Course Description:

In today's competitive global pharmaceutical environment, more and more companies are faced with diminishing product pipelines, challenges developing innovative products, and generic competition due to loss of patent exclusivity. Traditional pharmaceutical companies now must find ways to minimize margin erosion through timely product development activities as well as tightly managed operations and supply chains. This concerted effort is the only way companies today will be able to compete and maintain profitability while meeting varying customer demand and product market requirements. At the same time, pharmaceutical companies are also challenged with global regulatory issues, pricing arbitrage, demand volatility constraints, product counterfeiting, rising commodity prices, and the overall complexity of operating in a competitive global environment. As a result of such changes to the pharmaceutical landscape, companies find themselves focusing on strategic supply chain, logistics and operations management areas to effectively impact the bottom line in order to stay competitive.

In light of the challenges facing the pharmaceutical industry, executives are grappling with big questions:

- How do we increase the value of our product pipeline while improving the efficiency of our product development and operations?
- How can we exploit efficiencies through mergers and acquisitions, licensing, and post-merger integration and what does that mean for our business operations?
- How do we build our capability to excel in strategic areas such as marketing and sales, supply chain management, and effective product commercialization strategies?
- As strategic alliances become a more important way to drive growth, how do we manage them more effectively as well as their associated operations?

The objective of this course is to provide students with knowledge of pharmaceutical industry cost management structures, strategic sourcing processes, negotiation tactics, procurement processes and supply management strategies. With shorter product lifecycles and worldwide rivalries increasing, much success depends on effective global supply chain management being able to deliver the right product to the right market at the right time under the appropriate regulatory governance.
About the Instructor:

Bruce E. Sullivan is Vice President, Aspen Pharmaceuticals USA in Bridgewater, NJ. He has responsibilities for Commercial, Supply Chain, Finance, Quality and Regulatory departments for all marketed products. In addition, he also has responsibility for all new commercial product launches which involve 3-party Marketing, Sales & Distribution partners in the women’s health and oncology categories.

Mr. Sullivan holds a Bachelors of Science from Worcester Polytechnic Institute, a Masters of Business Administration from Rensselaer Polytechnic Institute, as well as, an Advanced Management Certification in International Business from Babson College. He is trained in Executive Leadership and Strategy Development at Cranfield University (UK) and is certified as a Project Management Professional (PMP).

Mr. Sullivan is a Part-Time Lecturer for both the Newark Rutgers Business School (MBA level) and Rutgers University (Undergraduate level) where he teaches a range of Supply Chain management courses. In addition, he has taught internal corporate training curriculum in the areas of Statistical Process Control (SPC), Project Management (PM) and Kaizen manufacturing philosophy.

Performance Assessment:

1. Class Participation – 15%
2. Group Case Study Assignment I – 15%
3. Group Case Study Assignment II – 15%
4. Final Exam – 25%
5. Group Case Project – 30%

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 and each student must be prepared to discuss the cases during class discussions.
3. The class meets every Thursday at 6:40pm. 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 classroom 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 and will have a significant impact on your grade.**

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

**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.

**Class Agenda:**

Questions / Review of Previous Class 6:40pm – 7:00pm

Lecture 7:00pm – 8:45pm

Review/Analysis of Selected Cases 8:45pm – 9:30pm

**Semester Breakdown:**

**Week 1 – January 23, 2020**

1. Lecture – Strategic Supply Chain Review
2. Case Reading – Strengthening the Health Care’s Supply Chain

**Week 2 – January 30, 2020**

1. Lecture I – Fundamentals of Pharmaceutical Operations
2. Case Reading – KPMG: The Life Science Supply Chain
3. https://www.youtube.com/watch?v=oQSGX9J5OJ

**Week 3 – February 6, 2020**

1. Lecture II – Fundamentals of Pharmaceutical Operations
2. Case Reading – Outlook on Pharma Operations
3. https://www.youtube.com/watch?v=teb1Cm-7cio

