# Modeling Financial Statementslogo horizontal jpg

**Professor Julian Yeo**

**Warning: This course is not optimized for Mac Versions of Excel.**

**Modeling Financial Statements (MSA Spring 2024)**

# COURSE DESCRIPTIONS & SYLLABUS

**Your instructor**

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Consultation hours: Please check LMS Brightspace

# COURSE DESCRIPTIONS

Overview

Forecasting financial statements is critical for many business disciplines. Though financial projections are rarely perfect, a good, flexible, and dynamic financial model enables users to consider different scenarios (typically predicated by historical and anticipated results) and various variables that could potentially lead to different business decisions.

The course will equip you with the skills to design, build, and present your interactive financial models from scratch. By the end of the course, you should be able to understand, analyze, and model spreadsheet-based pro-forma financials for equity valuation purposes and other business contexts. This course synthesizes your knowledge of financial statement analysis, corporate finance, and valuation.

*Part I: Building financial models for various decision contexts*

In Part I of the course, we exploit (i) the linkages between financial statements and (ii) the accounting constructs (that tie financial variables together) in building flexible and dynamic financial models for various decision-making contexts. Contexts that we examine include managing working capital, budgeting for start-up businesses, evaluating strategy, and forecasting financial statements. Part I of the course concludes with building a dynamic financial model that projects the financial statements and their supporting schedules for a publicly listed company.

*Part II: Financial modeling for equity valuation*

Part II of the course focuses on financial models commonly used for equity valuation purposes. The valuation models we examine include the Relative Valuation, Discount Cash Flow, and Abnormal Earnings Growth models.

We must first know how financial metrics are mapped into stock prices to design your valuation model. Through the development of these valuation models from first principles (yes, in this course, we will derive all the models!), we can synthesize, compare and contrast the different valuation models (e.g., Dividend Discount

Model, Free Cash Flows Model, the Residual Income Valuation Model, and Abnormal Earnings Growth Model). It is also through the derivation of these models. We can pinpoint the relationships (or lack thereof) between various accounting variables (such as book value, earnings, EBITDA, etc.) and intrinsic values. To the extent that stock prices and intrinsic values deviate, we will better appreciate multiples such as P/B, P/E, PEG, and other ratios involving stock prices.

This course introduces a new procedure for inferring future financial metrics you need to see from a publicly listed company based on the stock price you are paying. Your dynamic valuation model will enable you to identify and quantify how changes in certain factors (e.g., business risk factors, business outlook, or affiliation with related companies) will impact a company's stock price. As the current stock price implies, you will assess whether future performance is attainable using the dynamic valuation model you build to formulate your buy/sell/hold decision.

# COURSE MATERIALS

There is no prescribed textbook for this course. Learning objectives will be illustrated through a series of class exercises. You may access all course materials, including class exercises and solutions to class exercises on LMS Brightspace.

You may access a detailed listing of the sequence of topics, related materials, and related spreadsheets via LMS Brightspace. Do not forward or share materials with others.

# ASSESSMENTS

Your final grade is calculated based on:

Quizzes 15%

Take-Home Mid-Term Exam 30%

Group Presentation 25%

Take-Home Final Exam 30%

**ACADEMIC INTEGRITY**

Academic integrity and honesty is central to our mission as an educational institution. [The MBA & Graduate Courses Code of Conduct](https://www.stern.nyu.edu/portal-partners/student-engagement/mba-community-experience/code-of-conduct), which all students sign, therefore places particular emphasis on academic integrity. Notably this includes refraining from any method or means that provides an unfair advantage in exams or papers, and clearly acknowledging the work of others in your own work. As a reminder, the [entire Code of Conduct is available here](https://drive.google.com/file/d/1xb-lnuuQRsjNpTK7LYV2bbePlQZErnul/view?usp=sharing).

To help ensure the integrity of our learning community, prose assignments you submit to LMS Brightspace will be submitted to Turnitin. Turnitin will compare your submission to a database of prior submissions to Turnitin, current and archived Web pages, periodicals, journals, and publications. Additionally, your document will become part of the Turnitin database.

**STUDENT ACCESSIBILITY**New York University is committed to providing equal educational opportunity and participation for students with disabilities. Students who are interested in applying for academic accommodations are advised to reach out to the Moses Center for Student Accessibility (CSA) as early as possible in the semester. If you already receive accommodations through CSA, you are encouraged to request your accommodation letters through the Moses portal as soon as possible.

Moses Center for Student Accessibility (CSA), 212-998-4980, [mosescsa@nyu.edu](mailto:mosescsa@nyu.edu), [www.nyu.edu/csa](http://www.nyu.edu/csa)

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. Please reach out if you need help. The NYU Wellness Exchange offers mental health support. You can reach them 24/7 at 212 443 9999, or via the "NYU Wellness Exchange" app. There are also drop-in hours and appointments. Find out more at<http://www.nyu.edu/students/health-and-wellness/counseling-services.html>

**DIVERSITY & INCLUSION**

This course strives to support and cultivate diversity of thought, perspectives, and experiences. The intent is to present materials and activities that will challenge your current perspectives with a goal of understanding how others might see situations differently. To support this approach, this syllabus has been reviewed by NYU Stern’s Office for Diversity and Inclusion to ensure inclusivity and a representative pedagogical approach to learning.  By participating in this course, it is the expectation that everyone commits to making this an inclusive learning environment for all.

# TENTATIVE CLASS SCHEDULE

| **Week** | | | **Topics** | |
| --- | --- | --- | --- | --- |
| *Part I: Building financial models for various decision contexts* | | | | |
| 1. | 1/30 & 2/1 | | Intro to Financial Modeling   * Modeling overview * Modeling and equity valuation overview * Modeling best practice * Excel best practices and shortcuts | |
| 2. | 2/6 & 2/8 | | Modeling Working Capital Management   * Short-term liquidity * Receivable/Payable/Inventory management | |
| 3. | 2/13 & 2/15 | | Modeling Start-up Businesses   * Start-up budgeting * Presenting financial models * Tools for start-up businesses | |
| 4. | 2/20 & 2/22 | | Building financial forecasts   * Set up * Modeling operating performance | |
| 5. | 2/27 & 2/29 | | Building financial forecasts (cont.)   * Modeling asset intensity * Modeling debt * Modeling taxes | |
| 6. | 3/5 & 3/7 | | Building financial forecasts (cont.)   * Mid-Term review | |
| 7. | 3/12 & 3/14 | | Mid-Term Exam | |
|  | 3/19 & 3/21 | | Spring break | |
| 8. | 3/26 & 3/28 | | Building financial forecasts (cont.)   * Modeling equity method investment * Modeling non-controlling interest holders * Modeling equity and number of shares | |
| 9. | 4/2 & 4/4 | | Forecasting statements – a comprehensive case  - 7 steps in building financial statements for a selected listed company | |
| 10. | 4/9 & 4/11 | | Forecasting statements – a comprehensive case (cont.)  - 7 steps in building financial statements for a selected listed company | |
| *Part II: Financial modeling for equity valuation* | | | | |
| 11. | 4/16 & 4/18 | | Connecting Financial Modeling with Equity Valuation   * Stock price and accounting variables * Implementing the Dividend Discount Model * Implementing relative valuation (price-multiples) * Implementing Asset-based Valuation Model |
| 12. 4/23 & 4/25 | | Implementing Residual Income Valuation Model   * Introduction and implementation * Reverse engineering   Formulating buy/sell/hold decision | |
| **13. 4/30 & 5/2** | | **Group Presentations** | |
|  | | **Take-Home Final Exam – due date TBD** | |