

Spring 2016: MTH 9879 Market Microstructure Models

Course Policy

Instructor:

Jim Gatheral, VC 6-235, (646) 312-4134, jim.gatheral@baruch.cuny.edu.

Office hours (subject to change):

Tuesdays 2pm–4pm, and by appointment.

Teaching assistant:

Prof. Tai-Ho Wang, VC 6-253, (646) 312-4130, tai-ho.wang@baruch.cuny.edu.

Time and location:

Tuesday 6:05–9:00pm, VC 9-135.

Prerequisites:

MTH 9814: Introduction to Pricing Financial Instruments and MTH 9831: Probability and Stochastic Processes for Finance.

Required textbooks:

- *Market Liquidity: Theory, Evidence, and Policy* by Thierry Foucault, Marco Pagano and Ailsa Röell, Oxford University Press, 2013.
- *Empirical Market Microstructure* by Joel Hasbrouck, Oxford University Press, 2007.

Recommended books:

- *Trading and Exchanges* by Larry Harris, Oxford University Press, 2003.
- *Theory of Financial Risk and Derivative Pricing: From Statistical Physics to Risk Management* by Jean-Philippe Bouchaud and Marc Potters, Cambridge University Press, 2003.
- *Statistical Analysis of Financial Data in R* by René Carmona, Springer, 2014.

For reference

- *Market Microstructure Theory* by Maureen O'Hara, Wiley, 1998.

Organization

Students are expected to arrive on time for the beginning of each class. In accordance with the policy of Baruch College, anybody who is absent more than 4 times will receive a grade of WU, which is equivalent to a grade of F.

Homework will be assigned each Tuesday and will be posted on the course Quantnet page. Typically, homework will be due in two weeks from the date of assignment. You are encouraged to discuss homeworks with other students through the MTH9879 Baruch MFE Forum. Alternatively, you can use my office hours to get help with the homework and may also email me or Tai-Ho with short questions. Unless prior arrangements have been made, late homeworks will not be accepted. There will be no makeup if the final examination is missed.

The use of cell phones, beepers, and pagers is strictly prohibited during class. Please switch them off before entering the classroom.

Study groups

You are encouraged to discuss homework problems with other students in your class. Yet there will be no homework groups; you should write solutions on your own without consulting others' work (see Academic Honesty section below).

Academic Honesty

You are encouraged to discuss the course material and homework assignments with your fellow students. Each assignment must, however, be written and completed by each individual on his or her own. Plagiarism and related forms of unreferenced "borrowing" of written material will not be tolerated. Textbooks, notes, and any other written materials should not be used during the exams unless otherwise noted. I take academic honesty very seriously.

Grading

There will be roughly weekly homework assignments and a final examination. $\frac{2}{3}$ of your final grade will be from the homework assignments and $\frac{1}{3}$ from the final examination.

Exam schedule

The final examination is tentatively scheduled for Tuesday May 24, 2016 from 6–8pm, VC 9-135.