

Financial Analysis
Course Number: 22:430:608
Course Title: Portfolio Theory

COURSE DESCRIPTION

This course examines portfolio management from both a theoretical and practical application standpoint. The academic portion of the curriculum focuses on portfolio theory and risk mitigation through diversification. It goes on to discuss the strengths and challenges practitioners face when implementing these models.

Ultimately, practitioners must make decision in an environment where risk and uncertainty prevail. The goal of the investment management discipline is to provide a framework that enables managers to achieve their investment goals at the lowest cost, which requires taking measured and calculated risks of a performance shortfall.

Quantitative methods of portfolio optimization and risk management are critical elements of the investment management process. Furthermore, they are very important element of the CFA credentialing program. The curriculum presented is designed to help prepare students for all levels of the portfolio management section of CFA examination process.

COURSE MATERIALS

<u>Required Textbook:</u>	(1) Modern Portfolio Theory By Francis & Kim, Wiley 2013 ISBN 978-1-118-37052-0
<u>Lecture Notes:</u>	Slides will be posted on the course website before each class that covers the materials. Check Canvas (canvas.rutgers.edu) and your official Rutgers email account regularly.
<u>Reference Textbook:</u> <u>NOT REQUIRED</u>	(1) Quantitative Analytics in Debt Valuation & Management By Mark W. Guthner, CFA, McGraw-Hill 2012 ISBN 978-0-07-179061-1 (2) The Options Edge By Michael C. Khouw & Mark W. Guthner, CFA, Wiley & Sons ISBN 978-1-11-921241-6
<u>Calculator</u>	A non-programmable financial calculator is necessary. Any financial calculator admissible on the CFA exams is acceptable. RBS recommends the Texas Instruments BA II Plus or Professional (for \$28-\$40). Please have your calculator with you at all lectures, starting our next lecture. http://www.screencast.com/users/Quartic_Training/folders/TI%20BA%20I%20PLUS%20calculator%20tutorial/media/e31b353c-26db-459d-9de4-e7ec10d7e5d5

This course does not take place in a vacuum. Students are encouraged to stay in touch with the financial press and stay connecting to what is happening the marketplace. If you have questions, be sure to raise them in class.

LEARNING GOALS AND OBJECTIVES

By the conclusion of this course the student should be able to demonstrate an understanding of investments as both a discipline and a craft. Students should be able to demonstrate master the following actions and concepts.

- Develop a disciplined approach to investment management.
- Understand the power, characteristics, and limits of diversification.
- Build an understanding of fixed-income and equity portfolio management.
- Be able to produce an investment strategy for both institutional and individual investors communicated through an investment policy statement.

Students will develop these skills and acquire knowledge through the following activities.

- Class participation
 - Self study
 - Homework/Practice sets
 - Portfolio & Trading Simulation
 - Writing a Personal Financial Plan
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PREREQUISITES

Financial Management and some probability and statistics courses are prerequisites. Investment Analysis and calculus is recommended, but not required.

ACADEMIC INTEGRITY

I do NOT tolerate cheating. Students are responsible for understanding the RU Academic Integrity Policy (<http://academicintegrity.rutgers.edu/>).

I will strongly enforce this Policy and pursue *all* violations. On all examinations and assignments, students must sign the RU Honor Pledge, which states, “On my honor, I have neither received nor given any unauthorized assistance on this examination or assignment.” I will screen all written assignments through *SafeAssign* or *Turnitin*, plagiarism detection services that compare the work against a large database of past work. Don’t let cheating destroy your hard-earned opportunity to learn. See business.rutgers.edu/ai for more details.

Capital IQ: Students will get access to Capital-IQ, which is a powerful tool and database that will help students perform complex financial analysis. Once an account is sign up,

students should have access should for the duration of their studies at Rutgers Business School. Keep a lookout for an email from Capital-IQ (ClientSupport@capitaliq.com) and follow the instructions to set-up an account.

Portfolio Management Simulation Exercise: Everyone will try their hand at trading and portfolio management. Go to the Investopedia link and sign up for a free account. <https://www.investopedia.com/simulator/>

CASE ASSIGNMENT

Personal Investment & Financial Plan: The class is designed to introduce students to the fundamentals of investment management. Many students who take this class are finance majors who plan on a career in this area. Those students have more to learn. This class will give students the foundation to take more in depth and specialized classes (e.g. equity analysis and asset valuation, portfolio management, fixed income, real estate and derivatives).

