

# Investments and Portfolio Theory

FINC 3440 001, Spring 2021

Asynchronous Online

Seattle University

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Office hours: Please visit [www.junduanmu.com/teaching](http://www.junduanmu.com/teaching) to book your appointment. (A sample tutorial video is posted on Canvas).

*Email is the most effective/efficient way to contact me.* Please email me at [jduanmu@seattleu.edu](mailto:jduanmu@seattleu.edu) if you wish a quicker response. In order to provide you with the best education experience, you may expect an email reply from me within 24 hours. I firmly believe that prompt and quick communication leads to superior learning outcomes.

## COURSE OBJECTIVE

This course is a general overview of capital markets and financial instruments, such as money market securities, stocks, bonds, and options. This course helps students understand modern portfolio theory, its applications, and related empirical evidence. The students will learn to assess asset and portfolio returns and risks, and to construct efficient portfolios given investment objectives. They will also learn to apply different valuation models to evaluate fixed income securities and stocks. This course also introduces options and basic option trading strategies.

This course meets the following all five learning outcomes of Seattle University Undergraduate Finance major.

- Describe and explain to lay individuals financial concepts relating to: value creation, risk management, and the functioning of financial institutions and world financial markets, for corporate and investor decision-making.
- Demonstrate strong critical thinking and problem solving skills within an ethical framework.
- Apply tools such as spreadsheet, mathematical, and statistical modeling to analyze problems and issues in finance.
- Employ discipline knowledge and skills orally and in written form in a professional manner in service to the community.
- Recognize social justice issues inherent in financial decision-making.

The course will be a blend of lecture and class participation. Most class meetings will include a breakout session in which students work in groups or individually to solve a problem or case.

This course is **NOT** designed to teach you how to make a quick killing in the stock market. Neither does it specifically discuss ad hoc approaches to equity investing. Instead, the course aims at providing you with a systematic introduction to the professionally acceptable investment principles and techniques that will enable you to analyze major asset classes (stocks, bonds, and derivatives) and hopefully help you make sound investment decisions in the current economic environment. Pedagogically, it takes the *perspective of institutional investors and the asset allocation approach they use*. You will learn the current philosophy,

theories, models, practice and techniques about investment management and the empirical evidence relating to them.

### PREREQUISITES

The course prerequisite is FINC 3400.

The course assumes that you have completed introductory courses in basic algebra, finance, accounting and statistics. You are expected to have *proficiency* in (i) all mathematics up to calculus, (ii) accounting principles, (iii) basic statistics, especially knowledge on probability distributions, mean, variance, covariance, and regression analysis. (iv) spreadsheet modeling in *Microsoft Excel*, and (v) internet skills such as searching, email, downloading files, etc. If you have not completed the necessary coursework or do not feel comfortable with the requisite skills, you will find the concepts introduced in this course difficult. Please come to me if you have any questions about the requirements.

### TEXT BOOK and RESOURCES

The text for the course is *Essentials of Investments*, Zvi Bodie, Alex Kane & Alan J. Marcus (McGraw-Hill/Irwin, 11<sup>th</sup> edition, **ebook is available, see below; Please use the link below to purchase your access**).

**Connect Access:** <https://connect.mheducation.com/class/j-duanmu-spring-2021-finc3440-01>

This course requires paid access to McGraw-Hill's Connect Finance. Connect Finance is an online homework management system containing questions tied directly to your textbook. Connect can be purchased standalone or with an ebook (ConnectPlus). Go to the web address displayed above. Enter your e-mail address. If you are a new user, you'll see two options. Either click to enter your access code (purchased via the SU Bookstore) OR Click to purchase access to Connect online. Fill out the registration form. Once you see this message, you can access your Connect homepage by clicking on "Go To Connect Now". At your Connect homepage you can access your assignments, study center, grades, and other resources provided by your instructor. Start by clicking any of the assignment titles displayed on the list. ***Shall you have any question with Connect Access, please email me immediately! Quizzes and Exams are administered via Connect.***

Text reading will be supplemented by various articles and other relevant materials to be made available throughout the quarter. PowerPoint slides, articles and links of interest, and other material will be made available on Canvas. You are responsible for managing relevant material.

