FINANCIAL MODELLING

International MBA IMBA-EN SEP-2024 S-FI

Area Finance

Number of sessions: 15

Term: Concentrations

Category: regular

Language: English

Professor: **MARYEM EL HASSANI**

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Bachelor's in Finance from the John Molson School of Business and Masters in Finance from IE University. CFA Charterholder and WSO Modeling Certified.

Previously taught Corporate Finance and International Finance at the John Molson School of Business.

Professional experience includes 3 years of M&A Experience at Deloitte, 2 years pursuing Commodities Trading for HeidelberCement Trading, and 4 years as a Senior Equity Analyst for two major buy-side equity funds in Madrid (Beka Asset Management and Chronos Equity). Co-founder of Capitelle.

Office Hours

Office hours will be on request. Please contact at:

For office hours, please e-mail me to schedule a Zoom call.

SUBJECT DESCRIPTION

Financial modeling is an essential skill in all finance related jobs and in the understanding of a business. It entails the process of developing a financial model from start to end, and is a key process in understanding and valuing an enterprise (whether public or private, early or late stage). The goal of this course is to provide the fundamental framework and skill set necessary to build a financial model from scratch, allowing the student to develop their knowledge and skills to apply them thereafter.

The course will combine both theoretical and analytical Corporate Finance / Valuation elements, coupled with practical application in excel. Throughout the term, we will develop and build financial models, tackling all the necessary steps for its completion, and understanding how the different individual financial statements are integrated, before building the final step, the valuation. Finally, the course will touch on more advanced modeling concepts, namely, LBO and M&A modeling.

LEARNING OBJECTIVES

Upon completion of this course, students will be able to:

1) Structure and develop a financial model on excel, understanding the important spreadsheet functions;

2) Analyze and construct the integrated set of financial statements for a Company, based on projections (Income Statement, Balance Sheet, and Cash Flow Statement);

3) Understand how the financial statements are integrated, how to error proof models, and balancing the balance sheet.

4) Perform a Valuation based on the Forecast Financial statements, following both Intrinsic and Relative valuation. Methodologies will include DCF valuation and the Market/Transaction multiples approach.

4) Simultaneously, students will deveop a firm grasp on the concepts underlying the different steps undertaken in the forecasting/valuation process.

TEACHING METHODOLOGY

IE University teaching method is defined by its collaborative, active, and applied nature. Students actively participate in the whole process to build their knowledge and sharpen their skills. Professor's main role is to lead and guide students to achieve the learning objectives of the course. This is done by engaging in a diverse range of teaching techniques and different types of learning activities such as the following:

Learning Activity	**Weighting**
Lectures	40.0 %
Exercises in class, Asynchronous sessions, Field Work	20.0 %
Individual studying	40.0 %
TOTAL	100.0 %

AI POLICY

Generative artificial intelligence (GenAI) tools may be used in this course for [describe acceptable use cases, e.g. research, ideation, generating an outline, proofreading, grammar check, coding, image generation] with appropriate acknowledgement. GenAI may not be used for [describe the limitations, e.g. assignments, group submissions, exams]. If a student is found to have used AI-generated content inappropriately, it will be considered academic misconduct, and the student might fail the respective assignment or the course.

If you are in doubt as to whether you are using GenAI tools appropriately in this course, I encourage you to discuss your situation with me.

Below, a suggested format to acknowledge the use of generative AI tools. Please note that acknowledging AI will not impact your grade.

I acknowledge the use of [AI systems link] to [specify how you used generative AI]. The prompts used include [list of prompts]. The output of these prompts was used to [explain how you used the outputs in your work]

If AI was permitted to use in your assignment, but you have chosen not to include any AI generated content, the following disclosure is recommended:

No content generated by AI technologies has been used in this assignment.

If a student is found to have used AI-generated content for any form of assessment, it will be considered academic misconduct, and the student might fail the respective assignment or the course.

PROGRAM

SESSIONS 1 - 2 (LIVE IN-PERSON)

SESSIONS 1 & 2 – Introduction, Model Structure, Introducing Case Study

Welcome, Course Roadmap, Excel Settings for Modeling, Keyboard Shortcuts, Productivity Add-ins, Formatting Conventions, Modeling Best Practices. Demystifying financial statements and 10ks.

