COURSE DESCRIPTION

In today's competitive global pharmaceutical environment, more and more companies are faced with diminishing product pipelines and generic competition due to patent expiries. The traditional cash rich pharmaceutical companies are now faced with the challenge of tightly managing their operations and supply chains in an effort to reduce spend. At the same time, pharmaceutical companies are constantly faced with challenges of counterfeiting, global logistics and rising commodity prices. As a result of such changes to the pharmaceutical landscape, companies find themselves focusing on strategic supply chain, logistics and operations management area to effectively impact the bottom line. The objective of this course offer students the knowledge of cost management, strategic sourcing, negotiation, procurement processes and supply management strategies for pharmaceutical companies.

Performance Assessment:

1. Class Participation – 30%

2. Case Study Assignment I – 35% (Due on September 23, 2014)  
   McKesson

3. Case Study Assignment II – 35% (Due on October 4, 2014)  
   Shanghai Pharmaceuticals

Course Procedures:

1. Course lecture notes will be posted on blackboard prior to each class. Students are expected to review the lecture notes prior to each class.

2. All assigned reading must be conducted prior to class.

3. The class meets every Saturday at 9:00 am. Punctuality is important.

4. Respect for one another is mandatory during class discussion.

5. All cell phones must be silenced at the start of class to minimize disruptions. If you need to take a call, please exit the class room quietly so that the discussions are not disrupted.
6. If you will miss any class, make arrangements with the instructor for any material that may be missed. Missing more than one class will not be acceptable.

7. Participation is strongly encouraged and is a part of your grade. Everyone is expected to participate fully in class discussions.

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**Honesty and Integrity:**

Any form of dishonesty will result in an “F” grade for the course. All of your written work must be your own. All references must be cited. Plagiarism will not be tolerated.

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**Class Agenda:**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td>Questions / Review of Previous Class</td>
<td>9:00 – 9:20</td>
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<tr>
<td>Lecture</td>
<td>9:20 – 11:20</td>
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<tr>
<td>Review/Analysis of Selected Problems/Cases</td>
<td>11:20 – 11:50</td>
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<tr>
<td>Questions / Final Words / Next Class</td>
<td>11:50 – 12:00</td>
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**Week 1 – Pharmaceutical Operations Overview & Business Landscape**

**Resource:**

**Case Reading:**
- *Building Supply Chain Capabilities in the Pharmaceutical Industry – Trends impacting the supply chain*
- *Building Supply Chain Capabilities in the Pharmaceutical Industry – Winning supply chain capabilities*
- *Supply Chain Structural Change: Pharmaceutical Industry*

1. Introduction to Pharmaceutical Purchasing and Supply Chain Management

2. Evolution of the supply chain operations departments within pharmaceutical operations
   a. Strategic sourcing
   b. Operations management
   c. Distribution/Logistics
   d. Technology

3. Driving a successful supply chain in the global pharmaceutical market

**Week 2 – Drug Discovery Through Drug Product Commercialization and the Associated Supply Chain**

**Resource:**
- [https://www.youtube.com/watch?v=cFC1SO7yE3A](https://www.youtube.com/watch?v=cFC1SO7yE3A)

**Case Reading:**
- *Managing the Extended R&D Supply Chain*
- *Clinical Trial Supply Chain Management*

1. Stages of pharmaceutical discovery
   a. The drug development process – Phase 0 through Phase IV
b. Clinical, development and commercial operations interfaces with procurement and supply management

2. The impact of procurement and supply management on the bottom-line during the pharmaceutical chain lifecycle process
   a. Clinical operations supply chain networks
   b. Commercial operations supply chain networks

3. Revitalizing the pharmaceutical supply chain landscape

**Week 3 – Pharmaceutical Distribution Network Systems**

*Resource:*


- [https://www.youtube.com/watch?v=KCN4hdxs8Kk](https://www.youtube.com/watch?v=KCN4hdxs8Kk)

- [https://www.youtube.com/watch?v=e1QE8WZvL8A](https://www.youtube.com/watch?v=e1QE8WZvL8A)

*Case Reading:*

- *Working with 3PL Providers to Prepare for Pharmaceutical Pedigree Rules*

- *Role of the Distributor in Pharmaceutical Supply Chains*

- *The Challenge of Curbing Counterfeit Prescription Drug Growth: Preventing the Perfect Storm*

1. The distribution networks
   a. Manufacturing ➔ Warehousing ➔ Wholesalers ➔ Retailers

2. Wholesaler Value – Managing the end to end supply chain
   a. Wholesaler operations
   b. Relationship between manufacturers and wholesalers

3. Track and trace systems and impact of security networks
**Week 4 – Pharmaceutical Sales & Operations Networks**

**Resource:**
- [http://www.supplychainbrain.com/content/videos/biotech-09/biotech-companies-are-becoming-demand-driven/](http://www.supplychainbrain.com/content/videos/biotech-09/biotech-companies-are-becoming-demand-driven/)

**Case Reading:**
- *Sales and Operations Planning Process*
- *Metabical: Pricing, Packaging, and Demand Forecasting for a New Weight-Loss Drug*

  1. Developing, implementing and managing the Sales & Operations Planning (S&OP) process
  2. Optimizing inventory in the value chain
  3. Supply chain operations interface with the organization

**Week 5 – Pharmaceutical Operational Systems, Strategies & Trends**

**Resource:**

**Case Reading:**
- *Healthcare & Life Sciences Supply Chain Report*
- *Contract Manufacturing Partnerships*
- *Pharma 2020: Supplying the Future*

  1. Using ERP as a competitive procurement/supply chain tool
  2. Predictions in future trends in pharmaceutical operations and their effect on procurement and supply management operations
  3. The insourcing/outsourcing business models and its impact on the future pharmaceutical business model
a. Understanding the Contract Research Organization (CRO), Contract Manufacturing Organization (CMO) and Contract Sales Organization (CSO) business model – advantages and disadvantages of outsourcing
b. Regulatory impact of outsourcing
c. Supplier management

Harvard Business Review Course Link

https://cb.hbsp.harvard.edu/cbmp/access/28196336