**Books for Fun:** *A Random Walk Down Wall Street*, Burton Malkiel

*Fooled by Randomness*, Nassim Taleb

*Naked Statistics* and/or *Naked Economics*, Charles Wheelan

Anything by Michael Lewis

**Movies for Fun:** *Wall Street*, *Margin Call*, *Inside Job*, *The Flaw*, *Money for Nothing*, *The Big Short*, *Rogue Trader*, *The Smartest Guys in the Room*

**Online Resources:** *Wall Street Journal*, *Business Week* and *Barron's*;

<http://www.marketwatch.com/>;

<http://finance.yahoo.com/>;

<http://money.cnn.com/>;

<https://www.msn.com/en-us/money/>

You will want a **financial calculator** for homework and exams. You will want to bring it to each class as we will have opportunity to work some problems in class for clarification and practice. I recommend the Texas Instruments BA II Plus.

### ATTENDANCE, ASSIGNMENTS AND GRADING

It should be obvious that attendance and participation are critical to building understanding. In order to encourage your attendance and participation you will earn points for each class attended. I also expect your participation. If you have a question, ask. Other people will appreciate that your question resulted in clarification for all. Your attendance grade will be determined by your attendance points divided by total possible points adjusted for any class cancelations, university excused absences, and participation.

**There are three exams.** Exam 1 and 2 are not comprehensive per se, in that I will not directly ask you questions on exam 2 that we covered for exam 1, but the material builds upon itself. That means you cannot hope to do well on the last exam if you don't understand the material from the beginning of the course. Exam 3 is comprehensive, with a higher weight on the materials we covered after exam 2.

If you will miss an exam due to a scheduled University excused activity (i.e. away game) you must make arrangements with me *prior* to the exam to schedule a make-up exam. Dire and unforeseen circumstances that make taking an exam impossible will potentially be allowed a make-up exam at the sole discretion of the instructor. Unexcused missed exams will be graded as a 0%.

Exam are taken online in Connect. They will be open book/note. However, you will not be allowed to work with others on the exams. You **CANNOT** use any website other than Canvas and Connect during the exam. The exams will include, but not limited to, a combination of multiple choice, true/false, problem, and short-answer/essay questions. Exams will be open for a 24 hour window (**PAY CLOSE ATTENTION TO THE SCHEDULE!**). Once you have elected to start the exam you will have 2 hours to complete it. There will be no make-up exams. It is your responsibility to take all exams at the scheduled time. The exams will emphasize not how well you have memorized solutions to the problems you have seen, but rather how well you understand and apply general principles to new situations. Bear this in mind as you study. Exam feedback will be released after 24 hour window.

**There are ten quizzes.** Each quiz is due at 11:59pm, every Monday. Please find your exact due dates in the class schedule page attached in the back. Quizzes will be taken on Connect Finance and each quiz will be live on Connect one week before the due date. There is a 1 hour time limit and you are limited to 1 attempt. Quizzes are open note/book. However, you will not be allowed to work with others on the quizzes. You **CANNOT** use any website other than Canvas and Connect during the quiz. All answers/solutions will be released after the due date, unless otherwise stated in the course schedule. Regardless of the reason for missing a quiz, make-up quizzes will not be given to anyone for any reason. It is your responsibility to submit your quiz on time. Late submission will not be accepted. Missed quiz will be assigned a grade of 0%.

Appeal Process: You will be given one week from the date that I return a graded quiz or exam to the class to notify me in writing of any problems with grading or assessment. This includes such things as

incorrectly graded problems, poorly worded questions, unfair questions, etc. Include your name, the quiz or exam you are referring to, the question you are referring to, and a brief explanation of the problem. After one week has passed, I will not address previous quizzes and exams.

**There are UNGRADED practice homework.** There will be one practice “homework” per chapter. I *strongly* suggest you work through practice homework before attempting the graded quizzes and exams. You have unlimited attempts on practice questions, no time limit, and you will get immediate feedback as to correct/incorrect with explanations. Keep in mind, it is your sole decision and responsibility to complete the practice homework, I am not going to grade the practice homework in any manner. Failure to complete the practice homework will not carry any impact on your grade. Neither will the successful completion of the practice homework.

**There is one investment competition.** Each student will invest \$100,000 of "FINC3440" money and can *trade only stocks* (no options, futures, or any mutual funds allowed). Here is the link to join the game: <https://www.marketwatch.com/game/finc3440-01-spring2021>. Please register using your real name and SU email *by April 5<sup>th</sup>, 2021*. You will have two-week practice round and you need to familiarize yourself with the rules and trading system. Your portfolio will be reset on *April 16<sup>th</sup>, 2021* and the real stock investment competition will start on *April 19<sup>th</sup>, 2021*. The portfolio must have at least two stocks and have remaining cash less than \$25,000 *on April 19<sup>th</sup>, 2021*. You may only trade **U.S. listed stocks (NO options, futures, mutual funds, or any investment companies allowed). ETFs and ADRs are exceptions, they are allowed in the competition.** You need to trade at least every week!

