Overview

This course is designed as an in-depth introduction to the social sciences and its methodologies. It is intended to give a broad overview so students can intelligently combine ideas in solving real-world problems. We will focus on the logic and design of social research, beginning with some concepts and topics common to research across the social sciences. We will later move on to understanding the principles behind an array of methodologies used in the social sciences: causal inference, experimentation, observational studies, formal models, surveys, and applied machine-learning techniques. We will analyze their applications using cases drawn from the research literature.

The focus of this course is not on the techniques themselves — you will have ample opportunity to do that in other courses — but in understanding the logic behind the use of these tools to extract meaningful answers from their applications.

Prerequisites: it is assumed that you have had at least one semester of graduate-level statistics involving linear regression and analysis of variance. Some basic mathematics and algebra will also be assumed.

Course Materials

Three texts are intended to be resources for the crafting of your thesis proposal. Each week I give recommended chapters for review:

- Royce Singleton, Jr. and Bruce C. Straits. *Approaches to Social Research*. Oxford University Press, New York, 2010. (used copies available for reduced cost)

For further background, I would also recommend

Required Readings are mandatory and should be completed before each class. Article Readings will serve as the foundation to class discussions; they will be available on Canvas. Thesis Readings are intended to help you with the drafting and crafting of the Research Proposal, but will not be discussed in class.

Course Dynamics

The class will be a combination of lectures and focused discussion.

We will devote the first half of the class to a lecture on the topic assigned for the week, and during the second half of the class a panel of students will give a 5-minute presentation of one of the Article readings, followed by a class discussion to analyze in detail these applications of the methods we are studying. I will send a sign-up sheet for you to
pick the weeks you will be “on panel.” When you are on panel, you will distribute a one page summary of the readings the day before class by 6PM.

Each panel presentation should not take more than 5 minutes, and should address the following questions: What is the research question? What is the specific hypothesis under investigation? Can it be falsified? Why was a particular method chosen? What inferences can be draw from its results? What are its limitations?

Over the course of the semester, you will be required to complete two (2) Assignments where you will apply concepts and methods that you have learned in class. Assignments should be submitted on Canvas by 6PM on the indicated dates.

At the end of the course, you will turn in a 12-15 page Thesis Proposal. To ensure that you produce a fully fledged product, you will be required to hand in Thesis Proposal Deliverables at periodic intervals. These will constitute the foundational pieces for your proposal. Feedback will be provided on these deliverables. Deliverables should be submitted on Canvas by 6PM on the indicated dates.

**Course Requirements**

Attendance is expected and reading assignments are to be completed before each session. All written work must be original and produced exclusively for this class. You are expected to follow the University’s guidelines for the submission of written work and there will be penalties for turning in assignments late. The final grade of the course will be based of your fulfillment of each of the following requirements:

Assignments (20%): Students must complete a series of assignments where methods from the course are applied. Assignments are due on October 4 and October 25.

Class participation (10%): Students are expected to have read all the Required Reading before class and actively participate in class discussion.

Panel presentations (20%): Students will regularly be assigned to present one of the readings. Students will also present a one page analysis of the readings and the grade for this part will be determined by both the quality of the analysis as well as the quality of the oral presentation.

Thesis Proposal Deliverables (20%): Students will submit pieces of their proposal at regular intervals. Please submit each one of them by 6PM on the indicated dates on Canvas.

Thesis proposal (30%): Throughout the course, you will work on a research proposal. This 12-15 page paper will be turned in at the end of the semester.