**Week 4 – February 13, 2020**

1. Lecture I – Pharmaceutical Supply Chain: Discovery through Commercialization of Branded, Generic, OTC, Cosmeceuticals, and Nutraceuticals Product Operations
2. Case Reading – Clinical Trial Supply Chain Management
3. https://www.youtube.com/watch?v=3Gl0gAcW8rw
Week 5 – February 20, 2020
1. Group Case Research

Week 6 – February 27, 2020
1. Lecture II – Pharmaceutical Supply Chain: Discovery through Commercialization of Branded, Generic, OTC, Cosmeceuticals, and Nutraceuticals Product Operations
2. Case Reading – The Pharmaceutical Supply Chain
3. https://www.youtube.com/watch?v=QIomXDij8_5U

Week 7 – March 5, 2020
1. Lecture III – Pharmaceutical Supply Chain: Discovery through Commercialization of Branded, Generic, OTC, Cosmeceuticals, and Nutraceuticals Product Operations
2. Case Reading – The New Rx for Pharma Manufacturing Supply Chain
3. https://www.youtube.com/watch?v=q4d19FqDTmU
4. Group Case Research Project I Due – HBR: Shanghai Pharmaceuticals

Week 8 – March 12, 2020
2. https://www.youtube.com/watch?v=h9_l0I1fAAI4

Week 9 – March 19, 2020
Spring Break – NO CLASS

Week 10 – March 26, 2020
1. Lecture II – Pharmaceutical Sales & Operations Planning – Matching Supply and Demand
2. HBR Case Study – Forecasting Denosumb

Week 11 – April 2, 2020
1. Lecture I – Inventory Control Systems, Logistics Management, and Distribution Networks
2. Case Reading – Securing the Global Pharmaceutical Supply Chain
3. https://www.youtube.com/watch?v=rSPlkuvTLl0
4. Group Case Research Project II Due – HBR: McKesson

Week 12 – April 9, 2020
1. Group Case Research

Week 13 – April 16, 2020
1. Lecture II – Inventory Control Systems, Logistics Management, and Distribution Networks
Group Case Assignments:

Group case assignments consist of teams of four. Each case is to be read and analyzed by the group and a 5 to 7 page term paper is to be submitted by the group. The term paper will give a synopsis of the case as well as answers to the questions embedded in the case. One grade will be issued for all team members. A hard copy of the case should be provided to the instructor as well as an electronically copy due date outlined in the weekly schedule above.

Group Case Project:

The Pharmaceutical Supply Chain Strategy Term Project consists of a team term paper and presentation. Each team will research and develop an innovation which aims to solve a critical pharmaceutical life science issue. The innovation can be a new product, service or process.

The innovation that your team chooses for preparing the business model need not be restricted to product innovation, but could also be a process innovation which can include systems, company mergers, etc. Each team must present a one page summary of the proposed idea by March 8th. You should also include in your report an executive summary which encapsulates the gist of your analysis.

Note: You should not cut-and-paste verbatim material from any sources, unless you use that material as exact quotes. In that case be sure to enclose any pasted text material in double quotes and to provide an exact reference for it. All pasted graphs and charts should also be properly referenced.

Suggested Outline for Pharmaceutical Supply Chain Management Term Project
1. Term paper should be no more than 20 pages not including supporting documentation (graphs, charts, etc.)

   **Term Paper Specifications:**
   a. Double spaced/Size 12 Times New Roman font
   b. Margins should be no more than 0.75 around
   c. Properly notate all references
   d. A hard bound copy as well as an electronic copy is to be provided to the instructor on the due date prior to the scheduled class meeting time

2. The structure of the term paper should include the following:
   a. Executive summary
   b. Current state of the topic
   c. Analysis, key issues, product presentation and design, etc.
   d. Financial considerations
   e. Future trends, opinions and conclusions