*** Notice: The contents of syllabus are subject to change as necessary.**

UST 601: Applied Quantitative Reasoning I

Maxine Goodman Levin School of Urban Affairs

Levin College of Public Affairs and Education

Cleveland State University, Cleveland Ohio

Fall 2023

Instructor: B.J. Fletcher, Ph.D.
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Pronouns: He/Him/His

Class Hours and Classrooms:
Wednesday – 6:00PM – 9:50PM; UR 040.

Office Hours:
Tuesday & Thursday: 12pm – 4pm
By Appointment: Please contact me in advance (at least 48 hours before) via email providing when you would like to set the meeting.

Course Format:
This course is offered as an in-person format. Course content will be delivered via the Blackboard course management system. The instructor will communicate with students outside of class using a variety of interactive tools including discussions, announcements, and email. Students are expected to prepare for class by doing readings, and completing assignments. The format of class will consist of weekly readings, assignments, in class discussion, quizzes, exams, and a research project. A computer and access to the internet are required.

Required Textbook:
Salkind, N. J. and Bruce, B. Frey (2021). *Statistics for People Who (Think They) Hate Statistics: Using Microsoft Excel* (5th ed.). Thousand Oaks, Calif.: SAGE. [Paperback ISBN: 9781071803882].
****A digital copy should be available on Blackboard via the BryteWave Course Materials (BCM) link under the files tab.****

Recommended Textbook:
Creswell, J. W. and Creswell, J. D. (2022). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (6th ed.). SAGE Publications, Inc. [Paperback ISBN: 9781071817940].

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Required Supplies: MS Office – Excel

Course Description:
This class introduces students to research methodology and quantitative analysis as it applies to the fields of public administration, planning, and policy. Practitioners and scholars in these fields regularly use quantitative methods to answer important questions about human behavior and public problems, programs, and policies. This approach often requires the use of statistical tools, the basics techniques will be introduced in this class. While many of you may plan *not* to use statistical methods in your day-to-day work in the field, having the ability to comprehend and critique such methods is an important skill for public leaders, bureaucrats, planners, policy advocates, and those working in the non-profit sector.

Students will learn to analyze substantive social questions related to their fields of interest using statistical analyses, including: descriptive statistics, graphical analysis, hypothesis testing, confidence intervals, correlation, and regression analysis. Throughout the course, we will learn key statistical concepts and methods, and we will consider the various ways in which these can help us learn about social phenomena.

The content in this course builds upon itself as we progress. It will be difficult to grasp current material if you have fallen behind on past material. All assessments, therefore, are inherently cumulative, though each will focus on the more recently covered material. Lectures will include introduction of new material, as well as practice problems and familiarization with statistical software required for completion of the term research paper. Regular attendance is critical to success in this class.

Course Objectives:
At the end of this semester, students should:

- Understand basic statistics and data management in public sector.
- Understand basics of research methodologies and design.
- Perceive practical knowledge about fundamental concepts of statistics and their applications.
- Learn how to apply these skills for their area(s) of interest and study.
- Become a critical consumer of information and statistics.
- Be able to produce statistical reports.
- Become a creative producer of statistical analysis using computer programs.
- Be able to produce an independent research paper.

Course Conduct:
While this is a synchronous web-based course, students are still expected to be respectful to one another and the options of their peers. This course will cover some topics which people will feel passionate about; we will not all share the same views on these topics. We want to come from a place grounded in facts to guide our understanding of the topics, being able to critically evaluate facts and positions is an important component of

higher education development, we are here as a learning community. When responding to a peer's position, it is acceptable to offer questions and varying points and counter arguments on a given topic, in so doing this helps us all better understand the nuances of the topics we will cover. It is not acceptable to attack a peer because of their position or understanding of a topic.

This course will consist in-class sessions as well as asynchronous readings, and activities via Blackboard.

We will hold in-class session every Wednesday from 6:00pm to 9:50pm EST. These sessions will include discussions, which, will include both full-class conversations and small-group working groups. In order to complete the course successfully, you will need a computer or smart device with access to the internet and Blackboard. If you have any questions about accessibility, or if these requirements are going to be problematic, please let me know. *I do not want technology to be the reason why anyone is not able to complete the course*.

All assignments for the week must be completed by **6:00pm Wednesday EST**, unless otherwise noted in the course schedule located at the end of the syllabus.

Contact Rules:
As a general rule I can be reached by email; I will do my best to respond to emails no later than 24 hours after they are sent. In extreme cases no later than 48 hours, in the event I am away for a conference, or it is over the weekend. Please email me directly at my CSU email (**b.j.fletcher@csuohio.edu**), **DO NOT** message me via the Blackboard message system.

Grading Criteria:
For this course, there will be 600 total possible points. There will be weekly homework assignments (problem sets) designed to help students practice concepts from the readings. Quizzes will be used to help gauge students' understandings for concepts over the course of the semester. There will also be a Mid-term and Final exam for this course. There will also be one writing assignment, where students will be asked to write an original research paper focused on appropriate statistical method to address a research question related to their primary area of study. Please see course assignments section for more details.

Participation	20 points
Homework Assignments (problem sets)	240 points
Quizzes	40 points
Research Paper	100 points
Exam 1	100 points
Exam 2	100 points
Total:	**600 points**

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All assignments should be submitted via Blackboard. Keep your submission receipts in case of technical error. If you do not receive a submission receipt, the work was not submitted, and you should re-submit it or contact the Center for eLearning for technical assistance. Assignments are due by 4:00pm the day listed on the syllabus.

Final grades will be determined based upon the total points accumulated:

A: 94 – 100	B: 83 – 86.9	F: <70*
A-: 90 – 93.9	B-: 80 – 82.9	
B+: 87 – 89.9	C: 70 – 79.9	

*A failing course grade also will be assigned to students who:

- Fail to receive grade points in three or more weekly discussion sessions without arranging for the absence with the professor in advance.
- Fail to complete either of the projects according to the syllabus schedule or receive a grade of F on any project.

CSU policy regarding grades of "**I**" and "**X**" dictates the following conditions:

"**I**" – An incomplete ("**I**") grade may be given when the work in a course has been generally passing, but some specifically required task has not been completed through no fault of the student. An "**I**" grade can be assigned by the instructor when all three of the following conditions are met:

1. Student is regularly attending/participating in the class and has the potential to pass the course,
2. Student has not completed all assignments and has stopped attending/participating for reasons deemed justified by the instructor, and
3. Student notified the instructor prior to the end of grading period.

"**X**" – The grade of "**X**" can be assigned by the instructor when an attending/participating student has stopped attending /participating without notification and has not completed all assignments for reasons that cannot be determined by the end of the grading period. An "**X**" automatically becomes an "F" if not resolved by the last day of instruction of the following semester. An "**X**" grade will be assigned by the University Registrar when no grade is submitted by an instructor.
Students may drop or withdraw from the class by the dates stipulated in the CSU Academic Calendar. Additional information on adding, dropping, withdrawal, and incomplete grades can be found on-line at: http://www.csuohio.edu/enrollmentservices/registrar

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Course Assignments:

Homework Assignments (Problem sets) (240 points)

Homework assignments (Problem sets) will consist of questions to allow students the opportunity to practice concepts cover in this course. Homework assignments are due on Blackboard by Wednesday at 6:00pm EST each week. Problem sets will come from the "Time to Practice" sections of each chapter in **Salkind and Frey (2021)**. See the course schedule for specific homework sets and due dates. ****Homework Assignments (Problem sets) must be submitted in a Word Document format, DO NOT submit PDF files****
****Homework assignments must also include a copy of your Excel file****

Quizzes (40 points)

There will be four (4) quizzes held during the class session via Blackboard on the 3rd, 5th, 12th, and 14th week of class (each quiz is worth 10 points). Each quiz will cover (and only cover) material from that section of the course. Quizzes will be given the week they are listed in the semester schedule. Each quiz will have a 30-minute time limit to complete. Any make-up quizzes will need to be arranged prior to the class in which the quiz is scheduled.

