

DATA SCIENCES AND OPERATIONS

SPRING 2024 SEMESTER

DSO 565 — Supply Chain Analytics

Section(s) – 16300R/16299D

Professor

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Email

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When

Online, Tuesdays 6:30 PM – 9:30 PM

Office

Online

Units

3



WHY TAKE THIS COURSE?

A general business understanding is no longer adequate in the workplace for students who plan to have a career in Modern Supply Chain Management. Most competitive companies expect advanced, in-depth skills from students entering the job market. With the advancement and adoption of Business Analytics, Data Science, and Artificial Intelligence, data-driven decision-making has become the modern approach to supply chain management.

COURSE OBJECTIVES

1. Evaluate a variety of business constraints and inputs in Supply Planning and develop a realistic constrained model to optimize the Master Production Schedule, perform sales forecasting, inventory optimization, and distribution planning
2. Assess various cost drivers for the supply chain network and develop a realistic model to optimize the supply chain network to minimize the total delivered costs

KEY CONCEPTS

- KPIs and Metrics for Supply Chain Analytics
- The Supply Chain Data Ecosystem
- Clustering and Supply Chain Segmentation Analytics
- Supply Chain Network Design Analytics
- Demand-sensing and forecasting analytics
- Procurement Optimization Analytics
- Capacity & Production Optimization
- Inventory, Distribution, and Logistics Analytics
- Supply Chain Sustainability Analytics
- SCA Technology Ecosystem

COURSE DESCRIPTION

While other courses currently offered may nominally focus on a similar topic, this course will provide students with unique, in-depth insight into four areas of Supply Chain Management: *Data Driven Decision Making*, *Solving Real-World Problems*, *Utilizing Scalable Technology*, and *Current Industry Best Practices*.