

# jaro education





# Reinventing Business Operations with Data Analytics 2023

Global Online Certification Course

### **Course Schedule**

- 9th September 2023 15th October 2023
- Every Saturday and Sunday
- 5:00 PM 7:30 PM IST
- 30 hours duration

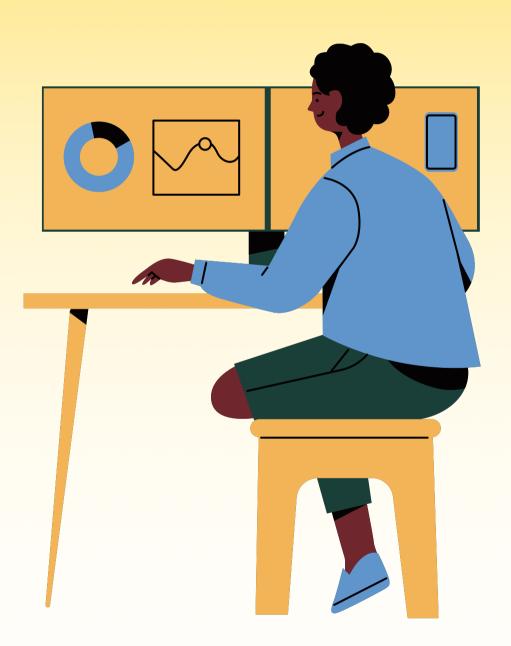
**Registration Deadline** 2nd September 2023



## **About the Course**

ज्ञानम् जयित सर्वत्र **M U M B A** I

- Business analytics uses statistical and quantitative methods, along with technology, to make informed business decisions.
- It involves collecting, organizing, and analyzing data to identify patterns and trends.
- Analytics is crucial for companies like HP, IKEA, Google, Adidas,
   JP Morgan, and Disney to drive profitable decisions.
- NITIE, Mumbai is offering the Global Online Certification
   Course on Business Analytics in collaboration with Prof. David
   Simchi-Levi from MIT.
- The course focuses on applying analytics to drive supply chain value and supports India's logistics sector development.



### **Course Content**



#### **Week 1: Introduction to Business Analytics**

- Course Overview
- Introduction to Business Analytics
- Digital Transformation

#### **Week 2: Prescriptive Analytics**

- Optimising Complex Decisions
- Linear Programming Formulation
- Demonstration of the Spreadsheet Optimization Method
- Shadow Price
- Sensitivity Analysis

#### **Week 3: Predictive Analytics**

- Linear Regression
- Logistic Regression
- Classification & Regression Trees
- K-Nearest Neighbor
- K-Means Clustering
- Bayesian Analysis
- Error Types

#### **Week 4: Integrated Analytics**

- Neural Network
- Variable Selection Techniques
- Categorial Variables
- Model Selection
- Integration of Techniques

#### Week 5: Case Study-I

- Case study: Supply Chain
- Unified View of Demand
- Supply Chain Segmentation
- Smart Planning & Execution
- Supply Chain Resiliency

#### Week 6: Case Study-II

- Case study: Pricing
- Online and Offline Retailer examples
- Estimating Lost Sales
- Price Elasticity of Demand
- Error Estimates
- Pricing Decisions
- Course Summary

# Course Highlights and Structure





### Structure

- 9th September'23 15th October'23
- 5:00 PM 7:30 PM IST || Saturday Sunday
- 30 Hours Course | 12 Sessions (2.5 Hours/Session)
- Mode of Instruction Online Platforms
- Lecture Attendance and Course Participation will be the criteria for Course Completion.



- Lecture recordings will be provided for 1 week.
- Participants will get the opportunity to interact live with Prof.
   David Simchi-Levi.
- Learn key concepts & trends through exhaustive cases & recent happenings in the industry.
- Lecture slides and supplementary material after each session.
- Upon completion of the course, all registered participants will receive a Certificate of Completion from NITIE signed by Prof. David Simchi-Levi and Prof. Manoj K. Tiwari - Director, NITIE Mumbai.





