

COR1-GB 1305 Statistics and Data Analysis Syllabus

New York University, Leonard N. Stern School of Business, Technology, Operations, and Statistics Department

Instructor Information

Instructor: Sarah Abramowitz

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Office: KMC 8 - 58

Office hours: My regular office hours are Mondays and Wednesdays 11 - 12 pm in my office or via this [Zoom link](#). I would appreciate it if you would sign up in advance via this regular hours [appointment link](#) so I know to expect you, but I will be in my office regularly at those times, so feel free to stop by or join me on Zoom even if you are not signed up. I also have varying additional appointment slots available via this additional hours [appointment link](#). You must sign up at least four hours in advance and some of these will be Zoom only. Please feel free to reach out by email if none of these times are convenient for you.

Teaching Assistant: Jillian Laird

Email: jt19310@stern.edu

Office hours: Tuesdays 12 - 1 via this [Zoom link](#).

Class Meetings

Section 02 9 - 10:20 KMC 3 - 50

Section 03 1:30 - 2:50 KMC 3-50

Catalog Course Description

This course is designed to achieve an understanding of fundamental notions of data presentation and data analysis and to use statistical thinking in the context of business problems. The course deals with modern methods of data exploration designed to reveal unusual or problematic aspects of databases.

More Detailed Course Description

The basic objective of this course is to provide the MBA student with a strong fundamental understanding of statistics and its applications. You will learn statistical applications utilizing real world examples and exercises from various fields. This course will survey the topics of descriptive statistics, probability, inferential statistics, linear regression and their applications. The course is designed to achieve an understanding of fundamental notions of data presentation and analysis and to use statistical thinking in the context of business problems. The course deals with modern methods of data exploration (designed to reveal unusual or problematic aspects of databases), the uses and abuses of the basic techniques of inference, and the use of regression as a tool for management and for financial analysis. Data relevant to business will be used throughout the course. The goal is not to turn you into statisticians or programmers but to enable you to appreciate the use of probability in assessing evidence and making decisions, and to be statistically literate consumers of quantitative information in a variety of contexts.

Topics Covered

Data collection and analysis, probability and the binomial and normal probability distributions, sampling and statistical inference, correlation and regression analysis.

I made a [tentative schedule](#) that gives more details about the topics covered in the course. This schedule is subject to change because this is my first time teaching this course. However, the midterm exam will be on the date indicated.

Course Objectives

Students will gain an understanding of the nature of data and of randomness in business situations. You will learn methods for the control of statistical bias, data presentation, incorporation of probability and randomness, using random variables, statistical inference, and correlation and linear regression.

By the end of the course, the student should be able to:

- Understand the basic methods of statistics: graphical, tabular, and statistical summaries
- Understand the essential concepts of statistical thought: probability distributions, estimation, and hypothesis testing.
- Construct and use statistics, graphs, charts, and tables to analyze data sets.
- Integrate statistical analysis in decision-making processes.

Course Materials

- Stine and Foster, *Statistics for Business: Decision Making and Analysis*, Third Edition, Pearson, (Supplementary Reading). The required book for this course, **Statistics for Business** by Stine, will be delivered to you digitally. You will receive an email from "BryteWave" with the instructions for accessing the material. The **cost of the book is \$48.25**, which will be added as a "book charge" to your bursar bill. **If you don't receive an email** go to <https://brytewave.redshelf.com/accounts/forgot/> and reset your password using your NYU net ID email address. If you choose to find your course materials elsewhere, you must login [here to the student portal](#) and opt out of the program by **September 17th. If you do not opt out by this date, you will be charged.**
- In this course, I will use the statistical software **RStudio** to generate all of the necessary data and visualizations for assignments and lectures. While I will use RStudio, this is **not** a course on how to use statistical software. The focus of the course is on learning to interpret and understand statistical output, not on creating it. All of the computer output you need to complete assignments will be provided to you, so you will not need to use RStudio yourself to succeed in this course. For those interested in learning how to generate statistics on your own, I will provide the data sets and R code used in the course. I am also happy to help you during office hours with any questions you have about using RStudio or Microsoft Excel to generate statistical output. Using RStudio is not a required component of the course.
- Hand held calculator for exams. You will not be allowed to use your phone for this purpose. I will have a few calculators to loan out during exams and calculator use will be limited to four functions and square root.

