MAX 201
Quantitative Methods for the Social Sciences
Spring, 2025

LECTURE (M008): Eggers, Room 010
Monday, 12:45-2:05 PM

LAB: Eggers, Room 030
Mondays, 2:15-3:35PM (M012-LAB)
Mondays, 3:45-5:05PM (M009-LAB)
Tuesdays, 11:00AM-12:20PM (M010-LAB)
Thursdays, 2:00-3:20PM (M011-LAB)
You are required to attend your registered lab section each week.

Course Instructor: Professor Jack Reilly
Office: Eggers 225F (2nd Floor, inside the Policy Studies suite)
E-mail: jlreilly@syr.edu
Office Hours: In person, Mondays and Wednesdays 2:15PM-3:15PM or by appointment

Teaching Assistants:

Abdela Hilo
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Office Hours: Tuesday, 9-11 AM, Eggers 030

Michael Mccall
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Jingding Wang
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Office Hours: Thursday, 3:30-5:30 PM, Eggers 040

Overview and Objectives

MAX 201 is an approved "second course" for the Liberal Arts Core Quantitative Skills requirement. We presume that you have taken MAT 121, MAT 221, STT 101, or some other introductory statistics course. MAX 201 was developed by an interdisciplinary committee of faculty members in the Maxwell School and designed to introduce students to the ways that quantitative data is used by social scientists in their research. The objectives of the course are the following:

- provide students with skills and concepts necessary for 300-level social science courses
- expose students to examples of research design and quantitative analysis for the social sciences.
- help students develop analytical and computing skills, which will be useful in

many careers.
- prepare students to be active, productive citizens in a society that increasingly provides important information in complex quantitative forms.

We believe that the best way to accomplish these goals is through intensive, hands-on experience. Thus, in MAX 201, you will be using SPSS, a user-friendly statistical software package, to work with research concepts and social science research data.

Course Materials

Required Book: Pollock, Philip and Barry Edwards. *The Essentials of Political Analysis.* 6 Edition.

The textbook is available through Orange Instant Access and already integrated into Blackboard. If you prefer to use a physical copy and want to opt out of the digital version, you will need to do so by **Monday, January 27th** or else your Bursar account will be charged the cost of the textbook.

Additional Readings: There will be several other readings for the course that will be posted under "Blackboard Readings" on Blackboard.

Software and Data:

SPSS: You will be working with statistical software SPSS this semester for all of your labs. You can work in Eggers 030 this semester on your labs and your research paper. Most computer clusters on campus also have SPSS available, such as in Bird Library. You can also rent SPSS and download on your own computer for $35-40 through https://studentdiscounts.com/ or https://onthehub.com/. This may be a useful purchase especially if you anticipate being off campus this semester. You also can remote into the lab from your home computer for days you want to work on your labs from home. See directions for how to remote into the lab here: https://su-jsm.atlassian.net/wiki/spaces/ITHELP/pages/159941283/Connecting+to+RDS+using+Remote+Desktop+App

Datasets: You will be primarily working with the General Social Survey (GSS), a nationally representative survey of the American population, all semester and a copy of the dataset will be posted on Blackboard along with the GSS codebook and a link to the GSS website's data explorer. Other data used in labs will also be posted on Blackboard. You will always have a "clean" copy of these data available to download from Blackboard if anything should happen to your downloaded datasets.

Course Requirements:

Homework (30%)

Each week in lab, you will learn a new application of a concept that we covered in lecture and manipulate real data. You will start the lab during your lab time and it will be due the following

Monday. **Lab assignments are due Mondays by 11:59 PM on Blackboard.** We will accept late assignments up until 11:59PM on Wednesday of each week for a five (5) point penalty per day late. **No assignments will be accepted after that time unless alternative arrangements have been made in advance.** We understand that there will be disruptions caused by health and other issues. ***The key is to communicate with the instructors so we can help you keep up with the course.* Discussing these issues at the end of the semester, after the fact, will not result in past labs being accepted.**

At the end of the semester your lowest lab grade will be dropped. Therefore, if you miss a lab because you are sick, out of town, or just miss the submission cut off, that missed lab grade will be dropped. However, we recommend you do your best to complete all 10 labs. You are responsible for the content covered in all labs regardless of a non-submission. Also, it is important to get the practice and feedback on each lab, as the skills presented in each lab will build upon each other throughout the semester.

