

Class timings: Thursdays 2 PM – 4:30 PM in Room RH 301.

Office Hours: Flexible office hours, held online via Zoom.

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Objectives: To study Corporate Valuation in sufficient breadth to allow a student to value a wide range of businesses, ranging from startups to mature businesses. We will study financial accounting and modeling, learn how they are used to build financial models for businesses, and then explore cash flow- and multiples-based approaches to valuing mature businesses with a focus on statistical robustness. We will also study the venture capital cycle and work with entrepreneurs and venture capitalists to model and value their start-ups. Time permitting, we will study valuation for corporate events such as mergers and acquisitions.

Class Structure: Each 2½ hr. class has three segments. The first ½ hour is a review session. It is followed by two one-hour lectures with a break in between. We will have multiple entrepreneurs and VCs describe their startups, and students will present their valuations to the entrepreneurs. As the entrepreneurs and VCs are located all around the world, students must make time to participate in these conversations outside of class hours over Zoom.

Preparatory work: I will provide materials that should be read ahead of each class, and extra credit is given for completing a short feedback form each week that lets me know what parts of the lecture you had difficulty with.

Homework, project, and exams: There is a homework assignment each week as well as a final exam and a valuation project. The class will be broken up into a set of teams, each of which will be tasked with creating an equity research report with its accompanying valuation model for a company of their choice. The reports will be presented at a competition at the end of the course. Additionally, team members work together to value startups and present their valuations to the participating entrepreneurs and VCs.

Generative AI: Students are encouraged to use generative AI with their classwork and homework, but not the exam, and must declare their use of AI and submit the prompts used along with their assignments and project reports.

Grades: 35% Homework, 25% Final exam, 20% VC valuations, 20% Group Project. I will use the FRE grading rubric to determine grades. Unexcused absences or being late to class will be penalized: 1% will be deducted from your grade each time you are late or absent.

Textbooks: Holthausen and Zmijewski (2020), *Corporate Valuation: Theory, Evidence and Practice*, Sommers, Easton and Drake (2021), *Valuation Using Financial Statements*.

Software: Calcbench, TracXn and PitchBook are essential for downloading financial statements and VC funding, as is Excel. GnuCash is an open-source accounting package that we will use to study accounting and the creation of financial statements.

Prerequisites: Graduate standing at Tandon (I will teach the accounting required for the course). You are strongly encouraged to take Professor Dan Gode's classes on Financial Modeling and Business Drivers and Professor Verghese and Kuriyan's class on M&A.

Moses Center Statement of Disability

If you are student with a disability who is requesting accommodations, please contact New York University's Moses Center for Students with Disabilities (CSD) at [212-998-4980](tel:212-998-4980) or mosescsd@nyu.edu. You must be registered with CSD to receive accommodations. Information about the Moses Center can be found at www.nyu.edu/csd. The Moses Center is located at 726 Broadway on the 3rd floor.

NYU School of Engineering Policies and Procedures on Academic Misconduct

- A. Introduction: The School of Engineering encourages academic excellence in an environment that promotes honesty, integrity, and fairness, and students at the School of Engineering are expected to exhibit those qualities in their academic work. It is through the process of submitting their own work and receiving honest feedback on that work that students may progress academically. Any act of academic dishonesty is seen as an attack upon the School and will not be tolerated. Furthermore, those who breach the School's rules on academic integrity will be sanctioned under this Policy. Students are responsible for familiarizing themselves with the School's Policy on Academic Misconduct.
- B. Definition: Academic dishonesty may include misrepresentation, deception, dishonesty, or any act of falsification committed by a student to influence a grade or other academic evaluation. Academic dishonesty also includes intentionally damaging the academic work of others or assisting other students in acts of dishonesty. Common examples of academically dishonest behavior include, but are not limited to, the following:
1. Cheating: intentionally using or attempting to use unauthorized notes, books, electronic media, or electronic communications in an exam; talking with fellow students or looking at another person's work during an exam; submitting work prepared in advance for an in-class examination; having someone take an exam for you or taking an exam for someone else; violating other rules governing the administration of examinations.
 2. Fabrication: including but not limited to, falsifying experimental data and/or citations.
 3. Plagiarism: intentionally or knowingly representing the words or ideas of another as one's own in any academic exercise; failure to attribute direct quotations, paraphrases, or borrowed facts or information.
 4. Unauthorized collaboration: working together on work that was meant to be done individually.
 5. Duplicating work: presenting for grading the same work for more than one project or in more than one class, unless express and prior permission has been received from the course instructor(s) or research adviser involved.
 6. Forgery: altering any academic document, including, but not limited to, academic records, admissions materials, or medical excuses.

Module 1: Overview of Valuation and Accounting

- a. Approaches to valuation and their zones of relevance
- b. Valuing mature firms (public) vs. valuing startups (private)
- c. Introduction to Accounting
- d. Financial Statement Analysis and its use in valuation

Module 2: Building Financial Models for Valuation

- a. Business Drivers: The key drivers of firm value
- b. Financial modeling: Turning operating decisions into financial models

Module 3: Accounting-based Valuation and the Cost of Capital

- a. Reconceptualizing valuation using the Edwards-Bell-Ohlson Equation
- b. Intangible assets
- c. Estimating the cost of debt, equity and assets.
- d. The weighted average cost of capital

Module 4: Robust Statistics and Probabilistic Models

- a. Summary statistics, Plug-in Estimators and Ordinary Least Squares
- b. Robust Statistics and Robust Regression
- c. Factor Models: CAPM, Fama-French and the Hou-Mo-Xue-Zhang Models
- d. Probabilistic models for valuing moonshots (e.g. drug development)

Module 5: Relative Valuation

- a. Valuation in information deserts
- b. Applying of robust statistics to relative valuation

Module 6: Valuation in Multiple Currencies and in Inflationary Environments

- a. The impact of inflation: The Modigliani-Cohn framework
- b. Restating financial statements in a hard currency
- c. Valuing foreign firms and multinationals

Module 7: Private Equity, Corporate Transactions and Illiquid markets

- a. Private Equity: Modeling value creation in Mergers and Acquisitions
- b. Valuation in illiquid markets

Class discussions with Venture Capitalists and Entrepreneurs

Project Presentations

Final Exam

Course Description on the FRE Course Listing Website

This course provides students with the theoretical, analytical, and financial modeling skills needed to value firms ranging from early-stage startups to mature giants. Students will use the material they learn to build and present a comprehensive valuation model for a mature company and will also present their valuations of a wide range of startups to their venture backers and management teams. While there are no prerequisites (the course will cover the basics of accounting and discounting), students must be prepared to spend a significant amount of time outside of class to interact with entrepreneurs and venture capitalists in a variety of time zones around the world over Zoom.