

New Jersey Institute of Technology

PSY 307A: Quantitative Methods Lab

Instructor: Leonore Morgenstern

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Office Hours: upon prior request on Wednesdays, 10:30 AM to 12:30 PM

Course Description

This lab course offers a hands-on introduction to applying quantitative research methods using real-world data and statistical software for data analysis. The curriculum guides students through the entire research lifecycle, from locating and managing data to analyzing and presenting findings.

Structured to provide a step-by-step practical experience, the lab culminates in the development of an original research project that leverages quantitative methods in psychology and other social science disciplines. At the end of the semester, students will present their work to the class and submit a final research project.

Course Milestones

- 1. Sourcing, Evaluating, and Managing Data:** Learn to identify and critically assess reliable databases and datasets for your research. This includes evaluating sources, ensuring data compatibility, and preparing data for analysis.
- 2. Building and Analyzing Indicators and Indices:** Develop practical skills in constructing meaningful indices from raw data. You will practice manipulating and interpreting these new variables to transform complexity into a clear, single score.
- 3. Developing a Quantitative Research Project:** Synthesize all course skills to design, execute, and present your own original research project. This capstone milestone demonstrates your ability to apply quantitative methods from start to finish.

Learning Objectives

- **Data Sourcing and Management:** Learn to identify, access, and evaluate quantitative data from various public and academic databases (e.g., U.S. Census Bureau, World Bank Data).

- **Statistical Software Proficiency:** Develop a foundational understanding of statistical software, with a primary focus on SPSS (Statistical Package for the Social Sciences).
- **Indicator and Index Construction:** Engaging the process of operationalizing concepts into measurable variables. Students will learn how to construct meaningful indicators and combine them into a composite index to measure complex phenomena.
- **Quantitative Analysis:** Gain the ability to conduct a complete quantitative analysis. This includes performing descriptive statistics to summarize data and using inferential statistics (e.g., t-tests, correlations, regression) to test hypotheses.
- **Data Communication:** Acquire the skills to communicate data-driven insights effectively. Students will learn to create appropriate data visualizations and present their findings in a clear, concise, and compelling manner, both in written reports and oral presentations.

Textbooks

Buying these textbooks isn't necessary; all materials will be provided through Canvas. The textbooks and bibliography are meant as reference points. You may need to create a Sage account to access the Student Portal of online resources (datasets, articles, etc.).

- Privitera, G. J. (2017). *Statistics for the Behavioral Sciences*. (3rd Ed.) Sage Publications. ISBN: 1506386253 [Student portal for the textbook's online resources](#).
- Frankfort-Nachmias, C., Leon-Guerrero, A., & Davis, G. (2020). *Social Statistics for a Diverse Society* (9th ed.). ISBN: 9781071910504 [Student portal for the textbook's online resources](#).

Grading and Assignments

90% and above	A
85 – 89%	B+
80 – 84%	B
75 – 79%	C+
70 – 74%	C
60 – 69%	D
below 60%	F

Participation & Attendance	10%
Lab Assignments	10%
Mid-semester project	15%
Oral presentations	15%
Project Report	20%
Final Project	30%

Grading Policies

- *The course will adhere very strictly to assignment due dates.*
 - There is no makeup for late papers, assignments, or reports. Following an emergency, contact the instructor.
- There is an attendance policy (starting in Week 3, with two unexcused absences permitted) because participation (including speaking, attentiveness, and following along in the reading) is crucial to facilitating an engaging classroom environment.
 - Unexcused absences beyond the allotted two will result in a 5% decrease in the attendance grade.
 - **All excused absences *must* be accompanied by the Dean of Students' Office approval.**
- There is no formal exam for the lab. The grade will be based on lab assignments and individual projects, including a three research report, a mid-semester project, and a final research project.
- Students have to attend the lab and engage with the SPSS practice lab assignment and homework assignments, which are instrumental to reaching the learning objectives of the lab.

Course Policies

Academic Integrity

Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at: <http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu.

AI Usage

This course expects students to work without artificial intelligence (AI) assistance to better develop their skills in this content area. As such, AI usage is not permitted throughout this course under any circumstances.

Academic Accommodations

If you require academic accommodations, you must file a request with the Office of Disability Services for Students (<https://www.njit.edu/studentssuccess/accessibility> [Links to an external](#)

[site](#)). You should file your request as soon as possible. Retroactive accommodations are not allowed.

Procedures and policies defined in this syllabus are subject to change upon mutual agreement. If you decide to stay enrolled in this course after receiving this syllabus, I will assume that you have read the entire syllabus and have agreed to all the policies outlined.

Technology Policy

Students are not allowed to use handheld devices (e.g., smartphones) or access non-course-related material during class meetings. This is to ensure the ability for others to participate without distractions. In the case of an officially recognized accommodation through NJIT, please contact the instructor for an exception. In the case of a need for emergency phone use, please excuse yourself from the classroom. Violations of this policy may result in a participation/attendance grade deduction.