Exams (25%)

There will be 2 exams taken in class on **February 24th** and **April 14th**. These exams are opportunities for you to demonstrate your understanding of the statistical and research concepts we are learning in the readings, lectures, and practice in the labs.

Lab skills test (5%)

The week of the **February 17th**, you will take a short lab skills test in your lab session to demonstrate that you understand how to work with SPSS and the GSS data.

Attendance (5%) and Exam Bonus Quizzes

Every week we will meet in Eggers 010 on Monday at 12:45 PM for lecture. My expectation is that you will all be there ready to listen and contribute to any discussion. You are required to attend both lecture and lab each week, and we will take attendance every class. In lecture, while taking attendance using a QR code you will also be doing random short quizzes on material covered that day. If you get the questions correct, you will receive bonus points that will be added to your exam grades. Your points prior to Exam #1 will be added to your Exam #1 grade and your points after the Exam #1 will be added to your Exam #2 grade. No make-up quizzes will be given. If you arrive extremely late to class your attendance and quiz will not be accepted for credit. **If the QR code login is not working for you, you are required to come see me to sign in and/or to take your attendance quiz on a hard copy. If you email me after class to tell me the QR code and/or quiz did not work, you will not receive attendance credit and/or quiz points.**

Research Project (35% total)

Your capstone project in the course is a final research project that is comprised of a presentation and research paper. Here you will bring all the skills you have learned throughout the semester together to develop a unique research question that you will explore using GSS data.

Presentation (10%)
You will present your preliminary research findings to a small group of students using Power Point or other presentation software. You will receive feedback on the presentation that you will incorporate into your final paper.

Final Paper (25%)
Your final paper will replicate an academic journal article, where you will introduce your topic, research question(s), briefly review the literature on your topic, develop hypotheses you will test with GSS data, describe your research methods and the results of your statistical analyses, and discuss your findings in a conclusion. Your analyses will explore the relationship between GSS variables at the bivariate and multivariate levels, and use one or multiple analysis techniques learned in class.

Reading for Lecture
Make every effort to do all of the assigned readings for the week **BEFORE** coming to the lecture. The lectures and the lab sessions will be much more helpful for you if you have completed the readings.

Lecture Notes
The lectures are based on Power Point slides, which will be posted on Blackboard before the lecture. I will talk through these slides during lecture. It is important you take notes to accompany the Power Point slides. The slides alone will not prepare you for the exams or lab assignments.

Final Grade Distribution
A = 94.00-100 B+ = 87.00-89.99 B- = 80.00-82.99 C = 73.00-76.99 D = 60-69
A- = 90.00-93.99 B = 83.00-86.99 C+ = 77.00-79.99 C- = 70.00-72.99 F = 59.99 and below

Course Procedures and Policies:

Attendance
Attendance at both the lectures and your registered lab sessions is required. If you complete the SPSS portion of your homework assignment during lab, you can spend lab time working on the write-up. Unless you have discussed with us a reason why you need to leave lab early, you are required to attend the entire lab class. **Leaving lab early without doing so will result in you not receiving attendance credit for that lab class.** Attending lab and lecture means being present, respectful, and on-task. Being disruptive, disrespectful of instructional staff or failing to follow directions will lead to not getting credit for the day and potentially higher sanctions.

Office Hours
Office hours are the time set aside in the week for you to come ask questions about the class, clarify ideas, introduce yourself, and tell us about research projects that you want to work on. If you just want to come say hi, that's ok too. If you cannot make any of the office hours we can make an appointment online or in person for a different time. The TAs will hold their office hours in Eggers 030 or Eggers 040. Please attend whichever set of hours is helpful for you.

