Evaluating Information and Analyzing Media
Communication Studies 221
Josh Pasek, Ph.D.
Winter 2019

Class
The course meets 11:30AM-1:00PM on Tuesdays and Thursdays in MLB, Lecture Room 1 (Room 1220). Labs meet in 2230 USB at your designated section times.

Office Hours
Professor Pasek: Tues 2:00-3:00 in 5413 North Quad or by apt. jpasek@umich.edu

Graduate Student Instructors

Name	Sections	Office Hours	Location	Email
Jessica Roden	002, 005	Tues 1-2 & appt.	5340NQ	jeroden@umich.edu
Edwin Wang	003, 004	Wed 8-9AM & appt.	5340NQ	edwinwwh@umich.edu

Please do not visit office hours for GSIs other than your own. Hours may be updated on Canvas.

Is Your Mobile Phone Giving You Cancer?

Readers of the *New York Times* could point to seven headlines published during 2011 reporting, "Cellphone Use Tied to Brain Changes" (Feb 22), "No Cellphone-Cancer Link in Large Study" (Oct 20), and, "Cellphone Radiation May Cause Cancer" (May 31) among other related claims.

Does this seem somewhat contradictory? It should. Depending on whom you ask and when, the answer to the cellphone-cancer link might be existent, nonexistent, or a subject for continuing research.

In life, we are constantly exposed to claims about what is true and how the world works. Some of these claims come from trusted acquaintances, others stem from news reports, and additional assertions reach us through Facebook, casual conversations, and emails. We find ourselves in this constant stimulation environment without a single easy way to determine which of the things we hear are actually true, which may be misleading, and which are completely false.

Clearly, cellphone use cannot simultaneously cause cancer, not cause cancer, and possibly cause cancer. But how should we evaluate which of the studies reported by the *New York Times* was actually accurate? Sadly, most of the time we simply aren't given enough information to weigh the evidence without looking at the studies themselves. Problematically, many people lack the training to read and understand original scientific research.
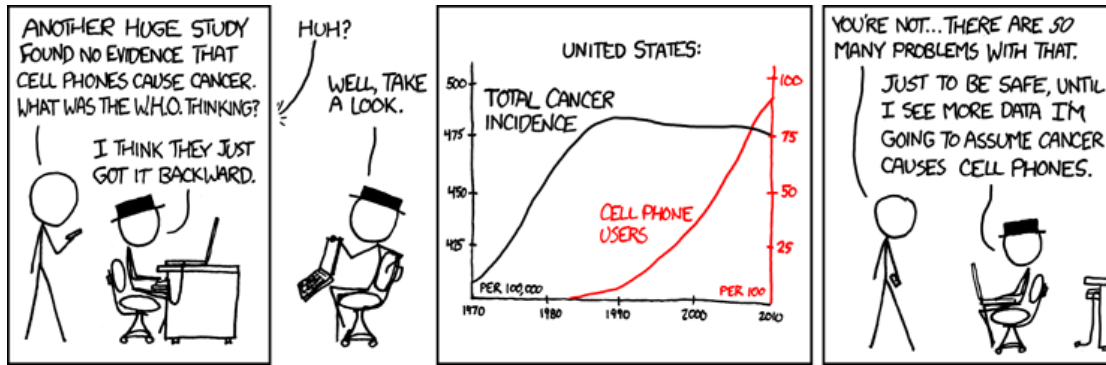
As the quantitative research literacy course in the Communication Studies curriculum, this course focuses on the core skills necessary to think through and critically evaluate scientific arguments and evidence. It offers basic tools for understanding results from the scientific study of human behavior, marketing data, and public opinion polls. By the end of the semester, you will have the tools to read and understand social science as it appears in the news and to differentiate between casual opinions and well-evidenced arguments.

Evaluating Media I explores the fundamentals underlying the development of knowledge, theories, and evidence, and the collection of data to describe society. The course works through explanations of how to conceptualize and enact research that studies people's use of media through methods including experiments, surveys, and naturalistic observation.

In this course, you will be expected to understand some of the basic principles of scientific research. You will learn some of the different ways that scientific studies can be designed, that data can be collected, and that data can be analyzed when studying mass communication phenomena. These same skills are central to the interpretation and communication of marketing data and public opinion information. For each of these areas, we explore a variety of techniques and assess the assumptions that researchers make in using each of those techniques. From this, you will be able to recognize what we can and cannot conclude in our examinations. These skills will also help you when you encounter scientific information in real world settings.

