

ECON416: Capital Markets and Portfolio Choices

Section 01: MWF 11:00 am-11:50 am, Chancellors Hall 121

Contact Information:

Instructor: Zhao Han; zhaohan@wm.edu

Office: Chancellors Hall 247

Office Hours: MW 2:30 pm – 3:30 pm or by appointment (please email me at least one day in advance)

Required Textbook

There are no required textbooks for the course. We will use *Investments*, 10th Edition, by Zvi Bodie, Alex Kane, and Alan J. Marcus as a reference.

Prerequisite

ECON303 (Intermediate Microeconomics), ECON304 (Intermediate Macroeconomics) and ECON308 (Econometrics). More generally, students should have a good knowledge of calculus, regression analysis, and linear algebra. No prior programming experience in R is required. Consistent study habits coupled with an eagerness to learn and ask questions will help to achieve the learning objectives.

Course Description

This course is an upper-level undergraduate course focused on studying financial assets and the capital markets in which they are traded. The course belongs to the larger field of financial economics. It will provide analytical tools and derive formal models in asset pricing. The set of tools is used to understand how different assets are priced in the market, and the relationship between risk and return. This course is meant to train students to think in a structured, analytical rigorous way about the fundamentals of asset pricing models, starting from the notions of market efficiency and ending with risk management principles. The course emphasizes active learning, group work, and interactive class discussions. Weekly assignments will require data analysis using the datacamp platform (www.datacamp.com) and the R programming language. This course will help prepare students entering graduate education or starting careers in management, finance, or economic consulting.

General Course Expectations

You are expected to attend all class periods, read or view the lecture material prior to class, participate in the class, and take notes as required. You are expected to finish the weekly programming assignment on time. Your grade is determined by your performance on a group presentation, datacamp assignments, and two essay exams. At any time, in class or during office hours, you are more than welcome to ask

questions. No question is a dumb question if something is impeding your learning. Questions will promote discussion and your insights could benefit the entire class.

Weekly Programming Assignment

I will use datacamp (www.datacamp.com) to assign weekly programming assignment. Datacamp is an online learning platform that specializes in topics like data science and analytics. Datacamp courses focus on interactive learning with many videos and engaging exercises to complete. It delivers a hands-on learning experience and is free to educators and students. To create your account in datacamp, please use the link

https://www.datacamp.com/groups/shared_links/e85a63f9292ce1477fb4d08670b87d3d93bcd827da35e68318534cea181e00de

For ECON416, we will focus on three **Skills Tracks** on datacamp, all coded in R. They are:

1. R Programming (<https://learn.datacamp.com/skill-tracks/r-programming>)
2. Finance Fundamentals (<https://learn.datacamp.com/skill-tracks/finance-fundamentals-in-r?version=2>)
3. Applied Finance (<https://learn.datacamp.com/skill-tracks/applied-finance-in-r>)

In total, the three skill tracks cover 17 mini-course, and requires 80+ hours of learning and programming. The weekly programming assignment requires you to finish one mini-course per week, which typically takes around 4 to 5 hours. Consequently, my expectations are besides attending class lectures, students need to spend at least one hour per day for five days a week on datacamp. You are expected to finish the weekly programming assignment on time, and I will monitor the class progress on datacamp closely. The datacamp assignment will be counted 30% or 150 points of your course grade.

Group Project

To foster cooperative learning and an in-depth study of a particular topic of interest, students will be responsible for participating in a group project on an issue in capital markets and portfolio choices. You will be assigned to a group of 3-4 people. This project, which is worth 40% of your overall class grade, will be completed in **three stages**.

Stage 1: Project Proposal

Find an interesting topic in capital markets and portfolio choices, develop and submit a short proposal, which must address the following questions:

1. What is the capital market/financial asset you are studying?
2. How have the capital markets evolved, and what factors have been key drivers in this evolutionary process?

3. What are the roles and responsibilities of financial organizations in that capital market?
4. How have market development-including regulations-shaped the financial organizations' activities?
5. What are the risks of the capital market? Are there any systematic risks to the macroeconomy?
6. Why do you want to study this capital market/financial asset in particular?

I will meet with your group after your submission to discuss your proposal. The purpose of the meeting is to brainstorm a polished research question. The research paper of the group project must contain a formal economic model and formal data analysis. You will develop a simple model, preferably using the tools and methods we discuss in class. I will also discuss with you how both qualitative and quantitative analyses can be designed for the project.

Stage 2: In-class Presentation

Your group will present your findings to the class at the end of the semester. The presentations should answer the following questions:

1. What are you studying? Why is the topic interesting from an economic perspective?
2. What is the empirical evidence?
3. How to interpret the empirical evidence?
4. Can your model explain the empirical evidence?
5. Based on your interpretation, what are the predictions, policy implications?

The presentation should last about 40 minutes. Each group member is expected to contribute to the presentation, and part of the presentation grade will involve group members rating each other's level of participation. There is no fixed structure or format to the presentation. I will give you some general guidelines later on in the semester.

Stage 3: Final Report

During and soon after the presentation, your group will get feedback from your classmates and me. After getting the feedback, you will prepare a final written report to be submitted on the final exam day. The report must contain two parts. The first part is a **research paper**, about 10-15 pages long, including all the analyses and technical details. The second part is a letter to the regulators or an **Op-Ed**, 2-2 pages long, in accessible language (i.e., no technical details, only intuitions), suggesting a policy stance based on your findings.

Essay Exams

We will have two take-home essay exams; each is worth 15% of your overall class grade. The exams are designed to evaluate your understanding of the class materials. These exams, based on

readings and in-class discussions, contain open-ended essay questions regarding the topics covered in class.

All exams are *open booked*, and you may use your notes if you would like. However, you will have *limited time* to complete the exam, so studying on the fly will not be a viable option. No cooperation is allowed during the exams, and any attempts of dishonesty will be punished with as much severity as the College permits.

If you need to miss an exam, you must notify me with a written/email request at least 24 hours before the exam. The only valid reasons for requesting a makeup exam would be: (1) A documented College sponsored events; (2) A documented medical emergency; (3) Some other documented extraordinary events. A makeup exam will be scheduled as soon as it can.

Academic Integrity

I expect everyone to follow the Honor Code. Please see your student handbook for details. “As a member of the William and Mary community, I pledge on my honor not to lie, cheat, or steal, either in my academic or personal life. I understand that such acts violate the Honor Code and undermine the community of trust, of which we are all stewards.” A minimum penalty for any breach of academic integrity is the grade of “F” for the course.

Grading Policy

It is your responsibility to keep track of your grades by regularly checking your Blackboard grade books. If you have a discrepancy, you will need to alert me in order to see if there is a mistake. The final grade for the course is based on the percentage of the number of adjusted total points earned. Use the below chart to determine your final course grade.

	<u>Possible Points</u>	<u>% of Total</u>	<u>Grade</u>	<u>Points</u>	<u>Percentage</u>
Assignments	100	20	A	500-460	100-92
Midterm Exam	125	25	A-	459-440	91-88
Group Project	125	25			
Final Exam	150	30	B+	439-425	87-85

Total	500	100%	B	424-405	84-81
			B-	404-385	80-77
			C+	384-370	76-74
			C	369-350	73-70
			C-	349-335	69-67
			D+	334-320	66-64
			D	319-300	63-60
			D-	299-275	59-55
			F	274-0	Below 55%

Modification of policies may be required during the semester. I will make explicit announcements pertaining to any such changes.