NYU | LEONARD N. STERN SCHOOL OF BUSINESS

Statistics and Data Analysis ● Professor Juran

Syllabus

MEETINGS	10:30-11:50 AM, Tues.-Thurs. starting Sept. 4
INSTRUCTOR	David Juran <djuran@stern.nyu.edu> <http://people.stern.nyu.edu/djuran/>
TEACHING ASSISTANTS	Hannah Diaz <hbm265@stern.nyu.edu> Andy Lee < asl568@stern.nyu.edu>

Course description and objectives: This course is intended to develop your skills in decision making and communicating under conditions of uncertainty and risk. The topics in the course are organized into seven modules, each with a corresponding set of materials:

1. Introduction to Data Analysis
2. Probability and Discrete Random Variables
2a. Decision Analysis
3. Continuous Random Variables and Portfolio Analysis
4. Sampling Theory and Confidence Intervals
5. Hypothesis Testing
6. Simple Regression
7. Multiple Regression

Texts and Materials

Statistics for Managers Using Microsoft Excel (8th Edition) by Levine, Stephan, and Szabat (Pearson; ISBN-10: 0134173058; ISBN-13: 978-0134173054), is a good companion text for the class, but most students in this program should be fine with no textbook. The intent is that all necessary materials will be provided either hard copy, or on NYU Classes, or both. If you choose to refer to a textbook as a supplement to the lectures, the Levine book is a good one. We will also disseminate materials through the Professor-maintained site: < http://people.stern.nyu.edu/djuran/1305home.htm >

Practice Problems

Practice problems are provided at the end of each module. They will not be graded and are not to be turned in. (Answers are also provided.) The practice problems are an optional resource for those who would like to solidify their confidence with the subject and prepare for the exam.

Course Deliverables

There are six case studies (team assignments), three quizzes, and a final exam, as shown in the schedule below. There is also one individual assignment, called Problem Set 0.

Assignments

Assignments must be submitted by the beginning of class on the due date. In fairness to other students and because solutions will be discussed in class, late assignments cannot be accepted. Watch for specific instructions from the TAs about submitting assignments.

Guidelines for Written Work Due

- Keep discussions brief and to the point. Caution: Try to minimize the number of attached Excel sheets (in other words, zero). Instead, include your spreadsheet results as tables (or better yet, charts) integrated with your text. Please use a 12 point font.

- Number the pages. There is no page limit, but it is usually possible to do an excellent job in less than 5 pages, total.

- The report should begin with an executive summary of no more than 1 page, single spaced. Executive summaries usually begin with conclusions or recommendations, give reasons, and discuss important alternatives, limitations, assumptions, etc. The summary should make reference to specific pages or sections where supporting material is given in more detail.

- Your analysis should be given after the summary. This should include such items as rationale for choices that you made, outputs, plots, and any other material to support your summary and conclusions.

- Be sure to answer all of the questions posed in the case, but you need not be limited to those questions. For example, you may decide that some other analyses are appropriate to support your conclusions.

Grading

Grades will be based on a combination of group assignments, final exam, and class participation. These are the weights assigned to the various components:

Class Participation	10%
6 Group Assignments	20%
3 Quizzes	40%
Final Exam	30%

Homeworks will usually be graded using the following somewhat subjective criteria:

- Check-Plus: Equivalent to 10 out of 10. Exceeds case expectations by providing unanticipated insight and/or unusually robust analysis compared with the rest of the class.
- Check: 9 out of 10. Fully meets the expectations of a thorough analysis and treatment of the key issues.
- Check-Minus: 8 or less. Below expectation by increasing degrees; significantly inferior to what other teams have done.

Class Participation

The class participation grade is based on my evaluation of the quality of each student's contribution during the semester. Each student is expected to join in the general classroom give-and-take. This requires not only familiarity with the assigned material, but also original thought and an ability to listen to the discussion. Quality is more important than quantity. Good questions, relevant experiences, points that build on previous points and insights into the business issue under discussion are the best forms of participation. We want to utilize the diversity of perspectives available in the classroom.

Exam

The exam will be open-book, open-notes, Word and Excel.

Ethical Guidelines

All students are expected to follow the **Stern Code of Conduct** (http://www.stern.nyu.edu/uc/codeofconduct). A student's 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.

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 (CSD, 998-4980) and provide me with a letter from them verifying your registration and outlining the accommodations they recommend.

Tentative Class Schedule
(subject to minor changes)

			Topics	Deliverables
1	Tuesday	9/4	Intro to Data Analysis	
2	Thursday	9/6	Descriptive Statistics and Graphs	
	Tuesday	9/11	NYU Holiday	
3	Thursday	9/13	Discrete Probability	Problem Set 0 and Rick Beck I
4	Tuesday	9/18	Discrete Probability	
5	Thursday	9/20	Discrete Probability	
6	Tuesday	9/25	Quiz	
7	Thursday	9/27	Decision Analysis	
8	Tuesday	10/2	Continuous Distributions	Queen of Diamonds
9	Thursday	10/4	Portfolio Theory	
	Tuesday	10/9	NYU Holiday	
	Thursday	10/11	TBA	
10	Tuesday	10/16	Portfolio Theory	Eileen's Novel
11	Thursday	10/18	Central Limit Theorem	
12	Tuesday	10/23	Quiz	
13	Thursday	10/25	Sampling Theory	
14	Tuesday	10/30	Confidence Intervals	
15	Thursday	11/1	Hypothesis Testing	
16	Tuesday	11/6	Hypothesis Testing	
17	Thursday	11/8	Excel Day	
18	Tuesday	11/13	Quiz	Rick Beck II and Napster
19	Thursday	11/15	Simple Regression	
	Tuesday	11/20	TBA	
	Thursday	11/22	NYU Holiday	
20	Tuesday	11/27	Simple Regression	
21	Thursday	11/29	Multiple Regression	
22	Tuesday	12/4	Multiple Regression	
23	Thursday	12/6	Multiple Regression	Rick Beck III
24	Tuesday	12/11	In-Class Review	
			Final Exam	