Course Learning Goals

By the end of 221, you will have a much deeper understanding of how knowledge is generated in both academic and nonacademic settings. This knowledge should enable you to critically read and evaluate research in the social sciences and the presentation of information in the news and in various workplaces. You should be able to pick up and read the vast majority of research articles in the social sciences and marketing research reports, understanding what the key concepts are, how they were assessed in the research, and the basic analytical tools that were used. You should also be able to render an independent judgment on the quality of academic work you encounter as well as claims about the nature of society (e.g. public opinion, product market shares, etc.). These skills are seminal both in the rest of your academic career and beyond.

More specifically, by the end of 221, you should be able to:

- Understand types of evidence and the sorts of knowledge they engender.
- Know the steps of the scientific method and how they are applied in social scientific research.
- Recognize how theories relate to hypotheses in the scientific tradition.
- Understand conceptualization and operationalization of key concepts in hypotheses.
- Know the types of sampling and what they imply about the generalizability of research results.
- Identify different types of study design and recognize what they can and cannot tell us about society.
- Assess the reliability and validity of an operationalization.
- Know what criteria are necessary to make a solid causal claim.
- Conduct simple statistical tests in Microsoft Excel.
- Evaluate the quality of evidence in social scientific research.

Course Materials

Required Texts:

Readings posted on the Canvas account.

Wrench, J. S., Thomas-Maddox, C., Richmond, V. P. and McCroskey, J. C. (2012 or 2015). *Quantitative Research Methods for Communication: A Hands-On Approach*. New York: Oxford University Press.

* This book is an excellent resource, especially if you are struggling with any of the methods we discuss or are looking for additional information about how to run analyses in Excel. You will not be tested specifically on anything from this book that is not also discussed in lecture. A copy is on reserve in the library. Other versions of this book are also acceptable.

Requirements

Grading

Participation and Section	25%
Research Critique Paper (February 22)	20%
Midterm Exam (March 19)	20%
Capstone Project (April 26)	35%

Participation and section grades are composed of the following parts:

Lecture Participation (iClicker)	5%
Section Participation	5%
Section Homework	10%
Section Quizzes	5%

Class and Workshop Meetings
Students are expected to attend all classes and to have the reading assignments and paper assignments completed in advance of the assigned class. Students are also expected to participate in class and use clickers at designated times during lectures. Because laptops can be distracting, some areas of the classroom may be designated as laptop-free zones.

Workshops for this class meet on Mondays and Wednesdays in 2230 USB. Workshops are led by Graduate Student Instructors (GSIs) and meet most weeks of the semester (except breaks, the first week, and open labs).

Unlike many other classes, the workshops in Comm 221 are not simply a forum for reviewing material discussed in lecture. Instead, they are designed to serve as an independent learning environment and an occasion to practice many of the concepts that are central to the course. This means that 1) there will be some required information that is only covered in lecture, not in the workshops, 2) there will be some required information that is only covered in workshops, not in the lecture, and 3) the content of the workshops will not always reflect exactly what was learned in lecture in each week.

Lecture Participation
Each lecture contains clicker questions. The professor will present the question, you will submit answers with your clicker, and then the correct answers will be revealed and discussed. The reason we use clickers is to give you more examples and applications of the concepts we are learning about, engage you right away in using what you've learned, and provide you with feedback about how well you understand the course material. Please note: most students find exams are harder than the clicker questions, so be sure to use the practice exams even if you're getting all the clicker questions correct.

If you answer 75% of the clicker questions in a given day (correctly or incorrectly), you will earn credit for participating in lecture that day. **Failure to answer 75% of the questions for any reason—absence, app problems, dead batteries, *et cetera*—will be excused three times** (these excuses will be automatic, you do <u>NOT</u> need to notify us)**.** After the third time, failure to participate in lecture will adversely affect your grade. In previous semesters, most students earned 100% in this category and those with higher lecture participation scores were far more likely to do well on exams and papers than those with lower participation scores (i.e., attending and participating in lecture are powerful learning tools). **Note: Excused lecture absences also fall under this provision unless the absence is for some long-term issue.**

Papers
Course papers require you to analyze and write clearly about analyses you have conducted. You will be graded on your writing, your use of the specified analytic techniques, as well as the extent to which you identify important class ideas. All papers for this class should use APA style (American Psychological Association, 2009) and you will need to be familiar with the rules for writing and citation in this style (a good overview is available in Chapter 4 of the textbook as well as at http://owl.english.purdue.edu/owl/section/2/10/).

