Operations Management

Summer 2002,

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Thank you for using your Name Cards
Course Materials

- 15.761 SDM Course Package
- *The Memory Jogger* (Handout)
- Goldratt & Cox, *The Goal*
  - Begin Reading
    - no later than 6/24
Optional Textbooks

- Nahmias
  *Production and Operations Analysis*

- Spearman & Hopp
  *Factory Physics*
Class Sessions

- Dialogue & Discussions
- Students alternatively (???)
  address Lead Questions
- Preparation & Participation
Grading

- Class Participation 40%
- 1st Case Write-Up 20%
- 2nd Case Write-Up 20%
- Problem Sets (3) 20%
Class Participation

- Relevant
- Contextual
- Insightful
- Supported
- Innovative
Write-Ups: Requirements

- Two Assignments
  - Due in Class !!!
  - University Health Services
  - Sport Obermeyer
- <= 1500 Words, <= 6 exhibits
- Groups of 1 to 3
- Not just answering questions in Syllabus
Write-Ups: Grading

- Analysis
- Exhibits
- Recommendations
- Presentation

Superfluous Charts
3 Problem Sets

- Enhance Mathematical Tools
- To be distributed in Class
- Groups of 1 to 3
What is Operations Mgmt.? 

- Creation and Distribution of Goods and Services 
- Procurement of Required Materials
The 3 Dimensions of Operations

Product

Supply Chain

Process
The Realm of Operations

Time

Cost

Quality
Tactical & Strategic Decisions

- **Strategic Decisions**
  - Process Selection
  - Network Design
  - Technology Choice
  - Product Design
  - Capacity & Scale
  - Supplier & Customer Relations

- **Tactical Decisions**
  - Procedure Selection
  - Information Flows
  - Scheduling (How much, when, what)
  - Inventory
Structure of Course

- Tools
- Processes
- Planning and Coordination
- Quality Management
- Project Management
- Supply Chain Management
What’s behind the Acronyms?

EOQ  ROP  MRP I
DFM  TOC  TQM  ERP  FMS
MRP II  BPR  JIT
Tools

- Queueing Theory
- Inventory Control
  - Economic Order Quantity (EOQ)
  - Newsvendor Model
  - Optimal Order Policies (ROP)
- Forecasting
- Statistical Process Control (SPC)
- Critical Path Method (CPM/PERT)
Processes

- Process Types
- Processes and Life Cycles
- Services
  - Food
  - Health Care
Planning & Coordination

- Theory of Constraints
- From MRP to ERP
- Cellular Manufacturing
- BPR
- JIT
Quality Management

- Deming
- Juran
- Crosby
- 6-sigma
- Robust Design
- SPC
Project Management

- Product Launch
- Critical Path (CPM/PERT)
- Risk Management
- Competitive Project Management
- The Design Structure Matrix (DSM)
Supply Chain Management

- Rapid Response
- Customer Service
- Inventory Positioning
- Logistics System Design
- Coordination
- Core Competencies