

**Northwestern University**  
**Kellogg School of Management**

Professor Camelia Kuhnen  
Finance 430-61/62/71

Finance I  
Fall 2009

**Syllabus**

**Course Description**

This is a first course in corporate finance which is designed to introduce students to the concepts and techniques necessary to analyze and implement optimal investment decisions by firms. The course studies the effect of time and uncertainty on decision making. Topics include basic discounting techniques, stock and bond valuation, capital budgeting under certainty and uncertainty, asset pricing models and efficient markets.

**Prerequisites**

The prerequisite for this course is knowledge of probability and statistics through linear regression. This requirement may be satisfied with either (i) prior or concurrent registration in Decision Sciences 434, (ii) sufficient previous course work in statistics. Familiarity with basic financial accounting (Accounting 430) and microeconomics (Managerial Economics 430) is recommended.

**Textbook**

The recommended textbook for the course is: Richard A. Brealey, Stewart C. Myers, and Franklin Allen, Irwin/McGraw-Hill, *Principles of Corporate Finance*, 9th Edition. You will also use this text for Finance II (441). There is also a course packet. Copies of the textbook and of the Solutions Manual for *Principles of Corporate Finance* have been put on reserve in the library. The Solutions Manual has answers to the end-of-chapter questions. Answers to assigned review problems are included in the course packet so you will not need the Solutions Manual unless you would like to do extra problems.

**Course Requirements and Evaluation**

The course grade will be determined by a 24%/26%/50% weighting on your best six problem sets/your midterm/your final.

There will be eight problem sets. Three of these are cases. Each of your best six problem sets will count toward 4% of your course grade (in other words the two lowest problem set grades will be dropped). Problem set grades are between 0 and 4. Problem sets are due back at the beginning of class on Thursdays for sections 61 and 62, and on Mondays for section 71. Late problem sets will not be accepted. You may submit problem sets via fax if you are

unable to attend class. My fax number is 847-491-5719. You should work on the problem sets in groups of four people. Groups will be formed during the first class for section 71, and will be randomly generated for sections 61 and 62. At the end of the quarter I will ask you to evaluate your peers based on their contribution to the group's output. These evaluations will determine whether each group member gets the group's score on problem sets, or a lower score.

The midterm will be a take-home exam, which should take about 3 hours to solve. I will post it on the course website on Friday, October 23 (in PDF format). The midterm must be handed in by 12:00pm on Friday, October 30. No late midterms will be accepted.

The final will be an in-class exam and will be given during finals week.

The exams are open book. You may use calculators and laptops for the exams, but no assistance (from group members or anyone else) is allowed.

### **Office Hours and Review Sessions**

My Evanston office hours are on Mondays, 1:00pm-2:00pm in office 4225. My downtown office hours are on Mondays, 4:45pm-5:45pm, in office M273. Office hours start in week 2. You can also ask questions after class, e-mail me at c-kuhnen@kellogg.northwestern.edu, or call me at (847) 467-1841.

The two main review sessions are in week 5 and 10, prior to the midterm and the final. These last 2 hours each. Regular review sessions will be held weekly for sections 61 and 62, except in week 1, 5 and 10. Review sessions for section 71 will be held every other Saturday. Review sessions are intended only for those of you who are having difficulties with the course. The majority of you should not feel obliged to go to these sessions.

### **Course Web Page**

Class-related information will be posted on the course web page, available on Blackboard.

### **Honor Code, Class Room Etiquette**

The first sentence of the Kellogg Honor Code reads: "All students enrolled in a course offered by the Kellogg School of Management agree to abide by the Kellogg Honor Code." If you are unsure of what this means, please read the honor code. If you are in doubt about whether something is acceptable under the honor code, you should not hesitate to ask me.

You will be allowed to work in groups for problem sets. The solutions you hand in should be independent work of your group. Before the problem sets are handed in you should discuss the problems only with members of your group. You should not discuss the problems with other students in this or any other 430 class or with former Finance 430 students. You should not receive any assistance on the midterm or the final from anyone. Violators will fail the class and may be expelled.

