Management and Economics of the Pharmaceutical & Biotech Industries
HCMG 863
Spring 2020
[Last Updated 1/10/20]

Contact Information

Professor: Abby Alpert, PhD
Office: Colonial Penn Center 303
Email: alpertab@wharton.upenn.edu
Office Hours: Monday & Wednesday 3:00-4:00 pm, or by appointment

Teaching Assistants:
Ben Chartock chartock@wharton.upenn.edu
Sarah Schutz sschutz@wharton.upenn.edu
Office Hours: By Appointment

Lectures

Class Meeting:
Monday and Wednesday, 10:30-11:50am, CPC Auditorium

Course Objectives

This course provides an overview of the management, economic and policy issues facing the pharmaceutical and biotechnology industries. The course perspective is global, with emphasis on the U.S. as the largest and most profitable market.

We focus on issues that differentiate these industries from most others, including:

- An R&D-intensive cost structure and rapid technological change; the role of biotechnology, genomics etc. in transforming the industry structure;
- A complex global market place in which customers include governments and third party payers, as well as physicians, pharmacists and individual consumers;
- Government regulation of every dimension of the business, including market access (safety and efficacy), pricing, manufacturing, and promotion;
- Continually evolving M&A strategies, including mergers, joint ventures, options-based deals and alliances;
- Global products and multinational firms, with growing tension between the needs and ability to pay in different market segments.
Course Format

- Lecture/presentation by instructor and industry guest speakers
- Case discussions
- Student presentations

Course Materials

Readings: All course readings are listed below and are required. The readings will be posted on the course website (cases are available through Study.Net).


Course Website: The course website is located at https://canvas.upenn.edu. The syllabus, case questions, assignments, and readings will be posted on this website.

Grading

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<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Case Write-ups</td>
<td>30%</td>
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<tr>
<td>Midterm Exam</td>
<td>30%</td>
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<tr>
<td>Term Project</td>
<td>30%</td>
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<tr>
<td>Class Participation</td>
<td>10%</td>
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1. **Two Case Write-ups (30%)**: Students should come to class prepared to discuss all the assigned cases. Specific questions for each case will be posted on Canvas. Each student must write-up responses to the case questions for **two of the four cases** listed in the syllabus. You may work in teams to discuss the cases and responses. However, you must **independently write up the case**. The case write-up should be a maximum length of **two pages**. Your write-up is due via Canvas by **5:00 pm the day before the case is to be discussed**.

2. **Midterm Exam (30%)**: There will be an in class midterm exam on **Wednesday, March 4**.

3. **Term Project (30%)**: Students will work on a term project in teams of up to four students. A list of possible topics will be provided or you may select your own topic, subject to approval of the instructor. A one-page outline of the team’s project is due via Canvas at the **beginning of class on February 26**. The team’s final write-up (max. 10 pages plus optional tables) is due via Canvas at the **beginning of class on April 20**. The term project will be presented in class.

4. **Class Participation (10%)**: The class participation grade will be assessed using a combination of a class sign-in sheet for attendance, periodic exercises, and speaker write-ups. Missing up to **two** classes will not affect your participation grade.
Classroom Guidelines and Policies

Attendance
Your on-time attendance for each class session is expected, as is your active participation. If you are unable to attend a class, please let me know in advance with a brief email.

Name Tents
Please display your name tent at each lecture including classes with guest speakers.

Laptops
Following Wharton’s electronics policy, all phones, laptops, and other electronic devices must be turned off during class. Violations of this policy will lead to a lower participation grade. See: https://www.nytimes.com/2017/11/22/business/laptops-not-during-lecture-or-meeting.html

Academic Honesty
All students should familiarize themselves with the University’s guidelines on citations, plagiarism and academic dishonesty, which are found at: http://www.upenn.edu/academicintegrity/ai_codeofacademicintegrity.html
Any violations of this policy will result in significant consequences, including but not limited to, grade deductions and reporting to the University.