Other students will take this class to round out their educational experience and to develop the core skills for personal wealth management. This exercise is designed to give all participants in this class the opportunity to reflect on their personal financial goals and devise a plan to achieve their desired lifetime objectives.

GRADING POLICY

The following activities will contribute to the determination of a final grade:

Activity	Points
Online Exercises (Homework)	15.0%
Portfolio Management Simulation Exercise	15.0%
Personal Investment/Financial Plan	15.0%
2 Midterms	40.0%
1 Final Quiz	10.0%
Poetic License	5.0%

The school, department and employers are concerned with grade inflation. To address this issue, [the established grading guidelines for our Masters of Finance courses specifies that the average grade should fall between 2.95 and 3.15 \(where A=4, A-= 3.67, B+=3.33, B=3, B-=2.67, C+=2.33, C=2, C-=1.67, D=1 and F=0\)](#). So, expect the average grade in this class to be a “B.”

Grades are non-negotiable & there is no extra-credit. Performance & class participation are all that matters. *Not being able to graduate or pursue a particular major is not a relevant argument regarding grade determination.* Keep this notice in your mind as you plan your overall coursework strategy.

EXAM POLICIES

Expect exams to be long and challenging. Students are not expected to finish their exam.

During exams, the following rules apply:

- If you have a disability that influences testing procedures, provide me an official letter from the Office of Disability Services at the start of the semester.
- Your exam will not be accepted unless you sign the Honor Pledge.
- *Online exams are open book open note, no friends, or Relatives*

Makeup Examinations

The Office of the Dean of Students handles requests from students unable to take their examinations at the time scheduled on account of documented illness or other extenuating circumstances, such as a death or other family emergency, car breakdown or an accident on the way to a final examination. *In such cases, students should contact the Office of the Dean of Students at the earliest available time. The Dean's role is to verify documentation of the student's situation and provide a solution.*

Professor reserves the right to eliminate makeup tests while count other activity more heavily.

ATTENDANCE & PREPARATION POLICY

- Class attendance is mandatory. Exceptions are made for students located overseas.
 - Complete all background reading and assignments and be prepared to engage in class discussions, ask questions on readings, etc. Two way dialog is an important part of the learning process.
 - If you are going to miss a class, report your absence in advance at <https://sims.rutgers.edu/ssra/>. If your absence is due to religious observance, a Rutgers-approved activity, illness, or family emergency/death, also send instructor email with full details and supporting documentation.
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CLASSROOM CONDUCT

Class participation and respect for other students is critical to the learning process. To facilitate class participation and the learning process:

- Turn your camera's on during class.
 - Turn off cell phones. Do not use your laptop for anything other than classroom work (i.e. no emailing, chat, web browsing)
 - Be engaged. Participation is required and essential to the quality and depth of learning of the entire class. The more prepared the class is, the more lively the discussion, the more everyone will learn from each other.
 - Expect to be "cold-called." It keeps students engaged and indicates to instructor the level of understanding of materials currently being discussed/presented.
 - Non-alcoholic beverages are permitted.
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COURSE SCHEDULE

Class	Lecture	Chapter	Subject
1	1	1 2	Class Introduction Probability Foundation of Portfolio Theory Assessing Risk
2	2	3 5	Diversification Mean - Variance Analysis
3	3	6	Efficient Portfolios
4	4	6	Efficient Portfolios Multi-Asset Case
5	5		Portfolio Management: Policy & Process <i>Personal Financial Plan Example</i> <i>Things to Think About</i>
6			1st Midterm
7	6		Midterm Review Fixed Income Portfolio Management
			NO CLASS
8	7		Fixed Income Portfolio Management Continued
9	8	17	Roll of the Efficient Market Hypothesis & Random Walk in Portfolio Theory
10	9		The Human Element Behavioral Finance
11	10	11 18 19	Risk Management
12			2nd Midterm
13	11		Options, Futures & Portfolio Management
14	12		Final Quiz, Personal Financial Plan Due

SUPPORT SERVICES

If you need accommodation for a *disability*, obtain a Letter of Accommodation from the Office of Disability Services. The Office of Disability Services at Rutgers, The State University of New Jersey, provides student-centered and student-inclusive programming in compliance with the Americans with Disabilities Act of 1990, the Americans with Disabilities Act Amendments of 2008, Section 504 of the Rehabilitation Act of 1973, Section 508 of the Rehabilitation Act of 1998, and the New Jersey Law Against Discrimination. More information can be found at ods.rutgers.edu.