The platform provides details on the numbers of shares of each stock holding, the percentage weights, and the value of each stock holdings. *The cash holding should be less than \$25,000* (with 2 business-day grace period for portfolio rebalance) over the entire quarter. Each student can put no more than 50% weight in any single stock. Students that violate any trading rules cannot get any bonus points. Each student is required to complete a record form for each transaction. You may find a sample transaction record form (Excel spreadsheet) on Canvas.

The competition will end on May 31<sup>st</sup>, 2021. You need to submit your final transaction record form and the debrief paper of “What you have done” or “What you could have done” (Please use the tab “summary” in the sample transaction record form) on Canvas by 11:59pm, June 7<sup>th</sup>, 2021. You will earn 100 points by successfully completing the investment competition. In addition, top performing traders are awarded with bonus points towards the final exam. Your final investment performance rank for bonus points will be the higher rank of the following two ranks: 1) a rank based on total raw return; and 2) a rank based on Sharpe Ratio.

Performance Rank	Bonus Points/Member
1 (based on total return)	5pt
1 (based on Sharpe Ratio)	5pt
2 (based on total return)	4pt
2 (based on Sharpe Ratio)	4pt
3 (based on total return)	3pt
3 (based on Sharpe Ratio)	3pt

**Details related to the investment competition will be provided in a separate document on Canvas.**

Grading is as follows:

<b>Activity</b>	<b>Points</b>
Attendance and Participation	50pt
Investment Competition	100pt
Quizzes	25pt*10=250pt
Exam 1	200pt
Exam 2	200pt
Exam 3	200pt
Total	1,000pt

A final word on grading: **Grades are earned, not given.** There will be ample, timely feedback with regard to your standing in the course as we progress throughout the semester. It should be obvious that attendance and participation are critical to building understanding. I expect you to come to class prepared not just to listen, but to participate. If you have a question, ask it. Other people will appreciate that your question resulted in clarification for all. Finally, your grade is subject to rounding such that an 899.99999999 is a “B+”, and, a 900 is an “A-”. Standard university grading scales apply, i.e.,

A	≥930	C	≥730 and <770
A-	≥900 and <930	C-	≥700 and <730
B+	≥870 and <900	D+	≥670 and <700
B	≥830 and <870	D	≥630 and <670
B-	≥800 and <830	D-	≥600 and <630
C+	≥770 and <800	F	<600

#### **CANVAS: DELIVERY OF COURSE MATERIALS**

I will establish a course web page on the Internet. Always check the Canvas page for class announcements and course information. This site will include PowerPoint files of the course lecture notes, homework assignments and solutions, any external web links, and relevant updates about the class including any changes in assignments or exams. You will be responsible for bringing the relevant course materials to each lecture. If a file or link is not operational, let me know via email ASAP so I can correct the link. If you have any other problems using Canvas, contact the Seattle University technology help desk.

#### **AUDIO OR VIDEO TAPING**

**AUDIO OR VIDEOTAPING IN CLASS IS PROHIBITED WITHOUT THE INSTRUCTOR’S PRIOR APPROVAL.** For protection of proprietary knowledge and for a variety of other reasons, audio and videotaping of any class session is strictly prohibited without prior approval of the instructor. Under extreme circumstances or for a pre-approved class absence, audio taping a class session will be allowed on a case by case basis and with the express permission of the instructor. The student will be responsible for making all necessary arrangements. Students will need to adhere to the appropriate agreed upon use of the content material of these audio tapes.

#### **ACADEMIC RESOURCES & ACADEMIC INTEGRITY**

Library and Learning Commons (<http://www.seattleu.edu/learningcommons/>, this includes: Learning Assistance Programs, Research [Library] Services, Writing Center, and Math Lab).

Academic Integrity Tutorial (found on Canvas and SU Online).

Seattle University is committed to the principle that academic honesty and integrity are important values in the educational process. Academic dishonesty in any form is a serious offense against the academic community. Acts of academic dishonesty will be addressed according to the Seattle University Academic Honesty Policy.

#### **ACADEMIC POLICIES ON REGISTRAR WEBSITE**

The policies can be found at the address:

Academic Policies on Registrar website (<https://www.seattleu.edu/redhawk-axis/academic-policies/>)

- Academic Integrity Policy
- Academic Grading Grievance Policy
- Professional Conduct Policy (only for those professional programs to which it applies).

