MGT 407E Statistics Syllabus
Peter K. Schott
2025

Course Description

The course introduces you to art of data analysis. We will cover confidence intervals, hypothesis testing and regression formally, intuitively and practically using a mixture of class lectures and hands-on applications. My hope is that you will find these tools useful both professionally and in your every-day life.

Detailed Outline of Class Sessions

We will cover the following topics. Each topic is the subject of a separate slide deck. The mapping of topics to meetings might change as the course proceeds.

Meeting	Dates	Time	Topic
1	Fri 8/8	14:30-18:15	1. Confidence Intervals
2	Fri 8/22	14:30-18:15	2. Hypothesis Testing
3	Fri 9/5	14:30-17:30	3. Bivariate OLS Regression
4	Fri 9/19	14:30-17:30	4. Multivariate OLS Regression
			5. OLS Extensions

Course Material

General: Lecture slides are posted to canvas under \files\slides. Note that I often make small adjustments to slides decks just before we meet. Problem sets are posted to canvas under \files\problem_sets. Course videos are posted to canvas under \files\videos.

Software: You are free to use any statistical package you like, e.g., STATA, Matlab, Python, R, etc. The class slides will show how all the tools covered in the course can be implemented in Excel. We will also, at times, use ChatGPT as a personal data staff.

Textbook: There is no required textbook for this course, but if you would like one as an optional resource, I think the book below is among the better ones on the market:
Data Analysis for Business, Economics and Policy, by Bekes and Kezdi.

Additional readings: The course slides will contain to links to additional readings that complement the course material.

Datasets: All datasets used in the course slides are posted to canvas under \files\datasets.

Course Support

For academic questions or concerns: please contact the TA or Faculty. For Canvas Site questions or concerns: please contact malik.harris@yale.edu (Monday-Friday 8:30am-5pm).

Professor and Office Hours

Peter K. Schott peter.schott@yale.edu. 203-436-4260. 2580 Evans Hall. Office hours by appointment. Please send me an email with a few times that work for you and I will pick one.

Teaching Assistant and Review Sessions

The teaching assistant for the course is Justin Kim (justin.j.kim@yale.edu). He will host periodic review sessions, the primary purpose of which is to help you with any difficulties you have in

understanding material introduced in lectures. These sessions can also be used to discuss the problem sets and old practice exams. Review sessions do not introduce new material. Review sessions will be held via Zoom according to the schedule below. See Canvas calendar entries for meeting room information. Schedule:

Thur, Aug 21	7:00-8:00pm
Thur, Sep 4	7:00-8:00pm
Wed, Sep 10	7:00-8:00pm
Thur, Sep 18	7:00-8:00pm

Problem Sets

There will be three problem sets. These problem sets have been posted to Canvas and are due Wednesday 8/20, Wednesday 9/3 and Wednesday 9/17 at 23:59. They are set up a Canvas quizzes and consist of a mixture of paper-and-pencil and data-analysis questions. In addition to inputting your answers into the Canvas quiz form, you must upload a PDF and Excel file showing your work for each question. While you may discuss the problem sets with your learning team (as well as your professor and TA) to gain a better understanding of the questions, the analysis and answers you hand in must be your own work. No credit will be given for late assignments. For more detail on assignments, please see "Deadlines for Deliverables" and "Incomplete Coursework" under Academic Policies, SOM Bulletin.

Exam

There will be a take-home exam once the class ends. The exam consists of two parts – an analytic, paper-and-pencil part and a data-analysis part focused on a provided dataset. The exam is open books and notes, including online materials. You can use a calculator for the analytic part and Excel for the data analysis part. The exam is a timed Canvas exam; once you open the exam, you will have 3.5 hours to complete and submit the exam. You can take the exam anytime between 9/22 to 9/29. For further detail about exams, please go to "Examinations" under Academic Policies, SOM Bulletin.

Grading

The weights for your course grade are 10 percent for each problem set (30 percent total) and 70 percent for the take-home exam. For details about grading, please go to "Grades" under Academic Policies, SOM Bulletin.

Yale School of Management Policies and Norms

For an overview, please see the M.B.A for Executives Program in the SOM Bulletin.

Attendance Policy: On-time attendance is required. For further details, please go to the "Attendance" section under Academic Policies, SOM Bulletin.

Laptop and Device Policy: Tablets, but not laptops, can be used for class-related purposes.

Artificial Intelligence (AI) Policy: Collaboration with ChatGPT or other AI composition software is permitted as noted in the problem sets and as discussed in our class meetings. Unless it is explicitly allowed, use of this tool is not permitted.

Course Recording: EMBA classes are recorded with faculty permission and posted in the Canvas Media Library. Course videos are Yale University property and cannot be downloaded or distributed in any form. Use of tools, video recording platforms, or any other method of circumventing these security measures is an Honor Code violation.

Academic Integrity: No student's name should appear on a group project if the student has not contributed to the production of the project. The following is an example of unacceptable conduct: Neo agrees to produce a case write-up, putting Trinity's name on the case write-up. Trinity agrees to

repay Neo by producing a subsequent assignment on his own. In group work, all group members are responsible for the integrity of work that is submitted. Group members should always question other members about the source of material and analysis that is being included in group projects. If a group member has any concerns about the integrity of material being submitted by the group, that group member should discuss those concerns with the instructor. Note that I re-use assignments over time. It is a violation of academic integrity to rely on any work from prior iterations of this or any related course in working on your assignments for this iteration of the course.

Plagiarism: The members of any academic community are expected not to present ideas or material from other sources as their own. In the context of this course, it is acceptable to refer to concepts, frameworks, and analytical tools from the readings or class lectures without citation (for example, a t-statistic or a scatterplot). However, it is not acceptable to quote or paraphrase analysis from another source and present it as your own, where "another source" includes current classmates and past students of the course. There is a difference between consulting a source and then forming your own opinion based on what you have read, and "lifting" material directly.

Note: the instructor reserves the right to modify and/or change the course syllabus as needed during the course.