

**Sem:** Autumn Term 2, 2025 **Class Day/Time:** Monday 9:35-10:55 **Room:** SB 219  
Monday 11:10-12:30 SB 219  
Monday 2:20-3:40 SB 219

**Instructor:** Professor Ingrid M. Werner

**E-mail:** werner.47@osu.edu

**Office Hours:** By Appointment via Zoom

**Office:** Fisher Hall 818

### Course Outline:

In this course, we describe how today's financial markets work; how governments and exchanges regulate them; and how traders create liquidity, volatility, informative prices, trading profits, and transaction costs. The course provides an overview of today's fragmented market for financial securities. We study different market structures: single price auctions, open outcry auctions, screen-based markets, and brokered markets. We study the role of different market participants: investors, brokers, dealers, arbitrageurs, retail traders, buy-side traders (institutions), day traders, and rogue traders. We also study different order types: limit orders, market orders, and stop orders; and trading strategies: program trading, basket trading, block trading, and short sales. Finally, we look at current topics: insider trading, rogue traders, market manipulation, and retail trading platforms and MEME stocks.

### Learning Goals:

1. To develop a thorough understanding of how securities are traded around the world, how traders (retail and institutional) can minimize their costs of trading, and how market makers can optimally set prices and execute orders.
2. To understand the role of regulation, and how it impacts participants in the securities industry.
3. To gain first-hand experience in securities trading and market making in a realistic interactive simulation environment.

### Required Materials:

Class-notes (slides), video modules, and other required materials will be distributed via Carmen.

### Mode of Delivery:

This class is hybrid. We meet weekly in person on Mondays in SB 219. The rest of your course work is on Carmen and can be completed around your own schedule during the week. Attendance requirements and graded component details are described in the next page.

### Evaluation Criteria:

Graded Components	% of Total	Type
Homeworks (4)	20%	O 🗨️
Cases: Quizzes (2/3)	10%	N 📈
Discussion Forums (2/3)	10%	N 📈
Final Exam	30%	N 📈
Movie Reflection	5%	N 📈
Trading Simulations	25%	O 🗨️

(See details and deadlines below)

#### Requirements for each form of graded component.

Failing to follow these will represent academic misconduct. See below.

**Independent Work [N 📈]:** Strictly non-collaborative, original individual work. You may discuss this assignment with your instructor only. Discussions with other individuals, either in person or electronically, are strictly prohibited.

**Collaboration Required [C 🗨️]:** An explicit expectation for collaboration among students either in class or outside of class (i.e. group work).

**Collaboration Optional [O 🗨️]:** Students are permitted, but not required, to discuss the assignment or ideas with each other. However, all submitted work must be one's original and individual creation.

### Attendance:

- **In-person weekly class session: required**
- **Participating in online activities: at least once per week**  
You are expected to log in to the course in Carmen every week. Carmen usage will be monitored. During most weeks you will probably log in many times.
- **Zoom meetings/office hours: optional**
- **Participating in case discussion forums: required**  
As part of your participation, you are expected to post at least twice for two of the three cases.

**Homeworks:** There are four open-book, open-notes, homework assignments. Students have two attempts for each homework assignment. Homework assignments each have a maximum of 5 points, for a total maximum of 20 points.

**Cases:** There will be three cases in the course, with an online discussion forum and a quiz for each case. I will drop the lowest scoring case quiz and you are required to participate in at least two case discussions. Each case quiz and discussion forum participation is worth a maximum of 5 points, for a total maximum of 20 points.

**Trading Simulations:** We will use several trading simulations in the course. The trading simulations cover learning from order flow, position management, as well as liquidity provision. The simulation software -- Rotman Interactive Trader (RIT) -- is designed by the staff in the trading laboratory at the Rotman School, University of Toronto. Fisher College holds a site license to RIT software. Students are encouraged to practice using the RIT software throughout the course. More information about the simulations will be provided on the Carmen course page. We will hold a two-day trading competition, and student performance during these two-days will be graded. The grade is based students' in-section rank, and I will select the best day in terms of performance. Absence from the trading competition will not be excused, except for the most serious circumstances. Such circumstances must be validated in writing by an appropriately accredited professional (e.g., medical doctor). The trading simulations count for a maximum of 25 points.

