

MT5011: Finance for Engineering and Technology Management

Description:

The ultimate aim of any business is the generation of wealth, and the graduate programs in Management of Technology (MOT) aims at using Technology effectively to generate wealth. Understanding how to interpret financial data (e.g., statements and balance sheets) and being proficient with numbers is a crucial capability for a technology manager to be able to add value to a company and better manage his division or company. The objective of this subject is to train technical professionals to grasp the "big picture" of finance and understand important financial concepts. Students will learn why managers need to be proficient with numbers and learn how to read and analyze financial statements. The course will equip CXOs and managers with finance knowledge to better manage a business division or company.

Syllabus:

The goals of this module are set for learning the fundamentals of strategy in business, technology and IP, as well as the skill training of information/intelligence analysis. This module assigns projects to participants and evaluates their learning outcomes both in knowledge and skill, which include:

1. Introduction to Financial Statements
2. Profit & loss account
3. Balance Sheet
4. Cash Flow Statement
 - Difference between profit and cash flow
 - Why cash is king
 - Capital Expenditure /Working Capital
5. Analysis and interpretation of financial statements
 - Judging financial health
 - Ratio Analysis
6. Financial Projections and budget
 - Assumptions
 - Break-even

7. Special Topics

- Industry Focus – more in-depth discussion of financial statements in 2-3 industries such as Software, Manufacturing, IT Services (depends on students mix)
- Foreign Exchange – impact on financial performance
- Budget Variances - how to take corrective actions and plan for contingencies
- Startup 101 for Technopreneurs

8. Introduction to Capital Project evaluation

- Discounted cash flow
- Various techniques-payback, internal rate of return and net present value

9. Project Presentation

Students to be divided into groups of 5-6 and complete a project on either (a) analyzing financial statements of a public company or (b) do a 5 year financial projection of a company

References:

Papers and chapters from books will be assigned for each class and for the student team analysis.

1. The Definitive Guide to Business Finance: What smart managers do with the numbers (2nd Edition) by Richard Stutely
2. The Accounting Game: Basic Accounting fresh from the Lemonade Stand by Judith Orloff & Darrell Mullis
3. Startup – A Silicon Valley Adventure by Jerry Kaplan