

University of Southern California
Department of Economics

ECON 652
Economics of Financial Markets II

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Spring 2020

Course Syllabus

This syllabus describes the policies, procedures, and content of this course. Please read it.

Contact Information

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Course Objective

The objective of the course is to study the theory of asset pricing and to gain a deep understanding of the major topics in empirical finance. While this is a theoretical class, I intend the course to have a significant applied component. Most students who take this class will ultimately be employed in industry and thus need to understand both the theoretical concepts behind asset pricing but also how to apply the theory to the “real world”. As such, the course is structured such that the first third is largely theoretical with the remainder focusing on advanced applied issues.

This course assumes that students have a reasonable understanding of the standard concepts in finance. Students should have completed a course in the field and need to have a general understanding of the CAPM, equity valuation models, bond pricing, and derivatives. Mastery is not required, but familiarity is. While we will cover these topics briefly during the first week of class, they will be taught with a “review mindset”, so that we have time to focus on more advanced topics. If you have not taken formal coursework in these areas, I would recommend taking this course at a later time once you’ve done so.

We will utilize mathematics intensively in this course. This includes the use of calculus, linear algebra, statistics, and econometrics. To be successful in this class, you will need to have a solid understanding of these concepts. If you do not have formal training in calculus and statistics, you should not take this course. I will not be doing a math & stats “refresher” section for those who are rusty.

Having said that, this is not a math class. While it is not uncommon for courses of this nature to be structured largely as a course in mathematics, that will not be the case here. Math is simply a tool that researchers utilize, albeit an important one. Ultimately, those who are successful in the finance industry understand technical models at a deep level, but more importantly, are cognizant of both the benefits and the limitations of the models that we employ. Students should learn to appreciate models for what they are, but one should never rely on them as the “sacrosanct truth”. While occasionally I will do a complete derivation of a model or result, in general I will avoid doing full proofs so that we can focus more on the end-result and intuition.

In order to maximize the real world experience of this course, I plan to spend the beginning of each class discussing current events in markets. This may be something as simple as discussing what has been happening with equities, interest rates, or currencies or I may go deep into a major market development. I will make extensive use of Bloomberg during this part of the lecture so that students not only get exposure to the main tool used by practitioners, but can see market data in “real time”.

While there is no grade for class participation, I very much appreciate an interactive class with interesting thoughts and questions, whether we’re covering current topics or discussing a theoretical model. Please don’t be shy.

Textbooks

There are three required textbooks for this course. You’re free to use whatever edition you want, but note that homework will largely be assigned from the text, so you need to make sure that you do the correct homework questions. The textbooks are:

Cochrane, John H., *Asset Pricing*, Revised Edition, 2005

Shreve, Steven E., *Stochastic Calculus for Finance II: Continuous-Time Models*, 2000. (Note that this is not the shorter first book which covers discrete-time)

Hull, John C., *Options, Future, and Other Derivatives*, 9th edition (note that this not the most recent edition. We’re using the (much) cheaper 9th ed.)

Lectures and Reading

The bulk of class time will consist of lectures. My lectures will largely follow the textbooks although I strongly encourage you to attend lectures and read the sections before class. Doing both will materially improve your understanding and help you to retain the course material. We are covering a lot of material over the semester. You will need to read the book, re-read the book, attend lectures, and do homework in order to maximize your likelihood of success in the course.

I use very little PowerPoint for my lectures. I believe that simply going over slides lacks the necessary detail that students need to master the material. Rather, I will write detailed notes on the board. Because most of the lectures are not PowerPoint-based, **lecture notes will not be made available to students**. If you miss a class, you’ll need to reach out to one of your fellow students to obtain the notes for that class.

Paper Presentation

Students will be required to present a finance paper to the class. Depending on the number of students enrolled, I'll ask you to assemble in groups of 2-5 individuals and your group will be responsible for doing a formal paper presentation. I have pre-selected the papers and will assign them randomly to each group. Your presentation should be no more than 30 minutes and should use Powerpoint. You are expected to go "deep" into the paper, including a detailed discussion of the model and the empirical results. You should be prepared to answer tough questions from both the professor and your classmates. Your grade will reflect the quality of the presentation and how well the content is conveyed. All papers will be available in Blackboard for everyone to read.

Course Requirements and Grading

The course grade will be based on homework, the paper presentation, a midterm exam, and a final exam. Your course grade will be determined using the following weights:

Homework	15%
Paper Presentation	15%
Midterm exam	30%
Final exam	40%

I will usually assign homework at the end of every class. **I will only be collecting homework four times and I will not preannounce which homework assignments will be collected.** You are responsible for doing all homework assignments whether I collect it or not. Your overall homework grade will be based on the four assignments which I choose to collect. Any collected homework will be accepted at the beginning of class only. Homework solutions will be posted right after class to Blackboard for all assignments whether collected or not.

The final exam is cumulative, so a good score on the final is indicative of comprehension of all the course material. For students who score better on the final exam than the midterm, I will shift the weight from 30/40 to 20/50. Note that there will be no extra credit given. Other than the course grade, no letter grades will be assigned, although I will report the distribution of the midterm exam scores.

Exams

Both exams are closed book, though you will be allowed a single double-sided 8½ × 11 page of notes for the midterm and the final. Do not bring two pages of notes to an exam.

For both exams, you will need a calculator that can raise numbers to arbitrary powers. Laptop computers and calculators with word-processing features are not permitted for use in an exam.

Textbook Readings and Important Dates

The schedule below is intended to be only a guide for the semester. I may modify the content covered or scheduled dates of any items below. This includes the addition and/or removal of content. All changes will be announced in Blackboard.

Part I: Finance Review		
1/13/2019	Finance Review: Interest Rates, Futures, Forwards, Swaps, & Options	Hull Ch. 4, 5, 6, 7, 10, 11
1/20/2019	MLK Birthday – NO CLASS	
1/27/2019	Finance Review: Interest Rates, Futures, Forwards, Swaps, & Options	Hull Ch. 4, 5, 6, 7, 10, 11
	Stochastic Calculus	Class Notes
Part II: Asset Pricing Theory		
2/3/2019	The Consumption-Based Model	Cochrane Ch. 1
2/10/2019	Factor Pricing Models	Cochrane Ch. 9
2/17/2019	President's Day - NO CLASS	
2/24/2019	Expected Returns in the Time-Series and Cross-Section	Cochrane Ch. 20
3/2/2019	Asset Allocation Models	Instructor Notes
	Equity Premium Puzzle	Cochrane Ch. 21
3/9/2019	MIDTERM EXAM	
3/16/2019	Spring Break - NO CLASS	
Part III: Advanced Topics in Finance		
3/23/2019	Stochastic Calculus & The Black-Scholes Formula	Shreve Ch. 4
3/30/2019	Options on Indices and Currencies	Hull Ch. 17
	Option Greeks	Hull Ch. 19
4/6/2019	OIS Discounting & Volatility Smiles	Hull Ch. 9, 20
4/13/2019	Credit Risk & Credit Derivatives	Hull Ch. 24, 25

4/20/2019	Interest Rate Derivatives & Convexity Adjustments	Hull Ch. 29, 30
4/27/2019	Models of the Short-Rate	Hull Ch. 31
	Course Review & Catchup	
5/11/2019	FINAL EXAM (7-9PM)	