

Economics 426: Advanced Financial Economics Winter 2025

Instructor: Yu-chin Chen (yuchin@uw.edu)

Class Time and Location: MW 10:30-12:20/Savery 156

Course Office Hours: T 2 – 3 or by appointment

Course Description

This course covers advanced topics in financial economics, reviewing and building upon the material in Economics 422 (recommended but not a strict prerequisite). In this course, we will first cover the economic underpinnings behind security valuations and investment decisions, then move on to examine more closely the foreign exchange (Forex) market, the derivatives markets, and additional topics in behavioral finance and fintech. Relative to Economics 422 and 424, the focus of the course is less on techniques and calculations but more on applications and analyses, through case studies and small projects that aim to illustrate the concepts of arbitrage, informational efficiency, and portfolio and risk management in practice.

Prerequisites

Financial economics is a quantitative subject, and we will rely heavily on microeconomic theory, statistics, and mathematical techniques. You should be comfortable with consumer optimization, decisions involving time and risk, concepts of market-clearing, equilibrium, as well as statistics and regression analysis. You will also need to know how to use Excel.

Course Objective

Develop deeper and nuanced understanding in financial economics of asset risk-return tradeoff, portfolio optimization, financial instruments & market microstructures, and risk management.

Group Work

Study groups are encouraged for assignments, case discussions, and exam preparation. However, **you must submit individual write-ups for each assignment.** No collaboration is allowed on exams and quizzes.

Course Textbook

- (Required) Zvi Bodie, Alex Kane, and Alan J. Marcus (**BKM**), Investments, 13ed.
- Additional course material will be provided on Canvas

Assessments

- 5 Problem Sets (25%) – due via Canvas

There are five homework assignments for the course to help you review and apply the material learned in lectures. Group work is strongly encouraged but **you need to submit individual write-ups, in your own words, as well as the names of your groupmates.** Assignment grades will be based on a 10-point scale. Six points will be awarded for completion; the remaining 4 will be assigned based on the quality of your answers.

- Small Group Presentations (15%) and Final Group Project Presentation (15%)

Each student will work in groups on 2-4 small presentations during the term and a final project that they during the last week of class. Regular participation and contribution to your group is important and you will also have the opportunity to provide feedback to your groupmates' contribution.

Note that attendance is mandatory on March 10th and 12th for the final group presentations.

- 4 Quizzes (20%) and Final Exam (25%)

There are four quizzes over the quarter and a final exam. Each quiz will take ~30 minutes to complete and

counts towards 5% of your grade. They are designed to make sure you stay up-to-date on the material. The final exam on **March 17th, 8:30-10:30am**, is cumulative and will include group presentation topics.

If you cannot make a quiz date, the following policy applies: major exceptions are only allowed in case of medical emergencies that concern either you or your family. If it is a quiz that you have to miss, its weight will be added to the final exam. If it is the final exam that you miss, you will need to take a make-up exam during the first week of the following quarter. This exam will be significantly harder than the exam at the end of this term, reflecting the fact that you have more time for preparation.

Academic Conduct Policy

The Economics Department supports the University policies regarding academic honesty and classroom behavior. Students of the course are expected to adhere to the University of Washington's Policy on Academic Honesty and will be asked to sign an agreement (Homework 0).

Course Topics

1. Fundamental Concepts in Financial Economics
 - Market completeness
 - Implications of no-arbitrage
 - Stochastic discount factor
2. Risk and return
 - Optimization: Mean-variance analysis
 - Equilibrium: Capital Asset Pricing Model
 - Arbitrage: The Arbitrage Pricing Theory and multifactor models
3. Present value and efficient markets
 - Asset valuation: equity, bonds, & derivatives
 - Long-term investor portfolio & the horizon effect
 - Market microstructure and liquidity
4. Options
 - Portfolios of options
 - Option Valuation
 - Black Scholes, volatility smile/smirks
 - Risk management and crisis
5. The Foreign Exchange Markets
 - Uncovered interest parity condition
 - FX predictability and risk factors
 - Digital currencies & CBDC
6. Structured finance (if time permits/group project topic)
 - Financial innovations in the credit markets
 - Credit crisis of 2007-2009 & the amplification mechanisms
 - Recent fintech & implications
7. Selected topics from behavioral finance (if time permits/group project topic)