**Movie:** Several movies are listed in the syllabus that capture the materials covered in class (see next page). Students should select at least one movie, and write a one-page reflection on its content. Further instructions will be provided on Carmen. The movie reflection counts for a maximum of 5 points.

**Exam:** There will be an in-class, closed-book, closed-notes, multiple-choice, comprehensive exam during the last week of class. More information will be available on the Carmen course page. A missed exam can only be made-up in extreme cases (e.g., death of family member, personal hospitalization, etc.) with proper documentation (e.g., a physician's note, ER paperwork, obituary, etc.). Each decision of potentially allowing a make-up exam is made by the instructor on a case-by-case basis. Additionally, students **MUST** contact the instructor (werner.47@osu.edu) as soon as they know of a potential problem or conflict with an exam date. Alternative methods (e.g., oral exam, essay) of testing may be used for make-up exams. If you are experiencing an extreme situation or emergency, please attempt to notify the instructor (werner.47@osu.edu) via email ASAP. The exam counts for a maximum of 30 points.

### Grading Scale

Letter	A	A-	B+	B	B-	C+	C	C-	D+	D	E
(Points)	(4.0)	(3.7)	(3.3)	(3.0)	(2.7)	(2.3)	(2.0)	(1.7)	(1.3)	(1.0)	(0.0)
Range	100% - 93%	93% - 90%	90% - 87%	87% - 83%	83% - 80%	80% - 77%	77% - 73%	73% - 70%	70% - 67%	67% - 60%	60% - 0%

Note: Above percentages are % of overall points earned.

In keeping with Fisher College policy, I strive to have the average GPA for the course in the following range:  
**3.2 – 3.6**

## **Movies:**

Links to relevant Wikipedia pages and streaming sources can be found on Carmen.

- Trading Places (1983), a movie about floor trading and a short-squeeze
- The Hummingbird Project (2018), a movie about high frequency trading
- Money and Speed: Inside the Black Box (2010), a documentary about the Flash Crash
- The Wall Street Code (2013), a documentary about algorithmic trading
- Margin Call (2011), a movie about the 2008 financial crisis
- The Big Short (2015), another movie about the 2008 financial crisis
- Boiler Room (2000), a movie about high-pressure brokerage firms
- The Wolf of Wall Street (2013), a movie about pump and dump and insider trading
- The Wizard of Lies (2017), a movie about Bernard Madoff's ponzi scheme
- Dumb Money (2023), a movie about the 2021 Game Stop short squeeze
- Rogue Trader (1999), a movie about the 1995 Barings Bank rogue trader Nick Leeson
- Team Spirit (2016), a movie about the SOCGEN rogue trader Jérôme Kerviel
- Wall Street (1987), a movie about the insider trader Gordon Gekko
- Martha (2024), a movie about Martha Stewart

## **Target Students:**

This course is primarily targeted towards students thinking of a career in investment management, securities trading, or the brokerage industry. It is also an excellent course to take for students targeting a career as a financial advisor. However, the course will also be useful for students interested in finance more generally. In the course, we will show that market structure and regulation affect asset pricing, and hence the cost of capital for firms around the world. Students taking this course will most certainly get a “leg-up” on the competition for summer jobs and hopefully also permanent jobs in the securities industry.

## **Prerequisites:**

The course is offered in combined sections of MBA, SMF, KAIST, and UG students. SMF students must have taken their core finance class, and MBA students must have taken MBA 6221 and 6222 (or MBA 6223). UG students must have taken BUSFIN 3220. In addition, background in microeconomics is useful because the notions of supply, demand and economic equilibrium underlie just about every trading situation. Statistics comes in handy when we need to design strategies in situations involving risk or evaluate performance of existing markets.

## **Workload Expectation:**

The university and college expectation is that students spend two hours outside of class for every hour spent in class. Since this course meets 1.5 hours per week in-class and the videos represent 1.5 hours asynchronously, you should expect to spend 6 hours per week on other course-related work.