You are also expected to follow the Kellogg code of classroom etiquette. Please be respectful of your fellow students and do not use your laptop for anything other than note taking/Excel calculations during class. If you plan to use your laptop, please sit in the back row. Also, please turn off your cell phone/PDA.

### **Miscellaneous**

You should bring your name plate to class and have it displayed throughout the quarter. Familiarity with Excel (or an equivalent spreadsheet program) is recommended. There are handouts titled “Use of Financial Functions in Excel” and “Use of Statistical Functions in Excel” on the course website. The spreadsheets referred to in these notes are also linked on the course web page. You should work the problems in these handouts.

### **Course Outline**

Below is an approximate schedule for the class. I will distribute lecture notes at the beginning of each lecture. I will also make the lecture notes available on the class web page.

Indicated below are the readings for each class. ”B,M&A” refers to the textbook by Brealey, Myers and Allen. All additional reading materials are in the course packet. ”TN” denotes a teaching note which is on the course website. You will find it useful to read the corresponding material in the textbook prior to the lecture. The material in teaching notes is optional, but may be helpful if you need clarification regarding the content taught in class. The review questions can be found at the end of each chapter of the B,M&A text in the section ”Practice Questions” unless noted otherwise. To further your understanding of the material, you should work out the review questions listed below. They will not be collected or graded. Solutions to the review problems are included in the course packet.

### **Week 1 Net Present Value (NPV).**

Goals in managing the firm. The interaction between firm decisions and capital markets. Asset valuation with known cash flows.

Readings: B,M&A chapter 1, 2, 3, (Optional: TN “Present and Future Value Concepts and Applications”, “Use of Financial Functions in Excel and/or Financial Calculators”).

Review Problems: B,M&A chapter 2: 9, 11 and 12.

Handouts: Syllabus, Notes Week 1, Problem Set 1.

### **Week 2 More on NPV.**

Compound interest rates. After tax discount rates. IRR. Inflation.

Readings: B,M&A chapter 3, (Optional: TN “Compounding, ...” TN “Inflation”), “As Exchange Rates Swing, Carmakers Try to Duck”, “Picasso Painting Sells For \$104M”.

Review Problems: B,M&A chapter 3: 12, 14, 18-22, 27, 28, 33.

Handouts: Notes Week 2, Problem Set 1: Solutions, Problem Set 2.

Problem Set 1 due.

Review sessions: Sections 61, 62: Wednesday, September 30, 1:30pm-2:30pm, room G42. Section 71: Saturday, October 3, 9:00am-11:00am, room TBA.

### **Week 3 Capital Budgeting.**

Capital budgeting with known cash flows. Determining cash flows.

Readings: B,M&A chapter 6, 7, (Optional: TN “Alternatives to NPV”, TN “Capital Budgeting”), “Internal Rate of Return: A Cautionary Tale”.

Review Problems: B,M&A chapter 6: 8, 11, and 12. B,M&A chapter 7: 19 and 20.

Handouts: Notes Week 3, Problem Set 2: Solutions, Problem Set 3.

Problem set 2 due.

Review sessions: Sections 61, 62: Wednesday, October 7, 1:30pm-2:30pm, room G42. Section 71: none.

### **Week 4 Stock Valuation.**

The Gordon growth model. Economic value added. Alternatives to NPV.

Readings: B,M&A chapter 5, (Optional: TN “Stock Valuation ...”), “Sorry, Wrong Number,” eBay Says on Skype”, “EBay Draws Skype Skeptics on Wall Street”, “All P/Es Are Not Created Equal”.

Review Problems: —

Handouts: Notes Week 4, Problem Set 3: Solutions, Problem Set 4.

Problem Set 3 due.

Review sessions: Sections 61, 62: Wednesday, October 14, 1:30pm-2:30pm, room G42. Section 71: Saturday, October 17, 9:00am-11:00am, room TBA.

