0401) and Wednesdays (LEC0501) we meet for required workshops. Complete the reading and watch the week's lecture before your workshop. (See Section 11.) Expect to be active in solving questions, writing, and interacting with your classmates and the instructional team. Your regular and active participation counts towards your participation mark (see Section 12.3). You must attend with your ACORN section at your assigned time: you cannot switch times for any reason. Do not schedule any conflicts during your two-hour ACORN time slot. The first two weeks of workshops do not count towards your participation mark. See Quercus for more on workshops, including important details about times and dates each week and what you need to bring (e.g. TCard, pencils, paper, etc.).

10 Ungraded Homework

Quercus gives ungraded homework and solutions most weeks. These include assigned end-of-chapter textbook exercises and problems that I wrote to supplement the textbook.

[1] 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 Planned Usual Routine

Quercus shows our estimated schedule in calendar form. This visualizes our course rhythm. Complete the readings and lectures – posted in the Friday cells – before the following week's activities. Usual routine:

(1) Complete the week's readings in the textbook, supplements, and/or the DACM Handbook.

(2) Watch the week's lectures (see Section 7) and any DACM companion videos (see DACM on Quercus).

(3) In weeks without a term test, attend your workshop. (See Section 9.)

(4) Complete the ungraded homework. You may also work on this earlier. (See Section 10.)

(5) In weeks without a DACM quiz or term test, attend with your TA tutorial section. (See Section 8.)

12 Marking Scheme

Planned Assessment	**Estimated Weight** †	**Estimated Date(s)***
Term Test #1 (Section 12.2)	12.5 % †	Friday, Oct. 29*
Term Test #2 (Section 12.2)	12.5 % †	Friday, Dec. 3*
Term Test #3 (Section 12.2)	12.5 % †	Friday, Mar. 4*
Term Test #4 (Section 12.2)	12.5 % †	Friday, Apr. 1*
Participation (Section 12.3)	12.5 % †	Sept. 9* to Apr. 8*
DACM (Section 12.4)	12.5 %	Oct. 1*, Oct. 22*, Jan. 21*, Feb. 18*, Mar. 25*, Apr. 8*
Final Exam (Section 12.2)	25.0 % †	TBA: Apr. 11* to Apr. 29*

† Section 12.1 explains alternate weights. Section 12.10.1 explains automatic accommodated weights.

* Dates are estimates. DACM dates are estimated due dates. These are rough guides to the approximate timing in our course: actually timing may be plus/minus days or weeks.

Quercus will give details, including penalties for lateness, when applicable. Make sure to see Section 16. Normally, students will be required to submit their course essays to the University's plagiarism detection tool 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 tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation web site (`https://uoft.me/pdt-faq`).

12.1 Alternate Weights (for any forced shifts online)

Section 12 presumes that all four term tests and the final exam are in person as planned. Otherwise, alternate weights apply for the marking scheme.

- If the final exam cannot be in person it becomes a final assessment and its weight decreases to 20%.
  - If any of the term tests can be held in person, then the 5 percentage point weight reduction of the final exam is evenly redistributed among the in-person term tests. If none of the term tests can be held in person, the weight of participation increases to 17.5%.
- If the final exam can be in person but any of the term tests could not be in person, then the weight of the final exam increases to 32.5% and the weight of any term tests not in person are reduced equally.

12.2 Term Tests #1 to #4 and the Final

The planned format for each term test and the final will be announced on Quercus. You may have extra materials to review ahead of time. The aid sheets – formulas and statistical tables – for the entire course are on Quercus and we give these to you during assessments. The final is cumulative.[2]

Topics addressed in lectures, homework, required readings, tutorials, workshops, and DACM are testable. If a concept appears in multiple venues, that signals high importance. Work with old tests and exams to hone your 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 Participation

Participation is multidimensional and reflects an overall assessment of your productive engagement in all aspects of our course. Your regular participation in workshops (see Section 9) and TA tutorials (see Section 8) are significant components. The *quality* of participation matters. Other smaller opportunities may also include surveys and/or other activities announced on Quercus. Piazza (see Section 15) 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. Negative participation would include, but is not limited to, any behaviors that run contrary to the expectations of this syllabus, questions around academic integrity, failing to follow instructions, and any behaviors negatively 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 course.

12.3.1 Participation mark and course grades

You will only learn your participation mark indirectly after your course grade is on ACORN and final exams are returned. Given your other known marks, you can deduce your participation mark, which cannot be appealed. Course grades reflect a fair assessment of submitted work and are not subject to negotiation.

12.4 DACM

Accept your invitation to join the DACM Quercus site. You need an up-to-date installation of Microsoft 365 ProPlus. Also, you cannot use the Canvas Student App: instead, use a laptop or desktop computer. There are five online quizzes (Modules A, B, C, D, and E) and an assignment: your DACM mark is the sum of the points earned. DACM is *one* assessment where completion is spread over time.

