

Instructor:

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Course Mission and Purpose

The mission and purpose of this course is to provide opportunities for you to understand how various portfolio implementation techniques impact the value of an investment portfolio.

Course Description

Adjusting investment portfolio positions has an impact on value. This course covers various issues associated with implementing investment portfolio decisions. Topics include, but are not limited to: how purchase and sell decisions are implemented in various market structures; what issues need to be addressed when evaluating market liquidity, or lack thereof; which trading approaches may be preferred in various markets; how transactions costs can be assessed and measured; what portfolio managers and traders can do to enhance portfolio performance. Students should have a broad introduction to financial concepts and markets. Financial Management (Finance 301, or equivalent) is a pre-requisite for this course. Investments (Finance 315, or equivalent) is a co-requisite. Reliance on trading simulation software is substantial. Students should feel comfortable using the computer.

Required Textbook and Materials

There is one textbook for this class: “*Mastering the Art of Equity Trading Through Simulation: The TraderEx Course*”, by R. Schwartz, G. Sipress, B. Weber, Wiley, 2010.

Other materials will be provided through the Sakai course site.

NOTE: The following is NOT required, but recommended.

You should be reading the Wall Street Journal. Substantial student discounts are available at <http://r.wsj.net/j3PIR>. I will refer periodically to various WSJ content. Again, although not required, a subscription to the Wall Street Journal is highly recommended. Your competitors are reading it!

You should also read something with a broader focus, like The Economist, which also offers substantial student subscriptions. Visit <https://www.economistsubscriptions.com/students/us/> for more details. Again, The Economist is only a suggested, not required reading. The Financial Times is also a worthy read. Visit <http://education.ft.com/contact-us/> and contact them regarding a student subscription for the semester, if not for the year.

Consider subscribing to one or more of the aforementioned publications. It is simply my humble opinion you are at a competitive disadvantage if you do not read something outside of required class assignments.

Course Goals and Objectives

The following Learning Goals and Objectives for Portfolio Implementation follow. (NOTE: The Learning Goal/Objective sequence may not be followed in strict chronological order.)

Goal #1 – Knowledge of matters impacting portfolio implementation

To attain this goal, students will be able to:

1. Describe various market structures.
2. Understand various orders used for trading.
3. Transform market prices into returns to calculate various statistical and performance metrics.
4. Define various transactions costs and their potential impact on portfolio value.

Goal #2 – Proficiency with market and limit orders

To attain this goal, students will be able to:

1. Explain the difference between a market and a limit order, and how each are used.
2. Explain how the limit order book functions.
3. Calculate a limit order price.
4. Determine how to handle large orders in an order driven market.

Goal #3 - Knowledge of factors impacting market intermediaries

To attain this goal, students will be able to:

1. Describe the various intermediaries and determine their influence on market operations.
2. Explain how various factors impact market maker operations.
3. Discuss how orders are handled and the potential for price improvement in a dealer market.
4. Formulate how various effects of market fragmentation, hybridization, and alternative trading venues potentially impact price discovery and portfolio implementation.

Goal #4 – Understanding the basics of technical analysis and algorithmic trading

To attain this goal, students will be able to:

1. Explain how various factors impact dynamic price and quantity discovery.
2. Describe how technical analysis may conflict with the efficient market hypothesis.
3. Determine how human behavior may impact technical trading approaches.
4. Describe the various factors traders consider when formulating trading algorithms.

Goal #5 – Knowledge of continuous vs. call auction markets:

To attain this goal, students will be able to:

1. Explain the differences between continuous and call auction markets.
2. Describe the various impacts of call auction markets on order handling and book-building.
3. Explain market effects of hybrid call/continuous structures.

Goal #6 – Proficiency with performance measurement:

To attain this goal, students will be able to

1. Calculate simple trading profit, trading surplus, VWAP and other trading metrics.
2. Calculate the components of explicit and implicit of transaction cost analysis.
3. Incorporate various risk management techniques into performance measurement analysis.
4. Define and explain the pros and cons of best execution.

Teaching Methods and Course Delivery

This course is a traditional in-class face-to-face offering. To insure all are on the same page with respect to topics, there will be a decent amount of traditional lecturing, but for the most part, this will be a hands-on course using trading simulation software. What does that mean? You should expect traditional lecturing when new topics are introduced. Once concepts are introduced, though, your focus will be to act as a securities trader using trading simulation software. The idea behind this approach is to better solidify connections between theory and practice. The world doesn't always work the way we would like it. The balance between theory and practice should help you more clearly see potential mine fields.

The Sakai chat rooms and periodic threaded discussions should be used as frequently as possible. I will monitor all communication mechanisms and attempt to respond as quickly as possible. eMail should be used for non-course related items that are more of a personal nature, e.g. death in family, or sickness, etc.

