

# MGMTMFE 412 – TRADING, MARKET FRICTIONS AND FINTECH

[Winter] [2025]

## Course Syllabus

### Instructor Information

*Faculty of Record:* Jinyuan Zhang (Assistant Professor)  
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*Office location:* TBD

### Course meeting times and location

*Course Day & Time:* Please see schedule for specific dates.  
*Course Location:* D301  
*Course Site:* Bruin Learn

### Pre-requisites/ Co-requisites

No requisite courses.

### Course Description

How does trading occur? What are the frictions? Are there trading strategies and entrepreneurial opportunities in resolving these frictions? This course examines the financial market infrastructure and the mechanism of price formation and discovery. Through the lens of market frictions, we develop different perspectives on critical phenomena such as bubbles and crashes, short squeezes, and mutual fund runs. Throughout the course, case studies of FinTech unicorns demonstrate how those firms profit from resolving market frictions and how recent technology changes the landscape of trading. We also discuss new implications of these technological advancements in the stock market (i.e., high-frequency trading) and alternative markets (i.e., bond market and cryptocurrency market).]

### Course Objectives

At the end of the course, students will be able to:

1. Gain an economic understanding of how the financial market functions
2. Implement trading algorithms
3. Demonstrate presentation skills through an in-class group presentation



## Course Materials

### Required:

Course Reader: [Hasbrouck, Joel, 2013. Securities Trading: Procedures and Principles](#)  
The lecture notes for each session are available on the course website

### Optional:

Harris, Larry, 2003. Trading and Exchanges: Market Microstructure for Practitioners. Oxford University Press, New York  
Links and references to optional readings will be posted on the course

## Course Outline

Module	Weekly Title & Key Topics	Pre-Class Reading/Media	Assignments Due
1	<ul style="list-style-type: none"> <li>Lecture: markets, clearing, settlement, market participants</li> <li>Discussion: centralized vs. decentralized markets</li> </ul>	<p>“Decentralized and Centralized Exchanges: Who Will Win the Race?” (Nasdaq)</p> <p>“The Rise of Decentralized Cryptocurrency Exchanges” (Forbes)</p> <p>“Centralized and decentralized bitcoin markets: Euro vs. USD vs. GBP” (Roman Matkovskyy)</p> <p>“Providing Liquidity in an Illiquid Market: Dealer Behavior in US Corporate Bonds” (Michael A. Goldstein, and Edith S. Hotchkiss)</p>	
2	<p>Lecture: information and price, price discovery, no trade theory</p> <p>Discussion: is the secondary stock market a sideshow?</p>	<p>“NEA’s Peter Barris: Secondary Markets Are A ‘Sideshow’” (The Wall Street Journal)</p> <p>“Robo-Advisors: Product vs. Platform’ Henry O’Brien” (The Startup)</p> <p>“How Far Do Stock Markets Influence the Real Economy?”</p> <p>“Learning from Peers’ Stock Prices and Corporate Investment” (Thierry Foucault and Laurent Fresard)</p> <p>“The Source of Information in Prices and Investment-price Sensitivity” (Alex Edmans, Sudarshan Jayaraman and Jan Schneemeier)</p>	HW1
3	<p>Lecture: liquidity, market orders and limit orders, bid-ask spread, Glosten and Milgrom (1985)</p>	<p>“Using AI to Trade? Here is JP Morgan’s Approach” (Towards Data Science)</p> <p>“How Robinhood Changed an Industry” (US News)</p> <p>“Charles Schwab and the New Broker Wars” (Barron’s)</p> <p>“The Wisdom of the Robinhood Crowd” (Ivo Welch)</p>	HW2
4	<p>Lecture: liquidity, market depth, Kyle (1985)</p> <p>Discussion: Dark Mechanism</p>	<p>“Barclays and Credit Suisse to Settle ‘Dark Pool’ Inquiries” (New York Times)</p> <p>“Market Liquidity and Funding Liquidity” (Markus K. Brunnermeier and Lasse Heje Pedersen)</p>	HW3
5	<p>Lecture: empirics of liquidity and value of liquidity</p> <p>Discussion: OTC to electronic trading, the case of the bond market</p>	<p>“Covid-19 forces electronic shift in bond market” (Financial Times)</p> <p>“When Selling Becomes Viral: Disruptions in Debt Markets in the COVID-19 Crisis and the Fed’s Response” (Alan Moreira, Valentin Haddad and Tyler Muir)</p> <p>“Corporate Bond Market Dysfunction During COVID-19 and Lessons from the Fed’s Response” (J. Nellie Liang)</p>	HW4