The research critique paper requires that you critique the way a journalist reported on a particular piece of research. The capstone project will require you to write up the results of your own analysis of some survey data. All papers need to be turned in on Canvas in advance of the class for which they are due. Late papers will be docked 3% for each day they are late and will NOT be accepted more than one week late.

Exam
The exam will require you to apply the concepts you have learned in class. Exams from past courses will be posted on Canvas. Exams will ONLY be offered on the designated day and time, there will be no alternate times for exams or makeup exams in this course.

Because the learning goals for the class are entirely based on skills and are focused on your ability to digest research, testing in the class is focused on how well you can apply the concepts we are learning. Most test questions are short answer questions that ask you to analyze or identify the central concepts in research reports. **Be aware that memorizing the definitions of key terms will NOT be sufficient preparation for these examinations**. You will be allowed to bring one page (8.5"x11") of notes to the exam (It can be any type size and typeface and can be double-sided).

Homework
There will be six homework assignments throughout the term. They will be assigned in section and will typically be due by the beginning of the following week's section.

Quizzes
There will be a few quizzes to complete in addition to the homework throughout the term. You will be informed about them in each week's workshops and you will complete them before the following week's lab. For the first week's quiz, you may find it helpful to review the syllabus carefully.

Some Recommendations and Resources

How to Succeed
In this class, we provide a number of tools to help you learn how to understand, evaluate, and produce good social science. We will test you on your ability to do just that. Your success in the class will be highly dependent on how well you utilize the tools we offer. It is hypothetically possible to pass the class without attending all the lectures, but attendance in lecture has proven an incredibly accurate indicator of overall class performance. Similarly, because we test how well you can apply the concepts in the readings and in class, you will not need to memorize any of the specific examples used in the textbook. Nonetheless, if you understand how concepts are applied in those examples, you will be much more likely to be able to apply them in the papers and during the exams.

iClicker Cloud Pilot

We will be participating in the pilot program for iClicker Cloud this semester - instead of using the tradition physical remotes, you will need to register for the online version of iClicker. This will allow us to ask more than just multiple choice questions, and engage with the course concepts more deeply for in classroom activities.

We will be using it in class to talk about some example questions as well as capture participation and attendance.

Three (3) days worth of participation points will automatically be dropped from your participation grade and automatically excused. If you will be unable to attend beyond that allotment, please discuss this *as soon as possible, BEFORE the absences occur*, with your instructor. You must be in class to participate and providing your own answers.

(Please note that this is a new technology that we are testing; there may be some issues, but there will be a support team from LSA Technology Services helping us work through any issues that arise. They will need you to complete a brief, 2-minute survey at the end of the semester, for which you will be given credit. This service is being provided for free during testing, so you will not need to pay for it, so long as you remember to sign up for Pilot-University of Michigan as your Primary Institution during the registration process.)

If you have any issues with getting registered, contact BlueCorps for support. They are available M-F, 10am-4pm in the ISS Media Center, on the Second floor of the Modern Languages Building. You can email them at bluecorps@umich.edu or call them at 734-763-2985.

Please do not send email about issues to instructors until you have already worked with BlueCorps!

Course Policies

Students with Disabilities
If you think you need an accommodation for a disability, please let the professor or your GSI know as soon as is feasible. Some aspects of this course, the assignments, the in-class activities, and the way we teach can be modified to facilitate your participation and progress. As soon as you make us aware of your needs, we can work with the Office of Services for Students with Disabilities (SSD) to help us determine appropriate accommodations. SSD (734-763-3000; https://ssd.umich.edu) recommends accommodations through a Verified Individualized Services and Accommodations (VISA) form. The teaching team will treat any information you provide as private and confidential. Please note that we will not make any retroactive accommodations, so please let us know of anything we may need to deal with in advance.

