

Course Description:

This course covers Japanese supply chain strategy and concepts and provides the students with a solid understanding of the analytical tools necessary to solve supply chain problems. Key drivers of supply chain performance such as inventory, logistics and transportation, information, sourcing, and pricing will be covered. It helps students develop the ability to evaluate supply chain performance and to formulate required strategies. It also covers traditional and modern Japanese production systems and those control systems being practiced in Toyota.

Textbooks:

Lecture handouts will be provided as the course proceeds.

Reference Books:

Heizer, J. and Render, B. (2013) Operations management: sustainability for supply chain management, 11th edition, Pearson International Edition
Monden, Y. (2012) Toyota production system: an integrated approach to just-in-time, 3rd edition, Engineering & Management Press

Course Plan:

- 1 Introduction to supply chain management (SCM)
- 2 Decision making tools in SCM
- 3 Forecasting demand in SCM
- 4 Managing supply chain inventory I
- 5 Managing supply chain inventory II
- 6 Logistics and transportation problems
- 7 Computer software for transportation
- 8 Mid-term exam
- 9 Production systems and MRP
- 10 Material requirement planning (MRP)
- 11 Scheduling in supply chains
- 12 Pricing and revenue management in supply chains
- 13 Toyota production system (TPS)
- 14 Toyota's Just-in-Time (JIT) systems

Other Course review

Method of Evaluation:

1. Mid-term Exam (30%)
2. Final Exam (40%)
3. Assignment (20%)
4. Attendance and Participation (10%)