Econ 372/572   **Intermediate Finance**   **Spring 2017**

MW 11:45 – 1:00

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Office hours: Tuesdays 2pm – 4pm and Thursdays 3pm – 5pm walk-in hours. Other times by appointment.

SYLLABUS

COURSE SYNOPSIS

The goal of this course is to provide a framework for understanding the key theoretical and practical models used in the financial world. After introducing some basic pricing and valuation tools, we will address how to use these tools to provide a foundation on how financial assets are priced in the marketplace. We will go on to examine the tradeoffs between risk and return, and explore optimal portfolio selection and analysis. We will also discuss some derivatives markets (futures and options) and evaluate how these securities can be used for both hedging and speculative purposes. Finally we will introduce corporate valuation using net present value and alternative methodologies for pricing both projects and companies.

CLASS MEETING TIMES AND FORMAT

Classes will be in a lecture format, but I encourage students to ask questions and to challenge ideas and concepts that are introduced. I will hold weekly office hours, and will also be available at other times by appointment.

Class attendance is *essential*, as much of the material that we will cover is not in the (optional) textbook, and the lecture handouts by themselves are not sufficient to understand the material fully. Repeated absence from class is likely to have a negative impact on your grade, as I will count *anything* that I say in class to be fair game for questions in problem sets and exams.

TEXTS:
Lecture Notes: Will be posted on Sakai.

Many students find class attendance and the posted lecture notes to be sufficient. However, if you prefer to have other texts relating to the material, the following two books may be helpful:

Brealey and Myers: *Principles of Corporate Finance* OPTIONAL
Bodie, Kane and Marcus: *Investments* OPTIONAL

ASSIGNMENTS, PROJECTS, EXAM AND GRADING:

Your grade for this course will be based on a combination of 10 problem sets (of which each individual student's best 8 scores will count for 30%), a midterm exam (25%), and a final exam (45%).

Problem Sets

The problem sets will be posted on Sakai, typically on a Wednesday, to be handed in (physical copies) the following Monday at the beginning of class. Problem sets may not be handed in late under *any* circumstances. I understand that there may be exceptional circumstances relating to illness, family emergency, etc. that may prevent you from being able to submit every problem set on time. For this reason, I will drop the lowest two problem set scores for each student before calculating final grades for the class.

While I encourage students to collaborate on problem sets, each student must hand in his or her own completed version. If you work with others on the problem sets, bear in mind that the final exam is based on independent performance, which should temper your desire to 'free-ride' on problem sets, rather than participating actively in the group effort.

Be aware that *accuracy* is an important component of the grade received on all problem sets and the exams. In other classes, you might lose just one mark if you use the right method but make a numerical error and arrive at the wrong solution. You should not assume that this type of grading policy will apply in *this* course. Clear and lucid presentation of your solutions will also work in your favor.

The case studies and some problem sets will necessitate the use of the spreadsheet software Excel. If you are unfamiliar with Excel, this will be an excellent opportunity to get some experience with it. It is used throughout the business world, and especially in finance/economics/accounting-related fields.

Final Exam

The final exam for the course is cumulative, and will take place on Tuesday, May 2nd from 9am – 12pm, the date and time specified on the university exam calendar.

REGRADE POLICY

I will only accept requests to regrade a problem set if you believe that your true grade is more than 4% higher than your written grade on that problem set. That is, I actively discourage "grade grubbing". You should also be aware that if you submit a problem set for a regrade, I will regrade the entire problem set, and that this has potential to result in a reduction of the homework grade, if I think that the grader has been too generous in any of the marks awarded.

The same regrade policy applies to the exam; that is: only submit an exam for a regrade if you believe that there is a grading error (I'll permit requests to check errors of 2% or more for exams); and assume that I'll regrade the entire exam and may remove marks as well as adding them.

Any regrade requests should be submitted, in writing, within 7 days of the problem set (or exam) being returned to you.

COURSE SCHEDULE

Introduction to Discounting

Rates of return. Future Value and present value. Present value of multiple cashflows.

Bond Markets

Bond prices and yields. Forward rates. Duration, convexity, and hedging. The term structure of interest rates and theories of the yield curve slope. Risk management in the fixed income markets.
Problem Sets 1 & 2 (Due Jan 23, Jan 30)

Equity Securities and Corporate Valuation

Net present value and its use in valuing corporate projects. Alternatives to NPV. Valuation via multiples analysis.
Problem Set 3 (Due Feb 6)

Portfolio Theory

Review of essential microeconomic concepts: utility and risk aversion. Potential violations of "standard" economic preference models. Review of essential statistics: random variables, and measurement of the first and second moments. Correlation, covariance, and variance-covariance matrices. Properties of the normal and lognormal distributions. Portfolio risk-return tradeoff. Reducing risk through diversification. The Efficient Frontier and minimum variance portfolios. Asset allocation and the Capital Allocation Line. Optimal portfolios and the Capital Market Line.

Problem sets 4 & 5 (due Feb 13, Feb 20)

Capital Asset Pricing Model: CAPM

Review of regression analysis. Capital Asset Pricing Model: derivation using "marginal price of risk" arguments. Systematic versus idiosyncratic risk. The Security Market Line and its relationship to the CML. Mispricing and Jensen's alpha.

Problem set 6 (due Feb 27)

Midterm Exam
Exam review: Monday, March 6 in class
Midterm: Wednesday, March 8 in class

Spring Break
March 13 – March 17

Performance Measurement

Portfolio management. Performance measurement using benchmarks. Caveats to performance measurement. Luck vs skill. Hedge fund and mutual fund performance.

Problem Set 7 (due March 27)

Derivatives

Futures Markets and futures pricing. Stock, currency and commodities futures and derivation of no-arbitrage pricing formulas. Using futures for speculation and hedging purposes. Introduction to Options and option payoffs. Combination trades for hedging and speculation. Put-call parity and no-arbitrage pricing.

Problem Sets 8, 9 & 10 (April 3, April 10, April 17)

Review and wrap-up
April 24, 26

Final Exam
Tuesday, May 2, 9am – 12pm (as shown on the Duke Examination Schedule calendar).