

Business Statistics (商务统计)

COURSE DESCRIPTION AND OVERVIEW

The world we live in is filled with uncertainty. As a result, we are continually asked to make complex social and economic decisions without knowing exactly how such decisions will affect future events. Making “good” decisions under these circumstances requires intelligent interpretation of quantitative data and an ability to make “knowledgeable” probability judgments. The use of statistical and mathematical methods in business is a crucial ingredient in success. Certainly, being able to “think quantitatively” is critical to all aspects of the contemporary business world. Business Statistics is about using quantitative techniques and making sense of data in the business environment. In theory at least, the better the information, the more informed the decision.

In this class we focus on data analysis, decision-making, and uncertainty. Our goal is to demonstrate a variety of quantitative methods to analyze data and therefore aid the decision-making process. Specifically, from the world of “statistical analysis,” we study the topics of descriptive statistics, probability and probability distributions, sampling and sampling distributions, confidence interval estimation, hypothesis testing, and regression analysis. In addition, from the world of “management science,” we study the topics of linear programming and simulation. We pay particular attention to showing how each of these topics can be applied in today’s fast-paced business decision-making arena.

We demonstrate these techniques by using examples from many different business disciplines; e.g., marketing, finance, production and operations management, and human resources, etc. We analyze the data associated with these examples using Microsoft Excel. Periodically, we’ll examine how the results generated using Excel can be integrated into other software packages such as Microsoft Word and Microsoft PowerPoint.

Course Goals:

There are three main goals for Business Statistics. They are:

1. To learn the most frequently used quantitative methods for analyzing data and solving decision problems;
2. To use these methods to address a number of business situations drawn from a

variety of business disciplines; and

3. To learn how to use Excel spreadsheets to implement these quantitative methods.

COURSE MATERIALS

Mason & Lind, *Statistical Techniques in Business and Economics*, McGraw-Hill, 1998 ISBN 7-111-06413-5

GRADE DETERMINATION

Your final course grade will be based on the following areas of evaluation. Within each particular area, items will be judged on a 100-point scale. When there are multiple items within a given area, each will carry equal weight.

Attendance and Participation: 10%

Each student will begin the term with a “baseline” score of 85. Students who miss a lot of classes and do not inform me of the reason will have their score reduced. I realize that unanticipated circumstances may arise which prevent attendance on a given day, and I ask only that you inform me (even on short notice) by a brief email so that I’ll know that you are missing class and why. Once basic attendance is accounted for, I will make an adjustment to each student’s score based on “in-class participation”. This is admittedly somewhat subjective on my part, but I don’t expect to have many problems along these lines. I expect most students to finish near between 85 and 90, and a few will finish near 95 or above.

Turn-in Assignments: 30%

There will be several individual and group assignments to be completed throughout the course. More information about these will be presented later in this syllabus and during the class sessions. Along with the presentations from each group, each member will be asked to provide me with a Peer Evaluation form, which is contained within this syllabus. I will use this information in determining the relative weight of the overall group effort for each individual member. These evaluations are intended to be anonymous, so try not to identify yourself when completing them.

Mid-Term Examination: 20%

Approximately half-way through the course, I will give an examination regarding the material presented through that point. The precise date of this exam will be determined during the first few class sessions.

This item is mandatory.

Final Examination: 40%

During the last class session, everyone will take a comprehensive examination which will cover material from the entire course. This item is mandatory.

Final Grade Scale

Here are the “cut-off” levels I plan to use in determining the final course grade for each student:

<u>Overall Score is at least</u>	<u>Final Grade</u>
95 and above	A
90 but less than 95	A-
86 but less than 90	B+
82 but less than 86	B
79 but less than 82	B-
76 but less than 79	C+
72 but less than 76	C
69 but less than 72	C-

LATE ASSIGNMENTS

For both individual and group assignments, any delay in turning them in to me will reduce the score for that assignment by 5% per day or part thereof, except under an excusable circumstance. Check with me first.

INCOMPLETE ASSIGNMENTS

Varies with circumstances.

COURSE OUTLINE

The following table presents the anticipated outline of study and some selected problem assignments. I reserve the right to make changes, additions or deletions to this list on an ongoing basis, however I will always try to provide sufficient notice of any such changes. In addition to the problems suggested here, the students are encouraged to complete as many of the questions in the end-of-chapter “examinations” contained within the text as they can.

will have covered in the course up to that point. Each group will be asked to prepare a brief presentation of their analysis and conclusions. The deliverable materials shall be as follows:

1. A single Microsoft Excel spreadsheet file containing your group's analysis efforts for the specific case study.
2. A single Microsoft Word document file containing a one-page "executive summary" of your analysis, conclusions and recommendations. I encourage you to use a simple "bullet point" format for this summary paper.
3. A single Microsoft PowerPoint presentation document file, with a maximum of 10 slides which you will use when making your actual presentation.

Each group shall prepare these materials and should expect to give a brief presentation on the due date for the case. Depending on class size, I may or may not call on any particular group to present on that particular day. You should, however, assume that you will present your material during that particular class session. Play it safe; be ready to go when the time comes! If your group gets called and you are not prepared, the resulting effect on your score for that project will be large!

These presentations must be constructed to occupy no more than ten minutes each. Every member of the group will be expected to participate in the presentation. I will take the role of CEO of the company or client to which you are presenting. The rest of the class members not involved in presenting will assume the role of the Board of Directors or company managers. As such, all class members are expected to be knowledgeable about the material and are encouraged to ask questions of the presenting group which reveal the strengths or weaknesses of the analysis and conclusions communicated. Remember that CEO's and Boards of Directors are very busy people; hence the 10 minute limit! Be creative, be comprehensive, but be brief!

Specific information and suggested techniques will be provided for each case when assigned in class