

Syllabus

MLDR 8803

Supply Chain Strategy and Operations

Fall 2026

Instructor: John (call me John) Vande Vate

Course Description: This course introduces fundamental concepts of Supply Chain Strategy & Operations, insights into how they are implemented, the impacts they have on financial performance and their consequences for different parts of the organization. Students learn and apply these concepts through a curated sequence of hands-on team exercises that transform a fictional firm from laggard to leader.

Pre- and/or Co-Requisites:

- MGT 6753
- Familiarity with Excel

Office Hours:

- Thursdays, 7:30 – 8:30 pm

Course Goals

- Discuss the goals of supply chain and explain the impacts of supply chain decisions.
- Identify the major drivers of supply chain performance and explain the relationship between supply chain metrics and financial performance
- Identify and manage the financial and service tradeoffs inherent in supply chain metrics
- Articulate the role of network design in supply chain performance
- Evaluate the strengths and weaknesses of different modes of transportation
- Identify the relative strengths and weaknesses of various transportation network design options
- Identify trade-offs involved in developing a transportation network
- Explain the impacts different transportation options can have on financial performance
- Describe different measures of product availability
- Articulate the differences between predictable and unpredictable variability and the appropriate buffers for managing them
- Utilize managerial levers available to balance product availability and financial performance.
- Articulate and explain the role of demand shaping in balancing supply and demand
- Identify and exploit noise reduction approaches in data analysis

Grading Policies

- There will be one final exam

- There will be 10 team challenges
- You will also be graded on team contributions
- Grading breakdown:

Grading Type	% Grade
Final Exam	20
Team Challenges	40
Team Contribution	40
Total	100

Attendance Policy

- This is a fully online course.
- Login on a regular basis to complete your work, so that you do not have to spend a lot of time reviewing and refreshing yourself regarding the content.

Plagiarism Policy

- Plagiarism is considered a serious offense. You are not allowed to copy and paste or submit materials created or published by others, as if you created the materials. All materials submitted and posted must be your own.

Student Honor Code:

Students are reminded of the Georgia Tech Honor Code. Please see <http://www.honor.gatech.edu>. Any act of dishonesty will result in a Fail Grade.

Students with Disabilities:

Georgia Tech offers accommodations to students with disabilities. If you need a classroom accommodation, please make an appointment with the *ADAPTS* office (see <http://www.adapts.gatech.edu>).

Communication

- Feel totally free to contact your instructor
- Please communicate clearly with your teammates

Netiquette

- Netiquette refers to etiquette that is used when communicating on the Internet. When you are communicating via email, discussion forums or synchronously (in real-time), please use correct spelling, punctuation, and grammar consistent with the academic environment and scholarship.
- We expect all participants to interact respectfully. Learners who do not adhere to this guideline may be removed from the course.

Class Text:

- Chopra & Meindl, Supply Chain Management: Strategy, Planning, and Operation, 6th Edition, Pearson (Supplemental. Good for Supply Chain focus, but gets too deep in the weeds) Selected sections available via E-Reserves through Reading Lists
- Cachon & Terwiesch, Matching Supply with Demand: An Introduction to Operations Management, 3rd Edition, McGraw-Hill Irwin. (Required for Challenge 9. Otherwise recommended. Appropriate depth and detail and Operations focus may smooth translation to Supply Chain). Selected sections available via E-Reserves through Reading Lists

Readings:

- Chopra & Meindl, Supply Chain Management:
 - Chapter 1: Understanding the Supply Chain
 - Chapter 3: Supply Chain Drivers & Metrics
 - Chapter 4: Designing Distribution Networks
 - Chapter 5: Network Design in the Supply Chain
 - Chapter 14: Transportation in a Supply Chain
- Cachon & Terwiesch, Matching Supply with Demand:
 - Chapter 2: The Process View of the Organization (Recommended)
 - Chapter 6: The Link between Operations & Finance (Recommended)
 - Chapter 7: Batching & Other Flow Interruptions (Recommended)
 - Chapter 12: Betting on Uncertain Demand (Required)
 - Chapter 14: Service Levels and Lead Times in Supply Chains (Recommended)
 - Chapter 16: Revenue Management with Capacity Controls (Recommended)
- Bartholdi & Hackman, Warehouse & Distribution Science (available on-line via Reading Lists)
 - Chapter 1: Warehouse rationale (Required)
 - Chapter 3: Warehouse operations (Required)
 - Feel free to read more. An excellent guide to improving warehouse operations.
- Curry, LTL Modue 1: A Whitepaper on the ins and outs of shipping LTL (available via E-Reserves through Reading Lists)
 - Overview.....pages 3-4 (Required)
 - Chapter 1: What is LTL and how is it different from TL?.....page 5 (Required)
 - Chapter 4: How are freight charges calculated?.....pages 11-14 (Required)
 - Chapter 5: What are classes and where do I find them?.....pages 15-18 (Required)
- The essence of Finance (Be sure to sign in with your GT email address and credentials) (Recommended)

Technology/Software Requirements

- Internet connection (DSL, LAN, or cable connection desirable)

Topics

Weeks	Information
Week 1	
Week 1	Intro to Supply Chain <ul style="list-style-type: none"> ○ Lesson 1: Course Intro ○ Lesson 2: Key Financial Metrics ○ Lesson 3: Finance - Supply Chain Connection ○ Lesson 4: Intro to PMML Electronics & Challenge 1
Join a Team Team Challenge 1	Sign up for a team PMML Electronic's Financial Health
Week 2	
Week 2	Consolidation & The Total Cost Perspective <ul style="list-style-type: none"> ○ Lesson 1: The Role of Distribution Centers ○ Lesson 2: The Total Cost Perspective
Team Challenge 2A, 2B, 2C Team Challenge 3	DC Opportunity Segmentation
Week 3	
Week 3	Transportation Modes & Supply Chain Performance <ul style="list-style-type: none"> ○ Lesson 1: Segmentation ○ Lesson 2: Mode Choice: LTL vs TL
Team Challenge 4 Team Challenge 5	LTL Rates & The Total Cost Perspective Every Store Every Day
Week 4	
Week 4	Network Design & Supply Chain Performance <ul style="list-style-type: none"> ○ Lesson 1: A Look Back ○ Lesson 2: Network Design ○ Lesson 3: Optimization Overview ○ Lesson 4: Network Design: Linear Models
Team Challenge 6 Team Challenge 7	Back to Challenge 2 – where should we put the DC? Back to School – A small academic location model with many DCs
Week 5	
Week 5	Transportation Networks <ul style="list-style-type: none"> ○ Lesson 1: Designing Transportation Networks ○ Lesson 2: LTL Consolidation
Team Challenge 8	Blending transportation modes
Week 6	
Week 6	Managing Uncertainty <ul style="list-style-type: none"> ○ Lesson 1: Managing Variability ○ Lesson 2: Building a demand distribution ○ Lesson 3: Managing risk without recourse ○ Lesson 4: Managing Service with Recourse
Team Challenge 9A Team Challenge 9B	Managing Uncertainty Service

Weeks	Information
Week 7	
Week 7	Revenue Management: Shaping demand <ul style="list-style-type: none"> ○ Lesson 1: Demand Shaping ○ Lesson 2: Price Sensitivity: Uses & Abuses of Historical Data ○ Lesson 3: Wrap up & Review
Team Challenge 10	The Retail Game: Shaping demand with price
Team Member Assessments	Assess members of your team
Final Exam	Final Exam: 90-minute individual exam. Open-book, open-notes, open-excel, open-internet. No collaboration with others.