There is NO collaboration of any kind permitted. The ONLY allowed aids are our DACM Handbook, Excel, a calculator, our course aid sheets, the DACM companion videos by Kate, our textbook, and other materials on the DACM Quercus site. Using any unauthorized aids and/or collaborating with others,

[2] Why have a *cumulative* final? Pedagogically, revisiting earlier material aids learning and long-term retention of skills. Practically, it allows the final to have a higher weight and be an opportunity to rebound.

whether giving or receiving assistance, on ANY question on ANY quiz or the assignment, or engaging in plagiarism, is an academic infraction for DACM. Just like a test, it is NOT prorated depending on how many answers are involved. Hence, the whole 12.5 percent weight is always at stake and any suspected infractions will go to the Dean's Office or higher where the most serious sanctions are imposed.

The DACM Handbook explains how to prepare effectively for quizzes. The DACM Quercus site explains the quiz formats and will also give details about the assignment. For a missed or problematic quiz, see Section 12.10. You *cannot* request a remark or partial credit for a quiz question: see Section 12.9.

12.5 Proactively Avoid Problems and Promptly Address Issues

Proactively maintain your devices and software. For Zoom, you must download and regularly update the Zoom Desktop Client and you must use UTORid authentication. Immediately contact The Information Commons Help Desk with any technical issues around your devices, software, Quercus, or connectivity.

12.6 Workload

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

12.7 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.

12.8 Head TA

Our Head TA is Aly Somani (aly.somani@mail.utoronto.ca). He helps manage our graded work, including requests from ATS (see Section 3), remarks (see Section 12.9), and missed work (see Section 12.10).

12.9 Remark Requests

Remark requests must: (1) Be submitted to Remark Test or Remark DACM Assignment, which are MS Forms, (2) Explain WHY more points are justified, (3) Be submitted within TWO WEEKS of the work's return to the class. Your mark may remain unchanged, go up, or go down. 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.

Also, 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 with standard rounding, the correct answer is 0.043, but you type either 0.044, 0.0437, 0.042, or 0.0424 and are marked wrong. You *cannot* request partial credit or a remark in such a case. Requirements are set with care and with sound pedagogical reasons.

12.10 Missed Work and Accommodations

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, joining our course late, religious reasons, extracurricular conflicts, technology problems, internet or power outages, quarantine issues, travel issues, accessibility concerns, and/or other challenging situations. ***Remember, for significant challenges, which last more than a week, work with your College Registrar immediately.***

To accommodate students who cannot attend up to two TA tutorials, we drop the two worst weeks. (To catch up, review tutorial slides and use TA student hours.) To accommodate students who cannot attend up to three workshops, we drop the three worst weeks. (To catch up, practice with that week's material on your own, including HW.) Save these for illness or other emergencies entirely outside your control: do not miss because you are busy or for any potentially avoidable reasons. These are automatic and also accommodate students who attend but face any challenges negatively affecting their performance some weeks.

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 are MS Forms. ***It must be submitted <u>AT LEAST ONE HOUR BEFORE THE START TIME</u>.*** It is unacceptable to fail to show up for an important engagement without any 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*, including a copy of your Absence Declaration (https://help.acorn.utoronto.ca/blog/ufaqs/declare-an-absence/).

Second Step (for one missed term test): Complete all other term tests and the final exam as scheduled. Your performance on those and your MS Form submission will be taken under advisement in determining your final course grade. However, if some term tests and/or the final exam cannot occur in person, you may be notified via your U of T e-mail about a cumulative oral make-up test, where your performance on that would also be taken under advisement. Any reweighting is at my discretion and will privilege work that can occur in person and the cumulative final exam.

Second Step (for one missed DACM quiz): Complete all other DACM quizzes and the DACM assignment as scheduled. Your performance on those and your MS Form submission will be taken under advisement in determining your final course grade.

Accommodations for missing more than one test or quiz are *extremely limited*: **(1)** a ***College Registrar*** writes to me after working extensively with a student – see Section 3 – 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 conflicts with international competitions). 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.

12.10.1 Automatic Accommodated Weights for Relatively Poor Performance

But what if you do not miss any tests or DACM quizzes but one is relatively poor because of any kind of problem or challenge? If we are able to hold all of our term tests and final exam in person as planned, we will reweight to your other three term tests (increase the weight of each by 2.5 percentage points) and the final exam (increase the weight by 5 percentage points). However, if any do not occur in person, we will only increase the weights of those in person, which is only a partial reweighting, and how it is implemented is at my discretion. (If all tests and the exam must happen online, then no reweighting is possible.) For DACM, we will move the weight of the lowest quiz to the assignment if that helps your mark. Any questions around your academic integrity for any work disqualify you from these helpful reweighting opportunities.