#### **Focus**

- The journey for Data-Driven Transformation
- Optimising Complex Decisions
- Machine Learning Techniques
- Model selection and integration of techniques



## Outcomes

- Develop critical thinking about the data analyses
- Identify opportunities for creating value using business analytics
- Estimate the value created using business analytics to address an opportunity

## **Course Fees**

### **For Individual Registrations**



Category	Fee Category	Registration Fee*	Early Birds**	- Register here
Indian	Student	Rs. 8000/-	Rs. 7,000/-	
	Academician/ Faculty	Rs. 18,000/-	Rs. 16,000/-	
	NITIE Alumni	Rs. 22,000/-	Rs. 20,000/-	
	Industry Professionals/ Others	Rs. 24,000/-	Rs. 22,000/-	
Foreign	Any	USD 450/-	USD 425/-	

#### For Bulk Registrations from One Organization

Category	No. of Participants	Registration Fee	Early Birds**	
Students	11 and above	Rs. 7,000/- per participant	Rs. 6,000/- per participant	Register here
Industry Professionals	11 and above	Rs. 20,000/- per participant	Rs. 18,000/- per participant	

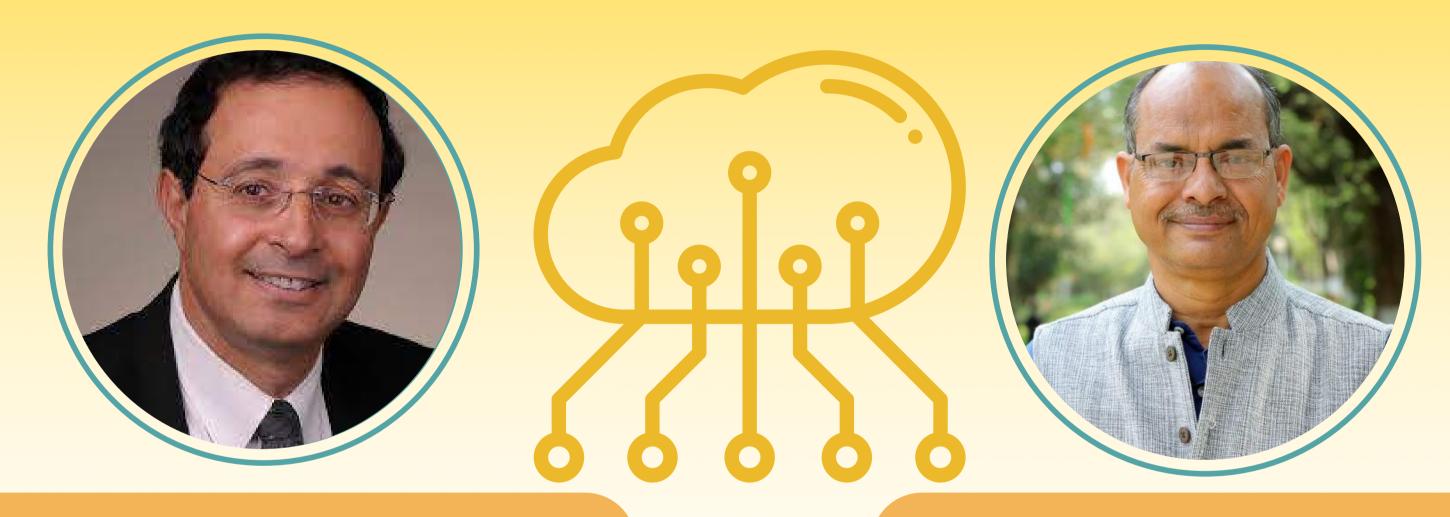
<sup>\*\*</sup>Early Bird Offer - Register on or before 5th August 2023



<sup>\*</sup>Registration Fee inclusive of all taxes. Convenience fees may apply.

# Course Instructed by





**Prof. David Simchi-Levi** 

Professor – Business & Supply Chain Analytics, MIT, USA Prof. Manoj Kumar Tiwari

Director,
NITIE Mumbai

# Prof. David Simchi-Levi

- Prof. David Simchi-Levi is the most renowned Professor and Thought Leader in the field of Supply Chain Management and also serves as the Editor-in-Chief of Management Science.
- He is the recipient of the prestigious INFORMS Impact Prize 2020 for his work on Supply Chain Resilience.
- His book, "Designing and Managing the Supply Chain" (with P. Kaminsky and E. Simchi-Levi) is a staple across B-schools for their Supply Chain Management courses.
- He is the founder and chairman of LogicTools which provides software solutions and professional services for supply chain optimization. The company has provided decision support systems to clients such as Caterpillar, ConAgra, Kraft Foods, Mercer Management, Ryder, SC Johnson, UPS, U.S. Postal Service, Walgreens, etc. and was acquired by IBM.
- Profile on MIT website <u>Prof. David Simchi-Levi</u>
- LinkedIn Profile: <a href="https://www.linkedin.com/in/david-simchi-levi-3045026/">https://www.linkedin.com/in/david-simchi-levi-3045026/</a>





