MGT-261 INVESTMENT ANALYSIS

SYLLABUS for Fall 2024 (updated: 5-Sep-24)

Instructor Contact Information

Instructor: Joe Chen
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Course website: on Canvas (http://canvas.ucdavis.edu)

Course Description

The objective of this course is to study theory and empirical evidence relevant to portfolio management. The course develops a thorough understanding of how investment professionals allocate funds in portfolio. The main topics include estimation of capital market parameters, trade-off between risk and return, optimal portfolio selection, equilibrium asset pricing models, and delegated portfolio management. The development of techniques that should be part of the tool kit of students interested in becoming professional investors or researchers in finance takes emphasis. This course primarily addresses the needs of advanced students in an MBA program.

Prerequisites

- I will assume a good understanding of **basic notions in finance** covered in the core (introductory) graduate-level finance course or equivalent. I will discuss some of these topics in class, but I expect you to refresh your memory on them at the very beginning of the course. Spending time in class to review ideas that are covered by more basic courses would be inefficient and, most importantly, would take time away from new and more exciting topics. I assume that you are in this class to learn new materials and get ready for the job market, and I will teach the course accordingly.

- Uncertainty is what makes financial markets fascinating. Unfortunately, this also makes our task more difficult. We cannot undertake a rigorous study of portfolio and risk management without a solid **knowledge of statistics**. You should have covered these materials in the core (introductory) graduate-level statistics course or equivalent. For this reason, I expect you to refresh your memory on some essential concepts such as descriptive statistics, inference techniques, and simple regression analysis. Any introductory book in statistics should help you to get up to speed.

- A mathematical approach is necessary to avoid superficiality for many of the topics covered by this course. We will assume a good **knowledge of mathematics**, such as linear algebra and calculus. I am not a fan of technicalities per se, but I hope that by the end of the course, you will appreciate how the use of technical tools is essential.

- If you are planning to work in the area of investment management, it is essential that you develop your computer skills. I will assume that you know how to use spreadsheets to perform some fundamental analysis. I will assign problem sets that require the **proficiency of computing** skills, such as the use of Microsoft Excel. Moreover, various course exercises may rely on accessing online resources.

Course Materials

Textbook
Investments, 13th Edition (referred to as **BKM** hereafter)
Authors: Zvi Bodie, Alex Kane, and Alan Marcus   ISBN-13: 978-1264412662
Publisher: McGraw-Hill   ISBN-10: 1264412665

Connect Online Access is NOT needed. Only the textbook will be used.
Digital versions and international/global editions are acceptable.
Older editions are also acceptable – but you will be responsible for following any
   changes in page numbers.

Other Materials
A coursepack with copies of HBS cases will be needed. Link to purchase the coursepack can be found on the course website. Additional required readings may be assigned and provided electronically.

Course Groups
Teamwork is a critical skill to be developed in investment management. All assignments and the course project must be done in groups. At the beginning of the course, students will form groups for the entire session. Each class participants are to form into **groups of 2 to 4 students**. If you have problems creating groups or finding enough members, one will be assigned for you. Name your group with business name appropriate for an investment company. Eg. "Aggie Inv't Co."

Course Assessments
The course grade is based on the following criteria:

Group Assignments (4)	25%*
Individual Assignments (4)	25%*
Course Project	35%
Participation	15%

* For the purpose of grading, you are allowed to drop your lowest scoring group
   assignment score and your lowest individual assignment score.

- **Group Assignments:** I will regularly assign group assignments to be completed in **groups**. There will be a total of 4 group assignments. Submit one write-up for the entire group, being careful to note all the names of group members.

- **Individual Assignments:** I will also assign individual assignments. These are to be done **individually without collaboration**. There will be a total of 4 individual assignments.

- **Submissions:** All electronically submitted documents must be **professional and properly formatted** to print. **Creating PDF documents are ideal.** You do not need to submit supporting documents containing data or spreadsheets with computations. Unformatted Word or Excel files will not be accepted.

- **Course Project:** There will be *one major project* dealing with portfolio allocation. We will be working on this project throughout the course, with intermediate components due intermittently. We will apply the portfolio choice and diversification theory from class to some actual real-life scenarios. Extensive use will be made of Excel (or any other mathematical package). The project must be done in your groups.

  Furthermore, the project will involve presentation components. Each group must also prepare a) 10-minute presentations on intermediate components of the project due as the course progresses, as well as b) a final 15-minute presentation summarizing your work. You may sign up for presentation slots as soon as groups are formed.

- **Participation**: A component of your participation grade will consist of a "team participation score" from your teammates. Throughout the course, you are to pull your weight and work equally hard as your other teammates. You and your teammates will rate the participation of each team member upon completing your final project presentation.

- **Grading Policy**: All course assessment items are graded on a 20-point scale and converted to letter grades based on grade standard and grading distribution consistent with [GSM MBA Program Policy & Procedures](#).

- **AI Policy**: You are permitted to use generative AI tools in this class as doing so aligns with the course learning goal of producing the best possible portfolio recommendation. The course project is designed such that while AI can assist you, it cannot fully complete the project for you. Students may utilize AI to brainstorm, draft, and refine their work, provided all AI-generated content is clearly identified and appropriately cited. You are responsible for the information you submit based on an AI query, including the accuracy and appropriateness of the results. AI should not replace original thought or personal analysis; it is a supplementary tool to support the development of your ideas and arguments. Any use of AI must align with academic integrity standards, and misuse of AI (such as presenting generated content as your own work or failing to disclose its use) will be considered academic misconduct.[*]

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[*] ChatGPT and Grammarly were used to create the initial draft of this policy.

