FINANCIAL ECONOMICS

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Office Hours
Monday 10:30-11:45 AM
Wednesday 11:00-11:45 AM
Other times by appointment

Prerequisites: (Upper-Level Elective) 220:320 Intermediate Microeconomics and 220:322 Econometrics

Texts:

Basis of Evaluation: Announced quizzes and econometric assignments will determine your grade. There will be no hourly or final examinations, nor will any extra credit work be provided. An absence at a quiz, for whatever reason, counts as a 0. However, you may drop your two lowest grades—except the last quiz. Under no circumstances will a make-up be given for a quiz. Dropping two grades substitutes for make-ups. There will be approximately ten quizzes and four econometric assignments. An average grade between 85 and 100 is an “A,” between 80 and 84, a “B+,” between 75-79, a “B,” between 70-75, a “C+,” between 65 and 69, a “C,” between 56-64, a “D,” and less than 55, an “F.”

Time Required for Class Preparation: You are responsible for preparing the assignment before class. The average time required to complete an assignment properly is 3 to 4 hours—less time and you are less likely to do well—less than 2 hours and you are unlikely to pass. Simply reading the assignment will not insure your passing the course. Additional time is required to master financial analysis. Remember Ann Landers’ observation, “Opportunities are usually disguised as hard work so most people don’t recognize them.”

Learning Goals: This course focuses on several learning goals adopted by the Department of Economics.

Economic Literacy – Students who complete Financial Economics should understand and be able to articulate, both orally and in writing, the core principles, concepts and theories that form the foundation of modern financial analysis and research. See the course outline below for a list of these principles, concepts, and theories. In this course, we use collaborative group learning to master the essential tools of financial economics and problem solving. Groups present and discuss their solutions with the class.

Economic Numeracy – Students who complete Financial Economics should be familiar with the tools, techniques and methods of empirical financial economics. In this course we show how the basic tools of financial economics can be applied to data. Notably, we estimate asset-pricing models, and we apply event study methods to banking data around several recent failures of systemically important financial institutions to see how markets evaluate size and risk-taking among surviving institutions.

Economic Citizenship – Upon completion of Financial Economics, students should be able to apply their understanding of core concepts and quantitative tools to analyze and research real world problems and to evaluate alternative policy proposals dealing with finance and financial markets. In this course we focus on financial institutions during the recent crisis and public policy adopted during the crisis.
**Schedule of Assignments**

**CWS** denotes Copeland, Weston, and Shastri, *Financial Theory and Corporate Policy*

**BMA** denotes Brealey, Meyers, and Allen, *Principles of Corporate Finance*

*Note: The problems assigned below prepare you for class. They are required but not collected in class.*

<table>
<thead>
<tr>
<th>I. The Theory of Finance</th>
<th>Students who have not yet requested or used apps.rutgers.edu, request access at <a href="https://netid.rutgers.edu/">https://netid.rutgers.edu/</a></th>
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</thead>
</table>
| A. Capital Markets, Consumption and Investment | **Class 1**  
CWS, Chapter 1 (Problems 1.1-1.6) |
| B. Time Value of Money | **Class 2**  
BMA, Chapter 2 (Select a variety of end-of-chapter problems to insure your mastery.) |
|   | **Class 3**  
BMA, Chapter 3 (Problems 1-4, 8, 9, 11, 15, 16). Request access to apps.rutgers.edu at [https://netid.rutgers.edu/](https://netid.rutgers.edu/). Practice logging on. |
|   | **Class 4**  
CWS, Chapter 2 (Problems 2.1, 2.3, 2.6, 2.8)  
BMA, Chapter 4 (section 4.2) (Problems 1-7)  
BMA, Chapter 5 (Problem 10) |
| C. Investment Decisions: The Certainty Case | **Class 5 – Satellite Computer Lab**  
|   | **Class 6**  
Research Assignment 1 due at the start of class |
|   | **Class 7**  
E. The Theory of Choice: Utility Theory Given Uncertainty
   1. Axioms of Choice under Uncertainty
   2. Utility Functions
   3. Risk Aversion
   4. Stochastic Dominance
   5. Mean and Variance as Choice Criteria

F. State Preference Theory
   1. Uncertainty and Alternative Future States
   2. Pure (Arrow-Debreu) Securities
   3. Complete Capital Market
   4. No-Arbitrage Profit Condition
   5. Economic Determinants of Security Prices
   6. Optimal Portfolio Decisions
   7. Efficient Set with Two Risky Assets

G. Objects of Choice: Mean-Variance Portfolio Theory
   1. Measuring Risk and Return for a Single Asset
   2. Measuring Portfolio Risk and Return
   3. Efficient Set with Two Risky Assets
   4. Efficient Set with One Risky and One Risk-Free Asset
   5. Optimal Portfolio Choice: Many Assets
   6. Portfolio Diversification and Individual Asset Risk

H. Market Equilibrium: CAPM and APT
   1. Efficiency of the Market Portfolio
   2. Derivation of the CAPM
   3. Properties of the CAPM

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**Class 8**
**Research Assignment 2** due at the start of class

**Class 9**
*CWS, Chapter 3, pp. 45-59, 62-65* (Problems 3.3, 3.4, 3.5, 3.8)

**Class 10**
**Research Assignment 3** due at the start of class

**Class 11**
*CWS, Chapter 4 (Problems 4.2, 4.3)*

**Class 12**
*CWS, Chapter 5, 101-121 (5.6, 5.7)*
*BMA, Chapter 7 (background)*

**Class 13**
*CWS, Chapter 5, 121-141 (5.9, 5.11)*
*BMA, Chapter 8, 186-192*

**Class 14**
*CWS, Chapter 6, 147-158 (6.1-6.5)*
*BMA, Chapter 8, 192-195*
4. Use of the CAPM for Valuation
5. Applications of the CAPM for Corporate Policy
6. Empirical Tests of the CAPM
7. The Market Risk Premium
8. Empirical Market Line
9. Arbitrage Pricing Theory

I. Market Efficiency: Theory and Evidence

J. Using Asset Pricing Models to Measure Risk

K. Event Studies Based on Asset Pricing Models
   1. Too-Big-to-Fail
   2. Take-Over Discipline and Interstate Banking
   3. Personal Use of Corporate Jets by CEOs

Class 15
CWS, Chapter 6, 159-176 (6.6-6.11)
BMA, Chapter 8, 195-199

Class 16
CWS, Chapter 6, 176-188 (6.12, 6.13)
BMA, Chapter 8, 199-203 (8, 21)

Class 17
BMA, Chapter 13 (1-7, 13, 18, 20, 21, 22)

Class 18

Class 19

Class 20

Class 21

Class 22
L. Pricing Contingent Claims: Option Pricing Theory and Evidence

1. Deposit Insurance as a Put Option


2. Bank Charter Value vs Option Value of Deposit Insurance


II. Capital Structure

A. Modigliani-Miller Irrelevance Theorem

B. Agency Problems in Involving Equity and Debt

Class 23
CWS, Chapter 7 (Problems TBA)

Class 24
CWS, Chapter 7 (Problems TBA)

Class 25

Class 27
CWS, Chapter 15, 557-564, 594-604
[in the Custom Textbook, Ch. 11, 365-372, 402-412]

Class 28