

NYU Stern: Foundations of Finance
FINC-UB.0002.001, FINC-UB.0002.002
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Preliminary syllabus, subject to change.

Spring 2025

Office Hours:

Mondays 11am-12pm; Wednesdays 4-5pm;

Professor Toomas Laarits

KMC 9-55

tlaarits@stern.nyu.edu

Description: This course is a rigorous, quantitative introduction to fundamental principles of asset valuation. The main topics of the course are the time value of money, portfolio selection, equilibrium asset pricing (CAPM), equity valuation, arbitrage pricing, fixed income securities, and derivatives. The key analytical concepts we will study are present value, risk, diversification, arbitrage, and option value. The tools we develop have immediate applications to real-world financial decisions. I will emphasize how the course material relates to current events.

Teaching Assistants:

Dan Milo, Stern PhD student. dm4766@stern.nyu.edu

Kasha Bhatia, Stern Undergraduate student. kb3866@stern.nyu.edu

Eric Markov, Stern Undergraduate student. em4624@nyu.edu

Wilson Merchan, Stern Undergraduate student. wm2228@stern.nyu.edu

Office hours schedule will be posted weekly on course website.

Schedule and Format: We will have 27 class meetings and two exams. A detailed schedule is at the end of this syllabus. Classes will meet:

- Section 001: Monday, Wednesday, 9:30am–10:45am, Classroom TBA.
- Section 002: Monday, Wednesday, 3:30pm–4:45pm, Classroom TBA.

The scheduled midterm exam date is Monday, March 17. The final exam will take place during the exam week, with the exact time to be scheduled by the registrar, depending on your section. Please review the course schedule now.

I plan to record all class meetings, but there will be no option to join via Zoom. Lecture recordings and annotated slides will be available on the course website. Both the midterm and final exams will be in person.

Classroom Etiquette: Please respect your fellow students. Each class starts and ends on time. Please give yourself time to arrive and mute your devices.

Student questions have positive externalities, so I strongly encourage you to speak up! Please see the grading section on how participation matters for your grade. It is the expectation that everyone commits to making this an inclusive learning environment for all.

Prerequisites: To succeed in this class, you must be comfortable with introductory statistics,

calculus, and microeconomics. I strongly encourage you to review Handout 0 on statistics at the beginning of the semester. That said, I aim to make the course self-contained.

Course Materials: The main class material consists of materials that will be handed out in class and posted on the course website. I will hand out lecture slides, handouts with detailed derivations or examples on select class material, problem sets, and practice exam questions.

In addition to the posted materials, I recommend, but do not require, “Essentials of Investments” by Zvi Bodie, Alex Kane, Alan Marcus, 12th edition (prior editions are fine too). There are multiple different purchase options for this book. There is a hardcover available at NYU bookstore. Additionally, there are multiple options available on the publisher’s website: e-book rental/purchase, physical loose-leaf book purchase, and a “Connect” e-book that gives you access to more practice problems. There is also a solutions manual available.

Communication: The class website is on Brightspace at <https://brightspace.nyu.edu/>. It is your responsibility to keep up with the announcements posted on the course website.

Grades: Your course grade will be based on:

Item	Share
Participation	10%
Homework	20%
Midterm	30%
Final	40%

Participation is an important part of the course grade, and there are numerous ways to contribute in this respect. I strongly encourage you to attend and to speak up in class. Questions are always welcome. If you find an article/post/tweet that illustrates a topic we have covered in class, please send it along and I will post it to the course website. I post short concept questions after each lecture: completing those within 7 days from the class date also earns participation credit.

At NYU Stern, we strive to create courses that challenge students intellectually and that meet the Stern standards of academic excellence. To ensure fairness and clarity of grading, the Stern faculty have adopted a grading guideline for core courses with enrollments of more than 25 students in which approximately 35% of students will receive an “A” or “A-” grade. This course has more than 25 students.

General Conduct and Behavior: Students are expected to maintain and abide by the highest standards of professional conduct and behavior. Please familiarize yourself with Stern’s [Policy in Regard to In-Class Behavior & Expectations](#) and [the NYU Student Conduct Policy](#).

Academic Integrity: Our undergraduate [Academics Pillar](#) states that we take pride in our well-rounded education and approach our academics with honesty and integrity. As members of our community, all students agree to abide by the [NYU Academic Integrity Policies](#) as well as the NYU Stern Student Code of Conduct, which includes a commitment to:

- Exercise integrity in all aspects of one’s academic work including, but not limited to, the preparation and completion of exams, papers and all other course requirements by not engaging in any method or means that provides an unfair advantage.
- Clearly acknowledge the work and efforts of others when submitting written work as one’s own.
- Refrain from behaving in ways that knowingly support, assist, or in any way attempt to enable another person to engage in any violation of the Code of Conduct.