**Prof. David Simchi-Levi**Massachusetts Institute of Technology, USA



# Prof. Manoj Kumar Tiwari

- Prof. Manoj K Tiwari, Director-NITIE, is on-lien from his post as Professor, Department of Industrial and Systems Engineering at the Indian Institute of Technology, Kharagpur.
- He has been ranked-1 among top 100 individual researchers across the world who had published research articles in International Journal of Production Research (1985-2010), the top leading author for Supply Chain Analytical Techniques (Computer & Industrial Engineering), among Top 20 most productive authors in the area of Production and Operations Management in the last 50 years (Int. Journal of Production Economics, 2009) and rated 2nd among many researchers working in Logistics and Supply Chain Management in India (Analysis of the logistics Research in India-White paper published in TU Dortmund University, Dortmund Germany-2012).
- He is the recipient of "Most Influential Researcher Award" in the domain of Operations and Supply Chain Management.
- He was recently awarded the David F. Baker Distinguished Research Award from the Institute of Industrial & Systems Engineers (IISE, USA).
- Optimization, Simulation and Computational Intelligence are the main techniques adopted by Prof. Tiwari to automate the decision support system for complex and large scale problems in Manufacturing and Logistics System.
- Profile on NITIE Website Prof. Manoj Kumar Tiwari
- LinkedIn Profile <a href="https://www.linkedin.com/in/manoj-tiwari-5050a634/">https://www.linkedin.com/in/manoj-tiwari-5050a634/</a>





Prof. Manoj K. Tiwari
Director, NITIE Mumbai



## About National Institute of Industrial Engineering (NITIE)



- Established in 1963 with UNDP and ILO assistance.
- Ranked 7th among Indian management schools in 2023 by NIRF.
- Specializes in industrial management, supply chain, and operations.
- Focuses on transformative education and industry-inspired research.
- Strong connections with private, public, and academic sectors.
- Aims to help Indian businesses gain global presence.
- Dedicated to all dynamic sectors of the Indian economy.
- Aligns vision and activities with current and future needs.



### **Success of Previous Courses**



NITIE had successfully completed 8 versions of the Global Online Certification Course on Supply Chain Digitization & Management, End-to-End Supply Chain Transformation through digitization and Business & Operations Analytics in association with Prof. David Simchi-Levi in 2021-22.

The courses received an overwhelming response with 15000+ individuals from reputed national and international organizations. Some prominent academic institutions include the IITs, IIMs, IIFT, University of London, University of Warwick and some eminent organizations include P&G, HUL, GE, ITC, Amul, Deloitte, General Mills, IBM, Titan, Reliance, PwC and many more.



- Supply Chain Digitization and Management
- Business and Operations Analytics 2021
- End-to-End Supply Chain Transformation through Digitization
- Competing in Business through AI-Powered Supply Chains 2022

- Business and Operations Analytics 2022
- Supply Chain & Demand Analytics
- Data-Driven Supply Chain Transformation
- Business Analytics: From Data to Insights and Decision Making-2023

## **Participated Organizations**



### **Educational Institutes**

### Corporates









# PM Gati Shakti Initiative

The PM Gati Shakti - National Master Plan was announced in 2021 with an aim to celebrate 75 years of a progressive India and the glorious history of its people, culture, and achievements. The objective is to break departmental silos and lay the foundation for holistic infrastructure development to address the multi-modal and last-mile connectivity issues pertaining to supply chain and demand management.

The Global Online Certification Course on Business Analytics is exclusively curated to provide a roadmap for industry practitioners to understand the cardinal aspects of technology trends, digitisation, analytics, and automation to reinvent the supply chain.

This course aims to provide participants with a profound understanding of leveraging technology to improve operational efficiency and decision-making across the supply chain to accelerate the idea of the Gati Shakti Master plan



# **Coordinating Team**



#### Contact us:

• Prof. Veepan Kumar +91 88269 13081

• Prof. Amit Kumar Das +91 96355 66086



# Faculty Coordinator from NITIE, Mumbai

- Prof. Rofin T M
- Prof. Maheswar Singha Mahapatra
- Prof. Vijay Kumar Manupati
- Prof. Veepan Kumar
- Prof. Amit Kumar Das
- Prof. Jasashwi Mandal
- Prof. Ramesh Kumar

#### **Student Coordinators from NITIE:**

- Mr. Rony Mitra
- Ms. Puja Sarkar

Click here for FAQs.

For all queries, please E-mail to: goc@nitie.ac.in