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Course Syllabus
STAT-UB.0003.01: Regression and Forecasting Models

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Meetings

Lectures:	Tuesday and Thursday, 3:30 p.m. – 4:45 p.m.
Final Exam:	Tuesday, October 20, 3:30 p.m. – 4:45 p.m.
Location:	KMC 5-90

Course staff

Instructor:	Prof. Patrick Perry
E-mail:	pperry@stern.nyu.edu
Office:	KMC 8-63
Office Hours:	Tuesday, 5:00 p.m. – 6:00 p.m.
	Thursday, 5:00 p.m. – 6:00 p.m.

Teaching Fellow:	Qiying Michael Zhang
E-mail:	qz437@stern.nyu.edu
Office:	KMC 8-170
Office Hours:	Monday, 3:30 p.m. – 4:30 p.m.
	Wednesday, 1:00 p.m. – 2:00 p.m.

Course website

Handouts, assignments, and data sets will be posted to

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http://ptrckprry.com/course/ub0003

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Grades will be posted to the NYU Classes website for the course.

Course objectives

The objective of this course is to introduce students to the basic statistical techniques that are widely used in business and other fields. In particular, considerable attention will be devoted to the technique of regression analysis, which is a useful and powerful technique for modeling the relationships between variables of interest.

Course organization

You will be responsible for the material contained in course lectures, handouts, and homework assignments. The lectures will follow the notes that will be handed out and posted on NYU Classes. However, the lectures will often contain more information than what is on the handouts. The textbook should be considered as supplementary reading for this material.

The course materials can be found on the NYU Classes site for this course. This will be the primary way that we will correspond with each other outside the classroom. However, the course staff will be available for office hours as well.

Texts and materials

1. McClave, J.T. Benson, P.G. & Sinich, T. (2014) *Statistics for Business and Economics* (3rd custom edition for New York University). Pearson.
   The 12th edition is also acceptable.

2. Minitab 17 Software. Available for free at http://apps.stern.nyu.edu; available for rent at http://http://www.onthehub.com/minitab.
   The rental version is only available for Windows PC.

Grading policy

We will have homework assignments, a midterm exam, and a final exam. In determining your grade for the course, the weighting for these assessments will be determined as follows:

Homework	20%
Midterm	35%
Final	45%

Approximately 35% of students earn grades of A or A−.

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 course staff no later than 7 days after the assignment was 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. Discuss homework grading issues with the teaching fellow, and discuss exam grading issues with the instructor. You must discuss all grading issues in person, during office hours.

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.

Exams

There will be one midterm and one final exam. You will be allowed one sheet of notes for the midterm. The final will be open book and notes.

If you miss the midterm for a *valid* reason (for example, a documented medical illness), the final exam will count for 80% of your grade. There is no make-up exam. If you miss the midterm for an *invalid* reason, your score will be zero.

Missing the final exam is not an option unless there is an *exceptional unpredictable event*. Weddings or vacation travel plans do not count as unpredictable. If you miss the final exam for any undue reason, there will be no make-up exam and your grade will be based on the midterm; your grade will be no higher than a B−.

Homework

Homework assignments will generally be due on Thursdays, with the solutions posted on the following Tuesday night. Homework counts for 20% of your grade. I recommend that students keep a copy of their homework to study from (in case it is not returned before an exam).

You are allowed to turn in one homework assignment late, without penalty. After that, a late assignment will receive a 40% penalty. Late assignments must be handed in at or before the start of class on the Tuesday after the assignment was due.

Class attendance and participation

There is no penalty for missing class. That being said, the students who attend every lecture tend to be the students who receive the best grades.

There is no explicit class participation grade, but I encourage you to ask questions and make comments during class. *There is no such thing as a bad question.* If you consistently participate in class, then I may boost your final grade by up to one point, for example, from a B+ to an A−.

Classroom norms

Cell phones and similar electronic devices are a disturbance to both students and professors. All such electronic devices must be turned off prior to the start of each class meeting. *Laptops are not permitted in class.*

Ethical guidelines

All students are expected to follow the *Stern Code of Conduct*, available at http://www.stern.nyu.edu/uc/codeofconduct. Student responsibilities include, but are not limited to, the following:

- A duty to acknowledge the work and efforts of others when submitting work as one's own. Ideas, data, direct quotations, paraphrasing, creative expression, or any other incorporation of the work of others must be clearly referenced.

- A duty to exercise the utmost integrity when preparing for and completing examinations, including an obligation to report any observed violations.

To minimize the temptation for copying or sharing during an exam, there will be multiple versions of every exam, and the seating order will be randomly assigned.

Students with disabilities

If you have a qualified disability and will require academic accommodation during this course, please contact the Moses Center for Students with Disabilities (http://www.nyu.edu/csd/). If you will need to take an exam at the CSD, you must submit a completed Exam Accommodations Form to them at least one week prior to the scheduled exam time to be guaranteed accommodation.

Class schedule

Date	Topics	Reading	HW due
9/03	Sampling distributions; Confidence intervals	5.1, 5.3, 6.1–6.3	
9/08	Hypothesis tests; p-values	7.1–7.4	
9/10	Introduction to regression; Least squares fitting	11.1, 11.2	1
9/15	Model assumptions; Residuals	11.3, 11.5, 12.11	
9/17	Inference for regression coefficients; Forecasting	11.4, 11.6	2
9/22	Review		
9/24	Midterm Exam		3
9/29	Outliers; Leverage points; Influential points		
10/01	Multiple regression; F-tests	12.1–12.4	
10/06	Regression with qualitative variables	12.7	
10/08	Regression with both qualitative and quantitative variables	12.8	4
10/13	Legislative day (No lecture)		
10/15	Review		5
10/20	Final Exam		