

# NATIONAL INSTITUTE OF INDUSTRIAL ENGINEERING (NITIE), MUMBAI



Presents Online MDP #121435 (course code) on

## APPLICATION OF TIME SERIES MODELING FOR BUSINESS FORECASTING

### Introduction

The field of econometrics using advanced tools and techniques has emerged over the last decade. The intention of this course is to help practitioners cut through the vast literature on time series models, focusing on the most important and useful empirical concepts. This course is expected to develop a sound background in quantitative analysis of time series. It offers a guide to analyze and model time series properties of economic and financial data using STATA. The course is designed for researchers and practitioners in the private and public sector. Our aim is to provide a road map from academic perspective to the research issues that are important for researchers and practitioners.

### Objectives

This short course aims to discuss a broader aspect of time series modeling on economic and financial data with advanced tools and techniques. It covers applied econometric tools relating to univariate and multivariate economic and financial time series using STATA. The course aims to develop insights of financial models with univariate and multivariate time series analysis using stock market indices.

### Course Content

- 1) Fundamentals of Business Time series
  - a. Visualization of Business Time series data and Analysis of Trends and Seasonality
  - b. Testing time series properties of Business Data Structure
- 2) Analyzing and forecasting Index of Industrial Production (IIP) with its trends. Analyzing the importance of Exogenous Business Indicators on IIP. Importance of forecasting IIP, Commodity Price Index and Capital Structure in Business Decision making.
  - a. Workout: Econometric Modeling of Industrial Index of Production and Commodity Prices using STATA
- 3) Analyzing the patterns of volatility and the structure on macroeconomic indicators, a case study of Industrial Index of Production and Capital Market:
  - a. Workout: Econometric Modelling of volatility on Index of Industrial Production and Exchange Rate.
- 4) Macroeconomic Modeling using Multivariate Econometric Models:
  - a. Workout: Simultaneous Equation Models and its application to Analyze Macroeconomic Variables like money, inflation, exchange rate and its impact on company performance with STATA..

### Learning Outcomes

- Understand Time Series properties of Financial and Economic data
- Theoretical and empirical implications of Financial and Economic Time series
- Univariate Time series modeling and forecasting.
- Multivariate Time Series modeling and forecasting

### Pre-requisites

- Personal Computer
- Basic knowledge of basic statistics and basic econometrics is expected
- However, the course is design in such a way that participants with little knowledge in statistics and zero knowledge in computer language can easily manage to learn financial time series modeling in this course

Date : 22nd March to 26th March 2021  
Duration : 5 classes, 3 hrs/class: 15 hrs total

Participants : Faculty, Research scholars, Professionals from finance, economics & related functional areas

Delivery Mode : Web based Sessions (Zoom/MS Teams/WebEx)

Program Fee: Rs 9027/- per participant

Registration link : <https://tinyurl.com/y4s7jkd9>

Pay via link : <https://www.onlinesbi.com/sbicollect/icollecthome.htm?corpID=370600>

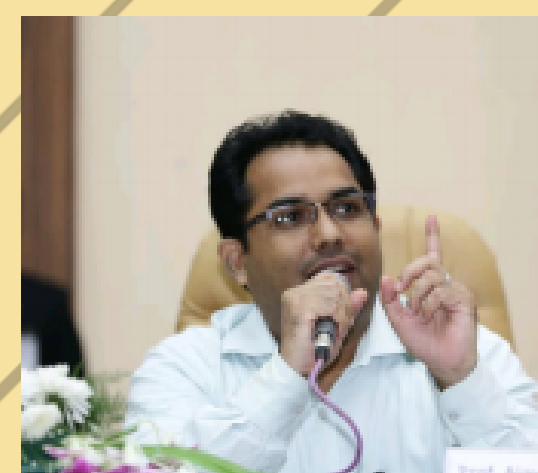
### FACULTY TRAINERS:



Dr. Mainak Mazumdar  
Assistant Professor  
(Finance and Economics)



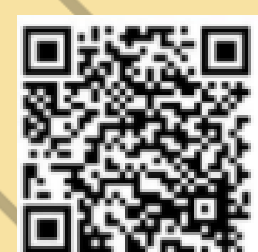
Dr. Poonam Singh  
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