Absences from Section
Sickness. If you are sick and will need to miss a lab/workshop section, please go to http://www.lsa.umich.edu/advising/. Click on the button that reads "What to do if You're Sick" and complete the subsequent form. This will report your illness to all of your instructors. You must complete LSA's form prior to your section time if you want to have an illness-related absence excused without a note from a doctor.

If you are sick for more than one class day, your absences will only be excused if you provide a doctor's note in addition to filling out the LSA form.

Religious holidays. Within the first two weeks of the semester, please notify your GSIs of any religious holidays for which you will be absent. If a holiday is sufficiently important that you will miss class, you should know the dates in advance.

Athletic and other university-related absences. If you are travelling to represent the University of Michigan, someone on your team will provide you with the appropriate paperwork to distribute to your instructors.

Other excusable absences. For family emergencies, funerals, and other such absences, you will need to notify the office of the Assistant Dean of Student Affairs, who will be able to inform all of your instructors. In Winter 2018, the assistant to the Assistant Dean is Debbie Walls; you can email her at dwalls@umich.edu. When you return to campus, bring documentation in support of your absence.

Note: Unless a particular reason for being absent will cause you to miss multiple lectures or one of the first two lectures of the term, there is no need to notify us. Three lecture absences/clicker problems are automatically excused for each student. You should notify your GSI for any section absences.

Grade Questions
When any major assignment (paper or exam) is returned to you, you must wait <u>at least 24 hours</u> before contacting your GSI with any questions you have. This ensures that you have time to read over the feedback given you and understand the issues your assignment faced.

We have found that students who take the time to wait approach their GSIs with more useful questions and receive more helpful answers. We also expect you to bring questions to your GSI first, as they are more directly involved in the grading process and are permitted to resolve any grading errors.

Academic Honesty
A good student-teacher relationship operates on the basis of trust. From that basis, your professors and GSIs trust that you will do your utmost to complete coursework and to be honest with us if for any reason you are unable to fully meet a commitment to the class. We also trust your judgment that any advice you solicit from or offer to your peers will stay well outside the bounds of the University of Michigan's policies on plagiarism and cheating (see examples at https://lsa.umich.edu/lsa/academics/academic-integrity.html). That said, if any member of the teaching team encounters evidence that you have in any way, shape, or form copied material without attribution or collaborated to the point that the work you present is not entirely your own, we will immediately refer the incident to Rashonda Flint, the Assistant Dean for Undergraduate Education. Because plagiarism and academic dishonestly hurt *everyone* in the class, we have no compunction about failing students who are found to have been dishonest. Put simply, this class has a zero-tolerance policy. There will be no second chances for cheating.

If you are unsure about whether some level of collaboration would count as too much, feel free to ask any member of the teaching team.

Notetaking and Laptops in Class
I have produced a *very* comprehensive slide deck for this class. I do this in part so that the slides can serve as a form of class notes (and also to make sure I don't get too far off track). I also make the slides available shortly before the start of each lecture. For these reasons, writing down everything that is on the slides is a waste of your time. It also happens to be a pretty ineffective way to learn the material. You don't need to know every word of what I say (though it is sometimes flattering), and you can always find everything on Canvas (except the videos). I will also go through many of the slides more quickly than you will be able to copy them down; this is on purpose. If you want to learn the material, you shouldn't try to memorize or copy exactly what I say, you should try to determine what the key points are that I am emphasizing and write those down. I highlight these in each lecture with a combination of a daily agenda slide, take-away slides, and by repeating important points. **The process of distilling a lecture down to its key points, rather than jotting down everything that is said, is actually a much better learning tool.**

Laptops are allowed, but not recommended, in Comm 221. There is a wealth of data showing 1) that students tend to get distracted when they have laptops open during class, 2) that students are distracted by the laptops of others who are not paying attention, and 3) that students often learn less when taking notes on laptops compared to on paper. Hence, if you know that you tend to get distracted when using a laptop, please be kind to others and sit along the sides of the class or in the back (or try not using a laptop). Also, **if you do not absolutely *need* to use a laptop, try to take your notes by hand; it's better for learning and you can always look back at the slides later on Canvas.**

Additional Resources to Know

Michigan Association of Communication Studies (MACS)
The Michigan Association of Communication Studies (MACS) is a student organization at the University of Michigan for people who — are communication studies majors, want to be communication studies majors, or are even the slightest bit interested in communication studies and all that it entails. For more information, see macsuofm.com.

