Management and Economics of the Pharmaceutical & Biotech Industries
HCMG 863
Spring 2019
[Last Updated 12/19/18]

Contact Information

Professor: Abby Alpert, PhD
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Office Hours: Monday & Wednesday 3:00-4:00 pm, or by appointment

Teaching Assistants:
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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 13.

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 27. The team’s final write-up (max. 10 pages plus optional tables) is due via Canvas at the beginning of class on April 22. 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 16: Introduction and Course Overview

Readings:
• Understanding Pharma—Chapters 1 & 2 (Optional)
• Standard & Poor’s Industry Surveys: Pharmaceuticals, June 2018 (pp. 4-39)
  Recommended reading order:
  1. “How the industry operates” (pp. 30-39)
  2. “Industry trends” (pp. 14-29)
  3. “Industry financial metrics” (pp. 4-13)
• Frakt, A. “Something Happened to U.S. Drug Costs in the 1990s.” New York Times, November 12, 2018

Jan 21: Martin Luther King, Jr. Day – No Class

Jan 23: Drug Discovery, Development, and Clinical Trials

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

Jan 28: Incentives for Innovation

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

Jan 30: Measuring Value: Cost Effectiveness and Comparative Effectiveness Analysis

Readings:

Feb 4: Marketing and Commercialization

Readings:
• Case #2: Cialis: Getting Ready to Market
• Understanding Pharma— Chapter 8 (pp. 156-173) (Optional)

Feb 6: Managed Markets: The Role of Insurers in Managing Pharmaceutical Use

Readings:
• Understanding Pharma— Chapter 10 (Optional)

Feb 11: Medicare Part D

Readings:
Feb 13: Pricing and Reimbursement: U.S.

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

Feb 18: Pricing and Reimbursement: U.S. (Cont’d)

Readings:
- Case #3: Merck: Pricing Gardasil

Feb 20: Pricing and Reimbursement: International

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

Feb 25: Policy Issues: The Opioid Crisis

Readings:

Feb 27: Generics and Biosimilars

Readings:

Mar 4: Spring Break – No Class
Mar 6: **Spring Break** – No Class

Mar 11: **Review Session/Catch-up**

Mar 13: **Midterm Exam**

**Part II: Industry Perspectives**

Guest Speaker Lectures [Speakers and Dates Subject to Change]

Mar 18: **Entrepreneurship in Pharma: Application to Alzheimer’s Disease** – Maria Maccecchini, CEO and Founder, QR Pharma

Mar 20: **The Market for Cancer Care** – Sarbani Chaudhuri, Global Commercial Head- Lung Cancer, Pfizer

Mar 25: **TBD**

Mar 27: **TBD**

Apr 1: **Orphan Drugs: Innovation and Pricing** – Brian Corvino, Executive Vice President and Managing Partner, Decision Resources Group

Apr 3: **Gene Therapies** – Jeffrey Marrazzo, CEO and Co-Founder, Spark Therapeutics

Apr 8: **Investing in Biopharma** – Yaron Werber, Managing Director, Senior Biotechnology Analyst, Cowen

Apr 10: **Innovation from External Sources, M&A/L&A** – Henry Gosebruch, Chief Strategy Officer, AbbVie

Apr 15: **Inside the Black Box of PBM Negotiations** – Steve Miller, Chief Medical Officer, Express Scripts

Apr 17: **Industry Responses to the Opioid Crisis** – Mike Derkacz, CEO, Braeburn

Apr 22: **Valeant Case Study** – Scott Hirsch, Head of Business Strategy, Bausch Health (formerly Valeant)

**Part III: Student Presentations**

Apr 24: Student Presentations

Apr 29: Student Presentations

May 1: Wrap-up/Student Presentations