

Syllabus – Spring 2017 – MW Noon – 4 units

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Class lectures
Mon/Wed 12:00 – 1:50 PM Room: ACC 201

Office hours
Mondays 4:00 – 5:00 PM
Fridays 1:30 – 2:30 PM

Introduction and Course Objectives

“Trading and Exchanges” will introduce you to the theory and practice of securities and contract trading at exchanges, in dealer networks, and among brokers. We will examine

- why and how people trade,
- who profits from investing and speculating, and when,
- the principles of proprietary trading and high frequency trading,
- why market institutions are organized as they are,
- how markets are changing in response to innovations in information technologies,
- the origins of liquidity, volatility, price efficiency, and trading profits, and
- the role of public policy in the markets.

To address these questions, we must understand why and how institutions, dealers, and individuals trade. Understanding trader behavior and how market structure affects trader behavior is the primary course objective.

Target Audience

This course is for anyone who wants to understand how markets work, how people trade, and when active investment management works and fails. The reading assignments and the class lectures are appropriate for students who have no market experience.

Experienced traders also will find this course to be valuable. Although you may already know much about market institutions, the economic perspectives that you will learn in this course will greatly improve your understanding of why some people make money while others lose money. Many brokers and dealers have learned much from this course. Students with substantial market experience have little advantage over other students other than initial familiarity with the jargon and institutions.

This course is of obvious interest to students interested in trading. It also will greatly benefit students who are interested in understanding the determinants of investment performance.

Learning Objectives

The objectives for this course are to develop your ability to understand, participate in, and manage trading and investment processes within various market structures. This course will help you develop the following knowledge and skills:

- Global Objective
 - Understand trading terms, concepts, principles, and theories.
- Detailed Objectives
 - Understand how
 - markets operate,
 - traders behave,
 - market structure affects trader behavior, and
 - traders and trading companies lobby policy-makers on market design issues.
 - Be able to
 - construct optimal trading strategies to solve various problems,
 - evaluate and motivate brokers,
 - recognize various trading styles and determine when they will be profitable,
 - Predict who will profit from trading and who will lose,
 - Predict when and which markets will
 - be liquid and
 - have informative prices.
 - Identify trading risks and manage them.

A complete and detailed list of the learning outcome statements is posted on Blackboard.

Required Materials

- Larry Harris, *Trading and Exchanges: Market Microstructure for Practitioners* (New York, Oxford University Press, 2003, ISBN 0195144708). An errata sheet is posted on Blackboard.
- Larry Harris, *Trading and Electronic Markets: What Investment Professionals Need to Know* (Charlottesville, The CFA Institute Research Foundation, 2015, ISBN 978-1-934667-91-0), free PDF download available at <http://www.cfapubs.org/toc/rf/2015/2015/4>. Also available for free on Amazon Kindle.
- Daily access to the *Wall Street Journal*.
- CFA Institute, *Standards of Practice Handbook*, Eleventh edition (CFA Institute 2014, ISBN 978-0-938367-85-7), available for free at www.cfapubs.org/doi/pdf/10.2469/ccb.v2014.n4.1 and also available on Amazon Kindle for \$0.99.

This handbook provides an excellent introduction to the ethical issues that arise in trading and investment management.

Supplemental Materials

- John Downes and Jordan Elliot Goodman, editors, *Dictionary of Finance and Investment Terms*, 9th Edition (New York: Barron's Educational Series, 2014, ISBN 978-1438001401)
This inexpensive dictionary is useful for quickly defining financial jargon and concepts.
- CFA Institute Financial NewsBrief. This free resource provides a daily email that briefs important current financial news stories and provides links to the primary sources. Sign up at www.smartbrief.com/cfa. You should read it every day.
- Richard Bookstaber, *A Demon of Our Own Design: Markets, Hedge Funds, and the Perils of Financial Innovation*, (New York: John Wiley and Sons, Inc., 2007, ISBN 0471227277). An excellent summary of the main risk management issues in the financial markets.

