

PAF 3401 Quantitative Methods for Policy & Practice

Mon/Wed 4:10pm-5:25pm — Vertical Campus 5 - 165

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Office Hours: by appointment

Course Description: This course introduces students to the use of quantitative research methods and tools that are used in the analysis of social science data. A fundamental understanding of these tools is a critical foundation for social science research in many fields. Students will learn how and why professionals use different research methods and data analytic techniques. Where appropriate real world data will be examined to familiarize students with the issues that professionals and researchers address and to explore how research and empirical evidence are used to drive decision-making. Students are introduced to the concepts and skills underlying a systematic approach to conducting research, including basic research terminology, the scientific method, use of theory and models, research ethics, measurement, sampling, hypothesis testing, and the basics of regression analysis.

Course Format and Objectives: As in any methods course, this class requires much work in and outside of the classroom. Active and informed participation is expected from every student. Class sessions will be a combination of lecture, discussion, and in-class exercises. Lecture material is intended to supplement, not review, the readings. Because the readings are a major source of learning, students are expected to study this material as it is assigned and to come to class ready and prepared. At the end of this course students will be able to:

- Describe the role of research in advancing knowledge and formulating policy
- Articulate the importance of measurement, sampling, surveys, and other forms of data
- Recognize the trade-offs involved in measurement and sampling
- Distinguish when to use qualitative/quantitative/or mixed methods research designs
- Formulate and test hypotheses in research models
- Apply statistical models to real world research questions, compute, interpret statistics, and ascribe significance to those statistics
- Use descriptive and multivariate statistical research techniques to perform analyses that support policy and operational decision-making

Recommended Texts:

Remler, D. K. and Van Ryzin, G.G. (2014). *Research Methods in Practice: Strategies for Description and Causation*. Los Angeles, CA: Sage Publications. **(RVR)**

Salkind, Neil J. (2010). *Statistics for People Who (Think They) Hate Statistics*: Excel 2010 edition, Sage Publications. ISBN 978-1-4522-2523-4 (S)

Acock, Alan. (2012). *A Gentle Introduction to STATA*. Revised 3rd Edition. Stata Press.

Required Material:

Software: Microsoft Excel will be used in the course. If the student would like to use another software such as SPSS or STATA that is fine. SPSS is available at the computer labs. And if you'd like to purchase STATA, the simplest method is a 6-month lease for Small STATA software with PDF documentation (\$45) Be sure to include your Baruch email when ordering:

<http://www.stata.com/order/new/edu/gradplans/student-pricing/>

A basic calculator that can take square roots and raise number to powers is required.

All course-related materials will be posted at the course web page on Blackboard.

Grading:

Grade Distribution			Grade Scale								
Class Participation	5%		Min	Max	Grade	Min	Max	Grade	Min	Max	Grade
Quizzes	10%		97.0	100	A+	93.0	96.9	A	90.0	92.9	A-
Homework	25%		87.0	89.9	B+	83.0	86.9	B	80.0	82.9	B-
Exam I	20%		77.0	79.9	C+	73.0	76.9	C	70.0	72.9	C-
Exam II	20%		67.0	69.9	D+	63.0	66.9	D	60.0	62.9	D-
Exam III	20%		0.00	59.9	F						

Course Requirements:

- **Class Participation [5%]**

- You are required to attend class. If you absolutely must miss a class, you are responsible for the material covered during your absence. You are also expected to do the readings ahead of time, participate actively during discussions, and in-class exercises contributing to the class in meaningful and thoughtful ways. Class discussion depends on your participation and engagement with the material; therefore, you will be expected to talk during class discussions. Class participation is measured by the quality of your thoughtful contributions to the class discussion.

- **Quizzes [10%]**

- In order to ensure adequate comprehension of the materials, throughout the semester you will have several quizzes. There will be no make-up sessions on quizzes, so please think twice before missing class or arriving late as the quizzes are given out at the beginning of class.