**ASSIGNMENT SCHEDULE**

Sept. 20: Thesis Deliverable #1: Description of Topic
Oct. 4: Assignment #1 and Thesis Deliverable #2: Hypothesis
Oct. 18: Thesis Deliverable #3: Description of Data
Oct. 25: Assignment #2
Nov. 1: Thesis Deliverable #4: Literature Review
Nov. 15: Thesis Deliverable #5: Research Strategy
Nov. 29: Thesis Deliverable #6: Draft
Dec. 10: Final Paper Due

**Course Outline**

**WEEK 1, Sept. 6: INTRODUCTION TO THE COURSE**

**WEEK 2, Sept. 13: THE “SCIENCE” OF SOCIAL SCIENCE AND THE ROLE OF STATISTICAL MODELS; ROLE OF ETHICS**
Required Reading:
- Singleton and Straits, Chapters 1-4

Thesis Reading:
- *The Craft of Research*, Chapter 3
- *A Rulebook for Arguments*, Chapters I-II

**WEEK 3, Sept. 20: CAUSALITY AND CAUSAL INFERENCE**

**Sept. 20: Thesis Proposal Deliverable #1 due: Description of Topic**

Required Reading:

Thesis Reading:
- *The Craft of Research*, Chapters 4
- *A Rulebook for Arguments*, Chapters VI-VII

**WEEK 4, Sept. 27: CONCEPTS AND MEASUREMENT**

Required Reading:
- Singleton and Straits, Chapter 5

Thesis Reading:
- *The Craft of Research*, Chapters 7-8
- *Rulebook for Arguments*, Chapter VIII

**WEEK 5, Oct. 4: EXPERIMENTS AND RANDOMIZATION PART 1**

**October 4: Assignment #1 due and Thesis Deliverable #2: Hypothesis**

Required Reading:
- Singleton and Straits, Chapters 7 and 8
Thesis Reading:

- *The Craft of Research*, Chapters 9-10

**WEEK 6, Oct. 11: EXPERIMENTATION AND RANDOMIZATION PART 2**

Required Reading:


Thesis Reading:

- *The Craft of Research*, Chapters 11

**WEEK 7, Oct. 18: OBSERVATIONAL STUDIES AND QUASI-EXPERIMENTATION**

*Oct. 18: Thesis Proposal Deliverable #3: Data Description*

Required Reading:

- Singleton and Straits, Chapter 11

Thesis Reading:


**WEEK 8, Oct. 25: SAMPLING**

*Oct. 25: Assignment #2 Due*

Required Reading:

- Singleton and Straits, Chapters 6

Thesis Reading:

- *The Craft of Research*, Chapters 14

**WEEK 9, Nov. 1: SURVEY RESEARCH**

*Nov. 1: Thesis Deliverable #4: Literature Review*
Required Reading:
Singleton and Straits, Chapters 9 and 10

Thesis Reading:
- The Craft of Research, Chapters 15

Week 10, Nov. 8: RATIONAL CHOICE

Required Reading:

Thesis Reading:
- The Craft of Research, Chapters 16

Week 11, Nov. 15: IDENTIFICATION

Nov. 15: Thesis Deliverable # 5: Research Strategy

Required Reading:
- Singleton and Straits, Chapter 12

Thesis Reading:
- The Craft of Research, Chapters 17

***THANKSGIVING RECESS***

Week 13, Nov. 30: MULTIPLE METHODS AND PAPER DISCUSSION

Nov. 29: Thesis Deliverable #6: Draft of Research Paper Due

Required Reading:
- Singleton and Straits, Chapter 13

Week 14, Dec. 6: TEXT AS DATA

Required Reading:


Statement on Academic Integrity

Columbia’s intellectual community relies on academic integrity and responsibility as the cornerstone of its work. Graduate students are expected to exhibit the highest level of personal and academic honesty as they engage in scholarly discourse and research. In practical terms, you must be responsible for the full and accurate attribution of the ideas of others in all of your research papers and projects; you must be honest when taking your examinations; you must always submit your own work and not that of another student, scholar, or internet source. Graduate students are responsible for knowing and correctly utilizing referencing and bibliographical guidelines. When in doubt, consult your professor. Citation and plagiarism-prevention resources can be found at the GSAS page on Academic Integrity and Responsible Conduct of Research. Failure to observe these rules of conduct will have serious academic consequences, up to and including dismissal from the university. If a faculty member suspects a breach of academic honesty, appropriate investigative and disciplinary action will be taken following Dean’s Discipline procedures.

