

Structure and Dynamics of Financial Markets, B40.3149  
Spring (January mini-term) 2010

This syllabus is tentative and subject to change

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## Overview

This class is offered for the first time in the January mini-term. The target audience is Langone MBA students.

This class is about market microstructure and trading. Many Stern Finance courses are about the securities that get traded (stocks, bonds, options, and so on) and how they should be valued. This course looks at *how securities are traded*: the operation and design of trading mechanisms and protocols. The main focus of the course is the continuous limit order book, the mechanism used for most trading in futures, options and stocks worldwide. But other protocols are used as well, so we'll also look at auctions, open-outcry ("pit" or "floor") markets, and their variations. The course draws on material from classical economic theory, behavioral economics and finance, and statistics. Although the course will cover many strategic aspects of trading, it is not primarily about trading systems or proprietary trading.

The format of the class is lecture/discussion plus in-class exercises. These exercises will include trading games (or, if you prefer, "simulations"). These exercises will be the basis for part of the grade, so class attendance is very important. The class sessions are: M Jan 11 6-9p, W Jan 13 6-9p, Sa Jan 16 9a-4p, M Jan 18 6-9p, and W Jan 20 6-9p. Please make sure that you can attend all sessions before you sign up for the course.

In addition to the in-class exercises, the grade will be based on a paper and final exam.

The main prerequisite is B01.2311 (Foundations of Finance).

## Topics (tentative)

Session	Date	Time	Topics
1	Mon, Jan 11	6:00p-7:30p	The basic electronic limit order book: The features of Nasdaq's SingleBook; how trades occur and how prices move (descriptive)
2	Mon, Jan 11	7:30p-9:00p	Customers: the motives for trade (information and hedging, public and private values). A first look at measuring trading costs.

3	Wed, Jan 13	6:00p-7:30p	Liquidity providers: The determination of the bid-ask spread. Adverse selection. Over the counter, dealer and interdealer markets.
4	Wed, Jan 13	7:30p-9:00p	Opening and closing the market: double-sided auctions; general features of auctions and auction design. Auction Rate Securities; IPO auctions; Treasury bond auctions; Municipal bond auctions.
5	Sat, Jan 16	9:00a-10:30a	Estimating the dynamics between prices and order flows
6	Sat, Jan 16	10:30a-12:00p	Measuring trading costs
7	Sat, Jan 16	1:00p-2:30p	Optimal trading strategies. (How should orders be split? What is the price of "urgency"?)
8	Sat, Jan 16	2:30p-4:00p	The make or take decision
9	Mon, Jan 18	6:00p-7:30p	Pegging strategies; discretionary orders; hidden and reserve orders.
10	Mon, Jan 18	7:30p-9:00p	Crossing networks, dark liquidity, and "zero impact" trades
11	Wed, Jan 20	6:00p-7:30p	Market manipulation and insider trading
12	Wed, Jan 20	7:30p-9:00p	Final exam