Course Description

This course will introduce you to the area of finance with a focus on the analysis of financial data in order to make sound financial decisions. Topics include introduction to financial markets, time value of money and risk return tradeoff, investment decisions under uncertainty, modern portfolio theory, and introduction to options. For each of the topics we will introduce data analysis techniques and implement them on real-life data.

Course Goals

The course objective is to understand the basic principles of Finance. Most of the topics in this course are relevant to day-to-day life as well as for financial managers. Among other things, this course will help you make better decisions on your own financial
matters, understand the basic principles of how corporations make financial decisions, familiarize you with how capital markets work, and give you a good foundation for the more advanced courses in finance.

The first part of the course deals with the concept of "time value of money": a dollar today is worth more than a dollar tomorrow. We then apply this concept to valuation of stocks, projects and firms. By the end of this first part of the course, I expect students to master the techniques necessary to evaluate streams of cash flows over time and have a thorough understanding of the issues associated with the timing of different cash flows.

Financial decision making, however, often involves risk and uncertainty, the focus of the second part of the course. This part is devoted to developing the necessary insight and techniques for financial decision making under uncertainty. To this end, we will discuss relevant measures of risk and use these measures to develop a workable theory that relates different levels of risk to different levels of expected return on financial and physical assets. We will then integrate the knowledge of dealing with cash flow that come in at different points of time and with different degrees of risk to devise capital budgeting techniques in the presence of risk.

---

Grading

There will be a comprehensive final exam at the end of the course. The exam will be in Excel. You can bring a formula sheet (8.5x11) to the exam. You can write whatever you want on both sides of this sheet.

Because of the many time constraints imposed on Management Analytics students, I have designed a flexible grading scheme for this course. Under this scheme, students will get points on homework assignments whenever they submit them, but will not lose points from not submitting an assignment, submitting a partial assignment, or getting partial credit on an assignment. Specifically, I will calculate the course grade as follows:

Homework assignment grading

Each of the four problem sets will have 7.5 points. Thus, students can earn any number of points between zero and 30 on the homework assignments. Call H the number of points that a student earns.

Exam grading

I will grade final examinations on a 100-points scale. Suppose you get E points on your final examination.

Course grading

Our grading scheme for your course grade, C, is given by: 

\[ C = H + (1 - H/100) \times E \]
Reading List

Text Book


The Wall Street Journal (or a similar financial newspaper). Not required but highly recommended. Students would benefit tremendously from regularly reading the Journal.