Research Paper (100 points)

This project, will require students to write an original research paper that uses appropriate statistical methods to address a research question related to public administration, planning, or your specific field of interest. The research paper *must* at include some combination of the following descriptive statistics, creation of tables/figures, hypothesis tests, statistical analysis, and interpretation with discussion. Research papers will be submitted and checked via SafeAssign. SafeAssign reports with less than 10% (excluding citations and references) match may need to be explained, any match above 11% (main text and body) will be considered plagiarized resulting in Zero for the assignment. See schedule below for due dates. You may want to check ICPSR (https://www.icpsr.umich.edu/web/pages/ICPSR/index.html) for potential data sets for your research project.

Research Paper

Students will complete a major project that consists of an original research paper. The project aims to assess students' ability to relate research questions to data and to determine and implement appropriate statistical analysis methods. You will select a research question (or a couple related questions) to examine over the course of the semester. You should choose a topic related to your area of interest in public administration, planning, policy, etc. You must find a dataset (or datasets) that can help answer your question and conduct appropriate statistical analysis. You will present your question, literature review, theory, and results in a research paper.

All assignments must be submitted in 12-point font, double-spaced, 1-inch margins, as a **Word document** and must be uploaded to the Blackboard assignment. Tables and figures should be embedded in the file as the

reader is meant to see them. No late work will be accepted. If you miss one of the deadlines, you will lose the associated points on your final grade for the project.

Research Memo and Problem Statement with Research Question – 5 points

In writing the first assignment, students are expected to select an issue of interest and prepare a statement about the issue. It consists of turning a topic of interest into a research problem, i.e., something researchable with findings that have the potential for application in your field. In this part you will address what question/s you are interested in researching, and what sort of data might help you answer the question/s. Your question should involve a relationship between two variables, for example: Do people's *political beliefs* affect their *attitudes* toward genetically modified foods? If you are debating between a couple of options, tell me about both so I can help you narrow it down. In the memo, explain why you think the question is worth asking, and if you have any expectations about what the answer might be. Indicate whether you have an idea of where to find data on this question. Students should include in their problem statement:

- A brief written description of the issue
- Why is it important
- Why should we care
- What needs to be resolved
- How is the problem impacting peoples' lives
- Why are you interested in the topic
- What problems will it solve or create
- Possible sores of data
- Possible research question(s)
- Possible relationship between variables
- Any other information the student feels will support their justification for the research they have selected.

These are only guiding questions; you may pick and choose depending on your project. You are essentially trying to establish the importance of your research question and introducing it to others who might not be aware of the issue. In addition to turning in the written assignment, students may also set up a time to meet with me to present their ideas and receive feedback.

Page limit: 2 full pages (~500 words)

First draft (Introduction, Literature Review, Theory, Conceptual Framework and Data) – 15 points

Provide the major sections that will begin the paper (everything except the actual data analysis, results, and conclusion).

Include a review of existing literature on and/or related to your research question. The articles, documents, and websites you consult will be guided by your topic. Whenever possible, you should cite scholarly articles

and/or books, though news stories and online sources (such as think thanks, research centers, etc.) are acceptable. You should briefly summarize relevant sources, explaining what they contribute to our understanding of your research topic, as well as their limitations. How many sources you should cite depends on your topic, but citing fewer than five sources will result in a loss of points. **Avoid using quotations as much as possible in the paper; paraphrase and cite your sources instead.**

In a separate section, explain the theory that underlies the relationship you plan to examine in your project. Here, it is important to establish a causal relationship that moves in one direction. In this section focus on developing theory and logic model that allows the researcher the possibility of answering their research problem. For example, if you are investigating the relationship between home ownership and self-reported happiness levels, you would need to map out *how* home ownership *affects* happiness. You will identify the key variables and relationships. Create a path (logic) model representing the key variables (circles) and relationships (arrows) implied by the relationship description. Your model should include at least four variables (Independent variables) and probably no more than 6 or 7 and one Dependent variable (See supplemental materials on Blackboard for logical models or conceptual framework). Indicate the direction of each of the relationships in your model (+ or -). Tell me whether you think the relationship is positive or negative and why – explain your model in words. Identify explain the key causal mechanisms. You can lean on the literature here, or develop a theory that stands apart from existing research. You should clearly note your research hypotheses. Finally, include a section in which you discuss the data you will use to answer your research question. This section should explain where the data comes from, how it was collected, and where it can be accessed. Discuss the relevant variables in the dataset and explain how they relate to your research question. Provide appropriate descriptive statistics (e.g. mean, standard deviation, range of the data) on the variables of interest as well as appropriate visuals of the distributions. Discuss the descriptive statistics and what the visuals show in the text of this section.

