

# Syllabus

## Supply Chain Management

- **Instructor:** Paul Lacourbe ([lacourbep at ceu.edu])
- **Credits:** 2
- **Term:** Fall 2017-2018
- **Course level:** PhD
- **Prerequisites:** None...

### Course description

Operations management is the design, operation, and improvement of systems. It examines in detail how organizations do things. Understanding how operations impact the firm is important for managers regardless of their field, as operations management is not only concerned with production facilities, but also health care, insurance, hotel management, banking, airlines... Operational issues include purchasing raw materials; controlling and maintaining inventories; managing capacity. This course in operations management is intended to be a survey of core literature in operations management.

### Learning outcomes

We will understand the importance of operations management literature and how to use it in your research

### Reading list

For each session

### Assessment

<i>final exam</i>	<i>40 points</i>
<i>homework assignment</i>	<i>30 points</i>
<i>Class participation</i>	<i><u>30 points</u></i>
<i>Maximum total</i>	<i>100 points)</i>

### Course schedule and materials for each session

Session 1 –

Topics: Newsboy and Transshipment

Assigned readings:

The single-item newsboy problem with dual performance measures and quantity discounts

Kroll, D. E. Lin, C.-S. European journal of operational research, 100(3), aug 1997

A Two-location inventory model with transshipment and local decision making Management Science 47(12) December 2001

Who benefits from transshipment? Exogenous vs. endogenous wholesale prices

Management Science 50(5) May 2004

Newsvendor networks: dynamic inventory management and capacity investments with discretionary pooling , Manufacturing & Service Operations Management Vol. 4, No. 4, 2002

Session 2 –

- Topics: Forecasting

Assigned readings:

Strategic investments, trading and pricing under forecast updating. Management Science Vol. 52, No. 12, 1913-1929, 2006

Toktay, L.B. and L.M. Wein, "Analysis of a Forecasting-Production-Inventory System with Stationary Demand," Management Science 47:9 (2001), 1268-1281

Wang, T. and L.B. Toktay, "Inventory Management with Advance Information and Flexible Delivery," Management Science, 54:4 (2008), 716 - 732

Session 3 –

- Topics: Remanufacturing
- Assignment 2 Due: Question Set B

Assigned readings:

The Economics of Remanufacturing Under Limited Component Durability and Finite Product Life Cycles. By: Geyer, Roland; Van Wassenhove, Luk N.; Atasu, Atalay. Management Science, Jan2007, Vol. 53 Issue 1, p88-100.

Closed-Loop Supply Chain Models with Product Remanufacturing. By: Savaskan, R. Canan; Bhattacharya, Shantanu; Van Wassenhove, Luk N.. Management Science, Feb2004, Vol. 50 Issue 2, p239-252.

Inventory Control in Hybrid Systems with Remanufacturing. By: Laan, Erwin van der; Salomon, Marc; Dekker, Rommert; Wassenhove, Luk Van. Management Science, May99, Vol. 45 Issue 5, p733-747.

#### Session 4 –

- Topic: Product Portfolio Management

#### Assigned readings:

2. Ding, M. and Eliashberg, J. 2002. Structuring the new product development pipeline. *Management Science*, 48, 3, 343-363.
3. Nobeoka, K. and M.A. Cusumano. 1997. Multiproject strategy and sales growth: The benefits of rapid design transfer in new product development. *Strategic Management Journal*, 18, 3, 169-186.
4. Loch, C. and Huchzermeier, A. 2001. Project management under risk: using real options approach to evaluate flexibility in R&D. *Management Science*, 47,1, 85-101
5. Mintzberg, H. and Waters J.. 1985. Of Strategies, deliberate and emergent. *Strategic Management Journal*, vol. 6, 257.

#### Session 5 –

- Topics: Product Definition

#### Assigned readings:

6. Krishnan, V. and S. Gupta. 2001. Appropriateness and impact of platform-based product development. *Management Science*, 47, 1, 52-68.
7. Randall, T. and Ulrich K.. 2001. Product variety, supply chain, and firm performance: Analysis of U.S. bicycle industry. *Management Science*, 47, 12, 1588-1604.
8. Bhattacharya, S., Krishnan V., and Mahajan V. 1998. Managing new product definition in highly dynamic environments. *Management Science*, 44, 11 (part 2), S50-S64.
9. Ulrich, K., D. J. Ellison. 1999. Holistic Customer Requirements and the Design-Select Decision. *Management Science*, 45, May, pp.641-658.
10. Ulrich, K. 1995. The role of product architecture in the manufacturing firm. *Research Policy*, Vol. 24, pp. 419-440.
11. Meyer, M.H., Tertzakian P., and Utterback J.. 1997. Metrics for managing research and development in the context of the product family. *Management Science*, 43, 1, 88-111.

#### Session 6 – (Nov 18)

- Topics: Organizational Capabilities and Learning

Assigned readings:

- Zangwill, W and P. Kantor. Toward a Theory of Continuous Improvement and the Learning Curve. *Management Science*, 44, 910-920
- Adler, P.S. and K. B. Clark. 1991. Behind the learning curve: A sketch of the learning process. *Management Science*, 37, 267-281.
- Pisano, G.P., Bohmer R. M., and Edmondson A.C.. 2001. Organizational differences in rates of learning: Evidence from the adoption of minimally invasive cardiac surgery. *Management Science*, 47, 6, 752-768
- Lapre, M., A. Mukherjee, L. Van Wassenhove. 2000. Behind the learning curve: Linking learning activities to waste reduction. *Management Science*, 46, 5, 597-611.

Session 7 –

- Topic: Managing Risky Projects

Assigned readings:

- Sommer, S. C., C. H. Loch. Selectionism and Learning in Projects With Complexity and Unforeseeable Uncertainty. *Management Science* 50 (10), 2004.
- Terwiesch, C., and C. H. Loch: Collaborative Prototyping and the Pricing of Customized Products. *Management Science* 50 (2), 2004, 145-158.
- Pich, M. T., C. H. Loch, C. H., and A. De Meyer, On Uncertainty, Ambiguity and Complexity in Project Management, *Management Science* 48(8), 2002, 1008 – 1023.
- De Meyer, A., C. H. Loch and M. T. Pich: Managing Project Uncertainty: From Variation to Chaos, *Sloan Management Review* 43 (2), Winter 2002, 60 - 67.

Session 8 –

**Final Presentation**