



**AUA-IITB Overseas Study Program 2022 –
Freight Transportation Planning and Logistics (FTPL)**

4 July 2022 to 15 July 2022

Host University: Indian Institute of Technology Bombay (IIT Bombay), India

Who can participate: Undergraduate (final year students), Masters students, and PhD students

Mode of delivery: Online

About the program: Transportation planning often focuses on passenger transportation. It is well known that efficient movement of goods is critical for economic development, safety, congestion, and the environment. Unlike passenger movement, there are many players involved in the decision making of freight movement. It is important to understand, model, and plan the logistics of these movements. The modelling and planning methodologies of freight movement are different. With the increasing urbanization the logistics of freight is receiving a significant importance. Efficient logistics operations are vital for economic prosperity of a region. Many countries have higher logistics cost causing the hurdles in the freight mobility. With the exponential growth in the ecommerce significance of the logistics operations has only increased. The course covers the various key topics in freight transportation planning and logistics operations.

Program Schedule:

Morning sessions: 10:30 am to 12 noon (India time)

Afternoon sessions: 1:00 pm to 2:30 pm (India time)

Date	Time (IST)	Topic
04-Jul-22	10:30 am to 12 noon	Course introduction; Introduction to Transportation Systems
	1:00 pm to 2:30 pm	Introduction to freight transportation modelling
05-Jul-22	10:30 am to 12 noon	Interregional freight demand models
	1:00 pm to 2:30 pm	Freight generation and freight trip generation

06-Jul-22	10:30 am to 12 noon	Tutorial (Input-Output Table, Regression for freight generation and freight trip generation)
	1:00 pm to 2:30 pm	Introduction to Network Flows
07-Jul-22	10:30 am to 12 noon	Network flow problems
	1:00 pm to 2:30 pm	Tutorial on network flow problems
08-Jul-22	10:30 am to 12 noon	Micro-level distribution structure, Logistics costs, Drivers of distribution structure
	1:00 pm to 2:30 pm	Micro-level normative models, Warehouse location
11-Jul-22	10:30 am to 12 noon	Inventory theory and freight transport modelling
	1:00 pm to 2:30 pm	Urban freight models
12-Jul-22	10:30 am to 12 noon	Vehicle routing problem and Fleet size optimization
	1:00 pm to 2:30 pm	Vehicle routing problem and Fleet size optimization
13-Jul-22	10:30 am to 12 noon	Urban Logistics
	1:00 pm to 2:30 pm	Freight Consolidation centres
14-Jul-22	10:30 am to 12 noon	Humanitarian logistics during disasters
	1:00 pm to 2:30 pm	Interactive session on freight transportation planning and logistics in AUA countries
15-Jul-22	10:30 am to 12 noon	Student presentations
	1:00 pm to 2:30 pm	Student presentations; Course conclusion