Page limit: 4 full pages (~1000 words)

Final paper – 80 points

Present your project in five sections:

1) Introduction: Explain your question and its relevance.

2) Literature Review: Synthesize existing academic research regarding your question. No more than two direct quotes may be included.

3) Theory and Conceptual Framework: Explain the underlying causal mechanism and your hypotheses. Why would x cause y, according to your theory?

4) Data and Methods: Describe your data, where it comes from, and how you will use it (data source – secondary or primary, collection method) and target population (unit of analysis). Describe the distributions of each variable in the text (variable type – dummy or categorical, etc. and level of measurement – nominal,

ordinal, interval, ratio, etc.). Which tests will you perform and or what statistical techniques you used? State formal hypotheses to be tested.
5) Results and Discussion: Present the results of your analysis and interpret them, and draw conclusions about how these findings relate to your theory (i.e., reject the null, fail to reject), if you use correlations or regression analysis interpret your coefficient and regression results. **What do your findings *mean* in terms of the original research question?** Discuss limitations to reliability and any potential threats to validity (internal, external, construct) of your findings (e.g. sampling method, sample size, measurement/operationalization problems, etc.).

A strong paper will connect the research question to an important *applied* problem and relevant literature, develop a causal theory, select and clearly describe appropriate data and methodology, and compute and interpret the results accurately.

Page limit: 10 pages (~2000-3000 words)

Exam 1 (100 points) & Exam 2 (100 points)
There will be two comprehensive exams, exam 1 and exam 2. The exams will cover topical areas in the course. Each exam will cover martials from the first half and second half of the semester, consisting of a combination of multiple-choice questions covering topics in each section. Each exam will be 50 questions worth 2 points each for a total of 100 points, for a total of 200 points. Questions will cover, basic concepts, performing statistical analysis of given data, and interpreting the result of statistical analysis. Exams will be administered via Blackboard; students will have an hour to complete the exam once it is started. Please follow course schedule for specific dates of each of the two exams. Exams will be open for the week in which they are due, so students will be able to start them at any point during that week. The exam must be completed at the time it is started, that is, students will not be able to save and come back to the exam later. It is important to budget the appropriate amount of time to complete the exam by the due date. For students who need accommodations, please set up a time to speak with me prior to the exam so we have time to setup accommodations properly.

Opt-out option: Students have to option to **opt-out of one** of their homework assignments (problem sets). This is built in to help students in the event of an emergency – such as a sickness, or death in the family. While the student will receive credit for this one option, it is still important the student read the materials since the material will be covered in quizzes and exams. There is no need to inform me of the missing assignment, the assignment will be adjusted at the end of the semester before Exam 2.

Lecture notes will be provided by the instructor for the assigned chapter(s) in the Course Materials section. The note will be a way to review the highlights of the chapter, outlining the key components from the assigned readings.

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Course Evaluation:

1. Qualtrics Evaluation

A short Qualtrics evaluation will be administered mid-semester as a means to check-in with students to see how things are going.

2. Student Course Evaluation

End of Semester Student Evaluations.

Current grades will be provided periodically throughout the semester or upon request.
Only in cases of extreme hardship will an incomplete be given. Please see the Student Handbook for qualifying circumstances.

Course Access and Content: This course will utilize CSU Blackboard. Use your current CSU username and password to access the course. Blackboard may be accessed at:
https://www.csuohio.edu/center-for-elearning/academic-integrity-statement

All course information, announcements, and content will be posted on this site. It is important that you access the site regularly for updates. Correspondence will be sent through your CSU email account, please be sure to check your email to stay up to date on any course announcements or personal correspondence. The following sections will be used the most frequently for this course:

Announcements: Important notices, reminders, and/or updates may be found here.