Program Mission

The mission of the UC Davis Graduate School of Management is to be a global leader in management research and education. As part of the world's premier public university system, we pursue significance, excellence and scholarly rigor in our research, teaching and service to the people of California. We emphasize curiosity, creativity and high standards in the generation and transmission of theoretical and practical knowledge relevant for business.

Honor Code and Academic Integrity

Academic integrity exists when students and faculty seek knowledge honestly, fairly, with mutual respect and trust, and accept responsibility for their actions and the consequences of those actions. Without academic integrity, there can be no trust or reliance on the effectiveness, accuracy, or value of a University's teaching, learning, research, or public service activities. It is therefore key that we understand what academic integrity is, why it is important, and how to help it flourish on college campuses.
1. It is expected that all class members will treat each other with respect and dignity.
2. It is not acceptable behavior to insult, harass, or demean any member of the class.
3. Professional business behavior should be modeled in the classroom, including the use of appropriate language, jokes, or stories.

Code of Academic Conduct: Students are expected to conform with the code of academic conduct, which can be found here: http://sja.ucdavis.edu/files/cac.pdf. In general, students are also expected adhere to the UC Davis Principles of Community. For more information, please review the Academic Conduct Booklet. Academic Affairs, as well as the Academic Director of the MBA Program, will be notified of any violations, and will take appropriate action.

Course Schedule

Important Notes
- Complete all required readings PRIOR to each week's meeting.
- All readings in this course are considered secondary materials and are for providing background information and reinforcing materials.
- Optional readings are intended for students intending to pursue this topic further.

Week 1: Investors and Portfolio Management
Tuesday, 1-Oct-2024, 9:00am-11:50am (GH-1302)

- Required Reading: BKM, Chapters 1.1-1.5, 1.8, 28.1-28.4,
  and "Professionalism in the Investment Industry".
- Optional Reading: BKM, Chapters 1.6, 28.5-28.7.

Week 2: Portfolio Returns and Risk
Tuesday, 8-Oct-2024, 9:00am-11:50am (GH-1302)

- Required Reading: BKM, Chapters 2.4, 4.1, 4.3, 4.6-4.7, 5.2.
- Optional Reading: BKM, Chapters 2.1-2.3, 4.8, 5.1, 5.3.
- Complete Group Assignment #1

Week 3: Capital Market Assumptions (Part A)
Tuesday, 15-Oct-2024, 9:00am-11:50am (GH-1302)

- Required Reading: BKM, Chapters 3.8-3.9, 5.4, 5.6-5.7.
- Optional Reading: BKM, Chapters 3.7, 5.5, 5.8.
- Review basic statistics from core statistics course.
- Complete Individual Assignment #1.

Week 4: Capital Market Assumptions (Part B)
Tuesday, 22-Oct-2024, 9:00am-11:50am (GH-1302)

- Required Reading: BKM, Chapters 17.2.
  and "Capital Market Expectations" Chapters 1, 2.1. (p5-p13)
- Optional Reading: BKM, Chapters 17.5.
- Review regression analysis from core statistics course.
- Complete Individual Assignment #2

Week 5: Optimal Asset Allocation (Part A)
Tuesday, 29-Oct-2024, 9:00am-11:50am (GH-1302)

- Required Reading: BKM, Chapters 7.1-7.3, 25.2.
- Complete Group Assignment #2.
- Turn in intermediate part 1 of Course Project (due: 24hrs prior to meeting).

Week 6: Optimal Asset Allocation (Part B)
Tuesday, 5-Nov-2024, 9:00am-11:50am (GH-1302)

- Required Reading: BKM, Chapters 6.2-6.4, 7.4.
- Complete Group Assignment #3.

Week 7: Stock Selection (Part A)
Tuesday, 12-Nov-2024, 9:00am-11:50am (GH-1302)

- Complete Individual Assignment #3.
- Turn in intermediate part 2 of Course Project (due: 24hrs prior to meeting).

Week 8: Stock Selection (Part B)
Tuesday, 19-Nov-2024, 9:00am-11:50am (GH-1302)

- Required Reading: BKM, Chapters 8.1-8.4,
  and *"New Facts in Finance" by J. Cochrane*.
- Optional Reading: BKM, Chapters 8.5.
- Complete Individual Assignment #4

Week 9: Equilibrium Models
Tuesday, 26-Nov-2024, 9:00am-11:50am (GH-1302)

- Required Reading: BKM, Chapters 9.1, 9.3-9.4, 10 (all).
- Optional Reading: BKM, Chapters 9.2.

Week 10: Performance Evaluation
Tuesday, 3-Dec-2024, 9:00am-11:50am (GH-1302)

- Required Reading: BKM, Chapters 11 (all).
- Optional Reading: BKM, Chapters 12.1.
- Complete Group Assignment #4
- Turn in intermediate part 3 of Course Project (due: 24hrs prior to meeting).

Week 11: Final Project Presentation
Schedule a 30-minute Zoom meeting between 3-Dec-2024 and 10-Dec-2024

- Complete Course Project Executive Summary
- Prepare Course Project Presentation