The entire Stern Student Code of Conduct applies to all students enrolled in Stern courses and can be found here: www.stern.nyu.edu/uc/codeofconduct.

Per request of the dean, you must include a signed statement at the top of each homework assignment and exam, indicating that you adhere to the Code of Conduct. The statement is: *“I pledge my honor that I have not violated the NYU Stern Student Code of Conduct in the completion of this exam/problem set.”* I provide a cover sheet for homework assignments that includes this statement. It is in your best interest that potential employers know that Stern takes honesty seriously. Stern’s reputation adds to the value of your degree.

Student Accessibility: If you will require academic accommodation of any kind during this course, you must notify me at the beginning of the course and provide a letter from the Moses Center for Student Accessibility (212-998-4980, mosescsa@nyu.edu), verifying your registration and outlining the accommodations they recommend. If you will need to take an exam at the Moses Center for Student Accessibility, you must submit a completed Exam Accommodations Form to them at least one week prior to the scheduled exam time to be guaranteed accommodation. For more information, visit the CSA website: <https://www.nyu.edu/students/communities-and-groups/student-accessibility.html>

Student Wellness: Classes can get stressful. I encourage you to reach out if you need help. Our aim is for students to be as successful academically as they can, and to help them overcome any impediments to that. Bookmark the [NYU Stern Well-being Resource Hub](#) for existing services at NYU and Stern covering a wide variety of topics including financial well-being, relationship well-being, mental well-being, and more. Any student who may be struggling and believes this may affect their performance in this course is urged to contact the Moses Center for Student Accessibility (212-998-4980, mosescsa@nyu.edu) to discuss academic accommodations. If mental health assistance is needed, please call NYU’s 24/7 Wellness Exchange hotline 212-443-9999. Furthermore, please approach me if you feel comfortable doing so. This will enable me to provide relevant resources or referrals. There are also drop in hours and appointments. You can find out more at <http://www.nyu.edu/students/health-and-wellness/counseling-services.html>

Name Pronunciation and Pronouns: Stern students now have the ability to include their pronouns and name pronunciation in NYU Albert.

Homework Assignments: There are four homework assignments over the course of the semester. Each assignment contains an Excel question, emphasizing a practical implementation of a concept from class. The assignments are graded on a 10-point scale. Homework

must be turned in online, either in PDF, Word, or Excel format.

You are encouraged to work in groups on the assignments, but you must hand in your own write-up and list the names of people you worked with.

Study Groups: I highly recommend that you regularly review the class material in a study group. Do not wait until exam time to meet with your group.

Calculator and Software: You need a calculator for this class. Please make sure it can handle logarithms and exponentials. It is recommended but not required to have a financial calculator. Standard models include the HP 12C (about \$60), the HP 10B-II (about \$25), and the TI BA-II Plus (about \$30). Please bring your calculator to class, as we will work through examples together. I have included some slides in the course pack to help you learn how to operate a financial calculator if you choose to buy one.

At least one problem in each HW assignment requires you to use Excel. Every student at Stern is expected to be comfortable with Excel and every Finance Specialization student is expected to have knowledge of Excel that extends beyond basic familiarity. The TAs are available to help with Excel questions.

Concept Questions: After each class, I will post multiple-choice concept questions on the course website. I will not grade them for correctness but completing them within seven days from the class day will contribute to your participation grade. After submitting your answers on the course website you will see the correct answers and a brief explanation. The concept questions are good preparation for the exams and a useful tool for keeping up with the material. After you have reviewed the material, it should take you no more than 15 minutes to complete the concept questions.

Suggested Problems: Suggested problems from “Foundations of Finance” are posted on the class website. These problems are intended to give you extra practice over and above the homework assignments. You do not have to turn them in, and there is no credit for them. You can look up solutions in the solution manual. Additionally, the “Connect” version of the textbook gives you access to extra practice problems on the publisher’s website.

Exams: The midterm and final exams test your understanding of the key concepts in the class. To prepare, review the slides together with your own class notes, the handouts, the concept questions, the homework assignments, the sample exam questions, and preferably the suggested textbook problems. The final exam will be cumulative with an emphasis on the material from the second half of the course.

I anticipate that both exams will take place in person. The exams are closed-book but you are allowed to bring one double-sided formula sheet for the midterm exam and two double-sided formula sheets for the final. I will also post my own version of the formula sheet on the course website.