- **Homework [25%]**

- Throughout the semester you will have several take-home assignments. Turning assignments on time is expected from all students. However, I will accept late homework without penalty within 5 hours of its deadline (which means you have until 10:30 pm to submit it on the day it is due). I understand that sometimes life happens, so if you cannot turn in an assignment by the due date indicated on the course schedule, let me know immediately (if you have a documented

medical excuse or is undergoing extraordinary circumstances, let's talk). Otherwise, students will be penalized one full grade per day after the deadline and no assignments will be accepted after three days.

- **Exams I, II, and III [60%]**

- Students will have three exams during the semester. These are designed to test your knowledge and understanding of materials covered in the readings and lectures. The exams are not cumulative. If you are late for an exam, you will not be given any extra time. If you know in advance that you will be unable to take any of the exams on the scheduled dates, please let me know at least a week in advance so arrangements can be made ahead of time. A make-up exam will be administered only if legitimate, written documentation is provided within three days of the scheduled exam date. If you are ill on the day of the exam, or have a family emergency (ex. death of a family member) you are required to provide written documentation pertaining to the reason for your absence. Also, it is your responsibility to email or call me **before** the scheduled exam time, so I know that you will be absent due to an illness or family emergency.

Course Policies

This syllabus is subject to revisions and changes at the discretion of the Professor. Any changes will be discussed in class and posted on Blackboard so you can plan accordingly.

Attendance policy: Regular class attendance and participation will be a deciding factor in all assignments and grades. ***Three unexcused absences will be allowed; a fourth unexcused absence will automatically lower your final grade three points.*** For example, if your final is a 93, your grade will be reduced by three points to a 90. If there are more unexcused absences, the same policy will apply subsequently, which could make you have to repeat the course. An unexcused absence refers to missing class for a non-university approved reason or personal reason other than sickness and/or a family emergency. Last minute emails and/or phone calls will not be accepted, unless in the case of a documented medical emergency. Only university-approved reasons and illness with written documentation by physician will be accepted as excused absences, and must be reported within three days of the absence date. ***Regular tardiness can be a distraction to the class and a sign of disrespect to the professor, thus three incidents will equal one unexcused absence.*** If you need to leave early, please let me know in advance at the beginning of class.

Electronic Devices: Technology both within and outside the classroom should enable your learning experience, not hinder it. If you decide to use a laptop in class understand that they are to be used **ONLY** for note taking, to follow the slides, or to work on Excel/STATA when appropriate. The laptop should not be used to browse the internet, answer emails, check social media, etc. If you use the computer to surf the web on non-class related sites, know that you are doing so at your own risk. Bottom line: you are wasting valuable time. Also, be mindful of those seating close to you. For more information on why I discourage laptop use in the classroom, please read: Sana, Faria, Tina Weston, and Nicholas J. Cepeda. 2013. "Laptop multitasking hinders classroom learning for both users and nearby peers." *Computers & Education*. Vol. 62: 24-31.

Blackboard: Blackboard is used a lot in this class. This is how I will communicate with you. ***It is your responsibility to check Blackboard on a regular basis.*** You are responsible for announcements made through blackboard.

Class Etiquette: I expect students to be attentive during class and to be courteous and polite during discussions. You are expected to listen respectfully to me and to other students when speaking. Racism, sexism, classism, ageism, homophobia, Islamophobia, anti-Semitism, and other forms of bigotry are inappropriate to express in this class. I respect all students and viewpoints and expect you to extend the same courtesy to your classmates and to me. Disruptive students will be asked to leave and may be subject to disciplinary action.

Academic Honesty: *“Academic dishonesty is unacceptable and will not be tolerated. Cheating, forgery, plagiarism and collusion in dishonest acts undermine the college’s educational mission and the students’ personal and intellectual growth. Baruch students are expected to bear individual responsibility for their work, to learn the rules and definitions that underlie the practice of academic integrity, and to uphold its ideals. Ignorance of the rules is not an acceptable excuse for disobeying them. Any student who attempts to compromise or devalue the academic process will be sanctioned.”*

The entire text on Academic Integrity can be accessed online at:
https://www.baruch.cuny.edu/academic/academic_honesty.html

Student Academic Support Services

Student Academic Consulting Center (SACC)