Lab Sessions
We have designed the course so that all your computer-based work can generally be completed during your lab session. If you need additional time and/or assistance, there are several hours (see above) when one of the Teaching Assistants will be available in the undergraduate computer lab in Eggers 030. *Food and Drink are not allowed in the lab.* A weekly schedule of when the computer lab (Eggers 030) is available is hung outside the lab door by ICT services.

You must get the approval of one of the Teaching Assistants if you would like to attend a lab session other than the one for which you have registered. We generally do not make changes.

Saving your work
We will show you where and how to save your work for the class. You can use Google docs for the lab work or you can save things on OneDrive (which all students have access to as a way to save and organize files). You should also have a USB thumb drive with you to lab in case there are problems saving your work to the OneDrive. You cannot save anything on the cluster computers. All your computer work can be done on the computers in Eggers 030. Each computer has access to Microsoft Office (which includes Word, Excel, and PowerPoint) and to SPSS.

University/Class Policies:

Academic Integrity
As a pre-eminent and inclusive student-focused research institution, Syracuse University considers academic integrity at the forefront of learning, serving as a core value and guiding pillar of education. Syracuse University's Academic Integrity Policy provides students with the necessary guidelines to complete academic work with integrity throughout their studies. Students are required to uphold both course-specific and university-wide academic integrity expectations such as crediting your sources, doing your own work, communicating honestly, and supporting academic integrity. The full Syracuse University Academic Integrity Policy can be found by visiting class.syr/edu, selecting, "Academic Integrity," and "Expectations and Policy."

Original course materials (Power Point slides, handouts, assignments, tests, etc.) and recordings of class sessions are the intellectual property of the course instructor. You may download these materials for your use in this class. However, you may not provide these materials to other parties (e.g., web sites, social media, other students) without permission. Doing so is a violation of intellectual property law and of the student code of conduct.

Upholding Academic Integrity includes the protection of faculty's intellectual property. Students should not upload, distribute, or share instructors' course materials, including presentations, assignments, exams, or other evaluative materials without permission. Using websites that charge fees or require uploading of course material (e.g., Chegg, Course Hero) to obtain exam solutions or assignments completed by others, which are then presented as your own violates academic integrity expectations in this course and may be classified as a Level 3

violation. All academic integrity expectations that apply to in-person assignments, quizzes, and exams also apply online.

Students found in violation of the policy are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered. Students may not drop or withdraw from courses in which they face a suspected violation. Any established violation in this course may result in course failure regardless of violation level. For more information and the complete policy, see: http://academicintegrity.syr.edu/uploads/docs/SU%20AI%20Policies%20Procedures.pdf

We encourage students to work together during the lab sessions in this course; we know that students come to the course with varied academic backgrounds and believe that cooperative learning benefits everyone. **You can work together on the SPSS portion of your lab, BUT the write up of the work must be done individually. Copying someone else's work is cheating and will not be accepted. Because we do not know who copies from whom, it will result in penalties for both students involved. Academic dishonesty will earn you a grade of zero for the assignment and, possibly, a failing grade for the course. Note that we are obligated to report any incidence of academic dishonesty to the academic integrity officer of your home college or school. He or she will report violations to the University Office of Academic Integrity.**

All academic integrity expectations that apply to in-person quizzes and exams also apply to online quizzes and exams. In this course, all work submitted for quizzes and exams must be yours alone. Discussing quiz or exam questions with anyone during the quiz or exam period violates academic integrity expectations for this course.

Turnitin

This class will use the plagiarism detection and prevention system Turnitin. You will have the option to submit your papers to Turnitin to check that all sources you use have been properly acknowledged and cited before you submit the paper to me. I will also submit all papers you write for this class to Turnitin, which compares submitted documents against documents on the Internet and against student papers submitted to Turnitin at Syracuse University and at other colleges and universities. I will take your knowledge of the subject matter of this course and your writing level and style into account in interpreting the originality report. Keep in mind that all papers you submit for this class will become part of the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers.

Artificial Intelligence Use

All generative-AI tools are prohibited in this course because their use inhibits achievement of the course learning objectives. This policy applies to all stages of project and writing processes including researching, brainstorming, outlining, organizing, and polishing. Do not use Generative-AI tools to create any content (i.e., images and video, audio, text, code, etc.). If you have any questions about a feature and whether it is considered Generative-AI, ask your instructor.

