Course Description

The purpose of this course is to introduce techniques of financial analysis, with applications to corporate finance. The concepts developed in Finance 100 form the foundation for all elective finance courses. The main topics covered include (1) the time value of money and the net present value rule; (2) valuation of bonds and stocks; (3) capital budgeting decisions; (4) uncertainty and the tradeoff between risk and return; (5) corporate financing decisions; and (6) options. The honors sections will take a more analytical and quantitative approach compared to other sections, and will cover some topics in more depth.

Professor

Jessica A. Wachter Email: jwachter@wharton.upenn.edu Homepage: http://finance.wharton.upenn.edu/~jwachter Office Hours: Monday 1:30-3:00 in SH-DH 2322

Teaching Assistants

Robert Irwan Email: irwanr@wharton.upenn.edu

Dongmei Li Email: lid2@wharton.upenn.edu

Course Material

Required:

- S. A. Ross, R. W. Westerfield and J. F. Jaffe, <u>Corporate Finance</u>, 7th Edition, McGraw-Hill Irwin, 2005. (Referred to as RWJ in the course outline.)
- Course pack of readings and past exams available from Wharton Reprographics. (Referred to as CP in the course outline.) Additional material will be distributed in class.
- A scientific or business calculator. It will be necessary for your calculator to have a x^y function.

Optional:

• Solutions Manual for use with Corporate Finance (7th edition), McGraw-Hill Irwin, 2005.

Problem Sets

There will be a problem set every week, starting with the second week of class. You will be rewarded full credit on the problem set if you have made a good-faith effort to answer all of the questions, and if you hand in the problem set on time. Late problem sets will not be accepted.

Grading

Grades will be based on the midterm exam (35%), the final exam (45%), problem sets (15%), the computer assignment (5%). The final exam is cumulative. You will be allowed one double-sided page of notes for the midterm and two double-sided pages of notes for the final. Class participation can help determine the grade if the student is on the margin between grades.

Exam Schedule:

- Midterm Exam: October 21, in class
- Final Exam: December 15, 4:00–6:00

Reviews will be scheduled prior to each exam.

All regrade requests must be made in writing within one week of the day the exams are returned. Any exam submitted for regrading of a question can be subjected to a complete regrading.

Study Groups

You are encouraged to work in groups on the problem sets, but you must hand in your own answers. It is also highly recommended that you regularly review the readings and class notes with your study group. The computer assignment may be completed and handed in by groups of up to three students.

Course Outline (First Half) Readings in brackets are optional Additional handouts may be distributed in class Dates are approximate

01	9/09	Introduction and NPV rule RWJ: [1–3], 4.1, Appendix 4A	
02	9/14	Present Value, Yields and Returns RWJ: 4.2, 4.4	
	9/16	No Class	
03	9/21	Present Value, Yields and Returns (cont.) RWJ: 4.3, 4.5 CP: 1	PS 1 due
04	9/23	Applications to Fixed Income Valuation RWJ: 5.1–5.3 CP: 2	
05	9/28	Applications to Fixed Income Valuation (cont.) RWJ: Appendix 5A (pp 134–140 only) CP: 3	PS 2 due
06	9/30	Applications to Equity Valuation RWJ: 9.1, 5.4, 5.5 CP: 4, [5]	
07	10/05	Applications to Equity Valuation (cont.) RWJ: 5.6–5.8	PS 3 due
08	10/07	Capital Budgeting: NPV vs. Internal Rate of Return RWJ 6.1, $[6.2-6.4]$, 6.5, 6.6, $[6.7, 6.8]$	
09	10/12	Capital Budgeting in Practice RWJ: 7.1–7.3, 7.4	PS 4 due
10	10/14	Equivalent Annual Cost and the Decision to Replace RWJ: 7.5	
11	10/19	Midterm Review	PS 5 due
12	10/21	Midterm (in class)	
	10/26	No Class (Fall Break)	

Course Outline (Second Half) Readings in brackets are optional Additional handouts may be distributed in class Dates are approximate

13	10/28	Expected Returns and Risk RWJ: 9.1 (review), 9.2–9.4, 10.1, 10.2 CP: 6, 7	
14	11/02	Portfolio Analysis: Gains from Diversification RWJ: 10.3–10.5 CP: 8, 9	
15	11/04	Portfolio Analysis: Capital Allocation Line RWJ: 10.6, 10.7 CP: [10], 11, 12	
16	11/09	Capital Asset Pricing Model RWJ: 10.8, 10.9, [Appendix 10A] CP: 13, 14, [15]	PS 6 due
17	11/11	Capital Budgeting under Uncertainty RWJ: 12.1–12.5 CP: 16	
18	11/16	Market Efficiency RWJ: 13.1–13.4, [13.5], 13.6 CP: 17, [18]	PS 7 due
19	11/18	Capital Structure RWJ: 15.1, [15.2], 15.3, 15.4 CP: 19	
20	11/23	Capital Structure (cont.) RWJ: 15.5, 16.1, 16.2, 16.4, [16.5–16.10] CP: 20, [21]	CA due
	11/25	No Class (Thanksgiving)	
21	11/30	Valuation and Capital Budgeting with Leverage RWJ: 17.1, [17.2], 17.3, 17.4	PS 8 due
22	12/02	Valuation and Capital Budgeting with Leverage (cont.) RWJ: 17.5–17.7	
23	12/07	Options: Definitions and Strategies RWJ: 22.1–22.4, [22.5], 22.6 CP: 22, [23]	PS 9 due
24	12/09	Options: Valuation RWJ: 22.7, 22.8, [22.9–22.10] CP: 24, 25	
25	TBA	Review Session	

- 1. Computing Effective Annual Rates
- 2. Holding Period Return and Yield to Maturity for Zero-Coupon Bonds
- 3. Calculating the Holding Period Return on a Coupon Bond
- 4. Equity Valuation Formulas
- 5. News Clippings on Equity Valuation
- 6. Geometric Average Versus Arithmetic Average
- 7. Numerical Examples of Mean, Standard Deviation, and Correlation
- 8. Proof of Mean and Variance Formulas
- 9. Gains from Diversification: 2 Risky Assets
- 10. News Clippings on Diversification
- 11. Portfolio Variance with Many Risky Assets
- 12. Optimal Portfolios when there is a Riskfree Asset
- 13. Understanding the CAPM
- 14. Calculating Beta
- 15. News Clipping on the Risk Premium
- 16. Applying the CAPM to Capital Budgeting
- 17. Understanding Market Efficiency
- 18. News Clippings on Efficiency
- 19. MM Propositions I and II
- 20. MM with Corporate Taxes
- 21. News Clipping on Bankruptcy Costs
- 22. Definition and Payoffs at Expiration of Calls and Puts
- 23. News Clippings on Options
- 24. Numerical Examples of Put-Call Parity and Minimum Value
- 25. Arbitrate Proofs of Put-call Parity and Minimum Value
- 26. Previous Midterm
- 27. Midterm Solutions
- 28. Previous Final