Syllabus: A copy of the syllabus for this course will be available here.

Course Materials: Chapter notes, and any additional course readings/material will be posted here.

Assignments: The weekly homework assignments (problem sets) will be available here.

Discussion Board: This link will take you to the discussion board for this course. All weekly reading assignments and related discussion should be posted in the designated forums.

Email: Emails can be sent from here to the instructor and/or other students in the course.

Additional Study Materials on Blackboard: Lecture PPTs: Lecture PPTs will be provided each week as PowerPoint slides. They are the summary of each week's readings and will be useful guidelines for students to learn key learning points and to prepare course requirements.

Other Supplement Study Materials: Supplemental readings, videos, or audio sources will be provided.

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Class Policies:
All assignments are due on the specified dates. Any late assignments will be penalized one letter grade per day. For example, an A paper will be deducted to an A- if submitted one day after the due date and so forth.

Please check Blackboard and your school email regularly as all correspondence will be sent to students via these sources. Please make sure that the email address listed for you through CSU is correct, active, and the email you prefer to use for this course. Unless otherwise noted, students are expected to submit individual assignments, and papers.

Plagiarism Statement:
In this course, you will submit written work in which you make use of information and ideas found in print or online sources. Whenever you use material from another writer, it is important that you quote or paraphrase appropriately and cite the source.

Never let it appear that ideas and information gleaned from other sources are your own. The CSU Academic Integrity policy defines plagiarism as "stealing and/or using the ideas or writings of another in a paper or report and claiming them as your own. This includes but is not limited to the use, by paraphrase or direct quotation, or the work of another person without full and clear acknowledgment." See full link below in the academic integrity section in university policies.

All writing assignment will be submitted and checked via SafeAssign. Failure to cite sources appropriately is plagiarism, a serious academic offense. Plagiarized work will not be accepted. Consequences for plagiarism are up to the discretion of the instructor; they may range, for example, from rewriting all or part of a paper to a grade of F for the course. Students who plagiarize more than once are subject to disciplinary action, which may include expulsion from the university.
If you have a question about using or citing another writer's work, **DO NOT GUESS**. Check with your instructor or a consultant at the CSU Writing Center. Bring a printout of the original source and your paper to the consultation.

University Policies:
Academic Integrity: Under no circumstances should a student copy, quote, misrepresent, or use the ideas or writing of another person without crediting the source. Plagiarism and/or academic dishonesty can result in a failing grade for the course and could result in the student being removed from the class and/or the university. Please see the CSU catalog for the university's rules regarding academic integrity.
https://www.csuohio.edu/academic-integrity/academic-integrity
https://www.csuohio.edu/writing-center/plagiarism
CSU Writing Center: Students needing assistance with writing assignments may utilize the Writing Center located in Tower 124. The Writing Center is free for CSU students, and their website provides several helpful

resources for writing assignments:
https://www.csuohio.edu/writing-center/writing-center

CSU Michael Schwartz Library: The CSU Library provides an array of comprehensive resources for research, including access to academic journals, periodical publications, and the university-system card catalog, which may be useful when searching for references for the writing assignments:
https://library.csuohio.edu/

Disabilities: Accommodations are provided for students with disabilities. If you need accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please inform me immediately. Please see me privately after class, or at my office. To request academic accommodations (for example, a note taker), students must also register with the Office of Disability Services it is the campus office responsible for reviewing documentation provided by students requesting academic accommodations, and for accommodations planning in cooperation with students and instructors, as needed and consistent with course requirements. For more information, contact the Office of Disability Services in Rhodes Tower West 210 or 687.2015, or visit their website at https://www.csuohio.edu/disability/disability

Lift Up Vikes! Food Pantry: The Lift Up Vikes Food Pantry provides support to students, faculty, and staff at CSU who need access to dietary and personal hygiene resources. Requests for food packages can be submitted at https://docs.google.com/forms/d/e/1FAIpQLSePG9jKwnJy__I1p14efrydfEB639FmPXPm_kuK-bywU1_E_A/viewform.