- Edwin Lefèvre, *Reminiscences of a Stock Operator*, (New York: John Wiley and Sons, Inc., Reprinted 1993, ISBN 0-47105970-6, first published in 1923)

Reminiscences is a ghostwritten autobiography of Jesse Livermore. Livermore was a very successful stock and commodity speculator who traded in the late 19th and early 20th centuries. The author, Edwin Lefèvre, was a financial reporter who spent two months interviewing Livermore for this project. The text is a first-person narrative by a character called Larry Livingston, who clearly represents Jesse Livermore. The book is full of market wisdom and human wisdom. It is easy to read, engaging, and covers many of the topics of this course.

Prerequisites

Either BUAD 215 or BUAD 306.

Familiarity with Investments, Microeconomics, Corporate Finance, Information Technologies, and Statistics is helpful but not necessary. You will not be lost if you have not yet studied these subjects, but sometimes you may have to work harder than students who are already familiar with their principle concepts.

Other Course Materials

Copies of various supplemental course materials will be available through your Blackboard account. I may use a password to protect some documents. If so, the password will be **TradeOn**. The password is case sensitive.

Grading Summary

		<u>% of Grade</u>
Tests	Pop quizzes	40.0%
	Midterm	25.0%
	Final Exam	<u>35.0%</u>
TOTAL		100.0%

The pop quizzes will be unannounced. They will be short—about 15 minutes long, and sometimes may have only one question. I will not reveal the total number of pop quizzes. I will drop your lowest n quiz scores when computing your quiz total, where n will be 15% of the total number of pop quizzes, rounded up to the nearest integer. According, I will drop one quiz score if the number of pop quizzes is 6 or less, two if the number is between 7 and 13, and three if the number is between 14 and 20. If you are not in class on the day of a pop quiz, you will not receive credit for that quiz. All pop quizzes will have equal weights in the final grade. I sometimes treat homework assignments as pop quizzes. See “Homework” below.

Final grades represent how you perform in the class relative to other students. Your grade will not be based on a mandated target, but on your performance, consistent with the policies of USC and the Marshall School of Business. Historically, the grade point average for this class is about 3.3. I assign higher or lower average grades based on my perception of overall performance of the class in comparison to other classes I have taught and in comparison to my general expectations for students in the class.

I consider four items when assigning class grades:

1. Your weighted-average standardized score for all exams. Since exams inevitably vary in difficulty, I standardize the scores by subtracting the class mean and dividing the result by the class standard deviation. I average these standardized scores weighting by the contributions of each exam to the class grade. For the purpose of computing the class grade, I base the standardization only on the scores of students who will receive non-failing class grades.

2. Your weighted-average exam score. This measure does not standardize the scores for each exam. It is equivalent to imagining that your class grade is based on a single exam with separate seatings occurring on each of the quiz and final exam days. Note that under this measure, missing a quiz on a day when the quiz is easy is worse than missing a quiz on a day when the quiz is hard.
3. Your rankings among all students in the class using the above two measures.
4. My impression of the overall achievement of the students in this class relative to that of other students in comparable classes that I have taught in the last few years or am presently teaching in other sections.

ASSIGNMENTS AND GRADING DETAIL

Examinations

The examinations will consist of essay, one-sentence, one word, or multiple choice questions. I may mix the question types. I generally do not reveal the question types in my exams before I give them.

The midterm and final examination dates will not change. Please check now to see that you do not have any conflicts.

The pop quizzes, midterm, and the final examination all will be cumulative examinations. The quizzes will cover topics introduced since the previous quiz and also topics covered by previous quizzes. Since I occasionally reuse questions from previous quizzes and exams, I strongly suggest that you review your graded quizzes and midterm to ensure that you can correctly answer questions that you missed in the past.

When writing exams, I always refer to the detailed list of the learning outcome statements that is posted on Blackboard. Except for questions involving current events, every question will involve knowledge identified by one or more of these learning outcome statements.

Homework

I occasionally assign homework. The homework is an integral part of this course and I expect everyone to do it. I may treat a homework assignment as a pop quiz. I will not tell you before the assignment is due whether I will treat it as a quiz. You can expect that the probability that I treat a homework assignment as a pop quiz will increase with the number of students who have not completed the assignment. If I treat homework as a quiz, I will assign grades based on conscientious effort and not on correctness.