Locating and inputting historical data, Setting up the model structure (modeling roadmap).

SESSIONS 3 - 4 (LIVE IN-PERSON)

SESSION 3 & 4 - Income Statement Forecasting

Top Line Forecasting (different industries/sectors), Segment Level Revenue Build, Discussion on margins. Understanding EBITDA vs. adjusted EBITDA, and profitability indicators.

Modeling shares outstanding and basic and diluted EPS.

SESSIONS 5 - 6 (LIVE IN-PERSON)

SESSION 5 & 6 - Balance Sheet Understanding & Forecasting

Fundamentals of the Balance Sheet

Discussion on Working Capital Schedules (cash conversion cycle and different payment/collection periods). Building a debt schedule.

Forecasting PP&E, building a depreciation waterfall, Retained Earnings Roll Forward Concepts and Modeling Retained Earnings.

Discussion on liquidity, solvency, and operating leverage.

SESSIONS 7 - 8 (LIVE IN-PERSON)

SESSION 7 & 8 - Cash Flow Statement Forecasting & Balancing the model

Understanding and modeling the Cash Flow Statement: CFO, CFI, CFF.

Discussion on balancing the model, sanity checks, circular references.

Modeling a revolving credit line.

Integrating and finalizing the model. Error checking and Balance Sheet balancing.

SESSIONS 9 - 10 (LIVE IN-PERSON)

SESSION 9 & 10 – Intrinsic Valuation – DCF Modeling & Cost of Capital

Valuation concepts: understanding FCFF/FCFE. Enterprise Value vs. Equity Value.

Discussion of theory behind traditional DCF, practicalities of valuation analysis in a real-life environment. Calculation of the TV and its implications.

Modeling the Weighted Average Cost of Capital, discussion and calculation of key inputs and best practices for Beta, cost of debt, cost of equity. Discussion of the use of WACC and its impact on valuation.

Case Study TBD.

SESSIONS 11 - 12 (LIVE IN-PERSON)

SESSION 11 & 12 – Relative Valuation

Overview of trading multiples based valuation, identification and calculation of relevant Ratios including P/E & PEG, EV/EBIT, EV/EBITDA, discussion on Peer Group construction & Valuation Ratios.

Construction of a Comparable Company & Transaction Comps Valuation model.

Case Study TBD.

SESSION 13 (LIVE IN-PERSON)

SESSION 13 – LBO/M&A Modeling

Discussion on the different considerations when developing M&A/LBO models.

Sources & Uses of Cash, Payment waterfalls, M&A EPS accretion/dilution analysis.

SESSIONS 14 - 15 (LIVE IN-PERSON)

Final Exam.

EVALUATION CRITERIA

criteria	percentage	Learning Objectives	Comments
Final Exam	40 %		
Group Work	30 %		
Class Participation	20 %		
Individual Work	10 %		

FAILING GRADE AND REASSESSMENT

When students receive a Fail in a course, they have the opportunity to present themselves for reassessment in order to earn the necessary credits toward graduation.

The reassessment of students should be scheduled between 5 and 10 working days after the review session takes place.

Grades for the reassessment are limited to a Low Pass and Fail.

Both, the initial Fail as well as the grade of the reassessment remain on the transcript. For the purpose of calculating the GPA however, only the grade of the reassessment is to be considered. Students receiving a failing grade in the reassessment of a course will not be able to continue in the program.

BIBLIOGRAPHY

Compulsory

- Simon Benninga. *Financial Modeling.* MIT Press Book. ISBN 9780262027281 (Digital)

BEHAVIOR RULES

Please, check the University's Code of Conduct here. The Program Director may provide further indications.

ATTENDANCE POLICY

Please, check the University's Attendance Policy here. The Program Director may provide further indications.

> According to IE University policy, attendance is mandatory; bachelor's and master's degree students are expected to attend 100% of the sessions as attendance is an essential component of IE´s learning methodology. For this reason, we monitor attendance closely and have established a policy for exceptional reasons for absence.
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> This policy applies to any type of session as planned in the syllabus: live in-person, asynchronous, and live online. Students attending less than 80% of sessions will receive a FAIL for the course. For master-degree programs, students must obtain a Low Pass in the subject's retake, or they will face program expulsion.

ETHICAL POLICY

Please, check the University's Ethics Code here. The Program Director may provide further indications.