### **Week 5 Bond Valuation.**

Term structure of interest rates. Forward rates and forward loans. Duration.

Readings: B,M&A chapter 4.1-4.4, (Optional: TN “Bond Valuation ...”), “A Guide to Investing in U.S. Treasury STRIPS”, “A World Turned Inside Out: Why Investors are Re-evaluating the Predictive Power of Bonds”.

Review Problems: B,M&A chapter 4: 18-24, 30.

Handouts: Notes Week 5, Problem Set 4: Solutions, Problem Set 5.

Problem Set 4 due.

Midterm posted on course website on the evening of Friday, October 23.

Midterm exam review sessions: Sections 61, 62: Wednesday, October 21, 1:30pm-3:30pm, room G42. Section 71: Friday, October 23, 6:00pm-8:00pm, room TBA.

### **Week 6 Understanding Diversification.**

Introduction to portfolio optimization.

Readings: B,M&A chapter 8, (Optional: TN “Risk and Return 1”), “Shortchanged”, “Diversification: A Bigger Free Lunch”.

Handouts: Notes Week 6.

Midterm due by 12pm on Friday, October 30.

Review sessions: Sections 61, 62: Wednesday, October 28, 1:30pm-2:30pm, room G42. Section 71: Saturday, October 31, 9:00am-11:00am, room TBA.

### **Week 7 Risk and Return.**

What is risk? Portfolio frontier.

Readings: B,M&A chapter 8, (Optional: TN “Risk and Return 1”, “Use of Statistical Functions in Excel”), “Is it Back to the Fifties?”

Review Problems: B,M&A chapter 8: Quiz 4, 8, Practice 17, Challenge 25.

Handouts: Notes Week 7, Problem Set 5: Solutions, Midterm Solutions, Problem Set 6.

Problem Set 5 due.

Review sessions: Sections 61, 62: Wednesday, November 4, 1:30pm-2:30pm, room G42. Section 71: none.

### **Week 8 The Capital Asset Pricing Model (CAPM).**

What is the price of risk? The Capital Asset Pricing Model. Some alternatives to the CAPM.

Readings: B,M&A chapter 9, (Optional: TN “Risk and Return 2”), “Great Expectations”.

Review Problems: B,M&A chapter 9: 15.

Handouts: Notes Week 8, Problem Set 6 Solutions, Problem Set 7.

Problem Set 6 due.

Review sessions: Sections 61, 62: Wednesday, November 11, 1:30pm-2:30pm, room G42. Section 71: Saturday, November 14, 9:00am-11:00am, room TBA.

### **Week 9 Capital Budgeting Under Uncertainty.**

Estimating project betas. Leverage. Uncertainty over time.

Readings: B,M&A chapter 18.1-18.2, (Optional: TN “Capital Budgeting with the CAPM and APT.”), “How High a Hurdle?”.

Review Problems: B,M&A chapter 10: 18.

Handouts: Notes Week 9, Problem Set 7: Solutions, Problem Set 8.

Problem Set 7 due.

Review sessions: Sections 61, 62: Wednesday, December 18, 1:30pm-2:30pm, room G42. Section 71: none.

### **Week 10 Market Efficiency.**

Information and capital markets.

Readings: B,M&A chapter 14, (Optional: TN “Market Efficiency”), “The Curious Case of Palm and 3Com” “Are Markets Efficient?” (two-part article), “By the Numbers: Hedge Funds and Half-Truths”.

Review Problems: B,M&A chapter 14: 11, 13.

Handouts: Notes Week 10, Executive Summary of Finance 430, Problem Set 8: Solutions.

Problem Set 8 due.

Final exam review sessions: Sections 61, 62: Wednesday, December 2, 1:30pm-3:30pm, room G42, Section 71: Friday, December 4, 6:00pm-8:00pm, room TBA.

**Week 11 Final Exam.**

Sections 61 and 62: Wednesday, December 9, 12:00pm-3:00pm, rooms G03 and G05

Section 71: Monday, December 7, 6:00pm-9:00pm, room TBA.