Lectures
Wednesday 3:00-5:50 PM 1 Washington Park, # 202

Office Hours
By appointment, typically at 1 Washington Park, # 1074, on Mondays 2:00–3:00 PM.

Course Outline
This course covers economic models in supply chain management under uncertainty. The emphasis is on the foundations of dynamic optimization tools in stochastic inventory models. We study key concepts such as Preservation and Attainment, Myopic Policies, optimality of (s,S) policies, capacitated inventory management, Bayesian Inventory Models, and Contracts in Supply Chains.

Topics:
1. The EOQ and the Newsvendor Inventory Models.
2. Recursion and Finite Horizon Optimization Models.
3. Dynamic Inventory Management - economic lot-sizing models.
5. Optimality of (s,S) policies.
7. Capacity Procurements under Unknown Demand.
8. Empirical Bayesian Inventory Models.
10. Competitive and Cooperative Inventory Policies.
11. Manufacturer’s Return Policies and Retail Competition.
12. Supply Contracts with Quantity Commitment and Stochastic Demand.
14. Vertical Restraints with Incomplete Information.
15. Modeling the Impact of Information on Inventories.

Suggested Readings:

TEXTS.
Papers.
11. More papers will be posted on the class page.