Religious Observances
Syracuse University's Religious Observances Policy recognizes the diversity of faiths represented in the campus community and protects the rights of students, faculty, and staff to observe religious holy days according to their traditions. Under the policy, students are given an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance, provided they notify their instructors no later than the academic drop deadline. For observances occurring before the drop deadline, notification is required at least two academic days in advance. Students may enter their observances in MySlice under Student Services/Enrollment/My Religious Observances/Add a Notification.

Accommodations
Syracuse University values diversity and inclusion; we are committed to a climate of mutual respect and full participation. There may be aspects of the instruction or design of this course that result in barriers to your inclusion and full participation in this course. I invite any student to contact me to discuss strategies and/or accommodations (academic adjustments) that may be essential to your success and to collaborate with the Center for Disability Resources (CDR) in this process.

If you would like to discuss disability-accommodations or register with CDR, please visit Center for Disability Resources. Please call (315) 443-4498 or email disabilityresources@syr.edu for more detailed information.

The CDR is responsible for coordinating disability-related academic accommodations and will work with the student to develop an access plan. Since academic accommodations may require early planning and generally are not provided retroactively, please contact CDR as soon as possible to begin this process.

CDR Testing
In order to comply with Center for Disability Resources (CDR) new exam services procedures for students, students with approved exam accommodations, who will be taking their exams at CDR, **must sign up 48 hours in advance of the day/time of each exam**. Students can request an exception if they meet certain criteria, but CDR cannot guarantee they will be able to approve or process late requests. In these cases, exams will need to be taken in the regularly assigned classroom and students who walk-in without signing up or who have not requested and been approved for an exception, will be advised to return to their regularly assigned classroom.

Other Concerns
Our goal is for you to be successful in this course. If you have any questions or concerns that are not covered by the syllabus, please talk to me—Professor Reilly—or one of the Teaching Assistants——so that we can work together to make this a successful experience for you.

Names
If you go by a name other than the one listed on MySlice, please let us know so we can call you by your preferred name. I go by Professor Reilly or Dr. Reilly.

Discrimination or Harassment
The University does not discriminate and prohibits harassment or discrimination related to any protected category including creed, ethnicity, citizenship, sexual orientation, national origin, sex, gender, pregnancy, disability, marital status, age, race, color, veteran status, military status, religion, sexual orientation, domestic violence status, genetic information, gender identity, gender expression or perceived gender.

Federal and state law, and University policy prohibit discrimination and harassment based on sex or gender (including sexual harassment, sexual assault, domestic/dating violence, stalking, sexual exploitation, and retaliation). If a student has been harassed or assaulted, they can obtain confidential counseling support, 24-hours a day, 7 days a week, from the Sexual and Relationship Violence Response Team at the Counseling Center (315-443-8000, Barnes Center at The Arch, 150 Sims Drive, Syracuse, New York 13244). Incidents of sexual violence or harassment can be reported non-confidentially to the University's Title IX Officer (Sheila Johnson Willis, 315-443-0211, titleix@syr.edu, 005 Steele Hall). Reports to law enforcement can be made to the University's Department of Public Safety (315-443-2224, 005 Sims Hall), the Syracuse Police Department (511 South State Street, Syracuse, New York, 911 in case of emergency or 315-435-3016 to speak with the Abused Persons Unit), or the State Police (844-845-7269). I will seek to keep information you share with me private to the greatest extent possible, but as a professor I have mandatory reporting responsibilities to share information regarding sexual misconduct, harassment, and crimes I learn about with the University's Title IX Officer to help make our campus a safer place for all.

