

# DRUG DEVELOPMENT & INDUSTRIAL PHARMACY MS

The Master of Science (MS) program in Drug Development and Industrial Pharmacy (DDIP) at the historic Philadelphia College of Pharmacy (PCP) at Saint Joseph's University provides you with the experience necessary to learn the science and practice of how drug delivery systems are developed. An advanced degree such as MS in DDIP at PCP provides the knowledge and network for rewarding careers in the pharmaceutical and healthcare industry. The Philadelphia College of Pharmacy is in the heart of the biotechnology and health science industry, surrounded by 250 medical facilities and within two hours of 75% of all U.S. pharmaceutical and biotechnology companies, with strong foundations in pharmaceutical training to prepare students on day 1 when they join the industry. The city's diverse population and variety of health science employers offers the unique opportunity to gain experience in pharmaceutical research. This program provides the graduates with a strong foundation in pharmaceuticals during the first half of the study. The second half of the program is focused on industrial pharmacy, with a strong laboratory component and hands-on experience in all areas. The program enables the graduates to have strong communication skills, professional training and will prepare them for a career in pharmaceutical industry in a variety of roles.

## Learning Goals and Outcomes

**Goal 1:** Solid knowledge foundation and critical evaluation of scientific literature

**Goal 2:** Effective and accurate oral communication of scientific research

**Goal 3:** Critical data analysis with appropriate statistical methods

**Goal 4:** Demonstrate and acquire good laboratory practices

**Goal 5:** Acquires solid pharmaceuticals principles and hands on to be work ready day 1

**Goal 6:** Personal development/leadership/teamwork

## Requirements

Code	Title	Hours
PHS 714	Advanced Pharma Analysis	1
PHT 750	Research Ethics and Conduct	2
PHS 750	Manufacturing Pharmacy	2
PHS 751	Advanced Pharmaceuticals	3
PHS 760	Regulatory Issues in Pharma	3
PHS 762	Pre-formulation and Phys Pharm	3
PHS 763	Res Proj in Drug Dev & Ind Pha (Intro)	3
PHS 763	Res Proj in Drug Dev & Ind Pha (Adv)	3
PHS 890	Pharmaceutics Seminar	1
Choose nine credits below		9
PHS 703	Pharma & Biopharmaceutics I (3 credits)	
PHS 709	Pharm-Biopharmaceutics II (3 credits)	
PHS 714L	Advanced Pharma Analysis Lab (2 credits)	
PHS 750L	Manufacturing Pharmacy Lab (1 credit)	
PHT 752	Intro Scientific Data Analysis (1 credit)	
PHS 800	Biopharmaceutical Foundatn II (2 credits)	

PHS 895 Analysis of Current Literature (2 credits)

**Total Hours** 30

## Typical Course Sequence

Course	Title	Hours
<b>First Year</b>		
<b>Fall</b>		
PHS 703	Pharma & Biopharmaceutics I (Elective #1)	3
PHT 750	Research Ethics and Conduct (Required)	2
PHS 750	Manufacturing Pharmacy (Required)	2
PHS 750L	Manufacturing Pharmacy Lab (Elective #2**)	1
PHS 890	Pharmaceutics Seminar (Required)	1
<b>Hours</b>		<b>9</b>
<b>Spring</b>		
PHS 709	Pharm-Biopharmaceutics II (Elective #3)	3
PHS 714	Advanced Pharma Analysis (Required)	1
PHS 714L	Advanced Pharma Analysis Lab (Elective #4**)	2
PHS 762	Pre-formulation and Phys Pharm (Required) *	3
PHS 763	Res Proj in Drug Dev & Ind Pha (Required) *	3
PHS 890 Pharmaceutics Seminar (Register in the spring semester for 0 credit (section G02))		0
* = Typically this MS is done in 3 semester but if the student wishes to complete in 4 semesters, PHS 762 & PHS 763 will be taken Year 2 Spring Semester.		
** = Working professional will meet with their advisors to select electives 2 & 4.		
<b>Hours</b>		<b>12</b>
<b>Second Year</b>		
<b>Fall</b>		
PHS 751	Advanced Pharmaceuticals (Required)	3
PHS 760	Regulatory Issues in Pharma (Required)	3
PHS 763	Res Proj in Drug Dev & Ind Pha (Required)	3
PHS 890 Pharmaceutics Seminar (Register in the spring semester for 0 credit (section G02))		0
<b>Hours</b>		<b>9</b>
<b>Total Hours</b>		<b>30</b>