

Northwestern University
Executive Management for Design and Construction

Finance and Accounting for Executives
PROJ_MGT 469

Course Objective:

One of the primary responsibilities of the CEO of any corporation is to articulate the company's financial goals as a tangible focus for its business mission and strategy. In theory, these goals are imposed by shareholders through stock market responses to company performance. In practice, they are deeply rooted in the CEO's values and political philosophy, and they draw persuasive power from the depth of that conviction.

Finance and accounting are critical components of any business, but few more so than the business of engineering and construction. Accounting is a method of keeping score in business. It uses dollars as the basic score. A firm could sell a project convincingly, design and/or execute it flawlessly, and have nothing to show for the effort if it doesn't generate an adequate return or worse if there are insufficient funds to compete the job. A firm needs adequate capital initially to start and then sufficient cash flow to operate on an ongoing basis. The firm's clients need financing to build, and the firm's executives must have a good understanding of financial statements and accounting to not only be able to evaluate the firm's financial performance, but also to evaluate the financial viability of its clients and projects.

This course will provide an overview of financial statements, how they work together and are pertinent for a return on investment (ROI) ratio other financial leverage analysis. The course will discuss an actual project and company financing. We will, from the perspective of a construction firm, its client and the lender, study the different types of capital and ways that a project is financed. The viability of project financing will be studied and assessed from the perspective of a development company. We will also look at what goes into the financial side of developing a company budget and three-year plan. The final stages of the course will focus on developing a project pro forma, detailing the impact of the project on the contractor's financial statement, and conducting a risk assessment of the project and its financing.

At the end of the day, the common component in all financial reports is CASH. You will learn how the three financial reports, the balance sheet, the income statement and the cash flow statement are all tied together by CASH. Financial statements document the performance of the firm and its financial health.

By the end of the class you should be able to:

- Read and understand the key financial statements and know the score of the game.
- Understand the impact of operating decisions on financial performance.
- Prepare a division budget and three-year plan and understand the planning process.
- Know the different types of financing available for new developments/ventures.
- Understand the time value of money and the impact on capital investments.
- Prepare an investment memorandum to secure project financing for a new asset.

Week-by-week description of the course:

Week 1 Course Introduction and meeting of members

Overview of the class and grading system. Also, three PowerPoint presentations:

- “Why Keep Score”: A focus on the strategic nature of keeping score!
- EMDC 469 Introduction to Accounting.
- The Role of the CFO – Strategy focused

Finance Quiz: Do you know the basics?

Week 2 Overview of Financial Statements I

Finance & Accounting for Nonfinancial Managers (Chapters 3 & 4)

To manage a business or branch and to make knowledgeable decisions involving return on investment (ROI) and the client’s financial suitability, an executive needs to have a good understanding of financial statements (Income Statement, Balance Sheet and Cash Flow Statement). Financial statements document the performance of the firm and its financial health. Owners, investors, and lenders rely in large part on the financial statements of the firm. Starting with the Income Statement, the class will cover main line items of the statements and how they are linked.

HBR Guide: The Fundamental Laws of Business pp 33-39

Week 3 Overview of Financial Statements II

We will work with construction company financial statements and review what goes into reviewing trends in data. We'll drill down into the components of each category and also talk about percent complete accounting and the profit recognition cycle. Discussion will include examples journal entries and financial statement reviews. We will also revisit accrual vs. cash based accounting and talk about GAAP vs. tax based accounting.

We will review fundamental financial and project review processes and goals.

- Percentage of Completion profit recognition cycle.
- The advantage of identifying issues early
- Being on top of the billing process = cash flow!
- Working capital requirements.

We will revisit the income statement and its relationship to the cash flow statement and balance sheet. The key focus is CASH.

HBR Guide: Profit (not equal to) Cash; and you need both pp 73-82

Homework: Overview of Homework Assignment

Week 4 Tools for Financial Analysis and Business Formation I

Finance & Accounting for Nonfinancial Mangers (Chapter 6)

Different ratio analyses can be used to interpret the financial statements and render them more useful. The class will cover certain profitability and solvency ratios and will show the range of actual statistics from available information from construction firms. Also covered will be how to calculate and interpret return on capital ratios, including cost of capital and net present value. We will focus on the details of what the bonding company is looking for in the financial stability of the firm.

HBR Guide: Using Statements to Measure Financial Health pp 43-55

Case Study Assignment: Ratios Tell a Story 2015 - To provide the perspective additional insight, we will do a case study assessing and comparing the financial performance of thirteen business entities.