- NYU Brightspace Course Site. This includes the slides and homework assignments for the course. You will use it to submit the course assignments. All lectures will be recorded and posted on Brightspace

Grading Policy

The graded items for the course are:

- Homework assignments - Homework assignments are designed to help you **test your understanding** of the course material and **get feedback** on your progress. They are a formative assessment in that they are a tool for you to adjust your learning strategies, so you're not just aiming for a perfect answer—you're working toward mastering the concepts. It is not enough to learn how to do these exact exercises. Instead, you are trying to learn how to do this type of exercise.

To make the most of these assignments:

- **Attempt them on your own first.** This is the best way to gauge what you truly understand and where you might need more practice.
- **Get help to refine your answers (optional).** After you've made an honest attempt, you can work with classmates or use AI tools to check your work and improve your final submission.

We recommend using Google's Gemini (gemini.google.com) to check your work if you decide to use AI. When you use it, be sure to log in with your NYU Google account or NYU Stern Google account. This ensures your queries and data are kept private and aren't used to train the AI models. Note that I used Gemini to edit this syllabus section for clarity to model best practices in AI for composition. That is, first I drafted something, then I asked Gemini to make it clearer, then I reviewed it, then I pasted it into my document and then I attributed the extent of its incorporation into my work.

We will complete some in-class exercises to prepare for the homework. These exercises are not collected and graded. Instead we will go over them in class and you will be able to ask any related questions.

- An in-person written midterm exam.
- An in-person written cumulative final exam

The exams in this class are summative assessments, meaning that they are used to determine how much you know. To ensure that your work is entirely your own, all exams are closed-book and closed-note, and the only technology allowed is a hand held calculator.

I will consider requests to change exam due dates only in cases of documented serious illness, family emergency, religious observance, or civic obligation. If you will miss class for religious observance or civic obligation, you must inform me no later than the first week of class. Recruiting activities, business trips, vacation travel, and club

activities are not acceptable reasons for absences or requests to reschedule exams and assignments.

MBA day classes are assigned a final exam date/time during the final exam period. *Finals week runs from Friday, December 12th through Friday, December 19th.* The Stern Records and Registration Office manages the final exam schedule and is posted [here](#).

Grade Calculations

Category	Percentage
Assignments	25%
Midterm Examination	30%
Final Examination	45%

Regrading

If you find what you believe to be a grading error on an assignment or exam, you must bring the matter to the attention of the professor or teaching fellow no later than 7 days after the assignment is handed back. Requests for grading adjustments after this will not be considered. This includes cases when the written grade does not match the recorded grade on the course website.

If you erase anything, change any answers, or add any notes after your assignment or exam has been graded, you may not submit the assignment or exam for regrading. If you modify an assignment or exam in any way after it gets returned, and then you submit that assignment or exam for regrading, this will be considered to be a violation of the academic integrity policy.

Integrity of Credit

Students will meet 2x a week for 1.5 hours for 15 weeks for this 3-credit course

Academic Integrity

We take pride in our well-rounded education and approach our academics with honesty and integrity. Indeed, integrity is critical to all that we do here at NYU Stern. As members of our community, all students agree to abide by the [NYU Academic Integrity Policies](#) as well as the NYU Stern Student Code of Conduct, which includes a commitment to:

- Exercise integrity in all aspects of one's academic work including, but not limited to, the preparation and completion of exams, papers and all other course requirements by not engaging in any method or means that provides an unfair advantage.
- Clearly acknowledge the work and efforts of others when submitting written work as one's own. Ideas, data, direct quotations (which should be designated with quotation marks), paraphrasing, creative expression, or any other incorporation of the work of others should be fully referenced.
- Refrain from behaving in ways that knowingly support, assist, or in any way attempt to

enable another person to engage in any violation of the Code of Conduct. Our support also includes reporting any observed violations of this Code of Conduct or other School and University policies that are deemed to adversely affect the NYU Stern community.