Location: Newman Vertical Campus, Room 2-116

The Student Academic Consulting Center coordinate peer tutoring and academic support for Baruch College’s undergraduates. SACCs mission is to help the students succeed academically during their college years and later in their chosen professions by helping them develop the skills and knowledge necessary for workplace success. One-to-one and group tutoring sessions are available for most undergraduate courses, as are workshops designed specifically to assist students with historically challenging coursework and concepts such as MTH 2003, MTH 2205, and MTH 2207. For more information: <http://www.baruch.cuny.edu/sacc/index.html>

The Writing Center

Location: Newman Vertical Campus, Room 8-185 and Newman Library Reference Desk

The Writing Center provides free support for undergraduate and graduate student writers at Baruch to improve their writing and English language skills. In the NVC location the Center offers 50 minute one-to-one sessions on scheduled and walk in basis (when available), as well as reader responses via email (eTutoring), online chat, and small-group workshops; at the Library, they offer both scheduled 50 minute sessions and dedicated 20 minutes walk-in session. The goal is to strengthen student’s long term writing and English language skills, often by concentrating on a specific writing assignment or project. Students from all discipline and all levels of writing and English language proficiency are welcome. The Writing Center is open whenever classes are in session, including winter and summer terms. For more information: <https://writingcenter.baruch.cuny.edu/>

Tools for Clear Speech

Location: Administrative office at NVC 6-121

The Tools for Clear Speech is an academic support unit that improves the oral communication skills of English language learners (ELLs) and nonnative English speakers at Baruch College. Oral

comprehensibility is essential for college and workplace success, and this program offers students weekly one-to-one pronunciation tutorials, a workshop series, conversation hours, an innovative oral communication video assessment, and some of the most advanced tutorial websites and software programs available. For more information: <https://tfcs.baruch.cuny.edu/>

The Office of Services for Students with Disabilities

Location: NVC 2-272 — Tel:646-312-4590.

Student Disability Services provides appropriate accommodations to students with disabilities to promote equal access to the college's programs and services. They advocate for and create an accessible college environment for students with disabilities, support faculty in the classroom, and provide technology that assists and empowers students to self-advocate and develop the skills necessary to succeed academically. Accommodations include but are not limited to: extended time for exams, tests in alternate formats, assistive technology, note takers, captioning, interpreters, tutoring accommodations, and changes in curriculum.

It is college policy to provide Accommodations and Academic Adjustments to students with disabilities. Any student who has a disability who may need accommodations in this class should register with Student Disability Services which is located in NVC 2-272 as early as possible. All discussions will remain confidential. For more information:

<http://www.baruch.cuny.edu/studentaffairs/ossd/disabilityServices.htm>

Health and Self-Care

It is important that we take care of ourselves inside and outside of class. Toward that end, there are many different kind of support services on campus such as the Counseling Center, Health Services, the Campus Intervention Team and the Office of Dean of Students. If you are concerned about yourself or a friend that is struggling, please contact the Counseling Center. All services are confidential and free of charge.

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Office of the Dean of Students for support. Furthermore, if you are comfortable in doing so, please let me know. This will enable me to take the necessary steps to provide you with the support, and resources you need.

For more information:

<https://www.baruch.cuny.edu/studentaffairs/counselingCenter.htm>

<http://www.baruch.cuny.edu/studentaffairs/healthServices.htm>

<http://www.baruch.cuny.edu/studentaffairs/cit.htm>

Resources for food and shelter security:

