

SCM511 Supply Chain Analytics

Level: 5

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY JULY

Synopsis:

Supply chain management decisions are becoming increasingly data-driven. SCM511 Supply Chain Analytics covers the application of data analytics techniques to identify and solve complex supply chain problems and improve overall performance. Students will learn to make decisions at different levels of a multi-tier supply chain by leveraging technology and analytics. The course aims to expose students to the risks and uncertainty inherent in supply chain management and how to handle them. It will help students to solve problems in inventory management, demand management and network design as well as improve the efficiency of an organisation's supply chain. Using real-world examples, students will learn to identify and optimise a supply chain using analytical tools.

Topics:

- Introduction to Supply Chain Analytics
- Data Collection and Data Visualisation
- Uncertainty and Risk
- Descriptive Models
- Predictive Models
- Prescriptive Models
- Inventory Analytics
- Newsvendor Model
- Demand Analytics
- Forecasting for Demand Analytics
- Network Design
- Travelling Salesman Problem

Learning Outcome:

- Analyse the role of data analytics in supply chain management
- Estimate the risks and uncertainties present in supply chain management
- Improve the way inventory is managed
- Collect data required for data analysis
- Construct forecasting techniques for demand management
- Solve the newsvendor problem

Assessment Strategies - Regular Semester (Evening Class):

Components	Description	Weightage Allocation (%)
Overall Continuous Assessment	PRE-CLASS QUIZ 1	10
	PARTICIPATION 1	15

Overall Continuous Assessment	TUTOR-MARKED ASSIGNMENT 1	25
Overall Examinable Components	ECA	50
Total		100

*The information listed is subject to review and change.