

**Special Courses of Master Degree in Pharmaceutical
Sciences
Industrial Pharmacy Department**

1. General Courses :(0600700) (12 cr. h)
2. Specialized Courses: (12 cr. h)

First Semester (6 cr. h)

No.	Course code	Courses	Credit hours	
			L	P
1	0603701	Pharmaceutical Technology I	2	1*
2	0603702	Pharmaceutical Unit Operations	2	--
3	0603703	Seminar I	1	--
Total			6	

*1 credit hour practical is 2 hours session weekly

Second Semester (6 cr. h)

No.	Course code	Courses	Credit hours	
			L	P
4	0603704	Pharmaceutical Technology II	2	--
5	0603705	Seminar II	1	--
6		Elective Course	3	
Total			6	

Elective Courses

No.	Course code	Courses	Credit hours	
			L	P
1	0603706	Applications of Physical Pharmacy in Pharmaceutical Industry Research	3	--
2	0602703	Applied Experimental Pharmacology	2	1*

*1 credit hour practical is 2 hours session weekly

**Course Description of Master Degree in Pharmaceutical
Sciences
Industrial Pharmacy Department**

First semester (6 cr. h)

Course Name	Teaching h/week		Credit hours	Code No.
	L	P		
Pharmaceutical Technology I	2	2	3	0603701
<p>Description: Advanced concept in design, development, formulation and manufacture of some pharmaceutical dosage forms, development and optimization of drug delivery systems including ocular, transdermal and depot dosage forms.</p> <p>PHARM 610 - Advanced Drug Delivery Systems University of Alberta/ Canada</p> <ul style="list-style-type: none"> • https://calendar.ualberta.ca/preview_course_nopop.php?catoid=28andcoid=243862 <p>Pharmaceutical technology (0903701) King's college London U.K.</p> <ul style="list-style-type: none"> • https://www.kcl.ac.uk/study/postgraduate/taught-courses/pharmaceutical-technology-msc <p>Phar 658: Pharmaceutical Manufacturing The University of Mississippi. USA</p> <ul style="list-style-type: none"> • https://catalog.olemiss.edu/pharmacy/pharmaceutics-drug-delivery/phar-658 <p>PHSC 542 – Advanced Topics in Industrial Pharmacy Campbell University North Carolina, USA</p> <ul style="list-style-type: none"> • https://cphs.campbell.edu/academic-programs/pharmaceutical-sciences/ms-in-pharmaceutical-science/courses/ 				

Course Name	Credit hours		Code No.
	L	P	
Pharmaceutical Unit Operations	2	--	0603702
<p>Description: Study of pharmaceutical manufacturing unit operations dealing with flow and transport of fluids, drying, size reduction, powder flow, size enlargement, mixing, emulsification, and crystallization. In addition, the course deals with the study of the layout of pharmaceutical manufacturing facilities.</p> <p>PHEN 603. Pharmaceutical Unit Operations New Jersey Institute of Technology</p> <ul style="list-style-type: none"> • https://catalog.njit.edu/graduate/newark-college-engineering/chemical-biological-pharmaceutical/pharmaceutical-ms/ <p>PE6013 Powder and Particle Technology and Unit Operations University College Cork, Ireland</p> <ul style="list-style-type: none"> • https://www.ucc.ie/admin/registrar/modules/?mod=PE6013 			

Second Semester (6 cr. h)

Course Name	Credit hours		Code No.
Pharmaceutical Technology II	L	P	0603704
	2	--	
<p>Description: Recent approaches in the development and manufacture of newly emerging drug delivery systems such as targeted drug delivery systems and nanotechnology-based pharmaceuticals.</p> <p>PHARM 610 - Advanced Drug Delivery Systems University of Alberta/ Canada</p> <ul style="list-style-type: none">• https://calendar.ualberta.ca/preview_course_nopop.php?catoid=28andcoid=243862 <p>Pharmaceutical technology (0903701) King's college London U.K.</p> <ul style="list-style-type: none">• https://www.kcl.ac.uk/study/postgraduate/taught-courses/pharmaceutical-technology-msc <p>Phar 658: Pharmaceutical Manufacturing The University of Mississippi. USA</p> <ul style="list-style-type: none">• https://catalog.olemiss.edu/pharmacy/pharmaceutics-drug-delivery/phar-658 <p>PHSC 542 – Advanced Topics in Industrial Pharmacy Campbell University North Carolina, USA</p> <ul style="list-style-type: none">• https://cphs.campbell.edu/academic-programs/pharmaceutical-sciences/ms-in-pharmaceutical-science/courses/			

Elective course

Course Name	Credit hours		Code No.
Applications of Physical Pharmacy in Pharmaceutical Industry Research	L	P	0603706
	3	--	
<p>Description: The course deals with the Physicochemical Principles of Pharmacy and their application in the pharmaceutical industry explaining some phenomena such as: solubility and dissolution phenomena, surface and interfacial tension, suspension stabilization and Zeta potential, emulsion preparation and stabilization in addition to pharmaceutical polymers.</p> <p>PHC 530 Physical Pharmacy University at Buffalo School of Pharmacy and Pharmaceutical Sciences/ New York /USAQ</p> <ul style="list-style-type: none">• http://pharmacy.buffalo.edu/academic-programs/pharmd/requirements/courses.html <p>PHSC 540 Advanced physical pharmacy Campbell University North Carolina, USA</p> <ul style="list-style-type: none">• https://cphs.campbell.edu/academic-programs/pharmaceutical-sciences/ms-in-pharmaceutical-science/courses/			