

Finance

Course Number: 33:390:380
Course Title: Investment Analysis

COURSE DESCRIPTION

This course provides students with a deeper understanding and appreciation of the complex questions and tradeoffs facing any investor, and the necessary theoretical background to critically evaluate alternative investment strategies and the modern literature on investments. It will cover the fundamental principles of portfolio management and investment management, risk-return trade-off and different asset classes. Knowledge will be built up through lectures, homework assignments and exams. This course should help prepare students for careers in commercial and investment banking, corporate financial management, risk management and investment management. It is also a useful course for anyone with a general interest in the financial world.

COURSE MATERIALS

- Required textbook: Investment, 11th edition, Bodie, Kane and Marcus (BKM) ISBN: 978-1259277177. -- [A global edition or earlier edition such as 9th or 10th should suffice, as long as you can figure out any of the differences in page numbers. The BKM book provides a very comprehensive treatment of modern investment theory. We will not be able to cover the entire book in a single semester class.]
 - Lecture slides, supplementary materials and assignments will be posted on (canvas.rutgers.edu). It is important for you to be sure that your official Rutgers email address is in your profile on Canvas. You are responsible for remaining up to date at all times and check your email frequently.
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LEARNING GOALS AND OBJECTIVES

- This course is designed to help students develop skills and knowledge in the following area(s):

Students should be familiar with the most common financial markets and instruments, including money market instruments and derivatives, and demonstrate an advanced level of knowledge with respect to bonds and stocks, including the concepts of duration and convexity. In addition, students should demonstrate an advanced level of knowledge of portfolio theory including expected return, risk (variance and beta), covariance and correlation, CAPM and other asset pricing models, the minimum risk portfolio,

optimal portfolio, multi-stock portfolios, and the notion of efficient markets. Students should also demonstrate the ability to access and analyze financial data.

- Students who complete this course will demonstrate the following:

students should demonstrate ethical awareness and the ability to think critically and deal successfully with unstructured problems.

- Students develop these skills and knowledge through the following course activities and assignments:

For the most part we will follow a traditional lecture format using slides. A copy of these slides will be posted online before each class session. I will be posting some additional readings, along with my lectures. The additional readings are primarily meant to complement the book. Some of these are fairly technical, and I won't expect you to understand every detail.

PREREQUISITES

The treatment of uncertainty is essential to investment management. Consequently, the course will entail the use of a number of statistical tools, ranging from the notion of probability distributions through linear regression analysis.

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.

ATTENDANCE AND PREPARATION POLICY

- Students are expected to attend all class sessions. If you are to be absent, 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 and you seek makeup work, also send me an email with full details and supporting documentation **within one day of your first absence**.

- For weather emergencies, consult the campus home page. If the campus is open, class will be held.
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CLASSROOM CONDUCT

Keep cell phones and laptops out of sight and turned off. You may not use a cell phone or a laptop in place of a calculator in class or during exam. To encourage student participation and active learning, students might at times be randomly called on during class. This is not intended to test or embarrass anyone, but rather to keep everyone actively engaged in the material.

EXAM DATES AND POLICIES

You are required to learn the material covered in class. There will be three examinations (closed book). Problem sets will be assigned and must be completed. The exam dates are listed below and the problem set due dates will be announced in advance. Problem sets will be collected at the start of class. Many of the questions on the exams will be similar to the problem sets and examples covered in class. It is also recommended that you read the Wall Street Journal, as many of the ideas we discuss in class are illustrated in Journal articles.

Exam 1
Exam 2
Exam 3 (Final 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 during the first two weeks of the semester.
 - No cell phones or other electronics (except calculators) are allowed in the testing room.
 - You must show a valid Rutgers photo ID to receive the exam and to turn in the exam.
 - Alternate seating; do not sit next to another student.
 - Use the bathroom prior to the exam start; bathroom breaks, if essential, may be escorted.
 - Your exam will not be accepted unless you sign the Honor Pledge.
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GRADING POLICY

Course grades are determined as follows:

Homework Assignments	25%
Exam 1	25%
Exam 2	25%

Exam 3 (Final Exam)	25%
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In some cases, I may also add a few bonus points to the total score based on your class participation and contribution to the classroom atmosphere.

