Economics of the Pharmaceutical and Biotechnology Industries
ECON-GB.2112.30

Term
Spring 2011

Course Length and Credit
This is a half-semester course (six weeks/three hour sessions) for 1.5 credits

Time
Tuesday evenings 6 – 9pm

Instructor
Dennis B. Liotta, MD, MBA
Adjunct Professor

Teaching Assistant
TBD

Course Summary
This course offers the student an overview of the management, economic and policy issues that drive and challenge the pharmaceutical and biotechnology industries. Included also in the biotechnology heading will be the multidiscipline medical device industry. The focus of this course is to give the student the insight into these dominant health care industries in their business transformation in an environment of health care reform.

Course Objectives
The objectives of the course will include: cost structure of these dominant market players; a focus on the management and economics of the powerful R&D process and its relationship to an ever changing technological environment and innovation dominance; the explosive growth of the biologic and genomics markets, and; the interconnectivity of the pharmaceutical and biotechnology industries. Discussion will also include the role of government regulation on these industries. The course will highlight the role of these industries in a global marketplace.

Case Studies
Actual case studies will be used and shall be the hallmark of this course. The case studies will include, but not limited to industry mergers, joint ventures, and alliances; as well as business operations and marketing functions; along with R&D, pricing ethics, manufacturing process, both domestic and foreign, and industry globalization of multinational firms.

Course Pre-requisite
None

Course Completion Requirements
Class participation and case studies 20%
Attendance of all six (6) class sessions 40%
Term exam/essays will be required to assess knowledge of the course materials 40%
## Course Syllabus

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<tr>
<th>Week</th>
<th>Topic</th>
<th>Sub-topics</th>
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| 1    | The Global Appetite for Drugs and Medical Technologies | The Differences Between the International Market and US Markets  
Impact on Supply Chain Dynamics  
Healthcare Reform Issues and Disparities: Solvency vs. Insolvency |
| 2    | Pharmaceutical/Biotech Companies, Payers and Patients and Business Models, Key Issues and Inherent Problems | Inter-connectivity of the two industries |
| 3    | Applied Pharmacoeconomics | Drug Trends  
Cost-benefit, effectiveness and utility analyses  
The Gamesmanship of Selling and Buying of Prescription Drugs  
Creating a Pharma R&D Roadmap |
| 4    | Driving the cost of healthcare up through Biotech and Medical Devices Innovation | The Rising Demand for Medical Technology: A New Age R&D Strategy  
Biologic and Genomic Explosion  
The cost benefit and utility analysis of the biotech business |
| 5    | The Economics of Industry Regulation | The Cost of Doing Business  
Drug Regulatory Affairs  
Biomedical Regulation & Policy  
Clinical Research Regulation & Ethics |
| 6    | Predicting the Future | Final Class:  
1. Open class discussion based on prepared research, viewpoints and arguments  
2. Final Exam |

### Text/Required Readings/Reading List

There is no required textbook for this course. Required readings and case studies will either be posted or distributed prior to corresponding class. Students are required to be prepared with their readings or case studies for each class. Students recognized as not being prepared will lose points associated with their class participation score.