Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
IND423	Finance Engineering	8	3	0	0	3	5

Prerequisites	
Admission Requirements	

Language of Instruction	French
Course Type	Compulsory
Course Level	Bachelor Degree
Objective	The aim of this course is to equip students with knowledge and skills concerning fundamentals of financial management, financial instruments and portfolio management.
Content	- Enterprise cycle. Review of balance sheet and income statement. - Sources-uses statement. Cash flow statement. - Applications of sources-uses statement and cash flow statement. - Financial ratio analysis. Profitability analysis. Liquidity analysis. Financial structure. Market ratios. - Financial budgeting. Breakeven analysis and leverages. - Financial forecasting models. Financial mathematics. - Risk analysis in investment decisions. Estimating risk of a portfolio. Diversification. Relationship between risk and return. - Modern portfolio theory (MPT). Capital asset pricing model (CAPM). - Measuring the performance of a portfolio. - Value at risk (VaR). - Net present value. Internal rate of return. Payback period. Profitability index. Cost of capital. - Evaluation of stocks and bonds. - Calculating enterprise value using discounted cash flow analysis. - Introduction to financial options. Option types.
References	- Weston, J.F., Brigham, E.F., "Essentials of Managerial Finance", Ninth Edition, The Dryden Press, 1990. - Zutter, C.J., Smart, S.B., Principles of Managerial Finance, Fifteenth edition, Pearson, 2019.

Theory Topics

Week	Weekly Contents
1	Enterprise cycle. Review of balance sheet and income statement.
2	Sources-uses statement. Cash flow statement.
3	Applications of sources-uses statement and cash flow statement.
4	Financial ratio analysis. Profitability analysis. Liquidity analysis. Financial structure. Market ratios.
5	Financial budgeting. Breakeven analysis and leverages.
6	Financial forecasting models. Financial mathematics.
7	Risk analysis in investment decisions. Estimating risk of a portfolio. Diversification. Relationship between risk and return.
8	Capital asset pricing model. Modern portfolio theory. Measuring the performance of a portfolio.
9	Midterm
10	Net present value. Internal rate of return. Payback period. Profitability index. Cost of capital.
11	Global bond markets. Evaluation of stocks and bonds.
12	Calculating enterprise value using discounted cash flow analysis. Credit management.
13	Introduction to financial options. Option types.
14	Presentation of term projects.