Problem sets: You are allowed to work with others on these assignments, but each individual should hand in their own written solutions. **Late assignments will not be accepted.** If you turn in all the assignments, the one with the lowest grade will be dropped; if you end up missing one assignment, that assignment will be dropped; if you miss a second assignment (or more) these other missed assignments will be recorded as zeros.

Exams: More information will be provided as we get closer to the exam dates. **Exams are closed book and you are only allowed to bring a calculator. I will provide formulas that are necessary to answer exam questions.** The final course grade will be determined by your final numerical average (using the numerical scores from all exams and assignments) relative to the rest of the class.

Make-up Exam: If an emergency arises and you cannot attend the exam, please be prepared to provide written documentation explaining your situation before missing the exam. **For the first two exams, there will be no make-up exams and the weight(s) will be allocated to the rest of the exam(s) you attend.** If you cannot attend the final exam, you must take the make-up exam. Please keep in mind that **the make-up exam is likely to be more challenging.**

Regrades: If you feel that an error has been made in the grading of the question on an exam, you shall notify me within one week after viewing the graded exam the first time. **Please note that the entire exam will be reviewed for accuracy and correcting any errors could either raise or lower the overall score.** I will adjust grades only if I have made an error. I cannot adjust grades based on consequences, such as hurt pride, lost scholarships, lost tuition reimbursement, lost job opportunities, or dismissals. **Please Note: No regrade request will be accepted if the original exam is done in pencil.**

Final grade distribution: following department guideline for undergraduate courses, the average GPA of this class will stay between 2.95 and 3.15.

COURSE SCHEDULE

Tentative Class Outline and Reading List (*Order and content subject to change*)

Most of my lectures will follow the BKM book fairly closely. However, for some of the topics I will provide more detailed discussions and sometimes also a different point of view. The topics covered, time permitting, include:

Module 0: Review Material

A) Institutional Background

BKM, Chapters 1-4.

B) Statistical Review

BKM, "Quantitative Review," Appendix A.

Mark Kritzman, "What Practitioners Need to Know about Uncertainty," *Financial Analysts Journal*, 1991, Vol.47, No.2, pp.17-21.

Mark Kritzman, "What Practitioners Need to Know about Regressions," *Financial Analysts Journal*, 1991, Vol.47, No.3, pp.12-15.

Module 1: Portfolio Theory and Asset Allocation

BKM, Chapters 5, 6 and 7.

Module 2: Portfolio Theory and Asset Allocation: Some Practical Considerations

BKM, Chapter 8

Philippe Jorion, "Portfolio Optimization in Practice," *Financial Analysts Journal*, 1992, Vol.48, No.1, pp.68-74.

Module 3: Risk and Return in Equilibrium: The Capital Asset Pricing Model (CAPM)

BKM, Chapter 9 and Section 27.3.

Fisher Black and Robert Litterman, "Global Asset Allocation with Equities, Bonds and Currencies," *Goldman Sachs, Fixed Income Research*, 1991.

Module 4: The CAPM: Empirical Evidence

BKM, Chapter 13.

Eugene F. Fama and Kenneth R. French, "The Capital Asset Pricing Model: Theory and Evidence," *Journal of Economic Perspectives*, 2004, Vol.18, No.3, pp.25-46.

Module 5: Market Efficiency and Return Predictability

BKM, Chapters 11 and 12.

Module 6: Options

BKM, Chapters 20 and 21.

Module 7: Futures

BKM, Chapters 22 and 23.

Module 8: Bonds and the Term Structure of Interest Rates

BKM, Chapters 14, 15 and 16.

Module 9: Multi-Factor Models and the Arbitrage Pricing Theory (APT)

BKM, Chapter 10.

Richard Roll and Stephen A. Ross, "The Arbitrage Pricing Theory Approach to Strategic Portfolio Planning," Financial Analysts Journal, May-June 1984, p.14-26.

Module 10: Performance Evaluation

BKM, Chapter 24.

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](mailto>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.]