

T/Th 10:05 – 11:20

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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.

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.

Most Sunday evenings, I will offer an optional review session from 5:30pm – 6:30pm [*location TBD*]. These sessions should be viewed as an opportunity to review material that students are struggling with. They are *not* intended as a way to get a quick overview of all that was covered in class the previous week, and should be viewed as an addition to, not a replacement for, attending lectures.

TEXTS:

Lecture Notes: Will be posted on Sakai

Brealey and Myers: *Principles of Corporate Finance* OPTIONAL

ASSIGNMENTS, PROJECTS, EXAM AND GRADING:

Your grade for this course will be based on a combination of 7 problem sets (40%), 2 team projects (30%), and a final exam (30%).

The team projects will require students to work in teams of 3 – all are corporate-sponsored competitions. One of these is *mandatory* for all students:

- A Private Equity case study sponsored by Audax (a PE firm) specifically for Econ 372/572

There are two other team-based competitions that are also open to students outside of Econ 372/572. Each student in Econ 372/572 must select at least one:

- an Equity Research Report competition, sponsored by Barclays Capital
- an Asset Allocation competition, sponsored by BlackRock

Your team's grade in the case study and competition will count towards your overall grade. (If you choose to participate in both the Barclays Equity Research Report competition *and* the BlackRock Asset Allocation competition, your highest team grade from these two competitions will count towards your overall course grade.)

Please note the following about the Equity Research and Asset Allocation competitions:

- You may form different teams for whichever of these competitions that you participate in.
- These two competitions are open to *all* Duke sophomores and juniors, not just students in Econ 372. Hence *sophomores and juniors* in Econ 372 may form teams with other sophomores & juniors who are *not* in this class, and in fact are encouraged to do so.
- *Seniors and MA students* form teams only among themselves; that is, they may not form teams with any sophomores or juniors.

The final exam for the course is cumulative, and will take place on the date and time specified on the university exam calendar: **at 2pm – 5pm on Sunday, December 16.**

There will be seven (7) problem sets over the course of the semester, which will typically be posted on Sakai on Thursdays, to be handed in at the beginning of the next Tuesday class. (Note that the team projects are not always due on a Tuesday – check the Course Schedule below for details of submission dates for the team projects.)

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 problem set score for each student before calculating final grades for the class. Please only use this “free pass” if you really need it!

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, projects, and the final exam. 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.

Some problem sets, as well as the competitions, 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.

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.

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

COURSE SCHEDULE**Equity Securities**

Common stock valuation. The stock market. Basic financial statements analysis and Net Present Value. Comparables analysis. Price/Earnings ratios and other relevant financial ratios.

Problem Set 1 (due Sep 11)

Introduction to Portfolio Theory

Review of essential microeconomic concepts: utility and risk aversion. Potential violations of “standard” economic preference models. Review of essential statistics: return, standard deviation, correlation, covariance, and variance-covariance matrices. Portfolio risk, return and diversification for two assets. Efficient frontier and diversification for portfolios of multiple assets. Capital Market Line (CML). Single and multi-factor linear regression models.

Problem Set 2 (due Sep 18)

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 Set 3 (due Sep 25); Problem Set 4 (due Oct 2)

BARCLAYS CAPITAL EQUITY RESEARCH COMPETITION: (SELECT 1 OF 2)

Competition materials available Tues, September 25.

Competition submissions due Wednesday, October 10 at 12pm to Ricky Powell in Soc Sci 326

[Some teams will be chosen to make presentations to representatives from Barclays Capital on the afternoon of Wed, October 24. These teams will be invited to make light edits to their presentations between Thurs, Oct 18 to Mon, Oct 22.]

BLACKROCK ASSET ALLOCATION COMPETITION: (SELECT 1 OF 2)

Competition materials available Fri, September 28.

Competition submissions due Thursday, October 18 (just after Fall break) at 12pm to Ricky Powell in Soc Sci 326

[Some teams will be chosen to make presentations to representatives from BlackRock on the afternoon of Tues, October 30. These teams will be invited to make light edits to their presentations between Wed, Oct 24 and Mon, Oct 29.]

Capital Asset Pricing Model (CAPM)

Capital Asset Pricing Model: derivation. Systematic versus idiosyncratic risk. The Security Market Line and its relationship to the CML.

Problem Set 5 (due Oct 30)

AUDAX COMPETITION: PRIVATE EQUITY CASE STUDY

Oct 23: Audax case study lecture in class

Case Study submissions due Tuesday, November 6 (at the beginning of class)

Some teams will be chosen to make presentations to representatives from Audax on Tues, Nov 13 in class. These teams will be invited to make light edits to their presentations between Fri, Nov 9 and Mon, Nov 12.

Nov 13: Student case study presentations in class
(Class Attendance Mandatory for *all* students)

Performance Measurement

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

Problem Set 6 (due Nov 20)

Futures Markets

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 Set 7 (due Dec 4)

Final Exam

Sunday, December 16, 2pm – 5pm