BUS 2341 D043

Financial Forecasting

T/TH 4:00 - 5:40, Room: M-304

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Office Hours: by appointment

This syllabus is subject to change based on the needs of the class.

Course Description: This course provides an in-depth analysis of the principles and techniques needed for financial forecasting, advanced financial management, modeling techniques, and their application to decision-making in a firm. The emphasis will be on the forecasting and modeling needs faced by business professionals. Topics include: capital budgeting principles and applications, modeling using MS-Excel including built-in add-ins, multinational finance, and risk management. Additionally, students will learn to model various investments, portfolio theory, and instruments for hedging, such as derivatives, options, etc. Issues faced by business professionals in the fashion, technology, financial services, and professional services fields will be addressed specifically. Individual lab assignments and team projects will require MS-Excel or other spreadsheet programs to create models. Students will need to prepare presentations using MS-PowerPoint and reports using MS-Word.
Prerequisite(s): BUS 2339 OR BUS 2340.
Credit Hours: 3 Credits/4 Hours a week

Text(s): *Fundamentals of Financial Management (FFM)*, 14th Edition
Author(s): Brigham & Houston; **ISBN-13:** 978-1285867977
Further Learning Material: Handouts on Excel and Statistics will be distributed

Course Objectives:
At the completion of this course, students will be able to:

- Use software to build financial models.
- Create sales projections, amortization tables, etc.
- Plan how to maximize a firms use of capital.
- Construct portfolios and use financial markets for hedging.
- Devise ways to address various risk management issues.
- Demonstrate proficiency in MS-Excel, MS-PowerPoint, and MS-Word.
- Research and present a project in which projections and forecasting is central.
- Incorporate issues of international exchange into forecasting models.
- Explain the various derivative instruments, e.g., equity options, and how they can help a business protect itself against risks. Estimate/project the cost of capital.

- Analyze complex projects where the risk of the project changes over time.
- Perform sensitivity analysis and break-even analysis.
- Knowledge of the role of risk in in the economy and in society at large.
- Developing statistical thinking skills which can be applied to many disciplines.
- Integrating compute, mathematical, and financial knowledge to solve interdisciplinary problems.
- Work together in groups with shared responsibilities, developing trust and team ethics.
- Become comfortable with a wide range of databases (information sources), including selfgenerated data, in order to apply theory to real-world situations.

Grade Distribution:

Exam 1	15%
Exam 2	15%
Homework	25%
Project	25%
Participation	20%

Letter Grade Distribution:

>= 93.00	A	77.00 - 79.99	C+
90.00 - 92.99	A-	70.00 - 76.99	C
87.00 - 89.99	B+	60.00 - 69.99	D
83.00 - 86.99	B	<= 59.99	F
80.00 - 82.99	B-		

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Cheating is the unauthorized use or attempted use of material, information, notes, study aids, devices or communication during an academic exercise.
Plagiarism is the act of presenting another persons ideas, research or writings as your own.
Internet Plagiarism includes submitting downloaded term papers or parts of term papers, paraphrasing or copying information from the internet without citing the source, and cutting and pasting from various sources without proper attribution.
For a more detailed explanation, you can find the full Academic Integrity Policy here:
`http://www.citytech.cuny.edu/about-us/docs/CUNY_ACADEMIC_INTEGRITY_6-2011.pdf`

Course Policies:

- **General**
  - Exams are closed book, closed notes.
  - **No makeup exams will be given.**
- **Assignments**
  - Discussion amongst students is encouraged, but students are expected to provide their own solutions to homeworks. **Offering** and **accepting** solutions from others is an act of **plagiarism**.
  - **No late assignments will be accepted under any circumstances**.

- **Attendance and Absences**
  - A student may be absent without penalty for 10% of the number of scheduled class meetings during the semester – i.e., 3 classes.
  - Students are responsible for all missed work, regardless of the reason for absence. It is also the absentee's responsibility to get all missing notes or materials.
  - **Excessive Absence:** If a students class absences exceed the limit established for a given course or component, the instructor will alert the student that a grade of "WU" may be assigned. If a student remains officially registered for a course and never attends that course, a final grade of "*WN" will be assigned. If the student withdraws officially from the course, he/she will be assigned a grade in accordance with the existing withdrawal policy of the College.

Assessment Methods: Each of these learning objectives contains elements of theory, requires technical proficiency, and may be used specifically or more generally. Because of the complex nature of Business Decision Making, "solutions" typically involve several ideas and/or tools. For the same reason, there are often several "correct" solutions. Thus, assessment is based, to some degree, on the ability of the student to integrate and coordinate the ideas and methodologies addressed in class, in the laboratory, and online.