Statement on Disability Accommodations

If you have been certified by Disability Services (DS) to receive accommodations, please either bring your accommodation letter from DS to your professor’s office hours to confirm your accommodation needs, or ask your liaison in GSAS to consult with your professor. If you believe that you may have a disability that requires accommodation, please contact Disability Services at 212-854-2388 or disability@columbia.edu. Important: To request and receive an accommodation you must be certified by DS.
GR4010: Theories and Methods of the Social Sciences

This course provides an introduction to research design and quantitative research methods in the social sciences. The goals of the course are: (1) to instruct students in how to critically analyze scholarly articles in terms of research design and (2) to guide students in how to design an original research project. Technical issues related to the implementation of the methods are not the focus of this course. Broader issues regarding the advantages and disadvantages of alternative designs, methods, and techniques are instead.

Reading Assignments:
The readings for the course consist of chapters from the textbook below and a selection of academic articles that address more advanced and specific topics. These readings are available through the library course reserves.

Required:

Written Assignments:
The course includes 5 assignments: The main assignment for the course is a project proposal (20-25pp.) that is due at the end of the term. The 4 other assignments (i.e., literature review, research question/puzzle statement, methodology statement, and IRB certification) are designed to aid in the development of this proposal. Detailed instructions regarding these assignments will be provided during the term.

All students must submit their assignments on time. Late assignments will be graded down 1/3 of a point for every day late. Late assignments will not be accepted after 7 days. Extensions may be granted but only in the case of serious unforeseen illness and/or family emergencies.

Attendance:
Students are expected to come to each class having read the assignments for that day ahead of time and to participate in the class discussions. Powerpoint slides will not be made available to students. Students may miss 1-2 classes without these absences being reflected in their course grade. Unless you miss more than 2 classes, it is not necessary to email the professor or the teaching assistant to inform us of your absence or the reason for your absence.

Office Hours: To sign up for the professor’s office hours, go to: www.SignUpGenius.com/go/5080F4EAAA62FA3F85-office

Academic Integrity:
Students are expected to do their own work on all assignments for this course and act in accordance with the Faculty Statement on Academic Integrity. Students who plagiarize, use unauthorized materials, or commit any other act of academic dishonesty will reported to the Office of Judicial Affairs and appropriate corrective measures will be taken.

Disability Accommodations:
To receive a disability accommodation, you must be certified by the Disability Services Office (212-854-2388 or disability@columbia.edu). If you have been certified, please share the accommodation letter with me and your teaching assistant directly or ask your liaison to contact me.

Grades:
- Literature Review: 10% (due: 10/02/18)
- IRB Certification (P/F): 2% (due: 10/09/2018)
- Research Question/Puzzle Statement: 10% (due: 10/16/2018)
- Methodology Statement: 10% (due: 11/20/2018)
- Proposal (20-25pp): 58% (due: 12/14/2018)
- Participation: 10%

I. Introduction (Tues., 09/05/18)

Topics/Questions: What is the scientific method? How scientific are the social sciences?

- Brancati, Social Scientific Research, Chapter 1.
II. Research Topic/Question Selection (Tues., 09/11/18)

**Topics/Questions:** What makes a good research topic? What is the difference between a research question and a research puzzle? What strategies are there for identifying a good topic and/or question and puzzle? What are the differences and trade-offs between problem-driven versus method or data-driven approaches?


**Note:** We will discuss the research question assignment at this class meeting.

III. Conceptualization (Tues., 09/18/18)

**Topics/Questions:** What is the difference between a concept and a measure? What are the criteria by which concepts are evaluated for quality? What is concept stretching?


