

# CERTIFICATE PROGRAM IN FINANCIAL ANALYTICS

## Introduction

Data Driven Decisions are becoming necessity for more and more business as operating environments are faced with more complexity, increased quality and quantity of data around an ever-increasing numbers of decision variables. These changes have put new demands to further develop the analysis techniques in order to benefit from the available dataset. Finance has traditionally been a leader in the area of data driven decision making. An increased quantity and quality of data around decision variables have presented new avenues of application of statistical and analytic techniques in the field. These techniques are used for re-examining existing theories as well as for developing much comprehensive and informed decision-making processes. Use of analytic methods in finance promises to provide a much detailed and robust understanding of the central question i.e., the “why” and the “how” of value implications of decision alternatives.

This program is for managers, business professionals, entrepreneurs, officers, working executives as well as those who want to make a career in the field of finance and management.

## Objectives of the Program

The program aims at developing,

1. Aptitude to solve problems in the area of business finance with the help of data and analytics
2. Skills to apply analytic techniques for optimization and financial planning
3. Analytic perspective on capital budgeting, investment, risk management, and pricing decisions
4. Capabilities to contribute in data driven decision making environment

## Pedagogy of the Program

Live lectures, Case discussions and development of problems, Hands-on model building and data analytic

## Indicative Content of the Program

- Day One
  1. Quantitative analysis techniques - (Descriptive, Distributions, Regression)
  2. Optimization techniques - (LPP/Solver/Simulation)
- Day Two
  1. Corporate finance: Time Value of Money, Risk & Return, Asset pricing models, Leverage, Cost of Capital
  2. Forecasted income statement, Cash flow analysis & Capital Budgeting
- Day Three
  1. Identification of potential sources of risk: Macro analysis, Sensitivity analysis,
  2. Risk modelling: Scenario Analysis, Monte-Carlo Simulation
- Day Four
  1. Investment management: Modern Portfolio Theory, Arbitrage Pricing Theory and its extensions,
  2. Investment strategies: Selection and Timing skills, Investment Policy Statement, Active and Passive Investment strategies
- Day Five
  1. Investment process: Macro analysis, Portfolio construction and benchmarking
  2. Investment Analytic: Optimization, Back-testing, Performance analytic
- Day Six
  1. Econometrics for Credit Risk Analytic techniques: EV Distributions, Discriminant, Logistic Regression
  2. Different measures of credit risk, traditional credit models
- Day Seven
  1. Probability density function of credit losses, PD, LGD
  2. Structural models and reduced form models.
- Day Eight
  1. Nonlinear Optimization and Evolutionary Solver
  2. Pricing Analytic

**Program Director: Prof. Anand, Prof. Prasenjit Chakraborty & Prof Amit Sachan**

**Fees (Per Candidate):Rs 67800+GST (Non Residential-In Campus),Rs 51000+GST(Online)**

**Proposed Dates: From 5<sup>th</sup> December 2020 onwards.**