

SCM 7335 (formerly SCM 7362) Logistics Management
Spring 2020
Dr. Powell Robinson

Instructor: Dr. Powell Robinson

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Class Time & Location: Wednesday 6:00-9:00pm, MH-114

Office Hours: Tuesday, Wednesday, Thursday 4:00-5:30

Course prerequisites: SCM 6A01

Course Description

Supply chain management is the integrated management of the flows of materials, products, services and cash from the suppliers to the final customer and back again, with *logistics management* serving a critical role in managing these flows. The rapid enhancements in technology and the global expansion of business has increased the complexity of logistics management and an increasing demand for business professionals trained in the logistics management discipline. Core topics include: logistics strategy, forecasting and inventory management, international transportation management, distribution network design, import/export operations, logistics information systems, customer service and emerging trends in logistics. An important element of the course is in depth coverage of logistics system development in developing countries, including economic benefit, implementation challenges, risk, and governance issues.

Course Objectives

This course introduces the students to the fundamental concepts of business logistics including the relationship among logistics and other business functions, and the principle tools and analytical models used to support logistics management decision making. The course provides core knowledge and managerial tools for professional development in procurement, operations management, transportation, distribution, and marketing career paths.

Course Materials

- **Textbook:** No text is required for the course.
- **Supplemental Readings:** The course utilizes readings from leading business journals, such as the Harvard Business Review, Sloan Management Review, and others.
 - **Business Cases:** We will use select business cases from Harvard Business School Publishing. The cases used in the course can be directly purchased from HBSP
- **Instructor lecture notes:** Copies of the lecture notes will be posted on blackboard.

Course structure and grading:

Exam 1 and Exam 2:	55%	Logistics Analytics:	20%
Quizzes/Assignments:	10%	In Class Contribution:	15%

Logistics Analytics -- Experiential Learning

- Evaluating 3rd Party transportation services to support O&G production in the Gulf of Mexico
- Forecasting demand in grocery and consumer product goods distribution systems
- Facility network design using mathematical programming

Logistics Management and Systems Course Schedule

WEEK	TOPIC
Jan 15	Course Introduction -- Lecture Notes (LN): Intro to SCM -- LN: Logistics Role and Factors -- Mini Case, "Plant Location Puzzle", will be handed out in class.
Jan 22	Global Dimensions of Logistics and Transport Fundamentals -- LN: Global Dimensions of Logistics -- LN: Transportation Fundamentals -- Read: "State of Logistics Report, 2018". Be prepared to discuss 3 major findings in the report.
Jan 29	USMCA Trade Agreements and Economics of Transportation Pricing -- Read: NAFTA and USAMCA Comparison. -- Assignment Due: List and briefly discuss five important elements of the proposed USMCA trade agreement. Length < 2 pages. See the link below for USMCA details. https://ustr.gov/trade-agreements/free-trade-agreements/united-states-mexico-canada-agreement/fact-sheets/modernizing -- LN: Aligning and Coordinating Supply Chains -- LN: Pricing Economics Discussion questions 1. What is price elasticity of demand? What role does it play in pricing decisions? 2. "Monopolists (railroads) are regulated to protect the consumer: Pure competition is regulated to protect the firms (truckers)." Use market structure theory and pricing economics to explain the logic behind these statements. 3. What is the current role of economic regulation?
Feb 5	Transportation Pricing and Introduction to Vehicle Routing -- LN: Transportation Pricing -- Vehicle Routing Analytics Assignment: "Coastal Logistics, Inc." Be prepared to discuss the business problem and ask any clarifying questions related to the problem, software and discussion questions. The Coastal Logistics Case and Software is posted on Blackboard. -- LN: Vehicle Routing Models: We will review several vehicle routing problem types and how they are solved in class.
Feb 12	Vehicle Routing (continued) -- CASE "Canaan Group: Port Metro Container Transload Service", HBSP Course Pack
Feb 19	-- Exam 1: covers material through vehicle routing

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- Feb 26 Forecasting: Short to medium term forecasting using exponential smoothing
-- **Vehicle Routing Analytics Assignment (Coastal Logistics, Inc.) due at start of class.**
-- LN: Forecasting: Time Series Models and Error Measurement
-- Reference: SCM 6A01 text, *Operations and Supply Chain Management: The Core*
 1. Review the simple exponential smoothing model and error metrics prior to class.
 2. In class focus is on exponential forecasting with trend, seasonality and promotional events.
 3. Practice problems and solutions posted on blackboard.
-- Forecasting Analytics Assignment is posted on blackboard and will be discussed in class
- Mar 4 Inventory Management
-- LN: Inventory Management
-- Reference: SCM 6A01 text, *Operations and Supply Chain Management: The Core*
 1. Review order quantity and reorder point models prior to class
 2. Practice problems and solutions posted on blackboard.
- Mar 18 Order Management and Customer Service
--LN: **Forecasting Analytics Assignment Due at start of class.**
--LN: Order Management and Customer Service
- Mar 25 Distribution & Omni Channel Network Design
--LN: Distribution and Omni Channel Network Design
--LN: Network Design
- Apr 1 Network Design Modeling
--Network Design Analytics assignment overview, posted on blackboard.
- Apr 8 Network Design (continued) and Global Logistics Development
-- CASE: “EKOL Logistics: Thinking Outside the Box”, in HBSP Course Pack
 1. What factors lead to EKOL Logistics’ success?
 2. What role does EKOL logistics play in economic development?
-- CASE: “Hidrovias do Brasil: Navigating Uncharted Waters”, in HBSP Course Pack
 1. What are the major challenges facing economic development in Brasil?
 2. What role does business logistics play in aiding economic development?
- Apr 15 **Exam 2, 6:00-8:00 pm**, covers all material through network design.
-- **Network Analytics Assignment Due at start of class.**
- Apr 22 Logistics and Economic Development
-- CASE: “Frontier Services Group: Building A Pan-African Logistics Provider (A)”
 1. Trace the major stages of business logistics development in Pan-Africa.
 2. What are some of the major economic development challenges facing Pan-Africa?
 3. Do a google search on Frontier Services to identify the company’s current activities.
-- Course Summary and Review
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