**Note:** We will discuss the literature review assignment at this class meeting.

IV. Causal Arguments (Tues., 09/25/18)

**Topics/Questions:** What is causality? Can we demonstrate it in social scientific research and how? What do the following terms related to causal inference mean: tautology, functionalism, spuriousness, the fundamental problem of causal inference, and endogeneity?


*** Literature Review Assignment due by 4:00 pm, 10/02/18 ***

V. Method Selection (Tues., 10/02/18)

**Topics/Questions:** How does the method we use shape the answers that we get? Is there a best method? What are the ethical concerns associated with different research methods? What kind of research is permissible?


**Note:** We will discuss at this course meeting the methodology statement assignment and the IRB certification assignment.

VI. Laboratory Experiments (Tues., 10/09/18)

**Topics/Questions:** Why types of questions can be analyzed experimentally? How are lab experiments, in particular, used in the social sciences? What are the (dis)advantages of experimental versus non-experimental methods? What are their limitations? What are the (dis)advantages of lab experiments, in particular, over non-experimental methods and other types of experimental methods? How do lab-in-the-field experiments differ from lab experiments?


**CITI Certification due by 4:00 pm on 10/09/2018 **
https://research.columbia.edu/content/human-subjects-protection-training-program

VII. Field Experiments (Tues., 10/16/18)
Topics/Questions: How do field experiments, including survey experiments, differ from lab and lab-in-the-field experiments? What are their advantages and disadvantages compared to lab experiments? How are field experiments and survey experiments used in the social sciences?


Recommended:

*** Research Question/Puzzle Statement due by 4:00 pm on 10/16/2018 ***

XIII. Surveys, Part I (Tues., 10/23/18)

Topics/Questions: How does the type of information that you collect from surveys differ from that collected from other methods, especially interviews and observational data? What are the key issues to be aware of in survey administration and design in order to maximize the advantages and minimize the shortcomings of surveys vis-à-vis other methods?


Recommended:

IX. Surveys, Part II (Tues., 10/30/18)

Topics/Questions: What are the best strategies related to the administration of surveys and question design for soliciting sensitive information from respondents? What are the strengths and weaknesses of these strategies and how can they be combined, if at all, to offset their weaknesses?


**Election Day: Tuesday, November 6, 2018. No Classes.**

X. Observational Studies (Tues., 11/13/18)

Topics/Questions: What are the advantages of observational studies and when are they appropriate? To what does the term generalizability refer? What are the shortcomings of observational studies and how can they be overcome? What are natural experiments and when are the treatments really exogenous?

XI. Case Selection (Tues., 11/20/18)

**Topics/Questions:** What are the best principles to follow when choosing which case studies to study? What are the different types of sampling methods available? What does the term selection bias mean and what problems arise from it?

**Readings:**


**Note:** We will discuss in today’s class meeting the requirements and expectations for your research proposal.**

***Methodology Statement due at before 4:00 pm on 11/20/2018 ***

XII. Data and Measurement (Tues., 11/27/18)

**Topics/Questions:** What are criteria for the evaluation of the quality of data and measures? What are the opportunities and pitfalls of ‘big-data’? What are its benefits and shortcomings of content analysis?


XIII. Alternative Approaches (Tues., 12/04/18)

**Topics/Questions:** How to combine quantitative methods with qualitative methods? When are mixed methods always superior to single method approaches?


***Research Proposal due by 4:00 pm on 12/14/2018 ***
GR5010: Theory and Methodology in the Social Sciences
Quantitative Methods in the Social Sciences (QMSS)
Columbia University, Fall 2018
Wednesdays, 4:10-6:00 pm

Instructor: Michael Parrott
Office: Int. Affairs 509f, Fridays, 3 to 5 pm and by appt
E-mail: mp3675@columbia.edu (primary contact)
Class Room: 415 Schapiro
TA: DaHee Shon, ds3144@tc.columbia.edu, Int. Affairs 270J, Wednesdays 3 to 4 pm and by appt

Course Description

This course, one of the two foundational courses in the QMSS program, introduces various analytical approaches that contemporary social scientists use to investigate fundamental questions about social phenomena. This class is designed to guide students through some of the theoretical, methodological, and practical issues associated with the development of research design in the social sciences. Students will learn how to ask empirical questions; how to answer these questions scientifically using appropriate types of evidence; and how to clearly convey arguments, evidence, and conclusions to others.

