This is a course in applied regression analysis and forecasting. The intent is to give you a working knowledge of statistical tools used extensively in business decision making. Emphasis is given to frequently encountered problems and associated analytical procedures and corrections for dealing with these situations. With this goal in mind, an entirely applications-oriented approach is taken. Classes center on explaining the use and interpretation of estimated regressions and forecasting equations. No proofs or derivations are involved in any homework or exam.

Students are expected to be familiar with basic statistical concepts, such as measures of central tendency, dispersion, properties of estimators, hypothesis testing, and confidence intervals. The course begins with a quick review of these basics. (The prerequisite is Stat 302 or equivalent.)

Regression analysis has its most straightforward presentation in linear algebra, which provides an excellent framework for describing statistical procedures, explaining frequently encountered problems, and showing ways of conducting appropriate tests and adjusting the data when necessary. Consequently, the course also covers addition, subtraction, multiplication, and inversion of matrices using spreadsheets. Regression techniques are also presented in a spreadsheet context due to the likelihood of your having to estimate relationships without a statistical package (e.g., SAS).

Because of the emphasis potential employers place on group/team learning experiences, there is one project, described separately, that is part of the course.

GRADING: Homework comprises 25 percent, two hour exams are 25 percent each. Both exams are open book and notes. Exams and the sum of the exercises are scaled. Exercises are due at the start of class on the specified date. Late exercises must be turned in by the beginning of the next scheduled class period. The maximum credit that can be earned will be 75 percent of the points for the respective homework. The remaining 25 percent of the course grade will be based on a group project.

TEXTS:
