



## COURSE OVERVIEW NOTE

## Introduction to FIN 1

The Required Curriculum of the MBA program includes two Finance courses taught sequentially, **Finance 1** and **Finance 2**. The purpose of these courses is to develop a framework for making informed financial decisions to help you, as a corporate manager or entrepreneur, create economic value.

Corporate managers and entrepreneurs confront two main types of financial decisions. The first is whether to invest in a new venture or project. If the answer is yes, the second decision concerns how to fund the investment. These are important and complex decisions that can either result in significant value creation or – if managers do not act optimally – in value destruction.

The objectives of **Finance 1** are to understand the determinants of economic value and to explain how managers and firms can add value through their investment decisions, regardless of how they choose to fund those investments. **Finance 2** in turn focuses on making and understanding the value implications of financing decisions. These decisions include choosing the type of funding (internally generated cash flow, equity, debt, etc.), determining when and how to distribute cash flow to capital providers, and managing the risks associated with their investment and financing choices.

To achieve its goals, **Finance 1** adopts a decision-oriented approach. Instead of passively absorbing a series of lectures, students actively learn the fundamentals of finance and use financial analysis to evaluate and improve real-world business decisions: What investments maximize the long-run value of the firm for its owners? Is a firm's current growth strategy creating value? How much? What rate of return are the firm's investments expected to earn? Is that return sufficient given the risks? What are the value implications of improving business operations? What is a company worth to its owners? And how much is it worth to potential acquirers?

Active learning through the case method demands students' time and attention: students must carefully prepare for each class and think through complex and subtle issues before class. But in return this approach promotes a deep, long-lived understanding of the concepts and tools of finance, and their practical use in promoting value-enhancing decisions. Even students with experience in the application of the tools of finance can expect this approach to deepen their understanding of when and why the tools of finance work.

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This note was prepared by the Finance 1 teaching group for the sole purpose of aiding classroom instructors in Finance 1. It provides analysis and questions that are intended to present alternative approaches to deepening students' comprehension of business issues and energizing classroom discussion. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

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The cases in **Finance 1** bring to life the idea that managers can make better investment decisions if they understand the interplay between the financial, the strategic, and the operating sides of their business. Conversely, strategic, and operating decisions can be more effective if managers understand their value and financial implications. A firm's business model and financial model are not independent: they are intimately related, and it is important to understand their connections.

Finance is quantitative in nature. Thus, **Finance 1** builds not only a powerful set of financial concepts, but also an equally powerful set of quantitative and statistical tools which have direct applications in Finance and other domains of business analysis. These tools range from basic statistical analysis, regression analysis and forecasting, to probability and decision trees. As with financial concepts, **Finance 1** emphasizes the practical application of these tools. Students also develop a working knowledge of spreadsheets, a skill whose usefulness goes well beyond finance and the MBA program.

**Finance 1** is structured as a sequence of three modules:

- **Module 1: Forecasting and Valuing Free Cash Flows.** Students learn to analyze a firm's financial statements to understand its business model and financial health, and to forecast its future financing needs, distinguishing between accounting earnings and cash flows. Students then learn the basics of discounted free cash flow and multiples analysis and net present value. These powerful tools allow us to evaluate and select capital investment opportunities with uncertain cash flows.
- **Module 2: Capital Markets, Portfolio Choice, and Discount Rates.** While *managers* can create or destroy value through their investment decisions and influence the cash flows these investments produce through their operating decisions, *investors* decide whether to provide the capital managers need to implement their projects. Thus, it is important for managers to understand investors' needs, particularly the return investors require on the capital they provide. In this module, students learn the notion of a required return on investment and its determinants. Investors require higher returns on riskier investments. This leads naturally to a discussion of the types of risk that concern investors most.
- **Module 3: Integrated Value-Based Decisions.** This module expands and deepens students' understanding of the ideas developed in the two prior modules, considering: a corporate investor, a growth equity investor, an impact investor, an active investor, and a public markets investor. The module is structured as a sequence of comprehensive cases that expose students to complex financial decisions with significant value implications from multiple perspectives.

## Exhibit 1 Case Lineup, 2024

<i>Case</i>	<i>Concepts</i>	<i>Tools/Perspective</i>
<b>Module 1: Forecasting and Valuing Free Cash Flows</b>		
Butler Lumber, Day 1	- Growing Sales Requires Growing Assets - Growth in Assets Must be Funded	- Ratio Analysis - Sources and Uses of Funds - Cash Conversion Cycle
Butler Lumber, Day 2	- Income $\neq$ Cash Flow	- Percent of Sales Forecasting
Mighty Squirrel	- Developing a Financial Plan	
Project Helios	- Time Value of Money - Discounting and the Best Alternative	- Discounting Mechanics - Net Present Value
Patrimonio Hoy	- Household Borrowing $\neq$ Lending Rate	- Internal Rate of Return
Ocean Carriers	- Using Financial Statements to Compute Relevant, Incremental, Expected, Distributable Cash Flow	- Free Cash Flow Formula
Progyny	- Value of a Going Concern in Steady State	- Perpetuity Value
Hamilton	- Owning an Option is Valuable - Value of Experimentation and Abandonment	- Decision Trees - Scenarios and Real Options
Selling for a Song	- Understanding how Growth and Discount Rates Drive Discounted Cash Flow Value	- Perpetuity Value and Multiples
Tottenham	- Using Multiples to Estimate Value	- Multiples Analysis
<b>Module 2: Capital Markets, Risk and Return</b>		
Cook County, Day 1	- Stock Returns are Approximately Normal - Most Institutional Investors Aim to Maximize Mean and Minimize Standard Deviation of their Portfolios	- Mean Return - Standard Deviation/Volatility
Partners, Day 1	- Investors Want a Portfolio with the Maximum Possible Sharpe Ratio - Maximizing Sharpe Ratio with 1 and 2 Investments	- Portfolio Return - Portfolio Volatility - Sharpe Ratio
Partners, Day 2	- Maximizing Sharpe Ratio with Many Investments - Two Fund Separation	- Portfolio Optimization
Optimalen, Day 1	- Market Efficiency - Security Selection - Risk for a Marginal Investment $\sim$ Beta	- Portfolio Improvement Rule (PIR) - Alpha
Optimalen, Day 2	- Idiosyncratic v Systematic Risk - Benefits of Diversification	- Regression - Beta
DraftKings, Day 1	- Inputs to a Cost of Capital Estimate - Apply the PIR to a Broad Market Portfolio - Time Value of Money + Expected Return Per Unit of Risk x Quantity of Risk	- Asset or Unlevered Beta
DraftKings, Day 2	- Value Loss from a Hurdle Rate that is Too High or Low - Cost of Capital Estimation for an Unlevered Firm	- Cost of Capital
<b>Module 3: Integrated Value-Based Decisions</b>		
MGH and the Enbrel Royalty	- Value to Diversified versus Undiversified Investors - Diversified Investors will Usually Win in An Auction - Markets Drive Idiosyncratically Risky Innovation	
All-American Pipeline	- Use the Project not the Firm-Wide Cost of Capital - Firms Need Not Diversify for Investors Who Can Diversify for Themselves	- Corporate investor
Dicerna	- Probability-Weighted Valuation of Multiple Assets - Term Sheets Create Incentives	- Growth equity investor
Impact Developers Fund	- Share Repurchases to Concentrate Ownership	- Impact investor
Kerr McGee, Day 1	- Transactional, Operational, Capital Allocation Activism - Growth Can Destroy Value	- Activist investor
Kerr McGee, Day 2	- Going Concern v Liquidation v Run-Off Value	- Equity analyst
Peloton	- Comprehensive Review	