MGMT B8536-001: Strategy and Competition in Pharmaceuticals and Biotechnology
Spring 2018 (B-Term); Tues/Thurs, 10:45am to 12:15pm; Uris 142 (tentative)

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Course Overview

This course examines the strategic, technological, competitive, economic, organizational, and political challenges impacting the pharmaceutical and biotechnology industry. Critical issues to be examined include:

- Process of discovering, developing, and the approval of new drugs and biologics;
- Patents on pharmaceuticals and biologics; generics and “biosimilars”;
- Franchise/ R&D portfolio management;
- Sales and marketing objectives and practices;
- Drug pricing and third-party reimbursement, including design of prescription drug plans and PBMs/contracting;
- Vaccines – development, regulatory, pricing, distribution;
- Orphan drugs – development, regulatory, pricing, patient advocacy;
- Health policy/reform impacting this sector;
- Mergers & acquisitions and licensing in the biopharma sector.

The course is cross-functional in its approach, focuses on “real-world” problems currently facing senior managers in this sector, and identifies emerging trends that will materially impact future performance of “Big Pharma” companies, as well as specialty pharmaceutical and biotechnology firms. This course will be useful for students interested in careers in pharmaceuticals, biotechnology, and health services, as well as management consulting, investment banking, equity research, venture capital, private equity, and investment management given the large and growing healthcare/pharmaceutical practices of such firms.

Format, Approach

We highly value class participation and will constantly seek to directly apply the information and ideas discussed in the classroom to issues currently confronting senior managers in this sector. We will pursue these critical issues in considerable depth. Some understanding of, or experience in, the healthcare/pharma sector will be highly valuable.
Prominent guest speakers from the pharmaceutical and biotechnology industry will provide additional real-world insight on key industry challenges and trends.

Materials, Classroom, Ground Rules

Certain readings will be distributed in class or posted on Canvas. We will try to have lecture notes available in advance of each class (subject to guest speaker preference). It is important that you attend all classes, arrive on time, and give speakers and your fellow classmates your full attention. If you cannot attend a specific class or have to arrive late let Prof. Cramer know in advance by email. Please refrain from using laptops, IPads, cellphones, etc. in class.

Course Requirements and Evaluation

Class Participation (25%): Students will only get out of this course as much as they put in. It is therefore important that students take an active role in classroom activities and discussions and come fully prepared. The class participation grade will reflect class attendance and the quality of the student’s involvement in class discussion.

Writing Assignment (25%): For a mid-term writing assignment, students will be given a case study or series of questions for their written analysis and recommendations (2-4 page paper, excluding exhibits).

Final Paper (50%): There will be a final paper (3-5 pages, excluding exhibits) on topics reviewed in class during the course.

Class Schedule and Topics

The following is the schedule of topics (Note: specific dates, topics and speakers may vary depending on schedules/availability).

Mar. 20th (Tues.) Course Introduction and Industry Overview
- Course objectives, syllabus, readings, exams/grading.
- Environmental assessment and summary of key challenges and opportunities in the global pharmaceuticals business.
- Major strategic issues/alternatives facing executives at “Big Pharma”, specialty pharma, and early-stage biopharma companies.

Mar. 22nd (Thurs.) Regulatory Environment, Intellectual Property/ Patents
- Forces shaping the environment (key players and issues)
  - Players: FDA, CMS, OIG, DOJ, States, etc.
  - Issues: safety, pricing, marketing practices, etc.
- Patents on pharmaceuticals and biologics; Hatch-Waxman; “biosimilars”.
Mar. 27th  Clinical Development and the Drug Approval Process – Interactions with the FDA

- Clinical development process and strategies
- Review of drug approval process – U.S. and selected int’l markets
- Strategies re: working with the FDA in the current regulatory environment

Guest speaker: Robert Ruffolo PhD, former president, Wyeth R&D

Mar. 29th  BioPharma CEO Perspective – Science, Regulation/Policy, Company Stakeholders

- Perspective on competitive and environmental issues facing BioPharma CEOs, including regulatory issues, impact of health policy/reform, drug pricing & reimbursement, Board and shareholder relations, M&A, etc.

Guest speaker: Jeffrey Leiden MD, PhD, Chairman and CEO, Vertex Pharmaceuticals (tentative)

Apr. 3rd  Sales and Marketing Practices; Drug Pricing; Case Study: Rheumatoid Arthritis Category

- Goals of pharma marketing; role of sales reps; commercialization strategies -US and int’l; managed care; drug pricing, DTC advertising, etc.
- Who pays for drugs, and how are drug prices set (US, other markets).
- Debate on whether drug prices in US should be regulated similar to OUS markets and its potential impact on innovation.
- RA category: understanding the disease category, evolution of therapeutic agents, clinical development/ regulatory, competitive landscape, pricing & reimbursement, impact of biosimilars, etc.

Apr. 5th  Portfolio and Pipeline Management and Optimization

- Portfolio advisory function to guide R&D investment decisions.
- Frameworks and related tools utilized in such analytics.
- Therapeutic category optimization (e.g., oncology platform).

Guest speaker: Laurie Olson, EVP, Strategy, Portfolio and Commercial Operations, Pfizer (tentative)

Apr. 10th  PBM/Portfolio Strategy

- Role of Pharmaceutical Benefit Managers (PBMs); design of prescription drug plans; formulary management.
- Evidenced-based payer value propositions; performance-based pricing and other risk-sharing arrangements.

Guest speaker: Executive from leading PBM (Express Scripts, CVS, or OptumRx).
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<tr>
<th>Date</th>
<th>Event</th>
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<tr>
<td>Apr. 12th</td>
<td><strong>Interim Course Review; Review Midterm Assignment</strong></td>
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<td>Apr. 17th</td>
<td><strong>Case Study: Amicus Therapeutics; Orphan Drugs for Rare Diseases</strong></td>
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<td>- Company overview and history.</td>
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<td>- Orphan drugs for rare diseases (regulation, development, pricing/reimbursement; commercialization).</td>
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<td>- Corporate optimization strategies/ exit options &amp; timing</td>
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<td><strong>Guest speaker:</strong> John Crowley, CEO, Amicus Therapeutics</td>
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<td>Apr. 19th</td>
<td><strong>Vaccines and HIV – R&amp;D, Marketing, Pricing, Distribution</strong></td>
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<td>- Evolution of the vaccines and HIV businesses and franchises.</td>
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<td>- Unique development, regulatory, manufacturing and distribution issues.</td>
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<td><strong>Guest speaker:</strong> Emilio Emini Ph.D., HIV Program Director, Bill &amp; Melinda Gates Foundation; former head vaccines research, Pfizer</td>
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<td>Apr. 24th</td>
<td><strong>Mergers, Acquisitions, and Partnering in the Pharma/Biotech Sector</strong></td>
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<td>- Considerations in pursuing and structuring mergers and acquisitions</td>
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<td>- Partnering and licensing considerations.</td>
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<td>- Outlook for future M&amp;A activity in the industry (“Big Pharma”, specialty pharma/generics, small-cap biopharma companies).</td>
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<td>Apr. 26th</td>
<td><strong>Future Outlook of the Global Pharmaceutical Industry</strong></td>
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<td>- Will we see enhanced R&amp;D productivity – which research targets are most promising – what are the prospects for “personalized medicine”?</td>
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<td>- What changes in market structure and selling dynamics will take place?</td>
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<td>- What legislative/policy changes might we see that will impact this sector?</td>
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<td>- Will pharma companies become more diversified -- will we see more consolidation?</td>
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<td>- Functional roles/career advancement in the biopharmaceutical industry.</td>
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