MODELLING AND ANALYTICS FOR SUPPLY CHAIN MANAGEMENT

PROF. ANUPAM GHOSH
Department of Management
IIT Kharagpur

PROF. KUNAL KANTI GHOSH
Department of Management
IIT Kharagpur

INTENDED AUDIENCE: Students from Management, Industrial and Systems Engineering, Mechanical Engineering, and related disciplines.

INDUSTRIES APPLICABLE TO: Tata Group of Industries, Multinationals, L&T, and similar manufacturing and service organizations including IT companies

COURSE OUTLINE:
This course focuses on the application of analytical techniques for determining effective solutions to problems associated with supply networks considering the constraints of demand and supply. The objectives of the course are to understand the nature of supply networks, goal of supply networks and explain the impact of analytics based supply chain decisions on the success of a firm. The coverage includes key metrics that track the performance of the supply network in terms of each driver, identification of the key factors to be considered when designing a distribution network and use of analytical techniques for developing a framework for network design.

ABOUT INSTRUCTOR:
Prof. Anupam Ghosh obtained Masters Degrees with specializations in Supply Chain Management, Accounting, and Commerce. His PhD is on Information Visibility in Supply Chain. He has about 13 years of teaching experience in Supply Chain Management, Supply Chain Analytics, and International Marketing. He was a Visiting Scholar to Bentley University, Waltham, MA, USA during 2004-05.

Prof. Kunal Kanti Ghosh has over three decades of experience at various levels in the automobile industry. He was the "Corporate Initiatives Head" of Tata Technologies Ltd and was adjudged the Best Young Materials Manager by the Indian Institute of Materials Management in 1986. He also received the Best young Manager’s Award from All India Management Association in 1990.

COURSE PLAN:
Week 1: Introduction to Modeling and Analytics in Supply Networks
Week 2: Supplier Selection Analytics
Week 3: Transportation Modeling and Analytics
Week 4: Warehousing Modeling and Analytics
Week 5: Strategic Performance Improvement
Week 6: Inventory Analytics - I
Week 7: Inventory Analytics - II
Week 8: Inventory Analytics - III
Week 9: Inventory Analytics - IV
Week 10: Modeling Coordination in Supply Chains
Week 11: Risk Analytics in Supply Network Design
Week 12: Design and Modeling the global supply chain

TYPE OF COURSE: Rerun | Elective | PG
COURSE DURATION: 12 weeks (18 Jan’ 21 - 9 Apr’ 21)
EXAM DATE: 25 Apr 2021