Week 5 Tools for Financial Analysis and Business Formation II

Finance & Accounting for Nonfinancial Mangers (Chapters 7 & 8)

We will learn from the perspective that you've been promoted to VP of the Midwest Division and have been asked to prepare a one year budget and three year business plan. What are the key things to focus on? Why do firms do a budget and what makes a good budget. We'll talk about how the allocation of corporate overhead works and how to deal with the issues of uncertainty in winning work and delays in the start of projects. Also, key focus on Breakeven Analysis. Breakeven analysis is a simple yet powerful approach to profit planning the illuminates the relationships among sales, fixed costs, and variable costs.

HBR Guide: Learn to Speak the Language of ROI pp 105-111

Review Case Study: Ratios Tell a Story

Homework - Overview of Homework Assignment

Week 6 The Time Value of Money

Finance & Accounting for Nonfinancial Mangers (Chapters 11 & 12)

Introduction and review of the cost value of money. The concepts of compound interest, present value of a dollar, present value of an annuity the compound sum of an annuity and the internal rate of return will be outlined and discussed. We will review the how a company's discount rate or "Hurdle Rate" factors into projects getting assessed and approved.

HBR Guide: Practical Tools for Management Decisions pp 113-123

Take Home Exam: *The assignment will be a take home Accounting Test and Review. Test/review will cover of the accounting and finance concepts covered in the first five classes. Tests will be due next class (Week 7). Results will be covered at the beginning of class in Week 8.*

Week 7 El-Con Class Case Study and Project Funding

El-Con Case Overview: Goal of class will be an in-class discussion of the review of the case and potential solutions. Class will result in specific analysis to be conducted as homework and presented in Week 10 as a fairly comprehensive financial analysis of a construction company.

El-Con case is about a utility work focused construction firm (El-Con) that is a wholly-owned subsidiary of a large utility company. The primary question in the case is whether or not a large piece of equipment should be purchased by El-Con with discussion of how it could be financed. Analysis of the situation can include several of the topics previously discussed in the class.

Week 8 Overview of Financing and Leverage

Finance & Accounting for Nonfinancial Managers (Chapters 13 & 16)

Goal of class is to provide an overview of financing and leverage in general and the different types of financing structures available for new developments / ventures. Class will introduce the “capital stack” (range of tranches of debt and equity) used in providing capital to fund a project, or new ventures in general. Rationale for leverage in general will be addressed, with examples of highly levered and under-levered companies. Different types of equity and debt (including preferred / common equity, syndicated bank debt, traditional bank debt, bonds, on balance sheet funds, etc.) that can comprise the capital stack will be addressed. Actual capital stack for development / new venture will be provided and explained. Financial market overview, including its volatile nature, will be covered as well.

Introduction and assignment of case studies from HBR Guide to Finance Basics for Managers. Short case study presentations to be made in Week 9.

Week 9 Project Financing Perspectives

Finance & Accounting for Nonfinancial Managers (Chapters 14 & 15)

Goal of class is to address project financing from the perspectives of the owner, contractor and lender as well go over logistics of the financing and funding process. Sources and Uses statement will be introduced and explained. Short case study on a project / venture financing will be analyzed from perspectives of owner, lender and general contractor.

Understanding what the owner and the lender care about when entering into a project financing is important background for the construction firm. And, an understanding of the viability of the project, its financing and funding process are important perspectives for the construction firm. Class will cover areas of

importance to owner; lender and construction firm and go through case study example. A Sources and Uses statement ties the entire budget and all funding together for the project – and serves as a balancing mechanism. Class will go over sources and uses example. Finally, an overview of the logistics of financing and funding a project will be covered, from the credit agreement, draw process and close out process.

Week 10 EI-Con Case Presentations

Students will present their work and solutions on the EI-Con to the class. Presentations will be considered an important part of class grade.

Grade Determination:

Take Home Examination	30%
EI-Con Case Study Presentation	30%
Ratios Tell a Story Assignment	10%
Homework	20%
Other	10%

NOTE: *This course description explains the essence of the material covered. Canvas is the best source for the most up-to-date information about specific details for any given offering of the course.*

Texts:

1. William G. Droms and Jay O. Wright, *Finance and Accounting for Nonfinancial Managers: All the Basics You Need to Know*, Jun 2, 2015 (Paperback: \$21.24 on Amazon)
2. Harvard Business Review, *HBR Guide to Finance Basics for Managers (HBR Guide Series)*, Oct 2, 2012 (Paperback: \$12.37 on Amazon)