## **Additional Course Material:**

Examples of books that you may want to consult include:

- *Algorithmic Trading - A Practitioner's Guide*, TBG Press, 2020, by Jeffrey M. Bacidore.
- *Market Liquidity*, 2013, Oxford University Press, by Thierry Foucault, Marco Pagano, and Ailsa Röell
- *Financial Markets and Trading*, 2011, Wiley, by Anatoly B. Schmidt.
- *The Microstructure of Financial Markets*, 2009, Cambridge University Press, by Frank de Jong and Barbara Rindi.
- *Equity Markets in Action*, 2004, Wiley, by Professor Robert A. Schwartz and Reto Francioni. The textbook is available for free as an ebook through the Ohio State University Library.
- *Trading & Exchanges: Market Microstructure for Practitioners*, 2002, Oxford University Press, by Larry Harris.

**Appeals:**

Grading errors should be corrected. Appeals must be in writing, within 1 week after the graded work is returned—not the date you first look at it. The appeal should include a description of the question(s) that need to be reexamined as well as an explanation of why the original grade was incorrect. In general, the entire document will be checked for grading errors, and correcting these could either raise or lower the overall score.



**Copyright:**

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.






**Waitlisted students:**




Students who are waitlisted and seek to enroll must attend class through the first class session of the second week of the session. After that date, students who have not been added will not be enrolled and may not continue to attend the class. Waitlisted students should contact either the Fisher Undergraduate Program Office or the Department of Finance office if they have any questions regarding the waitlist process.

## Course Schedule

Week Theme/Module	Date	Topics in Detail	Preparation	Graded Components	Type*	Present Format	Assess. Format
<b>Week 1 – Primitives and Market Structure</b>	10/20	1. Introduction and Course Overview 2. US Market Structure 3. Orders, Bids, Offers, and Spreads <i>Trading Simulation: RIT Tutorial Video</i>	Watch videos 1-3		Lecture/ Sim.	InClass	
	RoW	4. Limit Order Books 5. Call Auctions 6. Continuous Markets  <i>Movie: Trading Places (1983)</i>	Watch videos 4-6		Videos & Read	Online	
		<i>Orders, Bids, Offers, and Spreads</i>		<i>HW1 (due Tu, 9am, Oct 28)</i>	O 		Computer
<b>Week 2 – Information and Prices</b>	10/27	<i>Trading Simulation: Order Driven Markets</i>	Review: <i>RIT User Guide – Client Software Feature Guide (LT3 Tutorial), and LT3 – Dynamic Order Arrival</i>		Lecture/ Sim.	InClass	
	RoW	7. Information and Prices 8. Trading on Information 9. Aglorithmic andHigh Frequency Trading  <i>Movies: Money and Speed:                  Inside the Black Box (2010)                  The Hummingbird Project (2018)</i>	Watch videos 7-9		Videos & Read	Online	
		<i>Trading Protocols and Information</i>		<i>HW2 (due Tu, 9am, Nov 4)</i>	O 		Computer
<b>Week 3 – Market Making and Inventories</b>	11/3	<i>Trading Simulation: Price Discovery</i>	Review: <i>PD0 – Market Equilibrium            PD1 – IPO Pricing            and            PD2 – Asymmetric Information</i>		Lecture/ Sim.	InClass	

	RoW	10. Risk-Neutral Models 11. Models with Risk-Aversion 12. Glosten-Milgrom Model  <i>Movies: Margin Call (2011) The Big Short (2015)</i>	Watch videos 10-12	Videos & Read	Online	
		<i>Market Making and Inventories</i>		HW3 (due We, 9am, Nov 12)	O 📌	Computer
Week 4 – Institutional Trading	11/10	<i>Trading Simulation: Sales and Trading I</i>	Review: <i>LT1 – Trading as a Principal</i> and <i>LT2 – Orders in Illiquid Markets</i>	Lecture/Sim.	InClass	
	RoW	13. Order Submission Strategies 14. Algorithmic Trading 15. Trading Cost Analysis (TCA)  <i>Movie: The Wall Street Code (2013)</i>	Watch videos 13-15	Videos & Read	Online	
		<i>Institutional Trading Costs and Review Questions for Exam</i>		HW4 (due Tu, 9am, Nov 18)	O 📌	Computer
Week 5 – Institutional Trading	11/17	<i>Trading Simulation: Sales and Trading II</i>	Review: <i>LT3 – Dynamic Order Arrival</i> <i>LT4 – Microstructure Capstone</i>			
Week 5 – Retail Trading	RoW	16. Brokerage Industry 17. Retail Trading 18. Robinhood Markets Inc.  <i>Movie: Dumb Money (2023)</i>	Watch videos 16-18 Review – <i>Robinhood Markets Inc.: Business Model Challenges, Ivey Publishing W21231.</i>	Videos & Read	Online	
		<i>Robinhood Markets Inc.</i>	<i>Discussion forum 1</i>	Case Quiz 1 (Tu, 9am, Nov 25, max 3 pages)	N 📌	Online Computer
Week 6 – Trading Competition	11/24	<i>CRZY and TAME</i>		Day 1 (Mo, Nov 24, reg. class time)	O 📌	InClass Computer
	RoW	<i>Thanksgiving Break</i>				

