



**Industry Pharmacy Practice Certificate Course**  
***Commercialization of Pharmaceuticals: Form A to Z and the***  
***Growing Role for Industry Pharmacists***  
**Online Course; 8 modules**

**Target Audience:**

This certificate course is designed to meet the growing demand in preparing student pharmacists, recent graduates, or younger professionals interested in a career in Industry.

**Course Description**

While the number of traditional pharmacy practice positions has been stagnant in recent years, the number of pharmacy schools across the U.S. continues to grow. In 2016 alone, it is expected that between 14,000-15,000 additional PharmDs will enter the workforce, which represents more than double the number of graduates produced in 2001.<sup>1</sup> This has led some to predict a looming employment crisis for the pharmacy profession.<sup>1,2</sup>

Meanwhile, the interest in pursuing a non-traditional professional path has expanded, particularly as such opportunities have increased beyond the realm of community and hospital pharmacies.<sup>3</sup> One such avenue for a pharmacist is a career in the pharmaceutical industry, where knowledge and awareness is increasing for new pharmacy graduates and established pharmacists. This career route allows pharmacists to utilize their clinical knowledge to impact patient health on a broader scale.<sup>3</sup>

The pharmaceutical industry including all of the organizations that support it offers exciting and professional challenges and opportunities for pharmacist graduates. Consistent with the changing roles of pharmacists in traditional healthcare practice settings, industry has also undergone significant changes resulting in a growing diversity of positions that are being filled by pharmacists throughout the commercialization process of pharmaceutical products.

This course explores various aspects of pharmaceutical commercialization from drug development and regulatory approval to marketing and sales strategies through life-cycle management. Each functional department will be described and discussed with a focus on the roles, responsibilities, and opportunities for pharmacists to successfully contribute and achieve high levels of professional satisfaction.

**References:**

1. Brown DL. A looming joblessness crisis for new pharmacy graduates and the implications it holds for the academy. *Am J Pharm Educ* 2013;777(5):Article 90.
2. Melillo S, Gangadharan A, Johnson H, Schleck P, Steinberg M, Alexander JG. Postdoctoral pharmacy industry fellowships: a descriptive analysis of programs and postgraduate positions. *Am J Health Syst Pharm*. 2012 Jan 1;69.
3. Romanelli F, Tracy TS. A coming disruption in pharmacy? *Am J Pharm Educ*. 2015 Feb 17;79(1):01.

**Course Delivery Format**

Upon completion of the course, participants will have a high-level understanding of key industry driving forces, commercial functions, and pharmacist roles.

- Online archived certificate course; 8 modules
- Registered participants have access to Course Instructor for Q&A
- Complimentary CV Review
- 50 Question Exam



## **Course Instructor: Biography**

Jerry Silverman, BS Pharm  
VP, Professional Development and Coaching

Jerry Silverman is a highly experienced and inspiring industry professional with a successful record of accomplishments in a wide variety of areas including: sales and marketing, training, new product development, and launch commercialization. He has worked in corporate, “big pharma”, and on the, “agency-side”, over his career and continues to be a strong advocate for the value of industry pharmacists, fellows, and students through coaching, mentoring, and teaching.

Mr. Silverman began his industry career with Eli Lilly as a pharmaceutical representative in Rochester, NY where he was responsible for hospital anti-infectives.

Jerry participated in a 3-year leadership development program at the Eli Lilly corporate headquarters. There he rotated through new product planning, training, and marketing. Upon completing this leadership development program, Jerry was recruited to join Searle in their Cardiovascular Medicines Marketing Group, where he rose to Director and had marketing responsibilities for the “blockbuster” antihypertensive agent, Calan SR.

After 12 years in, “big pharma”, Mr. Silverman founded BIMARK Medical Communications where he utilized his extensive experience in pharmaceutical marketing and training to build a successful agency over a twenty- year period.

Mr. Silverman is most proud of his contributions to the professional growth and advancement of industry pharmacists. His company served as an APPE for five schools of pharmacy in the NY/NJ metropolitan area for almost two decades. Bimark was invited to participate as the first medical communications fellowship to be affiliated with the Rutgers Post-Doctoral Program, as Jerry served as a preceptor and mentor to over 300 student pharmacists and PharmD Fellows. Additionally, BIMARK served as the medical communications agency responsible for the national marketing campaign for the Rutgers Industry Fellowship Program.

In 2008, Mr. Silverman was honored by the Alliance for Continuing Medical Education (ACME) for commitment to the training of industry pharmacists.

Jerry continues to devote his time and passion to advocating for industry pharmacy practice by serving on the leadership committee of the Industry Pharmacists Organization (IPhO). In this capacity he is responsible for development of professional programs to prepare student pharmacists interested in pursuing an industry career. He oversees the growing IPhO Student Chapter Network of pharmacy schools throughout the country, the IPhO National Fellows Council, and IPhO Coaching Services.



## **Course Objectives:**

### **At the completion of this course, Participants will be able to:**

Identify the needs, wants, and concerns of key stakeholder constituencies and their relationships that make up and influence the pharmaceutical industry sector including; manufacturers, public and private insurers, governmental regulatory bodies, healthcare providers, patients, and advocacy groups.

Describe the variety and functions of companies and organizations that support pharmaceutical manufacturers and opportunities for pharmacists employment including: medical affairs, clinical development, regulatory affairs and drug safety, health outcomes, medical communications and medical information, sales and marketing, and market research.

List the core functions and responsibilities of professional staff within departments of the pharmaceutical industry that commonly employ pharmacists.

Recognize how the effects of healthcare management principles by private and public payers have increased the opportunities for pharmacists to have a greater role within the pharmaceutical industry.

Explain the significance of key issues and trends related to prescription drug products, pricing, promotion, and distribution and their effect on industry practices, while forecasting near future employment growth opportunities.

Appreciate the critical skills and professional experiences required in order to secure an industry position.

Evaluate undergraduate, graduate, and post-doctoral professional development opportunities in academia and industry including internships, rotations, graduate programs and industry fellowship/residencies.

## **Course Assessments:**

Course assessments will include: optional micro essays and a 50-question exam.



## **Topical Outline:**

Course Intro and Overview

Industry Stakeholders, Structures, and Relationships

Forces Shaping the Pharmaceutical Industry

Business Development and Licensing

Drug Development Timeline and Signature Activities

The Role of CROs in the Pharma Industry

Regulatory Affairs and FDA Labeling

Growing Opportunities and Critical Responsibilities for Regulatory Affairs Pharmacists

FDA Amendments and Implications on Reviews, Research, and Patents

Drug Safety and Risk Management (Pharmacovigilance)

Role of the Drug Safety Scientist

FDA Regulation of Medical Information Resources and Responsibilities

Medical Affairs and Med Strategy - HEOR, Phase IV Post-Marketing Studies

Roles and Responsibilities Skills of Becoming a MSL

Pharmacists' Skills, Experience, and Pathways to Career Advancement

Market Research Needs Throughout the Commercialization Process

Industry Pharmacists Opportunities in Pharmaceutical Marketing and Communications

Field Force Structures and Relationships

Capabilities and deliverables of MECCs and Pharmacists' positions

Medical Education and Communications