Inclement Weather Procedure – no class activities: If campus is closed for inclement weather, we will NOT have class at the regularly scheduled class time. Please check your email for further instructions.

Diversity Statement:

There must be a clear respect for diversity maintained in the class. This includes respect for people related to gender, sexual orientation, religious identity, disability, age, socio-economic status, ethnicity, race, culture, and other differences. All of us have something to offer, and together, we can cultivate a classroom environment where individuals of varying opinions, experiences, and backgrounds are able to learn in a supportive and inclusive setting.

The Maxine Goodman Levin School of Urban Affairs believes that we all must work hard to communicate the fact that everybody belongs in public service regardless of race, color, religion, ability, gender, sexual orientation, indigeneity, immigration status or other identities that have historically been denied equal access to education and public service. Those who have traditionally been welcomed in race, gender, and class segregated universities have the greatest responsibility to our peers to make this belief real. We call on all students and faculty to create a space where everyone is valued for the unique experiences they bring to public service.

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Name & Gender Pronouns:

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by your name or gender pronoun. Please advise me of this early in the semester so that I may make appropriate changes to my records.

COVID-19 Statement:

The COVID-19 pandemic is still present and serious, especially with the Delta and the new Omicron variants. While you are in class on campus, you are required to have a properly worn mask regardless of vaccination status, always cough or sneeze into your elbow or tissue, and adhere to other public safety protocols and directives for your specific classroom/lab/studio. Students who do not follow these health and safety requirements will be instructed to leave class immediately. If you violate this protocol, you will need to leave the classroom and MAY be marked absent. Repeated violations of these health-saving protocols may lead to sanctions under the Student Code of Conduct (3344-83-04 [E] and [Z]) up to and including suspension or expulsion. Students with medical conditions that prevent them from wearing a mask should register with the Office of Disability Services to explore reasonable accommodation options as soon as possible. To register with the office, please visit their webpage at: https://www.csuohio.edu/disability/register. The CSU community thanks you for your cooperation!

Any additional readings, outside of the textbook for this course, will be made available on Blackboard under the files tab in the course readings folder.

We will also utilize the Forum tab to share examples of various topics from the course. I will provide photo, videos etc. here for students to view. Additionally, students will be able to upload photos and videos they find that they find interesting related to the topics we are covering in this course.
***Anything labeled "recommended readings" are not required; they are offered to provide more information of key concepts in Applied Statistics.**
**** Readings denoted with (S&F) come from Statistics for People Who (Think They) Hate Statistics. Readings denoted with (C&C) come from Research Design Qualitative, Quantitative, and Mixed Methods Approaches.**

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Semester Schedule
(Subject to change as necessary)

Week	Topic, Readings, and Assignment
Week 1 Aug. 30	• Introduction – (S&F) Chapter 1: Statistics or Sadistics? It's Up to You. & Chapter 2: Getting Started in Excel. • (C&C) Chapter 1: Selection of a Research Approach. • **Problem Set 1 – See Questions On Blackboard. Due Wednesday, September 6 by 6:00pm EST.**
Part 1 – Descriptive Statistics	
Week 2 Sep. 6	• (S&F) Chapter 3: Computing and Understanding Averages: Means to an End • (S&F) Chapter 4: Vive La Différence: Understanding Variability. • **Problem Set 2 - Chapter 3: Questions 1, 2, 4, 8, 9 (p. 69-70); Chapter 4: Questions 1-6, 9-10 (p. 86-87). Due Wednesday, September 13 by 6:00pm EST.**
Week 3 Sep. 13	• (S&F) Chapter 5: Creating Graphs: A Picture Really Is Worth a Thousand Words. • (S&F) Chapter 6: Computing Correlation Coefficients: Ice Cream and Crime: Computing Correlation Coefficients. • **Quiz #1 – In-class Wednesday, September 13.** • **Problem Set 3 - Chapter 5: Questions 1-3 (p. 118); Chapter 6: Questions 1-7, 9-11 (p. 142-144). Due Wednesday, September 20 by 6:00pm EST.**
Week 4 Sep. 20	• (S&F) Chapter 7: Just the Truth: An Introduction to Understanding Reliability and Validity & (C&C) Chapter 2: Review of the Literature. • (C&C) Chapter 3: Use of Theory (pp.51-59; 71-77 *can skip "mix-methods" sections*). • **Research Memo and Problem Statement with Research Question Due Wednesday, September 27 by 11:59pm EST.** • **Problem Set 4 - Chapter 7: Questions 2-5, 7-8 (p. 164); Due Wednesday, September 27 by 6:00pm EST.**
Part 2 – Using Inferential Statistics	
Week 5 Sep. 27	• (S&F) Chapter 8: Hypotheticals and You: Testing Your Questions. • (S&F) Chapter 9: Are Your Curves Normal? Probability and Why It Counts. • **Quiz #2 – In-class Wednesday, September 27.** • **Problem Set 5 – Chapter 8: 3, 5-8 (p. 179-180); Chapter 9: Questions 1-8, 10 (p. 199-200). Due October, Wednesday 4 by 6:00pm EST.**
Week 6 Oct. 04	• (S&F) Chapter 10: Significantly Significant: What It Means for You and Me. • **Problem Set 6 - Chapter 10: Questions 1-8, 10 (p. 220-221). Due Wednesday, October 11 by 6:00pm EST.**