<b>Week 7 – Trading Competition</b>	12/1	<b><i>CRZY, TAME, PAIN, and OUCH</i></b>		<b>Day 2 (Mo, Dec 1, reg. class time)</b>	<b>O</b> 	InClass	Computer
<b>Week 7 – Rogue Trading</b>	RoW	19. Squeezes, Manipulation, Pump & Dump 20. Ponzi Schemes 21. Rogue Trading  <i>Movies: Boiler Room (2000) The Wolf of Wall Street (2013) The Wizard of Lies (2017) Rogue Trader (1997) Team Spirit (2016)</i>	Watch videos 19-21 Review <i>Societe Generale (A): The Jerome Kerviel Affair, HBS Case 110029.</i>			Videos & Read	Online
		<i>Jerome Kerviel</i>	<i>Discussion forum 2</i>	<b>Case Quiz 2 (Tu, 9am Dec 9)</b>	<b>N</b> 	Online	Computer
<b>Week 8 – Final Exam</b>	12/8	<b><i>Cumulative Exam</i></b>		<b>Exam (Mo Dec 8, reg. class time)</b>	<b>N</b> 	InClass	Computer
<b>Week 8 – Insider Trading</b>	RoW	22. Insider Trading 23. Fiduciary Duty of Brokers 24. Greed and Hubris  <i>Movies: Wall Street (1987) Martha (2024)</i>	Watch videos 22-24 Review <i>Martha Stewart (A), HBS Case 9-305-034.</i>			Video	
		<i>Martha Stewart (A)</i>	<i>Discussion forum 3</i>	<b>Case Quiz 3 (Tu, 9am, Dec 16)</b>	<b>N</b> 	Online	Computer
		<i>Movie Reflection</i>	Watch selected movie	<b>Reflection (3 page reflection, We, 9am, Dec 17)</b>	<b>N</b> 	Online	File upload

<i>*Graded Component Types:</i>			
<b>N</b> 	Independent Work: Strictly non-collaborative, original individual work. Discussions with instructor only.		
<b>O</b> 	Optional-Collaboration: Original individual work/submissions; Students are permitted to discuss among themselves.		
<b>C</b> 	Collaboration-Required: An explicit expectation for collaboration among students.		

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### **Additional University Policies and Resources (in alphabetical order):**

You can find a list of university policies and resources at [go.osu.edu/UPolicies](https://go.osu.edu/UPolicies), but here are a few important ones.

#### **Academic Misconduct:**

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's *Code of Student Conduct*, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the university's *Code of Student Conduct* and this syllabus may constitute "academic misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University, or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, submitting the same or similar work for credit in more than one class, and possession of unauthorized materials during an examination. Ignorance of the University's *Code of Student Conduct* is never considered an "excuse" for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct.

If a student is suspected of, or reported to have committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to COAM. If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

#### **Accessibility:**

The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's [request process](#), managed by Student Life Disability Services (SLDS). If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. If one class is missed due to COVID exposure/self-isolation, contact me immediately so that we can agree on make-up arrangements. If more than one class is missed due to mandatory quarantine or illness, students should contact SLDS via the link above for support in identifying appropriate accommodations. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: [slds@osu.edu](mailto:slds@osu.edu); 614-292-3307; [slds.osu.edu](https://slds.osu.edu); 098 Baker Hall, 113 W. 12<sup>th</sup> Avenue.