Communication Studies Advising
The Communication Studies department offers advising for students who are interested in joining the major or understanding its requirements. Learn more by going to a postered meeting or visiting their website at https://lsa.umich.edu/comm/undergraduates/about-comm-studies-advising.html.

Sweetland Center for Writing
The Sweetland Center for Writing is a comprehensive center for improving student writing at all levels. They offer one-to-one tutoring for undergraduate students. Find them at www.lsa.umich.edu/sweetland/.

Counseling and Psychological Services (CAPS)
Counseling and Psychological Services offers counseling services, educational and preventive initiatives, training programs, outreach and consultation activities, and provide guidance on how to "do something" to fully contribute to a caring healthy community. CAPS can be contacted on their 24-hour crisis line, 734-996-4747 and online at caps.umich.edu.

MiTalk
MiTalk offers mental health resources including online screenings for depression and anxiety, skill-building tools to help you manage stress and academic life, and digitally recorded workshops, lectures, and some relaxation exercises. The site is completely free of charge to U-M Students. Find them at mitalk.umich.edu.

Sexual Assault Prevention and Awareness Center (SAPAC)
If you or someone you know has been harassed, assaulted, or stalked, you can receive confidential support and academic advocacy at the Sexual Assault Prevention and Awareness Center (SAPAC). SAPAC can be contacted on their 24-hour crisis line, 734-936-3333 and online at sapac.umich.edu. Alleged violations can be non-confidentially reported to the Office for Institutional Equity (OIE) at institutional.equity@umich.edu. Reports to law enforcement can be made to University of Michigan Police Department at 734-763-3434.

Course Outline:

PART 1 – Knowledge, Social Science, and Measurement

Week of January 7th, 2019 (Week 1)
Introduction to Evaluating Information and Analyzing Media
This week we will briefly discuss the purpose of the course, the syllabus, and the expectations for the class. We will also discuss how we know things and the role that media play in our knowledge about the world.

      1- January 10th – Course Introduction and Ways of Knowing

Week of January 14, 2019 (Week 2)
Science and Social Science, and the Scientific Literature
This week, we begin our exploration of social science. We discuss how our understanding of the social world can be examined using the scientific method. We focus on the roles of theory, hypotheses, and data as sources of this understanding. This week's workshop will focus on the tools necessary to find out what earlier researchers have done so that we can build on their work. On Thursday, we go over methods for finding and evaluating the quality of research. We will also work through the ways scholars communicate their findings and the challenge of translating technical language and concepts into the types of scientific stories you see in the news. In the GSI-led workshops, we will be introducing the labs and the tools we will be using to conduct analyses.

      January 14th/16th – LAB 1: Workshop: Introduction to Workshop Labs and Excel

      2- January 15th – Putting the Science in Social Science: Why Social Studies is More Than History
            Reading: Wrench et al. "Empirical Research" Chapter

      3- January 17th – Reading and Finding Research / Academic Research and The Media
            Readings: Wrench et al. "Searching for Previous Research and APA Style" Chapter

            Offit, Paul A. (2008). "Science and the Media." In *Autism's False Prophets: Bad Science, Risky Medicine and the Search for a Cure* (pp. 156-175). New York, NY: Columbia University Press.

Week of January 21st, 2019 (Week 3)
Ideas to Concepts to Questions
If we want to test a scientific theory, we first have to figure out what that theory implies and how to address it specifically in our research. Before we do this, however, we need to think about the potential implications of our choices. We therefore start out by talking about research ethics before moving into considering the data collection process. On Thursday, we discuss data and the role that data play in allowing us to test theories and hypotheses. In particular, we focus on the importance of measurement and the role of quantitative data as a way to test theories and hypotheses that can help us understand the world. This week's workshop will aim to improve your reading skills, allowing you to practice finding the information you need in social scientific research without having to read entire articles in depth.