Please use interrogatives if you wish me to respond. I do not respond to statements. I only respond to questions. Also, if you ask a question that I can answer with a 'yes,' 'no' or 'maybe,' I will. Please phrase your questions carefully.

Feel free to contact me whenever a question arises. I am here to help. Help me make this an enjoyable, as well as a rewarding educational experience for you.

Syllabus updates and other course communication:

All changes and announcements will be made through the course website on Sakai. If you do not use your rutgers.edu email for your email address, please insure that you forward messages to whatever email address you use. Extra readings will be posted on the course site. Make it a habit to check the course web site on a periodic basis – even if nothing specific is due. Feel free to contact the professor for whatever reason. Use email and the course site as your main communication tools.

COURSE GRADE SECTIONS AND DESCRIPTIONS

Trading Simulation Exercises (60% of Total)

There will be various simulation exercises throughout the semester. The purpose of these exercises is to evaluate your ability to incorporate market structure theory and background into a portfolio implementation task. Your grade on each exercise will be affected by your ability to connect the underlying market structure issues to a specific portfolio directive. Although your ranking using various profit and trading metrics will not entirely determine your score on each exercise, it will be a component of your grade.

CLASS PARTICIPATION (15% of Total)

This is a class predicated on your ability to implement portfolio decisions. You will be required to discuss with the portfolio manager (who will be the instructor and other class members) various alternative implementation strategies, e.g. ways one can possibly implement the trade. Hence, your participation in the class is crucial. The weighting of this portion of your overall class score reflects the importance of this component.

FINAL EXAM (25% of Total)

There will be a comprehensive final exam in this course. The format for the final will be similar to the trading simulation exercises.

Assignment Weights and Grading

Final grades will be calculated based on the performance of the course requirements weighted as follows:

| | |
|---------------------|-----|
| Trading Exercises | 60% |
| Class Participation | 15% |
| Final Exam | 25% |

Grades will be assigned according to the total sum of course requirement performance as follows:

| | |
|--------------------|----|
| 90-100%..... | A |
| 85-89%..... | B+ |
| 80-84%..... | B |
| 75-79%..... | C+ |
| 70-74%..... | C |
| 65-69%..... | D |
| Less than 65%..... | F |

*****Course Penalties*****

- Late submissions of Simulation Exercise write-ups result in a 50% reduction in your score on those assignments.
 - Non-submissions of Simulation Exercise assignments will receive a score of 0.
 - University accepted excuses will be addressed on a case-by-case basis. NOTE: Technical issues are not acceptable excuses for late or non-submissions.
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Academic Integrity

“Academic integrity requires that all academic work be wholly the product of an identified individual or individuals. Joint efforts are only legitimate when the assistance of others is explicitly acknowledged...The principles of academic integrity entail simple standards of honesty and truth. Each member of the university has a responsibility to uphold the standards of the community and to take action when others violate them...Students are responsible for knowing what the standards are and for adhering to them. Students should also bring any violations of which they are aware to the attention of their instructors.”

The above was taken from the Rutgers University Code of Academic Conduct, taken from the Student Advising Handbook - <http://camden-sbc.rutgers.edu/CurrentStudents/students/advising.pdf>. You are expected to know, understand and adhere to the policies on academic integrity outlined above. Procedures for violation of these policies outlined in the University Code of Academic Conduct will be followed.

Tentative Schedule

| Meeting Week | Topic(s) | Text Chapter* |
|--------------|---|--------------------|
| 9/5 | Intro/Prices and Returns | Various |
| 9/12 | Prices and Returns (cont.)/Liquidity/Volatility | SSW 1 and other |
| 9/19 | Implementation Shortfall | SSW 1 and other |
| 9/26 | Market Microstructure Basics / Survey | SSW 1 and other |
| 10/3 | TraderEx Intro/Performance Measurement | SSW 2, 3 & 4 |
| 10/10 | TraderEx | SSW 2, 3 & 4 |
| 10/17 | Microstructure/Order Book/Entering and Adjusting Orders/Post Trade Analysis | SSW 5 & 6 |
| 10/24 | Illiquidity/Large Orders | SSW 5 & 6 |
| NA | NA | NA |
| 10/31 | Call Auction Structures | SSW 7 |
| 11/7 | Dealers / Intermediaries | SSW 8 |
| 11/14 | Dark Pools | SSW 9 and Other |
| 11/21 | Equity Futures and Intro to Trading Technologies | Various |
| 11/18 | Algo design | Various |
| 12/5 | Algo Implementation | Various |
| 12/12 | Guest Lecture | NA |
| TBD | Final Exam | Everything covered |

*Text Chapter "SSW" indicates "Schwartz, Sipress & Weber, "Mastering the Art of Equity Trading..."