The [Stern Code of Conduct and Judiciary Process](#) applies to all students enrolled in Stern courses.

General Conduct and Behavior

Students are also expected to maintain and abide by the highest standards of professional conduct and behavior. Please familiarize yourself with Stern's [Policy in Regard to In-Class Behavior & Expectations](#) for graduate students and the [NYU Student Conduct Policy](#).

Grading Guidelines for Stern MBA Core Courses

To ensure parity among required course sections and to prevent grade inflation, core faculty are required to impose a 35% maximum of the letter grade of "A" or "A-".

Class Recordings and Images

Course lectures will be recorded and posted on Brightspace for you to access. To protect everyone's privacy, please do not make your own recordings or take photos in the classroom. As a result, posting any images or recordings from the class online is also forbidden.

Student Accessibility

If you will require academic accommodation of any kind during this course, you must notify me at the beginning of the course and provide a letter from the Moses Center for Student Accessibility ([212-998-4980](tel:212-998-4980), mosescsa@nyu.edu) verifying your registration and outlining the accommodations they recommend. If you will need to take an exam at the Moses Center for Student Accessibility, you must submit a completed Exam Accommodations Form to them at least one week prior to the scheduled exam time to be guaranteed accommodation. For more information, visit the CSA website:

<https://www.nyu.edu/students/communities-and-groups/student-accessibility.html>

Student Wellness

Our aim is for students to be as successful academically as they can, and to help them overcome any impediments to that. Any student who may be struggling and believes this may affect their performance in this course is urged to contact the Moses Center for Student Accessibility (see also the Student Accessibility section of this syllabus) at 212-998-4980 to discuss academic accommodations. If mental health assistance is needed, call the NYU's 24/7 Wellness Exchange hotline 212-443-9999. Furthermore, please approach me if you feel comfortable doing so. This will enable me to provide relevant resources or referrals. There are also drop in hours and appointments. Find out more at the [website for Counseling Services](#). Graduate students can also reach out to the Academic Advising team at academicaffairs@stern.nyu.edu if you would like to receive more information or further support.

Name Pronunciation and Pronouns

NYU Stern students now have the ability to include their pronouns and name pronunciation in Albert. I encourage you to share your name pronunciation and preferred pronouns this way. Please utilize this link for additional information: [Pronouns & Name Pronunciation](#).

Religious Observances and Other Absences

NYU's [Calendar Policy on Religious Holidays](#) states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. You must notify me in advance of religious holidays or observances that might coincide with exams, assignments, or class times to schedule mutually acceptable alternatives. Students may also contact religiousaccommodations@nyu.edu for assistance.

NYU Stern is committed to ensuring an equitable educational experience for all students regardless of identity or circumstances and strives to recognize the obligations its students have outside of Stern. Please review all class dates at the start of the semester and review all course requirements to identify any foreseeable conflicts with exams, course assignments, projects, or other items required for participation and attendance. If you are aware of a potential conflict, please contact me as soon as possible to discuss any potential conflicts to determine whether/how they can be accommodated.

Laptops, Cell Phones, and Other Electronic Devices

The use of electronic devices (e.g., tablets or laptops), for the purpose of note-taking is permitted. However, students should make every effort to avoid distracting their classmates or disrupting the class, so I would appreciate it if you would keep your cell phones put away and use class time to focus on the course material and not on other uses of the internet capabilities in the classroom.

Inclusion Statement

This course strives to support and cultivate diversity of thought, perspectives, and experiences. The intent is to present materials and activities that will challenge your current perspectives with a goal of understanding how others might see situations differently. By participating in this course, it is the expectation that everyone commits to making this an inclusive learning environment for all.