#### **Artificial Intelligence:**

Use of artificial intelligence (AI)-powered programs, including but not limited to ChatGPT, for course assignments must be first discussed and permitted by the faculty instructor. The scope of use may range from not permitted (with exception of AI-powered search engines such as Google, Bing, etc.) to a broader spectrum of allowed applications. When AI-powered programs are permitted, and used by students, the scope of use and content must be specified and referenced by students accordingly. Students are expected to be aware of the shortcomings of use of AI-powered programs, including risk of academic misconduct (e.g., plagiarism; etc.).



**Attendance:**

Any student who fails to attend the weekly in person meeting without giving prior notification to the instructor will be dis-enrolled after the third instructional day of the term, the first Friday of the term, or the second scheduled class meeting of the course, whichever occurs first.

**Continuity of Instruction:**

Should in-person classes be canceled due to weather or other unforeseen circumstances, I will notify you as to which alternative methods of teaching will be offered to ensure continuity of instruction for this class. Communication will be via CarmenCanvas.

**Covid/Flu Accommodation:**

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

If you are isolating while waiting for a COVID-19 test result, please let me know immediately. Those testing positive for COVID-19 should refer to the [Safe and Healthy Buckeyes site](#) for resources. Beyond five days of the required COVID-19 isolation period, I may rely on Student Life Disability Services to establish further reasonable accommodations. You can connect with them at [slds@osu.edu](mailto:slds@osu.edu); 614-292-3307; or [slds.osu.edu](https://slds.osu.edu).

**Disability Services:**

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. You can connect with them at [slds@osu.edu](mailto:slds@osu.edu); 614-292-3307; or [slds.osu.edu](https://slds.osu.edu). After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

**Creating and Environment Free from Harassment, Discrimination, and Sexual Misconduct:**

All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation. To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Office of Institutional Equity:

1. Online reporting form at [equity.osu.edu](https://equity.osu.edu),
2. Call 614-247-5838 or TTY 614-688-8605,

### 3. Or email [equity@osu.edu](mailto:equity@osu.edu)

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

### **Mental Health:**

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University's Student Life Counseling and Consultation Service (CCS) is here to support you. If you find yourself feeling isolated, anxious or overwhelmed, [on-demand mental health resources](https://go.osu.edu/ccsondemand) (go.osu.edu/ccsondemand) are available. You can reach an on-call counselor when CCS is closed at [614-292-5766](tel:614-292-5766). **24-hour emergency help** is available through the [National Suicide Prevention Lifeline website](https://www.suicidpreventionlifeline.org) (suicidpreventionlifeline.org) or by calling [1-800-273-8255\(TALK\)](tel:1-800-273-8255). [The Ohio State Wellness app](https://go.osu.edu/wellnessapp) (go.osu.edu/wellnessapp) is also a great resource.

### **Religious Accommodation:**

Ohio State has had a longstanding practice of making reasonable academic accommodations for students' religious beliefs and practices in accordance with applicable law. In 2023, Ohio State updated its practice to align with new state legislation. Under this new provision, students must be in early communication with their instructors regarding any known accommodation requests for religious beliefs and practices, providing notice of specific dates for which they request alternative accommodations within 14 days after the first instructional day of the course. Instructors in turn shall not question the sincerity of a student's religious or spiritual belief system in reviewing such requests and shall keep requests for accommodations confidential.

With sufficient notice, instructors will provide students with reasonable alternative accommodations with regard to examinations and other academic requirements with respect to students' sincerely held religious beliefs and practices by allowing up to three absences each semester for the student to attend or participate in religious activities. Examples of religious accommodations can include, but are not limited to, rescheduling an exam, altering the time of a student's presentation, allowing make-up assignments to substitute for missed class work, or flexibility in due dates or research responsibilities. If concerns arise about a requested accommodation, instructors are to consult their tenure initiating unit head for assistance.

A student's request for time off shall be provided if the student's sincerely held religious belief or practice severely affects the student's ability to take an exam or meet an academic requirement **and** the student has notified their instructor, in writing during the first 14 days after the course begins, of the date of each absence. Although students are required to provide notice within the first 14 days after a course begins,

instructors are strongly encouraged to work with the student to provide a reasonable accommodation if a request is made outside the notice period. A student may not be penalized for an absence approved under this policy.

If students have questions or disputes related to academic accommodations, they should contact their course instructor, and then their department or college office. For questions or to report discrimination or harassment based on religion, individuals should contact the Office of Institutional Equity.