January 21st – NO LAB for MLK Day

4- January 22nd – Ethics
Reading: Wrench et al. "Ethics" Chapter

5- January 24th – Turning Social and Media Processes into Quantitative Data
Reading: Wrench et al. "Variables" Chapter

January 23rd/28th – LAB 2: Parsing Papers and Sources and Evaluating Media
Coverage of Academic Work
Homework 1 Due

Week of January 28th, 2019 (Week 4)
Conceptualization, Operationalization, and Sampling
We begin this week by examining the processes of conceptualization and operationalization.
First, an idea or theory is translated into clear enough language that we can directly and
unambiguously test it. We then become familiar with the process of operationalization, and
explore how operationalizations of different types can help us transition from hypotheses to
data we can test. As we will see, not all operationalizations are equally good at addressing
the variables we really want to measure. On Thursday, we introduce a key component in the
design of any quantitative study—choosing a sample from which to collect data. Samples
allow us to collect the data we need without having to talk to every single person or look at
every single media source, saving both money and time while collecting data of equal quality.
Figuring out whom or what to study constitutes one of the central challenges researchers
encounter. We discuss ways to turn scientific theories into data we can use and practice some
of these tools to do this in lab.

6- January 29th – Conceptualization and Operationalization
Reading: Wrench et al. "Measurement" Chapter

7- January 31st – Sampling Intro and Probability Samples
Reading: Wrench et al. "Sampling Methods and Replication" Chapter

January 30th/February 4th – LAB 3: Conceptualization, Operationalization, and
Measures
Homework 2 Due

Week of February 4th (Week 5)
Samples, Hypotheses, Causality, and Third Variables
This week we begin by discussing some of the different ways of sampling cases to study and
explore the pros and cons of each approach. On Tuesday, we will be discussing probability
samples, or samples based on randomness, as opposed to non-probability ones. On
Thursday, we step back to conclude the part of the course where we plan data collection by
talking about how our hypotheses inform research design more generally and how we can
use design to make claims about what causes what. Because causality is a central goal in
many types of research, identifying when causal claims are strong or weak is important. We

also discuss third variables, which comprise an additional part of our hypotheses where we test proposals for how things are related. This week's lab will illustrate how sampling works.

8- February 5th – Probability Versus Non-Probability Samples
Reading: Wrench et al. "Sampling Methods and Replication" Chapter

9- February 7th – Hypotheses, Third Variables, and Causality
Reading: Höfler, M. (2005). "Causal inference based on counterfactuals." *BMC Medical Research Methodology, 5*: 28-39. doi:10.1186/1471-2288-5-28.
** Note that this is a tough reading, we have annotated a version on the course page to make it a little easier to read. You will not need to know anything from this reading that is not also in the lecture.**

February 6th/11th – LAB 4: Sampling

Week of February 11th, 2019 (Week 6)
Survey Research
This week, we begin the second part of the course, where we explore various types of operationalizations, starting with surveys. Surveys constitute one of the principal tools we have for understanding the social world. Like any other method, careful thought and planning are necessary if you want a survey to collect useful data. We explore the different types of surveys that can be conducted and their various uses. Because surveys depend fundamentally on asking questions, we conclude our look at surveys with a focus on survey questions and how researchers can ensure that their questions they ask elicit the responses they desire. This information will be useful for our class survey, which is a key part of the capstone project. It is also very important for individuals who want to go on to communication-related fields such as marketing, which relies heavily on survey research. In this week's lab, we will generate hypotheses with third variables that we will use for our final projects.

10- February 12th – Types of Survey Research
Reading: Wrench et al. "Survey Research" Chapter

11- February 14th – Asking Survey Questions
Reading: Pasek, J. & Krosnick, J. A. (2010). "Optimizing Survey Questionnaire Design in Political Science: Insights from Psychology". In Leighley, J. E. (ed.) *The Oxford Handbook of American Elections and Political Behavior*. Oxford University Press: Oxford, UK. pp. 27-51.

February 13th/18th – LAB 5: Third Variables
Homework 3 Due

Week of February 18th, 2019 (Week 7)
Experiments
This week we delve into the world of experimentation. Specifically, Tuesday's class will focus on the logic of experimentation as well as some of the practical limits on experimental designs. We will look closely at the assumptions behind experimentation and conditions under which experiments can mislead. For Thursday, we will examine how using the

experimental method allows us to make claims toward causality or generalizability. We will practice writing survey questions in lab In addition to discussing experimentation in lab; word your questions well because they will become part of the survey for the capstone project. Your first papers are also due this Friday.

