Operations Management Course Coverage

1. Operations Strategy
    a. The role of the operations function in the firm.
    b. The importance of trade offs in process design and fit with strategy.

Key issues: How does operations relate to the rest of the firm? What constitutes "good" operations? How do the strategic goals of the firm impact operations? What is the role of focus?

2. Process Analysis
    a. Operations measures of flow time, inventory and throughput.
    b. Little's Law.
    c. Bottleneck analysis.
    d. Critical path analysis.

Key issues: What are important operational measures and how do they link to financial performance? What determinisms the capacity of the process and what are the points of leverage in altering capacity?

3. Lean operations and statistical process control.
    a. Lean tools.
    b. Process capability.
    c. Control limits.

Key issues: How does lean operations lead to continuous improvement? How does one verify process improvement?

4. Services and queuing analysis
    a. Role of variability and utilization.
    b. Management of safety capacity.

Key issues: How does variability impact process performance? What is the role of economies of scale in service system? How do priorities impact service systems?

5. Supply chain management.
    a. Newsvendor problem.
    b. Economic order quantity.
    c. Safety stock.

Key issues: What are the opportunities for reducing supply chain costs and flow time? What is the role of economies of scale in supply chains?

Recommend textbooks:

Managing Business Process Flows: Principles of Operations Management (MBPF) by Anupindi, Chopra, Deshmukh, Van Mieghem and Zemel. Prentice Hall, 2nd edition, 2005.

Matching Supply with Demand: An Introduction to Operations Management by Gerard Cachon and Christian Terwiesch, McGraw-Hill/Irwin; 2 edition 2008.