Module	Weekly Title & Key Topics	Pre-Class Reading/Media	Assignments Due
6	Lecture: algorithm trading, front-running, arbitrage Discussion: the rising of passive investing and its impacts on the market	<p>“Passive attack: the story of a Wall Street revolution” (Financial Times)</p> <p>“Passive likely overtakes active by 2026, earlier if bear market” (Bloomberg)</p> <p>“Passive Funds Affect Prices: Evidence from the Most ETF-dominated Asset Classes” (Karamfil Todorov)</p> <p>“The Shift from Active to Passive Investing: Risks to Financial Stability?” (Kenechukwu Anadu, Mathias Kruttli, Patrick McCabe, and Emilio Osambela)</p> <p>“The Flash Crash: High-Frequency Trading in an Electronic Market” (Andrei Kir-ilenko, Albert S. Kyle, Mehrdad Samadi, and Tugkan Tuzun)</p> <p>“High-frequency Trading and Price Discovery” (Jonathan Brogaard, Terrence Henderson, and Ryan Riordan)</p>	
7	Lecture: bubble formation, market crashes, financial stability Discussion: money market runs and corporate bond market runs	<p>“Runs on Mutual Funds” (The Leap Blog)</p> <p>“Run on the Fund: The Big Risk of Bond Mutual Funds. What to Look For and What to Do” (The Wolf Street)</p> <p>“Payoff Complementarities and Financial Fragility: Evidence from Mutual Fund Outflows” (Qi Chen, Itay Goldstein, and Wei Jiang)</p> <p>“Investor Flows and Fragility in Corporate Bond Funds” (Itay Goldstein, Hao Jiang, and David T.N)</p> <p>“Runs on Money Market Mutual Funds” (Lawrence Schmidt, Allan Timmermann, and Russ Wermers)</p>	
8	Lecture: short selling, short squeezes, shorting strategy Discussion: Meme stocks and Reddit	<p>“How Robinhood and Covid opened the floodgates for 13 million amateur stock traders” (CNBC)</p> <p>“The FinTech App’s Kerfuffle on Online Trading” (Financial Times)</p> <p>“The Shorting Premium and Asset Pricing Anomalies” (Itamar Drechsler and Qingyi Freda Drechsler)</p>	
9	Lecture: market microstructure of fixed income markets, currency, commodities, cryptocurrencies Discussion: fragmented cryptocurrency markets	<p>“Trading and Arbitrage in Cryptocurrency Markets” (Harvard Law School)</p> <p>“Crypto Arbitrage: How It Works &amp; Trading Strategies” (Sofi Learn)</p> <p>“Is market fragmentation harming market quality?” (Maureen O’Hara, and Mao Ye)</p> <p>“Trading rules, competition for order flow and market fragmentation” (Amy Kwan, Ronald Masulis, and Thomas H. McInish)</p>	
10	Group presentations		

## Evaluation and Grading

### Required Assignments and Weighted Percentages

This course will be graded using the following weighted percentages for each of the assignments in the course. Feedback and grades are typically posted within one week of assignment due dates.

Assignments	% of Grade
Individual Written Assignments (4*10%)	40%
Group Presentation	30%
Final Exam	30%
<b>Total</b>	<b>100%</b>

Your overall course grade will be determined by how your performance on graded assignments ranks in comparison with other students in the class according to the grade distribution model at Anderson.

### Assignment Descriptions

*The following are descriptions of your required assignments for this course. Specific instructions, submission information, and any accompanying rubrics are detailed on the course site.*

#### Individual Homework

- Individual empirical coding exercises, which mimic questions in a professional business or research environment
- Hand in one report with detailed analysis steps and results

#### Group Presentation

- Develop a trading strategy
- Give a presentation to explain the idea behind the strategy
- The presentation is about 15 minutes long
- Hand in slides and report after the presentation

#### Final Exam

- In-person final exam

## Anderson and Course Policies

### Netiquette

The written language has many advantages: more opportunity for reasoned thought, more ability to go in-depth, and more time to think through an issue before posting a comment. However, written communication also has certain disadvantages, such a lack of the face-to-face signaling that occurs through body language, intonation, pausing, facial expressions, and gestures. As a result, please be aware of the possibility of miscommunication and compose your comments in a positive, supportive, and constructive manner.

## UCLA Policies

### Code of Conduct

All participants in the course are bound by the **UCLA Student Conduct Code**:

(<https://deanofstudents.ucla.edu/individual-student-code>)

### Academic Integrity

UCLA is an institution of learning, research, and scholarship predicated on the existence of an environment of honesty and integrity. As members of the academic community, instructors, students, and administrative officials are all responsible for maintaining this environment. It is essential that all members of the academic community practice academic honesty and integrity and accept individual responsibility for their work.

Academic misconduct is unacceptable and will not be tolerated in this course. Cheating, forgery, dishonest conduct, plagiarism, and collusion in academic misconduct erode the University's educational, research, and social roles.

Students who knowingly or intentionally conduct or help another student engage in acts that violate UCLA's expectations of academic integrity will be subject to disciplinary action and referred to the Dean of Students' Office.

Please familiarize yourself with **UCLA's Academic Integrity Policy**:

(<https://www.deanofstudents.ucla.edu/Academic-Integrity>). Speak to your instructor if you have any questions about what is and is not allowed in this course.

### Integrity in Research

Integrity in research includes not just the avoidance of wrongdoing, but also the rigor, carefulness, and accountability that are hallmarks of good scholarship. All persons engaged in research at the University are responsible for adhering to the highest standards of intellectual honesty and integrity in research.

Please familiarize yourself with the **University of California Policy on Integrity in Research**

(<https://www.ucop.edu/academic-personnel-programs/files/apm/apm-190-b.pdf>)

## Accessible Education & Inclusive Education

### Disability Services

UCLA is committed to providing a barrier-free environment for persons with documented disabilities. If you are already registered with the Center for Accessible Education (CAE), please request your Letter of Accommodation in the Student Portal. If you are seeking registration with the CAE, please submit your request for accommodation via the CAE website. Students with disabilities requiring academic accommodations should submit their request for accommodations as soon as possible, as it may take up to two weeks to review the request. For more information, please visit the CAE website ([www.cae.ucla.edu](http://www.cae.ucla.edu)), visit the CAE at A255 Murphy Hall, contact CAE by phone at (310)825-1501, or by telecommunication device for the deaf at (310) 206-6083.

### Equity, Diversity, and Inclusion

Please familiarize yourself with UCLA Anderson's commitment to maintaining an equitable, diverse, and inclusive community:

(<https://www.anderson.ucla.edu/about/equity-diversity-and-inclusion>)