Course Technology: Blackboard. MS Excel. MS Powerpoint

Week	Content
Week 1	**Introduction to MS-Excel I and Overview of the course, how our course is graded, and what is expected of us.** Readings: Instructor Supplied Hand-Outs (ISHO) In this section, we will be introduced to basic MS-Excel functionality. We will learn • Entering formulas • Applying formulas to collections of cells • Linking cells on the same and from different worksheets • Formatting cells for data content, appearance, etc. • Practice in Computer Lab (Laboratory Session) Assignment: Read the MS-Excel Handout and complete the exercises at the end. You will need to download some data from Blackboard.
Week 2	**Introduction to MS-Excel II** Readings: ISHO In this section, we will learn about the built-in add-in packages in MS-Excel. We will learn how to solve a variety of problems including • Statistical • Mathematical • Financial • Logical/Boolean operations • Searching & Sorting • Graphing & Charting • Practice in Computer Lab (Laboratory Session)
Week 3	**Basic Financial Accounting & Ratio Analysis using MS-Excel** Readings: Fundamentals of Financial Management (FFM), Chapter 3 In this section, we will review basic concepts from Managerial Finance by constructing • Balance Sheets • Income Statement • Statement of Cash Flows (all in MS-Excel). • We will learn to use their worksheets to solve a variety of problems. Example: Weekly Inventory & Sales Report (WISR) from a franchise restaurant. (Laboratory Session)

Week 4	**Basic Managerial Finance using MS-Excel I** Readings: FFM, Chapter 4 • In this section, we will construct an MS-Excel version of the DuPont System for analyzing financial ratios. • We will construct a worksheet that allows them to compare different business plans with different fixed costs, variable costs, etc. by graphing a profit line. We will use this tool to study breakeven points, etc. (Laboratory Session)
Week 5	**Basic Managerial Finance using MS-Excel II** Readings: FFM, Chapter 5, Sections 5.1 - 5.11 • In this section, we will use MS-Excel to build various tables involving Time-Value-Money (TVM) issues. • We will forecast value in simple and compound interest accounts, study NPV analysis for a business with a variety of future cash-flows. Costs of capital under various scenarios will be discussed. (Laboratory Session)
Week 6	**Introduction to Forecasting and Modeling** We will discuss the team project, choose teams, and brainstorm. Possible topics will depend on student interest, current events, etc. Readings: ISHO and FFM, Statistics Supplement 1 In this section, we will be introduced to forecasting and modeling. Different paradigms including • Causal scientific • Statistical/econometric • Monte-Carlo will be demonstrated in MS-Excel. We will learn how MS-Excel can simulate randomness and how this can be used to test model performance in unknown circumstances. Projects ideas will be suggested. (Laboratory Session).

Week 7	**Financial Forecasting with Data** Readings: FFM, Statistics Supplement 2 In this section, we will learn how to incorporate financial data, e.g., historical data freely available on the Internet, into their projections. We will calculate • Historical returns and historical volatility • Correlation The idea of "risk" as "deviation" from "expected" will be discussed and applied to issues in business. The "risks" of major importance to businesses, e.g., exchange rates, interest rates, etc., will be addressed. • Team Meetings (Laboratory Session).
Week 8	**Mid-Term (the laboratory session will also have an exam - part of the mid-term exam)**
Week 9	**Putting it together: Simple Portfolio Analysis** Readings: FFM, Chapter 8 A simple 2-Asset Portfolio model will presented and the MS-Excel SOLVER add-in will be demonstrated. By the end of this session, we will be able to • Download stock data from the Internet into an MS-Excel spreadsheet • Calculate the optimum weight of each asset in the portfolio to achieve different aims • Construct the Markowitz Efficient Frontier • Practice in Computer Lab (Laboratory Session).
Week 10	**Modeling Loans and Payments** Readings: FFM, Chapter 5, Sections 5.12 - 5.18 We will learn to construct amortization tables and use them to study borrowing and financial decision making. We will construct one in the lab session. (Laboratory Session).
Week 11	**Forecasting and Capital Budgeting** Readings: FFM, Chapters 10 and 11 Financing models will be constructed and used to project possible scenarios regarding • Business expansion plans • Pro-forma financial statements • Sales estimates • Team Meetings and Project Q/A (Laboratory Session).

Week 12	**Project Analysis with Randomness** Readings: FFM, Chapters 13 and 18 Using derivatives, e.g., futures and options, to hedge against unforeseen events. Modeling Options in MS-Excel.
Week 13	Student In-Class Presentations I (Also in the Laboratory Session)
Week 14	Student In-Class Presentations II (Also in the Laboratory Session)
Week 15	Review for Final Exam (Also in the Laboratory Session)