We will focus on two related questions throughout the course: how do we, as social scientists, know what we know? And, how do scholars distinguish between more and less convincing research? The first question invokes some understanding of philosophy of science but, more importantly for our purposes, the practicalities of how scholars decide which theories, tools, methods, and approaches to employ in researching specific phenomena. The second question involves developing a broad understanding of rigor in research design and a sympathetic skepticism about research conclusions – skepticism because of the challenges all researchers face in knowledge production, and sympathy because even the best research designs have limitations.

Rather than learning specific statistical tests or tools, we will think about the logic and design of social research, beginning with some concepts and topics common to research across the social sciences. We will then consider different methodologies – experimentation, observation, social surveys, and archival research, using examples drawn from the literatures.

Prerequisites
It is assumed that you have basic knowledge on regression analysis. QMSS offers short tutorials at the following link if you need review: http://www.ccnmtl.columbia.edu/projects/qmss/

COURSE MATERIALS

Required text:


Recommended readings for thesis preparation (* denotes these optional readings each week):


The majority of the other course readings are available through the University’s electronic journals. We will
have links to these on the course web page.

**Plagiarism and Academic Dishonesty:**
Students must do all their work within the boundaries of acceptable academic norms. See the Academic Honesty page of the CU website regarding college policy on plagiarism and other forms of academic dishonesty - [http://www.columbia.edu/cu/history/ugrad/main/handbook/academic_honesty.html](http://www.columbia.edu/cu/history/ugrad/main/handbook/academic_honesty.html). Students found guilty of plagiarism or academic dishonesty will be subject to appropriate disciplinary action, which may include reduction of grade, a failure in the course, suspension or expulsion.

**COURSE REQUIREMENTS**
Attendance is expected and reading assignments are to be completed before each class session.

The class will be a combination of lectures and focused discussion. Before each class, you should have read all required readings. We will discuss readings under various specific topics to engage applied theories and methods, primarily by asking a few pertinent questions: What is the research question? Why was a particular method chosen? What inferences can be draw from its results? What are its limitations?

The final grade for the course will be based on your successful completion of each of the following requirements:

- **Assignments (30%)**: There will be five short assignments that will help you to build a research proposal in small chunks. Assignments #1-3 ask you to write a one page response paper that describes a scholarly article that relates to your research interests. In assignment #4 you will submit a one to two page brief overview of your research proposal. And in assignment #5 you will write up a five to seven page mini-literature review that cites at least seven scholarly articles tied to your research question.

- **Research Proposal (30%)**: Throughout the course of the semester, you will work on a research proposal. This 12 to 15 page paper will be turned in at the end of the semester.

- **Proposal Presentation (10%)**: Each student will present their research proposal to the class and receive feedback at the end of the semester.

- **Presentation of Class Readings (10%)**: Students will be assigned to present an overview of, and lead a discussion about, selected readings in class.

- **Class Participation (20%)**: This course is designed to be a mixed lecture/discussion class. Students are expected to read all readings before each class and actively participate in class discussion.

