FIN-841 Financial Modelling

1. This course is designed to provide a link between theory and practice in Finance. The core objective is to equip students with the required knowledge and skills of building financial models using Microsoft Excel. In order to achieve this objective, students will learn basic programming and modeling skills in Excel and VBA for solving complex financial problems. Students will learn not only the mechanics of modeling, but also how to interpret the numbers and use them in financial decision making. On completion of this course, students would have developed the confidence and skills required to build their own financial models to tackle problems in many areas of finance.

Objectives

2. At the end of this course, students will be able to
    a. Develop a variety of financial models in Excel.
    b. Develop a practical understanding of the financial theory underlying financial models.
    c. Use financial models and theory to address a variety of financial planning problems.
    d. Use and communicate their findings from financial models clearly and concisely.

Outcomes

3. Course Learning Outcomes:

    a. Design and construct useful and robust financial modeling applications
    b. Gain hands-on experience in designing and implementing their own financial models
    c. Learn financial forecasting
    d. Use several of the support tools and techniques in spreadsheet programs
    e. Use and develop spreadsheet based solutions to financial problems

Content

S.No	Lecture Topic
1.	What “Financial Modeling” is, and the core concepts

2.	Excel basics; Features and functions; Formulas, lookups & calculations; Intro to VBA, macros, and user-defined functions
3	Basic financial calculations (time value of money); The three financial statements
4	Projecting the three statements (part 1)
5	Projecting the three statements (part 2)
6	Equity value, enterprise value, and key valuation metrics and multiples
7	Discounted cash flow analysis
8	Portfolio models, calculating efficient portfolios
9	Mid Term Exam
10	Beta and Security Market Line (SML) estimation
11	Variance-covariance matrix; Value at Risk (VAR)
12	Options: Introduction to options; The Binomial option pricing model
13	The Black-Scholes model
14	Fixed income analytics – valuation, duration, and convexity
15	Project Analysis
16	Project Presentation
17	BUFFER WEEK
18	FINAL EXAM

Text and reference books

Main Text: Financial Modeling, 4th Edition, by Simon Benninga, The MIT Press.

Supplemental readings and resources will be provided by the instructor.