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Week 7 Oct. 11	• (S&F) Chapter 11: Only the Lonely: The One-Sample Z-Test. • Exam 1 review. • **Problem Set 7 – Chapter 11: Questions 1-6, 8 (p. 233-235). Due Wednesday, October 18 by 6:00pm EST.**
Exam 1	
Week 8 Oct. 18	**Exam 1** • **Exam 1: In-class, October 18.** • **Mid-semester student evaluations due October 22 by 11:59pm EST.**
Part 3 Analysis Tools	
Week 9 Oct. 25	• (S&F) Chapter 12: *t*(ea) for Two: Tests Between the Means of Different Groups. • **Problem Set 8 – Chapter 12: Questions 1-7 (p. 252). Due Wednesday, November 1 by 6:00pm EST.**
Week 10 Nov. 01	• (S&F) Chapter 13: *t*(ea) for Two (Again): Tests Between the Means of Related Groups. • **First draft (Introduction, Literature Review, Theory, Conceptual Framework and Data). Due Wednesday, November 1 by 11:59pm EST.** • **Problem Set 9 - Chapter 13: Questions 1-4, 7-8 (p. 266-268). Due Wednesday, November 8 by 6:00pm EST.**
Week 11 Nov. 8	• (S&F) Chapter 14: Two Groups Too Many? Try Analysis of Variance. • (S&F) Chapter 15: Two Too Many Factors: Factorial Analysis of Variance – A Brief Introduction. • **Quiz #3 – In-class Wednesday, November 8.** • **Problem Set 10 – Chapter 14: Questions 1, 2 and 5 (p. 285-286); Chapter 15: Questions 1, 3-5 (p. 301-302). Due Wednesday, November 15 by 6:00pm EST.**
Week 12 Nov. 15	• (S&F) Chapter 16: Cousins or Just Good Friends? Testing Relationships and the Significance of the Correlation Coefficient. • (S&F) Chapter 17: Predicting Who'll Win the Super Bowl: Using Linear Regression. • **Problem Set 11 – Chapter 16: Questions 1-5 (p. 312); Chapter 17: Questions 1-2, 5-8 (p. 333-334). Due Wednesday, November 22 by 6:00pm EST.**
Week 13 Nov. 22	• **Work Week: Work on Final Paper.**
Week 14 Nov. 29	• (S&F) Chapter 18: Chi-Square and Some Other Nonparametric Tests: What to Do When You're Not Normal. • **Quiz #4 – In-class Wednesday, November 29.** • **Problem Set 12 – Chapter 18: Questions 1-3 (p. 348). Due Wednesday, December 6 by 6:00pm EST.**
Week 15 Dec. 6	• **Exam 2 Review.** • **Final Paper Due Wednesday, December 6 by 11:59pm EST.**
Exam Week	

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Week 16 Dec. 13	• **Exam 2: In-class Wednesday, December 13.**