

Brief Course Outline

Course Title: Market Microstructure & High-Frequency Trading

Course Number and Section:

ECONOMIC

3394B 550

Instructor Name(s): Bo Liu

Instructor Email(s): bo.liu@uwo.ca

Disclaimer: Information in the brief course outline is subject to change. The syllabus posted on OWL is the official and authoritative source of information for the course.

Course Description:

This course offers an in-depth exploration of financial market microstructure, focusing on the mechanisms and dynamics that govern the functioning of financial markets. It emphasizes understanding the theoretical models, empirical methods, and institutional details necessary to analyze market efficiency, liquidity, and price formation.

The course is structured around key topics such as dealer models, limit order books, liquidity measures, and high-frequency trading. Students will delve into foundational models like Glosten-Milgrom and Kyle's framework, while also exploring contemporary issues, including market fragmentation, transparency, and algorithmic trading.

Learning Outcomes:

- Develop a comprehensive understanding of the microstructure of financial markets, including key trading mechanisms, market participants, and their interactions.
- Master foundational models such as Glosten-Milgrom, Kyle's framework, and limit order books to analyze price formation and market liquidity.
- Gain the ability to critically evaluate market efficiency, transparency, and the impacts of market fragmentation on trading outcomes.
- Learn to measure and assess liquidity, including its determinants and implications for financial stability and asset pricing.
- Explore the role of technology in modern markets, including high-frequency trading and algorithmic strategies, and their regulatory challenges.
- Strengthen analytical skills through solving problem sets and applying theoretical models to empirical data.
- Build the expertise to critique financial market designs and propose improvements for enhanced efficiency and fairness.

Textbooks and Course Materials:

Textbook and Other Learning Materials (Hard Copy Not Required)

Required textbook: Market Liquidity: Theory, Evidence, and Policy, 2nd Edition, by Thierry

Foucault, Marco Pagano, and Ailsa Röell (Oxford University Press).

Available here from the online bookstore.

Supplementary Reference Textbook (Not required):

Trading and Exchanges: Market Microstructure for Practitioners by Larry Harris (Oxford University Press)

Empirical Market Microstructure: The Institutions, Economics, and Econometrics of Securities Trading by Joel Hasbrouck (Oxford University Press)

Trades, Quotes and Prices: Financial Markets Under the Microscope by Jean-Philippe Bouchaud, Julius Bonart, Jonathan Donier, Martin Gould (Cambridge University Press)

Market Microstructure in Practice, 2nd Edition, Edited by Charles-Albert Lehalle (World Scientific)

Note: Additional readings may be assigned.

Methods Of Evaluation:

Assignment	Due Date mm/dd/yy	Weight - %
Problem Sets	Due by the end of each 4 weeks	60%
Final Exam		40%

In solidarity with the Anishinaabe, Haudenosaunee, Lūnaapéewak, and Chonnonton peoples on whose traditional treaty and unceded territories this course is shared.

Sunday, December 8, 2024