I usually assign homework during the class session before it is due and post the assignment on Blackboard at least one day before it is due. The assignments will vary, but in general, they will be designed to ensure that you are keeping up with your reading and with current news about market structure.

Most students complete all the homework assignments satisfactorily and on time. In my experience, students who fail to do the homework assignments on time or who fail to take them seriously, also tend to do poorly on the exams.

USC Marshall Critical Thinking Initiative

The USC Marshall Critical Thinking Initiative is a school-wide effort to improve your critical thinking skills so that you can be more successful problem solvers in class and in the workplace. In this course, you will engage in a variety of learning activities that are aimed at developing and applying your critical thinking skills in a disciplined manner so that you can outperform others to get your desired job and to further excel in your career. Your ability to think critically is an important part of the evaluation/grading process in this course.

Discussion Board

The Blackboard discussion board for this class will be available for on-line discussions. If you have questions, post them to the board and your classmates or I will answer them. I sometimes answer questions quickly, and sometimes I let a question sit for a while, especially if the answer can easily be found in the book.

MARSHALL GUIDELINES

Add/Drop Process

Most Marshall classes are open enrollment (R-clearance) through the Add deadline. If there is an open seat, students can add the class using Web Registration. If the class is full, students will need to continue checking the Schedule of Classes (classes.usc.edu) to see if a space becomes available. Students who do not attend the first two class sessions may be dropped from the course if they do not notify the instructor before their absence. This course has no wait list, and I cannot add students. However, I may drop you from the class if you don't attend the first two sessions.

Further, if you are absent six or more times before April 7, 2017 (the last day to withdraw from a course with a grade of "W"), I may ask you to withdraw by that date. These policies maintain professionalism and ensure a system that is fair to all students.

Marshall Grading Guidelines

Assignment/Exam Grading Policy: As the instructor, I determine what qualifies as an accurate grade on an assignment, exam, or other deliverable, and my evaluation of the performance of each individual student is the final basis for assigning grades for the class. I may delegate some grading to assistants, but I remain responsible for all grades.

I adhere to the following Marshall School standards for undergraduate grading:

- A Excellent quality work
- B Good quality work
- C Fair quality work
- D Work of minimum passing quality
- F This grade is awarded to any undergraduate student failing to meet the minimum standards for passing the course. The grade of F indicates that the student failed at the end of the semester or was doing failing work and stopped attending the course after the twelfth week of the semester.

Plus/minus grading (A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F) increases the basic five grades to a total of twelve possible levels of performance.

I interpret these standards as follows:

- A Mastery of course concepts, tools, and techniques, plus a solid understanding of implications, applications, and interrelationships. Ability to apply and express that understanding with meaningful oral and written language.
- B Solid understanding of course concepts, tools, and techniques, plus knowledge of implications, applications, and interrelationships. Capability to converse effectively in the terminology of the course.
- C Knowledge of course fundamentals. Basic understanding or awareness of finer points of course and discipline. Meets minimal expectations of course input criteria.
- D Weakly grasps the essentials of the course with little understanding of the finer points.

- F Unable to communicate an understanding of the basic concepts, tools, or techniques of the course. A failure to measure up to the basic course output goals.

Retention of Graded Coursework

Final exams and all other graded work which affected the course grade will be retained for one year after the end of the course if the graded work has not been returned to the student. If I returned a graded paper to you, it is your responsibility to file it.

Returned Papers

To protect the confidentiality of your work, you must pick up your own graded paperwork. I will not give your papers to anyone else. Students who miss class sessions when paperwork is returned must come to office hours or arrange an appointment to retrieve the material.

Marshall Technology Policy

Laptop and Internet usage is not permitted during academic or professional sessions unless otherwise stated by the respective professor and/or staff. Use of other personal communication devices, such as cell phones, is considered unprofessional and is not permitted during academic or professional sessions. ANY e-devices (cell phones, iPads, other texting devices, laptops, I-pods) must be completely turned off during class time. Upon request, you must comply and put your device on the table in off mode and FACE DOWN. You might also be asked to deposit your devices in a designated area in the classroom. Videotaping faculty lectures is not permitted due to copyright infringement regulations. Audiotaping may be permitted if approved by the professor. Use of any recorded or distributed material is reserved exclusively for the USC students registered in this class.