There will be a post-midterm evaluation in class. If you are forced to miss the final exam, you will be required to make it up after the semester is over. Due to University regulations as confirmed by the Dean’s office, students must take the final exam with the section for which

they are registered.

Religious observances and other absences: NYU's [Calendar Policy on Religious Holidays](#) states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. You must notify me in advance of religious holidays or observances that might coincide with exams, assignments, or class times to schedule mutually acceptable alternatives. Students may also contact religiousaccommodations@nyu.edu for assistance.

NYU Stern is committed to ensuring an equitable educational experience for all students regardless of identity or circumstances and strives to recognize the obligations its students have outside of Stern. Please review all class dates at the start of the semester and review all course requirements to identify any foreseeable conflicts with exams, course assignments, projects, or other items required for participation and attendance. If you are aware of a potential conflict, please contact me as soon as possible to discuss any potential conflicts to determine whether/how they can be accommodated.

Laptops, cell phones & other electronic devices The use of electronic devices, for the purpose of note-taking only, is permitted. However, students should make every effort to avoid distracting their classmates or disrupting the class, including arriving early and choosing a seat that is less distracting for peers.

Staying up to Date: The class website contains links to recent articles in the financial press that complement the lectures. I have included a list of resources on the course website. If you find an article you'd like to share with the class, please email me—remember this contributes to your participation grade.

Course Outline: Below is a schedule of the topics for each class. Please note the exam dates and homework due dates. “MR” refers to main reading from “Essentials of Investments,” “SR” refers to supplemental reading from “Essentials of Investments”.

Class	Topic	Handouts	MR	SR	Notes
0. Financial Instruments and Markets					
1/22 (W)	Introduction. Axioms of finance.		Syllabus		
1/27 (M)	Financial instruments and markets.		1.1-5, 2, 3.1	1.6-7, 3.8-9	
1. Performance of Securities					
1/29 (W)	Present and future value.	1, 2	5.1-2		
2/3 (M)	Returns and compounding.	3-8	5.1-2, 5.4;	5.3	
2/5 (W)	Holding Period Returns, IRR.	3-8	5.1-2, 5.4;	5.3	
2. Portfolio Choice					
2/10 (M)	Portfolio formation and returns. Efficient Portfolios.	9-10	5.5, 6.1-2		
2/12 (W)	Investor preferences and optimal portfolios.	9-10	6.1-2		
	Three-day weekend. Monday 2/17 off. Monday classes meet on Tuesday.				
2/18 (Tu)	Efficient and optimal portfolios with a riskless asset.	11, 12	5.6, 6.3		HW #1 Due.
2/19 (W)	–”– with multiple risky assets.	12, 13	6.4-6.5	6.6	
3. The Capital Asset Pricing Model					
2/24 (M)	Introduction to the CAPM.	14	7.1-2		
2/26 (W)	Proof of the CAPM.	14	7.1-2		
3/3 (M)	Applications of the CAPM.		7.3		
3/5 (W)	Beyond the CAPM		7.4-5		
3/10 (M)	Overflow. Midterm review.				HW #2 Due.
4. Market Efficiency, Arbitrage					
3/12 (W)	Market efficiency and return anomalies.		8	9	
3/17 (Monday) IN CLASS MIDTERM EXAM. Covers material through 3/10.					

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Class	Topic	Handouts	MR	SR	Notes
3/19 (W)	Arbitrage and the Law of One Price.	17	3.2-3.7		
3/24 - 3/28 SPRING BREAK					
3/31 (M)	Arbitrage and the Law of One Price. Limits to arbitrage.		3.2-3.7		
5. Valuation					
4/2 (W)	Dividend discount models and valuation ratios.	15, 16	13.1-4	13.5-6	
6. Fixed Income Securities					
4/7 (M)	Bond prices and yields.	18, 19	10.1-4	10.5	
4/9 (W)	Bond returns, forward rates, and the yield curve.	20-22	10.6		
4/14 (M)	Duration and immunization.	23, 24	11.1-3	11.4	
7. Options, Futures					
4/16 (W)	Option basics.	25	15.1-2		HW #3 Due.
4/21 (M)	The Black-Scholes-Merton formula.		16.2-4	16.5	
4/23 (W)	Arbitrage bounds.	26, 27	16.1	15.3-4	
4/28 (M)	Overflow from options basics and arbitrage bounds.				
4/30 (W)	Futures. Spot and futures arbitrage.	28	17.1, 17.3-4	17.2	
5/5 (M)	Futures continued. Review.		17.5-6		HW #4 Due.
FINAL EXAM between 5/8 and 5/14. Date TBD by the registrar.					