> 12- February 19th – The Virtues and Limits of Experiments
>> Reading: Wrench et al. "Experimental Design" Chapter

> 13- February 21st – Causality vs. Generalizability in Experimentation
>> Reading: Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*. Houghton Mifflin: Boston, MA. Ch. 1 "Experiments and Generalized Causal Inference" pp. 1-22.

> February 20th/25th – LAB 6: Asking Survey Questions
> ***Research Critique Paper Due Friday, February 22nd at 11:59PM***

Week of February 25th, 2019 (Week 8)
Measurement Quality
This week, we focus on the challenge of good measurement. The measures we produce are frequently imperfect. This is true in part because of challenges in the question-and-answer process, but also because our operationalizations rarely map perfectly onto the concepts we wish to study. When we want to understand how well our measures relate to the concepts of interest, we assess on two overarching dimensions of measurement: reliability and validity. We start this week by working through one approach for improving measurement, measuring the same thing with multiple items. We will talk about experiments in this week's labs.

> 14- February 26th – Measurement Quality – Reliability and Validity
>> Reading: Wrench et al. "Reliability and Validity" Chapter

> 15- February 28th – Combining Measures – Indexes and Typologies
>> Reading: Babbie, E. (2010) Indexes, Scales and Typologies. *The Basics of Social Research.* 5th ed. Wadsworth: USA. 167-169; 171-189; 196-198.

> February 27th/March 11th – LAB 7: Experimentation and Capstone Hypotheses
> *Homework 4 Due*

Week of March 11th, 2019 (Week 9)
Designing Observational Studies
This week we will focus on observational methods. Tuesday's lecture will discuss methods for observing behavior and patterns in textual data, with a specific focus on content analysis. Thursday's lecture will touch on a few additional methods for collecting social science data, focusing largely on new tools such as web scraping and so-called "big data" analytics. We will examine reliability in more depth in this week's labs.

> 16-March 12th – Observational Data and Epidemiological Studies
>> Reading: Wrench et al. "Content Analysis" Chapter

17-March 14th – Social, Economic, Marketing, and Big Data Analytics
>Reading: Wrench et al. "Big Data" Chapter (Only in newer editions, also on CTools)

March 13th/18th – LAB 8: Reliability

Week of March 18th, 2019 (Week 10)
Combining Methods
This week we will focus on putting some of the methods we have learned together. Following Tuesday's Midterm exam, we will discuss approaches to collecting data that have some of the features of multiple methods that we have seen so far. This week's lab will explore validity, focusing on how combined measures can sometimes improve the validity of our operationalizations.

18-March 19th – ****MIDTERM EXAM**** (in class)

19-March 21st – Combining Quantitative Methods
>Reading: Sniderman, P. M. (2011). "The logic and design of the survey experiment: An autobiography of a methodological innovation." In Druckman, J. N., Green D. P., Kuklinski J. H., and Lupia A. *Cambridge handbook of experimental political science* (pp. 102-114). New York, NY: Cambridge University Press.

Match 20th/25th – LAB 9: Validity

Week of March 25th, 2019 (Week 11)
Describing Quantitative Data
Tuesday's lecture will discuss how to present simple descriptive information about our data. We will also begin to consider how to use data to test the reliability and validity of our measures. In this week's lab, we will be turning our class dataset into a form that can be easily used for our analyses.

20-March 26th – Describing Data and Assessing Reliability and Validity
>Readings: Wrench et al. "Descriptive Statistics" Chapter

21-March 28th – Relations Between Variables
>Readings: Wrench et al. "Chi-Square (χ^2) Test of Independence" Chapter
>
>Wrench et al. "Correlation" Chapter

March 27th/April 1st – LAB 10: Cleaning, Recoding, and Describing Data
>*Homework 5 Due*

Week of April 1st, 2019 (Week 12)
Comparisons Across Variables
We can use the data we have collected to test the quality of our measures as well as to begin testing our hypotheses. On Tuesday, we examine metrics of relations between variables that we can use to test hypotheses and determine "statistical significance." On Wednesday, we reserve class time to meet in your final project groups and work on your analyses with members of the teaching team available to assist.

