



राष्ट्रीय प्रौद्योगिकी संस्थान कालिकट  
National Institute of  
Technology Calicut



AICTE Training and Learning (ATAL)  
Academy Sponsored  
Faculty Development Programme on  
PM GatiShakti Thrust Areas



# DECISION MODELLING IN TRANSPORTATION AND LOGISTICS INDUSTRY

February 27  
to  
March 03,  
2023



Organised by  
**Centre of Excellence in Logistics and Supply Chain Management**  
National Institute of Technology Calicut  
NIT Campus P.O, Kozhikode – 673601, Kerala  
<https://nitc.ac.in/coelscm/>

Coordinator | Co-Coordinator  
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## CENTRE OF EXCELLENCE IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT, NIT CALICUT

The Centre of Excellence in Logistics and Supply Chain Management (CoELSCM) has been launched at NIT Calicut focusing on the Logistics Human Resource Development and Capacity Building to the realization of the objectives of the PM Gati Shakti scheme.

This Centre of Excellence is a multidisciplinary centre that works across various research groups such as Industrial Engineering, Transportation Engineering, Remote Sensing and Geospatial Technology, Construction Management, and Cyber Security. Faculty members of NIT Calicut in the above research groups and their research team will be a part of this centre. This team will focus on new and emerging technologies with multidisciplinary and translational research relevant to achieving the objectives of the PM Gati Shakti scheme to improve the operational efficiency of the supply chain and minimize logistics costs. The centre has initiated steps in disseminating advanced knowledge and promote digitisation, analytics, IoT applications, Artificial Intelligence and Machine Learning applications among the practising professionals in the organizations involved in the logistics sector and will share the best practices. More about the centre is available at <https://nitc.ac.in/coelscm/>

### Mission, Vision, and Objectives of the Centre of Excellence

Mission: Create an association between academia and industry to promote cutting-edge research, knowledge creation, ground breaking innovations and capacity-building programmes in the Indian logistics and supply

chain sector in order to make it effective and efficient.  
Vision: To transform Indian logistics and supply chain sector to boost the Indian economy's transformation into a global economic power.

### Objectives:

- Strengthen research in the area of logistics and supply chain sector focusing on capacity building to promote PM Gati Shakti Scheme.
- Enhance competitiveness of the Indian transportation and logistics industry
- Build a platform for knowledge creation and exchange in the logistics and supply chain domain.
- Establish research collaborations with professional bodies, academic institutions and industries for formulating innovative solutions in logistics and supply chain domain.

### About the Institute and Calicut City

The Institute was initially established as Calicut Regional Engineering College (CREC), which was the forerunner to the present National Institute of Technology, Calicut (NITC) in 1961. NIT Calicut is one of the pioneering engineering institutions of the country, which has contributed many outstanding engineers in India and abroad. It offers eleven UG programs, Thirty PG programmes, and doctoral programmes in various fields of Science, Technology, Engineering, Management, Planning and Business Administration. Calicut is a major knowledge Hub of Kerala and is the hometown of many institutions of national importance including NITC, IIMK, DOEACC, CWRDM etc. Calicut is connected by direct trains/road/air to all major cities in India. NITC is located about 22 kilometers north-east of Calicut City.

### PROGRAMME DURATION AND PEDAGOGY

The Online Faculty Development Programme is for a period of one week and will focus on concepts/theory/research avenues/emerging trends in the application of decision modelling techniques for the problems associated with the Transportation and Logistics Industry.

Minimum 80% attendance is mandatory for issuing the certificate. Assessments will be made every day and an overall assessment on the concluding day of the FDP.

The aim of this programme is to introduce the basics concepts in decision modelling techniques, an introduction to transportation and logistics industry in India. The programme will also deal with transportation systems, problems associated with the transportation and logistics industry, emerging trends and research avenues in transportation and logistics sector of the country, as well as, the proactive roles of academicians to strive to achieve the goals of PM Gati Shakti.

At the end of the programme, the participant will be able to

1. Appreciate the role of transportation and logistics in the operational efficiency of Indian Supply Chain;
2. Identify solution approaches to the transportation and logistics problems;
3. Apply modelling techniques in solving problems associated with transportation and logistics;
4. Gain exposure in knowing Opportunities and Challenges of transportation and logistics industry in India.

### COURSE CONTENTS

The course will cover the conceptual aspects related to transportation and logistics industry in India.

- Transportation in a supply chain and Transport Sector in India
- Overview of transportation logistics - Transportation management, Logistics costs, Transportation modes
- Cost analysis of transportation system - Transportation cost components, cost function and Factors that influence transportation cost

- Network Design of transportation system - Classification of transportation network
- Logistics transportation problems with linear programming
- Assignment and transshipment problems with linear programming
- Logistics customer services
- Multimodal Transportation: Opportunities and Challenges
- Overview of Industry segments in India, Future trends in Logistics
- Design of Line Haul Network for Large Parcel Delivery Firm in India.
- Heterogeneous Vehicle Route Scheduling in Parcel Delivery Network

### RESOURCE PERSONS

The sessions for the programme will be offered by faculty members from IITs, IIMs, NITs, Practising Engineers and other renowned persons working in the field.

### REGISTRATION

Those interested should first Sign Up to the ATAL portal, using the given link, after entering the mandatory details: <https://atalacademy.aicteindia.org/signup>. After logging-in to your profile, choose the tab "FDPs/CPDPs/Workshops" in your personal profile, on the left side of the dashboard. Using the drop down option in the field "Select Type", choose "Others". Moreover, using the drop down option in the field "Select Month", choose "All". The details of this FDP will be displayed. Click on the "+" button on the right side of the panel, to apply for this FDP, on or before **February 22, 2023**. There is no registration fee for the participants. Certificates will be provided after the successful completion of FDP. For the registration link, please scan the QR Code below.



**For more details,  
CONTACT**

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