**COURSE OUTLINE AND READINGS**

[Readings may be adapted throughout the course. Check regularly for updates]

<table>
<thead>
<tr>
<th>Week</th>
<th>Readings</th>
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<tr>
<td>1</td>
<td>Singleton and Straits, <em>Approaches to Social Research</em>: Chapters 1-2.</td>
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<th>Week</th>
<th>Readings</th>
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<tr>
<td>2</td>
<td>Singleton and Straits, <em>Approaches to Social Research</em>: Chapters 3.</td>
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**Week 3 (September 19): Causality and Causal Inference and Elements of Research Design**

Research reading response assignment #1 due:
One page write-up of article relevant to your research interests


**Topic: Interest Group Influence Through Campaign Contributions – Is There a Causal Link?**


*The Craft of Research* Chapters 9, 10, and 11.

*A Rulebook for Arguments* pages 31-36.

**Week 4 (September 26): Concepts and Measurement**

Research reading response assignment #2 due:
One page write-up of another article relevant to your research interests


**Topic: Social Capital**


*The Craft of Research* Chapters 4, 7 and 8.
Weeks 5 (October 3): Randomization and Experimental Method

Research reading response assignment #3 due:
One page write-up of another article relevant to your research interests

Singleton and Straits, *Approaches to Social Research*: Chapters 7 and 8, “Experimentation” and “Experimental Design.”


**Topic 1: Racial Discrimination**


**Topic 2: Voter Turnout**


*IRB for experiments discussion during class (Oct 10)*

*The Craft of Research* Chapters 5 and 6.

Weeks 6 (October 10): Innovative Tools used to gather data for Surveys/Survey Experiments

[NOTE: THIS WEEK WILL BE ONLINE ONLY.]


Tutorial: Getting great survey results from MTurk and Qualtrics via Amazon Mechanical Turk site. Link to site: https://blog.mturk.com/tutorial-getting-great-survey-results-from-mturk-and-qualtrics-f5366f0bd880

In class exercise: An introductory demonstration detailing how to use MTurk to generate survey/survey experiment results

Pro-Publica’s guide to Using Mechanical Turk: https://www.propublica.org/article/propublicas-guide-to-mechanicalturk/


*The Craft of Research* Chapter 12.

*A Rulebook for Arguments* Pages 49-72.

Week 7 (October 17): Observational Studies, Using Big Data for Observational Studies

How are they different from experiments? Understanding their limitations for causal inference. Statistical tools to cope with effects of non-random assignment of treatments. Inference from observational studies.

Assignment #4 Research Proposal Brief Overview (1-2 pages)

Singleton and Straits, *Approaches to Social Research*: Chapter 11
Donald B. Rubin. 2008. “For Objective Casual Inference, Design Trumps Analysis”


*The Craft of Research* Chapter 15.

**Week 8 (October 24): Sampling**

Assignment 5 Due, Minimum of five maximum of seven page literature review citing minimum of seven articles related to your research question. Due 11/1

Singleton and Straits, *Approaches to Social Research*: Chapters 6, “Sampling.”


*The Craft of Research* Chapters 13, 14, and 16.

**Weeks 9 (October 31): Survey Research**

General features of survey research.

Singleton and Straits, *Approaches to Social Research*: Chapters 9, “Survey Research.”


**Weeks 10 (November 7): Survey Instrumentation**


*Topic: National Longitudinal Survey of Adolescent Health*


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**Week 11 (November 14): Text as Data:**
Archival research. Text beyond archives.

Singleton and Straits, *Approaches to Social Research*: Chapter 12, “Research Using Available Data.”


Lee Drutman. and Hopkins, D. J. (2013), The Inside View: Using the Enron E-mail Archive to Understand Corporate Political Attention. Legislative Studies Quarterly, 38: 5–30. doi:10.1111/lsq.12001


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**Week 12 (November 21): Happy Thanksgiving! No Class. Wednesday is University Holiday.**

**Drafts of Research Proposals Due 11/21.**

**Week 13 (November 28): Proposal Presentations**

**Week 14 (December 5): Proposal Presentations**

**Drafts of Research Proposals Returned. Final Revision Due 12/14.**
I. Overview

This course — one of the two foundational courses in the QMSS curriculum — is designed as an in-depth introduction to the social sciences and its methodologies. It is intended to give a broad overview so students can intelligently combine ideas in solving real-world problems.