Course Schedule and Readings

Part I: Overview of Current Issues in the Pharmaceutical & Biotech Industries

Jan 15: Introduction and Course Overview

Readings:
• Understanding Pharma— Chapters 1 & 2 (Optional)
• CFRA Industry Surveys: Pharmaceuticals, December 2019 (pp. 6-29)
  Recommended reading order:
  1. “How the industry operates” (pp. 24-29)
  2. “Industry trends” (pp. 8-23)
  3. “Industry financial metrics” (pp. 6-7)
• Frakt, A. “Something Happened to U.S. Drug Costs in the 1990s.” New York Times, November 12, 2018

Jan 20: Martin Luther King, Jr. Day – No Class

Jan 22: Drug Discovery, Development, and Clinical Trials

Readings:
• Understanding Pharma— Chapters 4 & 5 (Optional)

Jan 27: Incentives for Innovation

Readings:
• **Case #1:** Organizing for Innovation at Glenmark (A)

Jan 29: Measuring Value: Cost Effectiveness and Comparative Effectiveness Analysis

Readings:

Feb 3: Marketing and Commercialization

Readings:
• **Case #2:** Cialis: Getting Ready to Market
• *Understanding Pharma*– Chapter 8 (pp. 163-180) (Optional)

Feb 5: Managed Markets: The Role of Insurers in Managing Pharmaceutical Use

Readings:
• *Understanding Pharma*– Chapter 10 (Optional)

Feb 10: Medicare Part D

Readings:

Feb 12: Pricing and Reimbursement: U.S.

Readings:
• Scannell, J.W. “Four Reasons Drugs are Expensive, of Which Two are False.” Forbes. October, 13, 2015.

Feb 17: Pricing and Reimbursement: U.S. (Cont’d)

Readings:
• Case #3: Merck: Pricing Gardasil

Feb 19: Pricing and Reimbursement: International

Readings:
• Case #4: Gilead: Launching Truvada in Europe

Feb 24: Policy Issues: The Opioid Crisis

Readings:

Feb 26: Generics and Biosimilars

Readings:
Mar 2: Review Session/Catch-up

Mar 4: Midterm Exam

Mar 9: Spring Break – No Class

Mar 11: Spring Break – No Class

Part II: Industry Perspectives

Guest Speaker Lectures [Speakers and Dates Subject to Change]

Mar 16: Entrepreneurship in Pharma: Application to Alzheimer’s Disease— Maria Maccecchini, CEO and Founder, Annovis

Mar 18: Inside the Black Box of PBM Negotiations — Steve Miller, Chief Clinical Officer, Cigna (formerly Express Scripts)

Mar 23: Orphan Drugs: Innovation and Pricing — Brian Corvino, Executive Vice President and Managing Partner, Decision Resources Group

Mar 25: Developing Vaccines — Sean McElligott, Director, Market Access, Scientific and External Strategy, Johnson & Johnson

Mar 30: Market for Cancer Care— Pallavi Bansal, Executive Director, Global Disease Lead, Merck

Apr 1: Data Analytics for Pharmaceuticals— Scott Johnson, Principal, Medicus Economics

Apr 6: Ethical Issues in Biopharma — Holly Fernandez Lynch, Assistant Professor of Medical Ethics and Health Policy, Perelman School of Medicine, University of Pennsylvania

Apr 8: Investing in Biopharma — Kris Jenner, Partner and Co-Founder, Rock Springs Capital

Apr 13: Innovation from External Sources — Henry Gosebruch, Chief Strategy Officer, AbbVie

Apr 15: TBD

Apr 20: Valeant Case Study — Scott Hirsch, Head of Business Strategy, Bausch Health (formerly Valeant)

Part III: Student Presentations

Apr 22: Student Presentations

Apr 27: Student Presentations

Apr 29: Wrap-up/Student Presentations