Academic and Personal Conduct

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own (plagiarism).

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. All students are expected to understand and abide by the principles discussed in the *SCampus*, the Student Guidebook (www.usc.edu/scampus or <http://scampus.usc.edu>). A discussion of plagiarism appears in the University Student Conduct Code (section 11.00 and Appendix A). Other forms of academic dishonesty are equally unacceptable.

Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: <http://www.usc.edu/student-affairs/SJACS/>. Failure to adhere to the academic conduct standards set forth by these guidelines and our programs will not be tolerated by the USC Marshall community and can lead to dismissal.

Discrimination, sexual assault, and harassment are not tolerated by the University. You are encouraged to report any incidents to the *Office of Equity and Diversity* <http://equity.usc.edu/> or to the *Department of Public Safety* <http://dps.usc.edu/contact/report/>. These reports are important for the safety of the whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report or can initiate the report on behalf of another person. *Relationship and Sexual Violence Prevention and Services* (RSVP) <https://engemannshc.usc.edu/rsvp/> provides 24/7 confidential support, and the sexual assault resource center webpage <https://sarc.usc.edu/reporting-options/> describes reporting options and other resources.

Support Systems

Students whose primary language is not English should check with the *American Language Institute* <http://dornsife.usc.edu/ali>, which sponsors courses and workshops specifically for international students. *The Office of Disability Services and Programs* (www.usc.edu/disability) provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* (<http://emergency.usc.edu/>) will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

Students with Disabilities

The Office of Disability Services and Programs (www.usc.edu/disability) provides certification for students with disabilities and helps arrange the relevant accommodations. Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me as early in the semester as possible. DSP is located in GFS (Grace Ford Salvatori Hall) 120 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776. Email: ability@usc.edu.

Emergency Preparedness/Course Continuity

In case of a declared emergency if travel to campus is not feasible, the *USC Emergency Information* web site (<http://emergency.usc.edu/>) will provide safety and other information, including electronic means by which instructors will conduct class using a combination of Blackboard, teleconferencing, and other technologies.

Please make sure you can access this course in Blackboard and retrieve the course syllabus and other course materials electronically. You should check Blackboard regularly for announcements and new materials. In the event of an emergency, the ability to access Blackboard will be crucial. USC's Blackboard learning management system and support information is available at blackboard.usc.edu.

Assignment Submission Policy

Assignments must be turned in on the due date/time electronically via Blackboard.

Evaluation of Your Work

I will do my best to make my expectations for the various exams clear and to evaluate your answers as fairly and objectively as I can. If you feel that an error has occurred in the grading of any question, you may, within one week of the date the exam is returned to you, write me a memo in which you request that I re-evaluate the assignment. Attach the original exam to the memo, and explain fully and carefully why you think the question should be re-graded. Be aware that the re-evaluation process can result in three types of grade adjustments: positive, none, or negative.

COURSE READINGS/CLASS SESSIONS

The midterm and final examinations will take place as scheduled.

I may modify the topic schedule to meet the needs and interests of the class.

The topics below **correspond** to numbered chapters in the textbook. They are assigned readings that you must read before coming to class. Come prepared to discuss them.

The course meetings will involve discussions, exercises and lectures. When I lecture, I will primarily reinforce and expand upon the lessons in the readings. I often will not review them as I will assume that you have done the readings. It is imperative that you read and study the assigned readings before coming to class.

If you are uncertain of an assignment, consult the course web pages on Blackboard.

Read the financial press every day. Come to class prepared to discuss current events in the markets. At a minimum, you must read the front page of the Money & Investing section of *The Wall Street Journal*. The business sections of the *New York Times*, *The Financial Times*, and *Investor's Daily* are also very good. Try reading the finance section of *The Economist* and any relevant special reports. Also, browse the CFA Institute Financial NewsBrief every day—it only takes about a minute. Serious professionals follow current events in their industry. Be a securities industry professional, if only for the next 17 weeks. Reading the news will help you get more out of this class.