12.11 Rebounding from Failures and Handling Errors and Ambiguity

Even though none of us enjoy them, failures are an expected part of learning and growth. We do *not* mark you as a person or you as a student: we only mark your submitted work. How do you react to a poor mark? Instead of feeling discouraged or frustrated, try reflecting on how that poor mark came to be and what is within your control to change going forward. If you're unsure of the causes, speak with me or your TAs, and especially earlier in the course when there is time to adjust.

Let me share a true story. In my first term in the College of Agriculture and Life Sciences at Cornell, I enrolled in Calc II using my AP credit for Calc I from high school. I found the course challenging and studied many hours. My only activities were studying, working in the dining hall, and the necessities of life (eating, sleeping, etc.). I went to the professor's office hours every week at 8am. I thought the first test went pretty well and then I got my marked paper back. At Cornell, numeric marks had no meaning: everything was curved. I waited for the professor to write the letter grades for each range of marks on the chalk board. He never it made it as low as my mark: I wasn't even close to a D-. I remember walking around campus in a daze and crying behind a building. But then I asked for help. The registrar worked with me to switch me into Calc I. I went to see my new professor to catch up. I ended up with top marks, became a math major, and transferred to a new school. So what is the point of this story? It's not that everything we fail at will ultimately become a great success. Sometimes we need to ask for help and adjust our approach. Sometimes we will ultimately find some measure of success, just not yet.

Practicing economists often fail and there are few "right answers." Many research endeavors have false starts, dead ends, and months of wasted work. There are also well-publicized examples of economists making a small coding error that means their headline empirical results are wrong. Further, people entering their second year of university often think in dualistic terms. Dual means two and symptoms are thinking in terms of black/white or right/wrong. Almost all empirical results in economics are subject to some debate: there is no one correct answer (even if many answers are definitely incorrect). While our course will often be on firm ground, we do venture into real research where we have to deal with shades of grey and ambiguity.

To support you, we include automatic accommodations in the design of the marking scheme: see Section 12.10.1. However, we cannot offer individual opportunities to rebound. In other words, we cannot change the marking scheme or offer bonus assignments upon request. While some may perceive this as being "strict," my goal is to be fair and kind. It is not fair to make exceptions only for those who contact me: many are not comfortable asking. Further, I cannot build fair individual-level marking schemes in a

large course. Finally, in many cases where extraordinary accommodations would be needed, the ultimate outcome is failing or dropping the course. It is not kind to carry on without a realistic chance of an acceptable outcome.

13 Should You Pay for Tutoring or Study Services?

This is your informed decision. Be aware that the supports and resources necessary for your success are already paid for by your tuition (with the exception of our textbook), including our TAs and me and the many resources on our Quercus sites. Also remember the Economics Study Centre. Be careful with paid services claiming to make learning easy, speedy, or convenient: real learning is hard and requires a sustained effort. Also, outside services have contributed to many students being sanctioned for academic infractions. In contrast, services provided by U of T are safe for you to use.

14 Student Hours and E-mail

Use student hours with Professor Murdock for any questions, including personal ones. TAs also host student hours, often with a theme (e.g. help with DACM). See Quercus for details and the latest schedule.

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. 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: see Section 15.*** Also, for personal matters, use student hours, not e-mail. E-mail is appropriate in *limited* circumstances: please do not take offense if my reply simply reminds you of this section and/or re-directs you to student hours or Piazza.

15 Piazza

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). Give a descriptive title to your post: for example, "Lecture 23, Slide 7: Meaning of R-squared?" or "HW 4, Required Problem 2" rather than "Help with lecture" or "Homework question." Also, specific questions that include relevant images (e.g. relevant screenshots or a scan of your attempt) tend to have the best chances of a helpful answer. Piazza is set to "inactive" during weekends and holidays.

16 Anticipating Challenges, Changes, and Disruptions

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 any situations arise that disrupt our original plans for the course.

Make sure to review the alternate weights in Section 12.1 so that you understand what will happen to the relative weights of assessments in some possible contingencies. Also, the planned format of assessments and activities may change and the weights may need to change in unexpected ways. As always, you are

expected to keep a sharp eye on our Quercus site for announcements and information. Be prepared for disruptions and changes.

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.

- ***Prerequisite Review for ECO220Y1Y, 2021/22*** pages 1 - 45
- ***The DACM Handbook for ECO220Y1Y, 2021/22*** pages 1 - 182
- 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, 2021/22*** 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, 2021/22*** 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 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**).[3]

[3]This is an academic journal article co-authored by a winner of the Nobel prize in economics.