We will focus on the logic and design of social research, beginning with some concepts and topics common to research across the social sciences. We will later move on to understanding the principles behind an array of methodologies used in the social sciences: causal inference, experimentation, observational studies, formal models, surveys, and applied machine-learning techniques. We will analyze their applications using cases drawn from the research literature.

The focus of this course is not on the techniques themselves — you will have ample opportunity to do that in other courses — but in understanding the logic behind the use of these tools to extract meaningful answers from their applications.

Prerequisites: it is assumed that you have had at least one semester of graduate-level statistics involving linear regression and analysis of variance. Some basic mathematics and algebra will also be assumed.
II. Course Materials

Two texts are intended to be resources for the crafting of your thesis proposal:


All mandatory readings will be available on Canvas. Please note that:

**Required Readings** are mandatory and should be completed before each class.

**Topic Readings** are also mandatory as they will serve as the foundation to class discussions.

**Thesis Readings** are intended to help you with the drafting and crafting of the Research Proposal, but will not be discussed in class. Read them in the suggested order/dates.

**Complementary Readings** are intended to serve as further (and future) references if you ever want to delve deeper on a particular topic, but are not a requirement to this class.

III. Course Dynamics

The class will be a combination of lectures and focused discussion. We will devote the first half of the class to a lecture on the topic assigned for the week, and the second half to analyze in detail one or two Topic readings which contain applications of the method under discussion. To kick off these discussions, students will give 5-minute Topic Presentations to introduce each reading. We’ll proceed then to discuss the method in detail. Each presentation should be preceded by a **one-page summary** to be emailed to the entire class at 6PM on the day prior to class.

**Before each class, you should have read, thought about and be prepared to discuss all assigned Required and Topic Readings.**

Over the course of the semester, you will be required to complete two (2) **Assignments** where you will apply concepts and methods that you have learned in class. Make sure to
read the instructions carefully and address all questions. Assignments should be submitted on Canvas by 6PM on the indicated dates.

At the end of the course, you will turn in a 12-15 page Thesis Proposal. To ensure that you produce a fully fledged product, you will be required to hand in Thesis Proposal Deliverables every two weeks. These will constitute the foundational pieces for your proposal. Feedback will be provided on these deliverables where required. Deliverables should be submitted on Canvas by 6PM on the indicated dates.

IV. Course Requirements

Attendance is expected and reading assignments are to be completed before each session. All written work must be original and produced exclusively for this class. You are expected to follow the University’s guidelines for the submission of written work.

The final grade of the course will be based on your fulfillment of each of the following requirements:

Assignments (20%): Students must complete a series of assignments where methods from the course are applied. Make sure to submit each one of them by 6PM on the indicated dates.

Class participation (20%): Students are expected to have read all the required readings before class and actively participate in class discussion. Note that you will not obtain this 20% unless you actively participate in class.

Topic presentations (10%): Students will regularly be assigned to present an overview of a “Topics” reading. Make sure to send your one-page summary to the full class by 6PM on the day prior to the class when you are presenting.

Thesis Proposal Deliverables (20%): Students will submit pieces of their proposal every two weeks. Make sure to submit each one of them by 6PM on the indicated dates.

Thesis proposal (30%): Throughout the curse, you will work on a research proposal. This 12-15 page paper will be turned in at the end of the semester.

Late Submission Policy: Course requirements are expected to be submitted on the due date. For every day after the submission date, 10% of the maximum grade will be deducted from the score.
V. Course Requirements

WEEK 1: INTRODUCTION TO THE COURSE

What this course is (and what it is not). Course overview. What is so unique about quantitative methods applied to the social sciences? Why do we need models to understand the world? Why is it useful to have statistical models in the social sciences?