Health and Wellness
Mental health and overall well-being are significant predictors of academic success. As such it is essential that during your college experience you develop the skills and resources effectively to navigate stress, anxiety, depression, and other mental health concerns. Please familiarize yourself with the range of resources the Barnes Center provides (https://ese.syr.edu/bewell/) and seek out support for mental health concerns as needed. Counseling services are available 24/7, 365 days, at 315-443-8000, and I encourage you to explore the resources available through the Wellness Leadership Institute, https://ese.syr.edu/bewell/wellness-leadership-institute/

COURSE SCHEDULE

Week of…	Lecture overview	Lecture material	Readings	Lab material	Assignment	Due on BB
Jan 13	Intro	Course overview; thinking about data; introduction to the GSS	Syllabus	Introduction to working with the GSS and SPSS.	Assignment #1: Understanding data and concepts in the GSS	Nothing due
Jan 20	No Lecture (MLK Day)	*There is no lecture or lab this week due to MLK day, but you may earn two bonus points on your midterm exam by attending the Maxwell School's screening of **Counted Out**, a documentary about the value of math and quantitative methods to understanding citizenship, polarization, and democracy. It will start at 6 PM on January 21, in the Strasser Legacy Room in Eggers Hall, and be followed by a discussion with faculty.*				
Jan 27	Introduction to Organizing and Analyzing Quant Data	Review of basic statistics: Measures of central tendency and dispersion; Levels of measurement	Pollock and Edwards, Ch 2, pgs. 34-55	Generating descriptive statistics with SPSS; Basic analyses of univariate data	Assignment #2: Measures of central tendency and dispersion; Summary statistics	Assignment #1
Feb 3	Measurement	Concepts and indicators; Variables; Indices	Pollock and Edwards, Ch 1, pgs. 1-24 Koenig, Harold G., and Arndt Büssing. "The Duke University Religion Index" *Religions* 1, no. 1 (2010): 78-85.	Conceptualization and measurement; Creating an index	Assignment #3: Recoding in SPSS; Creating indices	Assignment #2

Feb 10	Hypotheses; Bivariate analyses	Hypotheses; Crosstabs; Standardized scores (Z scores)	Pollock and Edwards, Ch 3	Bivariate tables; Hypotheses; Calculate Z scores.	Assignment #4: Testing hypotheses and calculate Z scores	Assignment #3
Feb 17	Sampling	Census; Surveys; Sampling	Pollock and Edwards, Ch 4, pgs. 114-126; Ch 6, pgs. pgs. 167-184	Sampling; Confidence intervals	Assignment #5: Hypotheses; Bivariate analyses and confidence intervals	Assignment #4
Feb 24	**Exam #1**	**In class - concepts exam**		**Lab skills test**		Nothing due – study for exam/lab test
Mar 3	Significance tests	Chi-square test of significance	Pollock and Edwards, Ch 7, pgs. 199-212	Testing statistical significance for categorical data	Assignment #6: Chi square tests	Assignment #5
Mar 10	**Spring Break!**					
Mar 17	Expanding bivariate analysis	Introducing a third variable	Review: Pollock and Edwards, Ch 5, pgs. 134-150	Introducing a third variable and testing for spuriousness	Assignment #7: Chi square and controlling for 3rd variable	Assignment #6
Mar 24	Analyzing continuous data	Differences in means; Regression	Pollock and Edwards, Ch 6, pgs. 188-194; Ch 8, pgs. 239-257		Assignment #8: T-tests and regression	Assignment #7

Mar 31	Research papers	Developing research topics; Review of paper and presentation requirements	Bradshaw, Kahn, and Saville, "To Hook Up or To Date?" (Blackboard)	Getting started on your project; Literature searches	Assignment #9: Preliminary project ideas and literature review	Assignment #8
Apr 7	Visually representing data and wrapping up the class		"One-in-Five Adults Have No Religious Affiliation" "America's Unique Gun Violence Problem, Explained 16 Maps and Charts" *(both on Blackboard)*	Creating charts and graphs with SPSS and Excel	Assignment #10: Building charts and graphs	Assignment #9
Apr 14	**Exam #2**	**In class – concept exam**		**Required labs**	**Work on presentation**	Assignment #10
Apr 21	Research presentations		Attend only your assigned presentation session this week			Peer evaluations for presentations (due in session)
Apr 28	Optional class – come to have last minute paper questions answered					**Research paper due by Monday, April 28th by 11:59 PM**