#### **NOTICE FOR STUDENTS CONCERNING DISABILITIES**

If you have, or think you may have, a disability (including an ‘invisible disability’ such as a learning disability, a chronic health problem, or a mental health condition) that interferes with your performance as a student in this class, you are encouraged to arrange support services and/or accommodations through Disabilities Services staff located in Loyola 100, (206) 296-5740. Disability-based adjustments to course expectations can be arranged only through this process.

#### **NOTICE REGARDING RELIGIOUS ACCOMODATIONS**

It is the policy of Seattle University to reasonably accommodate students who, due to the observance of religious holidays, expect to be absent or endure a significant hardship during certain days of their academic course or program. Please see, *Policy on Religious Accommodations for Students* (<https://www.seattleu.edu/media/policies/Policy-on-Religious-Accommodations-for-Students---FINAL.PDF>).

#### **OFFICE OF INSTITUTIONAL EQUITY**

Title IX of the Education Amendments of 1972 (Title IX) prohibits discrimination based on sex in educational programs or activities that receive Federal financial assistance. This prohibition includes sexual misconduct, which encompasses sexual harassment and sexual violence. Seattle U remains committed to providing a safe and equitable learning, living, and working environment. Seattle U offers emergency, medical, and other support resources, as well as assistance with safety and support measures, to community members who have experienced or been impacted by sexual misconduct.

Seattle U requires all faculty and staff to notify the University’s Title IX Coordinator if they become aware of any incident of sexual misconduct experienced by a student.

For more information, please visit <https://www.seattleu.edu/equity/>. If you have any questions or concerns, you may also directly contact the Title IX Coordinator in the Office of Institutional Equity (email: [oi@seattleu.edu](mailto:oi@seattleu.edu); phone: 206.296.2824) University Resources and Policies.

#### **COPYRIGHT NOTICE**

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials, including music and software. Copying, displaying, reproducing, or distributing copyrighted works may infringe the copyright owner’s rights and such

infringement is subject to appropriate disciplinary action as well as criminal penalties provided by federal law. Usage of such material is only appropriate when that usage constitutes “fair use” under the Copyright Act. As a Seattle University student, you are required to follow the institution’s copyright policy. For more information for SU copyright policy, see <http://www.seattleu.edu/policies/copyright.aspx>.

#### COURSE SCHEDULE

**DISCLAIMER: I reserve the right to modify the syllabus, course materials, format, schedule, and assignments as desirable and necessary throughout the course to best utilize our time together.**

<b>Week</b>	<b>Topic</b>	<b>Chapters</b>	<b>Due Date</b>	<b>Dues</b>
<b>Week 1</b>	<b>Intro to Investments</b>	<b>1</b>	<b>4/5/2021</b>	<b>Stock Investment Registration, Practice Trading Starts Syllabus Quiz</b>
<b>Week 2</b>	<b>Asset Classes and Instruments, Securities Markets</b>	<b>2, 3</b>	<b>4/12/2021</b>	<b>Quiz 1</b>
<b>Week 3</b>	<b>Securities Markets, Mutual Funds</b>	<b>3, 4, 20</b>	<b>4/19/2021</b>	<b>Stock Investment Competition Starts Quiz 2</b>
<b>Week 3 exam</b>	<b>Exam 1</b>		<b>4/21/2021</b>	
<b>Week 4</b>	<b>Equity Valuations</b>	<b>13</b>	<b>4/26/2021</b>	<b>Quiz 3</b>
<b>Week 5</b>	<b>Equity Valuations, Bond Valuations</b>	<b>13, 10</b>	<b>5/3/2021</b>	<b>Quiz 4</b>
<b>Week 6</b>	<b>Bond Valuations</b>	<b>10</b>	<b>5/10/2021</b>	<b>Quiz 5</b>
<b>Week 7 exam</b>	<b>Exam 2</b>		<b>5/19/2021</b>	
<b>Week 8</b>	<b>Risk and Return, Efficient Diversification</b>	<b>5, 6</b>	<b>5/24/2021</b>	<b>Quiz 7</b>
<b>Week 9</b>	<b>Efficient Diversification, CAPM</b>	<b>6, 7</b>	<b>5/31/2021</b>	<b>Stock Investment Competition Ends Quiz 8</b>
<b>Week 10</b>	<b>CAPM, Efficient Market Hypothesis</b>	<b>7, 8</b>	<b>6/7/2021</b>	<b>Stock Record Form and Debrief Quiz 9</b>
<b>Final Exam</b>	<b>Exam 3</b>		<b>6/9/2021</b>	