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1. COURSE DESCRIPTION

The purpose of this course is to provide a survey of probability and statistics which are applicable to decision making in a business environment. The course stresses applications; the technical aspects underlying the applied methods used will be presented intuitively.

The first topic is Data Collection and Analysis. This topic discusses the elements of the design of sample surveys, the methodology involved with extracting information from data which are collected from sample surveys, and how to use these data to aid in the decision making process.

The second and third topics involve a discussion of probability and probability distributions. As many business decisions have to be made in the face of uncertainty, it is very important to understand the applied concepts of probability in order to aid the decision making process.

The fourth topic is Sampling and Statistical Inference. In many business areas, decisions will have to be made using information from sample surveys. The key question is how to determine the reliability of the sample information. The concepts of probability are used to answer these questions so that the information contained in the sample can be used to infer the information required.

The fifth and final topic is Correlation and Regression Analysis. This topic is probably one of the most important and widely used statistical techniques. It has a wide variety of applications to business problems in accounting, economics, finance, management, marketing, and operations. Generally regression analysis is involved with the prediction or forecasting of a given variable (called the dependent variable) given knowledge of the
values of other variables (known as the independent variables). In marketing, a media buyer would like to measure the impact of advertising and other variables on sales. A financial analyst may want to predict the return on a stock from the return on an index. A production engineer may want to predict the time it takes to complete a given task for given characteristics of that task.

Closely associated with regression analysis is correlation analysis which is concerned with the measurement of the relationship between different variables. This can be used to study such things as the correlation between advertising and sales of a product and between the rate of return of a stock fund and the rate of return of a bond fund. Obviously correlation and regression analysis are closely related.

The course will be taught in a lecture and discussion mode. Student participation is strongly encouraged.
2. READING AND REFERENCE MATERIAL


**NOTE:** Reading 1 is not required. If some students wish to purchase this textbook for reference, this text can be purchased from the Book Store. Reading 2 will be provided to you in class. It contains class notes and minicases that will be assigned. Readings 3, 4, and 5 will be posted on NYU/Classes.
3. PROBLEM ASSIGNMENTS AND TESTS

A series of problem assignments will be given. There will also be a group case involving the use of multiple linear regression analysis at the end of the course. Two in-class examinations, a full period midterm examination and a final in-class examination, will be scheduled. The basis for the grade is as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Individual Assignments</td>
<td>15%</td>
</tr>
<tr>
<td>Group Assignment</td>
<td>10%</td>
</tr>
<tr>
<td>Midterm Examination</td>
<td>30%</td>
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<tr>
<td>Final Examination</td>
<td>45%</td>
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**NOTE:** Detailed solutions are provided on the day that the assignments are due. Consequently, there is no credit for late homeworks unless there is a valid reason and you contact me by email or otherwise.
4. COMPUTER SOFTWARE PACKAGE MINITAB

This course will use the computer statistical package Minitab as a teaching tool.

Keep in mind that this course is not a course in the use of statistical software packages. The importance of the use of computer software packages is for the consumer of statistics to be able to interpret the output that is obtained as a result of these software packages. The source of the information that is obtained from the computer output is not as important as the information itself. The course will stress the interpretation of this information irrespective of the source; after all the information is the same. Assignments will contain computer output for students to use.

It will not be required for the student to use Minitab to obtain this computer output. Students do have the option of using Minitab and instructions for the use of Minitab on your laptop using the Citrix system to run Minitab through the Stern network or from home/office will be provided. If students are familiar with Excel, they have the option of using Excel to obtain the computer output. In this regard, two forms of the data for analysis will be provided, namely an Excel spreadsheet and a Minitab worksheet.

Grades in the course will not be affected by the decision students make regarding this option.
5. COURSE POLICIES AND INFORMATION

1. Laptops are not allowed in class unless there is a specific learning issue. Please consult me if this is relevant.

2. Please turn off your cell phones before entering the class.

3. Class begins promptly at 9:00 AM. Please be punctual!

4. If you have to leave the class early for any reason, please do so quietly.

5. The grading policy as mandated by the Dean’s office for all core courses is that the maximum number of A’s (including A minus grades) is 35% of the number of students in the class.

6. You are allowed to work with your classmates on the homework assignments (as a matter of fact, I encourage you to do so). However, you must hand in your own assignment.

7. The midterm examination is a 100 minute examination scheduled for October 23. The final examination is a 2 hour examination scheduled on December 16 from 11:15 am to 1:15 pm. You may bring in one sheet of paper with notes and formulae for your use.

8. I do not take attendance. However, my experience indicates that there is a strong correlation between the learning experience and attendance in class.

9. 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 www.nyu.edu/csd) and provide me with a letter from them verifying your registration and outlining the accommodations they recommend. 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.