WEEK 2: THE “SCIENCE” OF SOCIAL SCIENCE


Required Readings:


Thesis Readings:


Complementary Readings:

WEEKS 3 | 4: CAUSALITY AND CAUSAL INference (I & II)


Required Readings:

Thesis Readings:

Complementary Readings:

[MM/DD] - Students will receive Assignment #1.
WEEK 5: EXPERIMENTS AND RANDOMIZATION

Theoretical Foundations of Experiments. Statistical foundations of experiments. Taxonomy of randomized experiments. Randomized experiments as the golden standard for causal inference. Inference from randomized experiments.

Required Readings:

Topic: Voter Turnout

Thesis Readings:

Complementary Readings:

[MM/DD] - Assignment #1 due.

Updated: May 1, 2018 at 12:39 hrs
WEEK 6: OBSERVATIONAL STUDIES

How are they different from experiments? Understanding their limitations for causal inference. Statistical tools to cope with non-random assignment of treatments. Inference from observational studies.

Required Readings:

Topic: Selected statistical applications to observational studies

Complementary Readings:
WEEK 7: CONCEPTS, MEASUREMENT, AND MEASUREMENT ERROR

Research design and the research question. Measurements as a function of concepts. Theoretical consequences of measurement error. Statistical consequences of measurement error.

Required Readings:

Topic: Economic Perceptions

Thesis Readings:

Complementary Readings:

WEEK 8: IDENTIFICATION


Required Readings:

Topic: Selected statistical applications to address identification

Complementary Readings:
WEEKS 9 | 10: SURVEY RESEARCH AND SURVEY METHODOLOGY (I & II)


Required Readings:

Topic: Question Wording and Response Scales

Topic: Non-response and Data Quality

Topic: Mode of Data Collection

Topic: Probability v Non-probability Samples

Thesis Readings:
Complementary Readings:


[MM/DD] - Students will receive Assignment #2.

WEEKS 11 | 13: RATIONAL CHOICE AND FORMAL MODELS (I & II)

Formal models of social behavior. The rational choice paradigm. What is rationality? What are its limitations? Can rational choice help explain collective action?

Required Readings:


Topic: Institutionalism


Topic: Partisanship and the transmission of partisan attachments


Topic: Legislative Behavior

Topic: Rational Choice and Its Critics


Complementary Readings:


[MM/DD] - Assignment #2 due.
[MM/DD] - Thesis Proposal Deliverable #6 (research proposal draft) due.

WEEK 12: ACADEMIC HOLIDAY

WEEK 14: TEXT AS DATA


Required Readings:

Topic: Estimating Ideology from Texts


**Complementary Readings:**


[MM/DD] - FINAL PAPER DUE.
Statement on Academic Integrity

Columbia's intellectual community relies on academic integrity and responsibility as the cornerstone of its work. Graduate students are expected to exhibit the highest level of personal and academic honesty as they engage in scholarly discourse and research. In practical terms, you must be responsible for the full and accurate attribution of the ideas of others in all of your research papers and projects; you must be honest when taking your examinations; you must always submit your own work and not that of another student, scholar, or internet source. Graduate students are responsible for knowing and correctly utilizing referencing and bibliographical guidelines. When in doubt, consult your professor. Citation and plagiarism-prevention resources can be found at the GSAS page on Academic Integrity and Responsible Conduct of Research.

Failure to observe these rules of conduct will have serious academic consequences, up to and including dismissal from the university. If a faculty member suspects a breach of academic honesty, appropriate investigative and disciplinary action will be taken following the Dean’s Discipline procedures.

Statement on Disability Accommodations

If you have been certified by Disability Services (DS) to receive accommodations, please either bring your accommodation letter from DS to your professor’s office hours to confirm your accommodation needs, or ask your liaison in GSAS to consult with your professor. If you believe that you may have a disability that requires accommodation, please contact Disability Services at 212-854-2388 or disability@columbia.edu.

Important: To request and receive an accommodation you must be certified by DS.