[Rutgers University-New Brunswick ODS phone (848)445-6800 or email dsoffice@echo.rutgers.edu]

[Rutgers University-Newark ODS phone (973)353-5375 or email ods@newark.rutgers.edu]

If you are ***pregnant***, the Office of Title IX and ADA Compliance is available to assist with any concerns or potential accommodations related to pregnancy.

[Rutgers University-New Brunswick Title IX Coordinator phone (848)932-8200 or email jackie.moran@rutgers.edu]

[Rutgers University-Newark Office of Title IX and ADA Compliance phone (973)353-1906 or email TitleIX@newark.rutgers.edu]

If you seek ***religious accommodations***, the Office of the Dean of Students is available to verify absences for religious observance, as needed.

[Rutgers University-New Brunswick Dean of Students phone (848)932-2300 or email deanofstudents@echo.rutgers.edu]

[Rutgers University-Newark Dean of Students phone (973)353-5063 or email DeanofStudents@newark.rutgers.edu]

If you have experienced any form of ***gender or sex-based discrimination or harassment***, including sexual assault, sexual harassment, relationship violence, or stalking, the Office for Violence Prevention and Victim Assistance provides help and support. More information can be found at <http://vpva.rutgers.edu/>.

[Rutgers University-New Brunswick incident report link: <http://studentconduct.rutgers.edu/concern/>. You may contact the Office for Violence Prevention and Victim Assistance at (848)932-1181]

[Rutgers University-Newark incident report link: https://cm.maxient.com/reportingform.php?RutgersUniv&layout_id=7 . You may also contact the Office of Title IX and ADA Compliance at (973)353-1906 or email at TitleIX@newark.rutgers.edu. If you wish to speak with a staff member who is confidential and does **not** have a reporting responsibility, you may contact the Office for Violence Prevention and Victim Assistance at (973)353-1918 or email run.vpva@rutgers.edu]

If students who have experienced a temporary condition or injury that is adversely affecting their ability to fully participate, you should submit a request via <https://temporaryconditions.rutgers.edu> .

If you are a military **veteran** or are on active military duty, you can obtain support through the Office of Veteran and Military Programs and Services. <http://veterans.rutgers.edu/>

If you are in need of **mental health** services, please use our readily available services.

[Rutgers University-Newark Counseling Center: <http://counseling.newark.rutgers.edu/>]

[Rutgers Counseling and Psychological Services–New Brunswick: <http://rhscaps.rutgers.edu/>]

If you are in need of **physical health** services, please use our readily available services.

[Rutgers Health Services – Newark: <http://health.newark.rutgers.edu/>]

[Rutgers Health Services – New Brunswick: <http://health.rutgers.edu/>]

If you are in need of **legal** services, please use our readily available services: <http://rusls.rutgers.edu/>

Students experiencing difficulty in courses due to **English as a second language (ESL)** should contact the Program in American Language Studies for supports.

[Rutgers–Newark: PALS@newark.rutgers.edu]

[Rutgers–New Brunswick: eslpals@english.rutgers.edu]

If you are in need of additional **academic assistance**, please use our readily available services.

[Rutgers University-Newark Learning Center: <http://www.ncas.rutgers.edu/rlc>]

[Rutgers University-Newark Writing Center: <http://www.ncas.rutgers.edu/writingcenter>]

[Rutgers University-New Brunswick Learning Center: <https://rlc.rutgers.edu/>]

[Optional items that many faculty include:

- Students must sign, date, and return a statement declaring that they understand the RU Academic Integrity Policy.

- Students must sign, date, and return a statement declaring that they understand this syllabus.]