I strongly recommend that you read *Reminiscences of a Stock Operator* at your leisure. It is entertaining and very interesting. Although written a century ago, most of its themes remain relevant today.

I also strongly recommend that you read Richard Bookstaber's *A Demon of Our Own Design: Markets, Hedge Funds, and the Perils of Financial Innovation*. This book provides an excellent summary of—and expansion upon—many of the concepts that we cover in this course. It is written at a level that you can understand without the benefit of this course, but you will get more out of the book after you have completed the first half of the course.

Date		Topic
Jan 9	M	1 Introduction 2 Trading Stories 3 The Trading Industry
Jan 11	W	4 Orders and Order Properties
Jan 16	M	No class (MLK Holiday)
Jan 18	W	4 Orders and Order Properties (continued)
Jan 22	M	5 Market Structures 6 Order-Driven Markets
Jan 25	W	6 Order-Driven Markets (continued)
Jan 27	M	7 Brokers
Feb 1	W	8 Why Do People Trade? 9 Good Markets
Feb 6	M	10 Informed Traders and Market Efficiency
Feb 8	W	11 Order Anticipators
Feb 13	M	12 Bluffing and Price Manipulation

Date		Topic
Feb 15	W	13 Dealers
Feb 20	M	No class (Presidents' Day Holiday)
Feb 22	W	14 Bid/Ask Spreads
Feb 27	M	Midterm Examination
Mar 1	W	Trading game
Mar 4	M	15 Block Trading; Dark pools
Mar 8	W	16 Value-motivated Traders
Mar 13	M	Spring Recess Holiday
Mar 15	W	Spring Recess Holiday
Mar 20	M	17 Arbitrageurs
Mar 22	W	18 Buy-side Traders 19 Liquidity 20 Volatility
Mar 27	M	21 Liquidity and Transaction Cost Measurement
Mar 29	W	22 Performance Evaluation and Prediction
Apr 3	M	No class (Harris at Q Group Meeting)
Apr 5	W	23 Index and Portfolio Markets 24 Specialists
Apr 10	M	25 Internalization, Preferencing, and Crossing
Apr 12	W	No class (Passover)
Apr 17	M	26 Competition within and among Markets
Apr 19	W	27 Floor versus Automated Trading Systems Electronic and High Frequency Trading
Apr 24	M	28 Bubbles, Crashes, and Circuit Breakers
April 26	W	29 Insider Trading; Ethics in Trading
May 1	M	Study day, no class
May 5	F	Final Examination , 11:00 AM - 1:00 PM
May 12	F	University Commencement

CONTACT INFORMATION

Addresses and Telephone Numbers

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You may call me at home, but please
not before 7:00 AM, after 9:30 PM,
on Friday night, or on Saturday.

How to Reach Me

1. Drop in during office hours—no appointment is necessary. My office is in Hoffman 806. My office hours this semester are:

Mondays	4:00-5:00 PM
Fridays	1:30-2:30 PM
2. Arrange to meet me by appointment.
3. Just drop in. I am in my office most days. It is best (but not necessary) to call ahead to make sure I am available and not occupied.
4. Call me on the telephone. If you leave a message, please speak slowly and clearly when you give your phone number. You may call me at work, home or on my cell phone. Please do not call me at home before 7:00 AM, after 9:30 PM, on Friday night, or on Saturday.
5. Arrange to dine with me before or after class. Consider inviting your classmates too. On Wednesdays I often eat lunch at 11:00AM at the farmer's market on McCarthy Quad. Look for me on the west side of the quad on a bench or at a picnic table.
6. Send me e-mail at LHarris@USC.edu. While I am always happy to take questions about course topics, I prefer to respond orally rather than by e-mail. The opportunity to listen and respond generally produces more effective learning. Also, if you have course topic questions, please post them to the Blackboard discussion board where a classmate may answer the question first, and where everyone can see my responses.