City Harvest: <http://foodhelp.nyc/locations-en/>

Safe Horizon: <https://www.safehorizon.org/domestic-violence-shelters/>

Nazareth Housing: <http://nazarethhousingnyc.org/>

New Destiny Housing: <http://www.newdestinyhousing.org/>

Class Schedule

Week 1	Aug 28	Introduction, Organization and Assignments Reading: Chapter 1 (S) and 1 (RVR)
	Aug 30	Lecture Topic: Measurement Reliability and Validity Reading: Chapter 6 (S) and 4 (RVR)
Week 2	Sep 4	No class - Labor Day
	Sep 6	Lecture Topic: Making Sense of the Numbers Descriptive Stats and Central Tendency Reading: Chapter 2 (S) and 8 (RVR)
Week 3	Sep 11	Lecture Topic: Making Sense of the Numbers Variability Reading: Chapter 3 (S) and 8 (RVR)
	Sep 13	Lecture Topic: Making Sense of the Numbers Frequency Distributions Reading: Chapter 4 and 21 (S), and 8 (RVR)
Week 4	Sep 18	Exam I Due: HW 1
	Sept 20	No class - Academic Calendar
Week 5	Sep 25	Lecture Topic: Making Sense of Inferential Stats Hypothesis Testing Reading: Chapter 7 (S) and 9 (RVR) Due: HW 2
	Sep 27	Lecture Topic: Making Sense of Inferential Stats Probability Reading: Chapter 8 (S)
Week 6	Oct 2	Lecture Topic: Making Sense of Inferential Stats Normal Distribution Reading: Chapter 8 (S) and 9 (RVR)
	Oct 4	Lecture Topic: Making Sense of Inferential Stats Significance levels, p value Reading: Chapter 9 (S) and 9 (RVR)
Week 7	Oct 9	No class - Academic Calendar
	Oct 11	Lecture Topic: Making Sense of Inferential Stats z test Reading: Chapter 10 (S) Due: HW 3

Week 8	Oct 16	Lecture Topic: Natural and Quasi Experiments t test Reading: Chapter 11(S), 15 (RVR)
	Oct 18	Lecture Topic: Natural and Quasi Experiments t test Reading: Chapter 11(S), 15 (RVR) Due: HW 4
Week 9	Oct 23	Lecture Topic: Natural and Quasi Experiments more t tests Reading: Chapter 11 (S), 15 (RVR)
	Oct 25	Lecture Topic: Natural and Quasi Experiments more t tests (cont) Reading: Chapter 11 (S), 15 (RVR)
Week 10	Oct 30	Review for Exam II Due: HW 5
	Nov 1	Exam II
Week 11	Nov 6	Lecture Topic: Making Sense of Inferential Stats z test
	Nov 8	Lecture Topic: Making Sense of Multivariate Stats Analysis of Variance Reading: Chapter 13 (S), 10 (RVR) Due: HW 6
Week 12	Nov 13	Lecture Topic: Making Sense of Multivariate Stats Analysis of Variance Reading: Chapter 13 (S), 10 (RVR)
	Nov 15	Lecture Topic: Causation Correlation Coefficient Reading: Chapter 5 (S) and 8 (RVR)
Week 13	Nov 20	Lecture Topic: Causation Correlation Coefficient Reading: Chapter 15 (S) and 8 (RVR)
	Nov 22	Lecture Topic: Using Regression to Estimate Causal Effects Linear Regression Reading: Chapter 16 (S) and 13 (RVR) Due: HW 7
Week 14	Nov 27	Lecture Topic: Using Regression to Estimate Causal Effects Linear Regression Reading: Chapter 16 (S) and 13 (RVR)

	Nov 29	Lecture Topic: Making Sense of Inferential Stats Chi square Reading: Chapter 17 (S) and 9 (RVR)
Week 15	Dec 4	Lecture Topic: Making Sense of Inferential Stats Chi square Reading: Chapter 17 (S) and 9 (RVR) Due: HW 8
	Dec 6	Lecture Topic: Course Wrap up/Review Due: HW 9
Week 16	Dec 11	Exam III Due: Optional Extra credit

Have a good Winter Break!

Student Information and Acknowledgment
PAF 3401 Quantitative Methods for Policy and Practice
Fall 2017

Student Information

Name:

Preferred name:

Email Address:

Major:

Academic Class: Freshman [] Sophomore [] Junior [] Senior []

List all classes you are taking this semester:

Besides going to college, are you currently working? If so, how many hours per week?

No [] Part-time I (up to 20 hrs) [] Part Time II (21 hrs to 31 hrs) []

Full-time I (32 hrs to 40 hrs) [] Full Time II (more than 40 hrs) []

Anything else you'd like me to know that might impact your performance in this class:

Student Acknowledgment

I have read and discussed the syllabus for “Quantitative Methods for Policy and Practice.”

Signature

Date