21-April 2nd – Testing Hypotheses with Data
>Reading: Wrench et al. "Hypothesis Testing" Chapter

22-April 4th – GROUP WORK DAY - MEET INDIVIDUALLY WITH YOUR GROUPS

April 3rd/8th – LAB 11: Correlations and Crosstabs
Homework 6 Due

Week of April 8th, 2019 (Week 13)
Data Analysis
Hypotheses require that we know more than just how variables are distributed; we also need to know how they compare to one another. This week we focus on the relations between variables, the ways in which they map onto our hypotheses. Tuesday's lecture discusses focuses on how to more closely map correlations and crosstabs onto our hypotheses about how concepts relate. In particular, we will discuss how to test for mediation, moderation, and sources of spuriousness. On Thursday, we discuss how statistical tools can help to solve more complex research questions and talk through how to assess whether data presented in research articles or in the news is accurate. Open lab periods will provide occasion for you to work on your final projects with the GSIs.

23-April 9th – Testing Complex Hypotheses
Reading: Wrench et al. "Regression" Chapter

24-April 12th – Discussions and Conclusions / Structuring Quantitative Research Papers
Readings: Wrench et al. "Presenting Research" Chapter

Pasek, J. (2011). Writing the Empirical Social Science Research Article, A Guide for the Perplexed. *Psychology Teacher Network, 21*(4).

April 10th/April 15th – OPEN LAB

Week of April 15th, 2019 (Week 14)
Generalizing and Concluding
Tuesday's class will discuss the process of making generalizable statements about a group of people after a hypothesis has been tested. We will discuss what we can make of our analyses and the limits of what can be said based on the data. Thursday, we step back to review some of the key differences between quantitative social scientific methods and other forms of systematic inquiry. This week we have open lab to help you with your capstone projects.

25-April 16th – Limitations and Statistical Honesty
Readings: Excerpts from Huff, D. (1954). *How to Lie with Statistics.* New York: W. W. Norton & Company Inc. (on Canvas).

26-April 18th – Comparing Social Science with Critical/Cultural Approaches
Reading: TBD

April 17th/22nd – OPEN LAB

Week of April 22nd, 2019 (Week 15)
Pulling it All Together
The final lecture of the semester will pull together the material you have learned and connect it to the main goal of the course—teaching you to be critical of the information around you, regardless of whether that source is academic, popular, or some person on YouTube. This toolkit will help you as you proceed in your future Communication classes, but will also serve as a useful skill when you enter the job market in the future.

27-April 23rd – How to Be a Critical Evaluator of Knowledge

<u> Capstone Project Due April 26th**</u>**

Schedule at a Glance

Week of	Monday Topic	Wednesday Topic	Lab	Assignment
1/7/19	NO CLASS	Introduction	NONE	
1/14/19	Social Science as Science	Reading Articles / Science and Media	Intro and Excel	HW1 Due
1/21/19	Ethics	Getting to Data	Parsing Papers & Evaluating Media	HW2 Due
1/28/19	Conceptualization and Operationalization	Intro to Sampling	Conceptualization & Operationalization	
2/4/19	Probability vs. Nonprobability Sampling	Hypotheses, Third Variables, and Causality	Sampling	HW3 Due
2/11/19	Types of Survey Research	Asking Survey Questions	Third Variables	
2/18/19	Experiments 1	Experiments 2	Asking Survey Questions	*Paper 1 Due*
2/25/19	Measurement Quality	Combining Measures	Experimentation and Capstone Hypotheses	HW4 Due
3/11/19	Observational Data	Social, Economic, & Marketing Indicators	Reliability	
3/18/19	*MIDTERM EXAM - IN CLASS*	Combining Surveys and Experiments	Validity	
3/25/19	Describing Quantitative Data	From Describing to Comparing	Cleaning, Recoding, and Describing Data	HW 5 Due
4/1/19	Relations Between Variables	[GROUP WORK DAY]	Correlations and Crosstabs	
4/8/19	Complex Hypothesis Testing	Discussion and Conclusions / Structure	Open Lab	HW6 Due
4/15/19	Limitations and Fallacies	Comparing Social Science with Critical Cultural	Open Lab	
4/22/19	Putting it all together	NO CLASS		*Capstone Due*