

## Master of Pharmaceutical Sciences Study Plan

- A. General Courses: the following courses are required to be registered by all students enrolled in the program (total 12 credit hours)

	Course Code	Course Name	Credit Hours
1.	1103611	Research ethics	1
2.	1103613	Experimental design and data analysis	2
3.	1101611	Instrumental analysis	3
4.	1102611	Foundation of Pharmaceutical sciences	3
5.	1102612	Pharmaceutical sciences Journal club-I	2
6.	1103612	Research seminar	1
Total			12

After finishing the general courses in the first semester, students will select one of three tracks

- B. Concentration-specific Courses

Each registered student should complete 12 credit hours' concentration -specific courses (total 12 credit hours)

Pharmacology Concentration			
	Course code	Course name	Cr. Hr.
1.	1102613	Molecular Pharmacology	3 (compulsory)
2.	1102622	Pharmacogenomics	3 (compulsory)
3.	1102621	Gene and Stem Cells Therapy	3 (compulsory)
4.	1102623	Neuropharmacology	3 (elective)
5.	1102624	Principles of Cancer Chemotherapy	3 (elective)

Pharmaceutics Concentration			
	Course code	Course name	Cr. Hr.
1.	1103621	Advanced Drug Delivery Systems	3 (compulsory)
2.	1103622	Advanced Pharmaceutics	3 (compulsory)
3.	1103623	Selected topics in pharmaceutics (regulatory affairs)	3 (compulsory)
4.	1103614	Pharmacy management	3 (elective)
5.	1103615	Advanced Cosmetics and Para-pharmaceuticals	3 (elective)

Medicinal Chemistry Concentration			
	Course code	Course name	Cr. Hr.
2.	1101612	Advanced Organic Chemistry	3 (compulsory)
1.	1101621	Advanced Pharmaceutical analysis	3 (compulsory)
3.	1101622	Advanced Topics in Medicinal Chemistry	3 (compulsory)
4.	1101631	Special Topics in Medicinal Chemistry	3 (elective)
5.	1101632	Advanced Pharmaceutical analysis I	3 (elective)

## Course Distribution (Full-Time)

### A) Pharmacology concentration

Year	Semester	Course Title	Course code	Credit hours	Total
1	Fall	Research ethics	1103611	1	12
		Experimental design and data analysis	1103613	2	
		Instrumental analysis	1101611	3 (2+3)	
		Foundation of Pharmaceutical sciences	1102611	3	
		Molecular Pharmacology	1102613	3	
	Spring	Gene and stem cell therapy	1102621	3	12
		Neuropharmacology OR Principles of cancer chemotherapy	1102623 OR 1102624	3	
		Pharmacogenomics	1102622	3	
Research thesis		1105635	3		
2	Fall	Research seminar	1103612	1	9
		Pharmaceutical sciences Journal club	1102612	2	
		Research thesis	1105636	6	

### B) Pharmaceutics Concentration

Year	Semester	Course Title	Course code	Credit hours	Total
1	Fall	Research ethics	1103611	1	12
		Experimental design and data analysis	1103613	2	
		Instrumental analysis	1101611	3 (2+3)	
		Foundation of Pharmaceutical sciences	1102611	3	
		Pharmacy management OR Advanced cosmetics and para-pharmaceuticals	1103614 OR 1103615	3	
	Spring	Advanced Drug delivery systems	1103621	3	12
		Advanced Pharmaceutics	1103622	3	
		Selected topics in Pharmaceutics	1103623	3	
Research thesis		1105635	3		
2	Fall	Research seminar	1103612	1	9
		Pharmaceutical sciences Journal club	1102612	2	
		Research thesis	1105636	6	

C) Medicinal Chemistry Concentration

Year	Semester	Course Title	Course code	Credit hours	Total
1	Fall	Research ethics	1103612	1	12
		Experimental design and data analysis	1103611	2	
		Instrumental analysis	1101611	3 (2+3)	
		Foundation of Pharmaceutical sciences	1102611	3	
		Advanced organic chemistry	1101612	3	
	Spring	Advanced Pharmaceutical Analysis	1101621	3	12
		Advanced Topics in Medicinal Chemistry	1101622	3	
		Special Topic in Medicinal Chemistry or Advanced Pharmaceutical Analysis I	1101631 1101632	3	
		Research thesis-I	1105635	3	
2	Fall	Research seminar	110311	1	9
		Pharmaceutical sciences Journal club	1102612	2	
		Research thesis-II	1105636	6	

**Course Distribution (Part-Time Students)**

A) Pharmacology Concentration

Year	Semester	Course Title	Course code	Credit hours	Total
1	Fall	Research ethics	1103612	1	6
		Experimental design and data analysis	1103611	2	
		Instrumental analysis	1101611	3 (2+3)	
	Spring	Foundation of Pharmaceutical sciences	1102611	3	6
		Molecular Pharmacology	1102613	3	
2	Fall	Gene and stem cell therapy	1102621	3	6

Year	Semester	Course Title	Course code	Credit hours	Total
		Neuropharmacology OR Principles of cancer chemotherapy	1102623 OR 1102624	3	6
		Pharmacogenomics	1102622	3	
	Spring	Research thesis	1105635	3	
3	Fall	Research seminar	1103612	1	6
		Pharmaceutical sciences Journal club	1102612	2	
		Research thesis	1105635	3	
	Spring	Research thesis	1105635	3	3

B) Pharmaceutics Concentration

Year	Semester	Course Title	Course code	Credit hours	Total
1	Fall	Research ethics	1103611	1	6
		Experimental design and data analysis	1103613	2	
		Instrumental analysis	1101611	3 (2+3)	
	Spring	Foundation of Pharmaceutical sciences	1102611	3	6
Pharmacy management OR Advanced cosmetics and para-pharmaceuticals		1103614 OR 1103615	3		
2	Fall	Advanced Drug delivery systems	1103621	3	6
		Advanced Pharmaceutics	1103622	3	
	Spring	Selected topics in Pharmaceutics	1103623	3	6
		Research thesis-I	1105635	3	
3	Fall	Research seminar	1103612	1	6
		Pharmaceutical sciences Journal club	1102612	2	
		Research thesis-I	1105635	3	
	Spring	Research thesis-Ii	1105636	6	3

C) Medicinal Chemistry Concentration

Year	Semester	Course Title	Course code	Credit hours	Total
1	Fall	Research ethics	1103612	1	6
		Experimental design and data analysis	1103611	2	
		Instrumental analysis	1101611	3 (2+3)	
	Spring	Foundation of Pharmaceutical sciences	1102611	3	6
		Advanced Organic Chemistry	1101612	3	
2	Fall	Advanced Pharmaceutical Analysis	1101621	3	6
		Advanced Topics in Medicinal Chemistry	1101622	3	
	Spring	Special Topic in Medicinal Chemistry or Advanced Pharmaceutical Analysis I	1101631 1101632	3	6
		Research thesis-I	1105635	3	
3	Fall	Research seminar	110311	1	6
		Pharmaceutical sciences Journal club	110220	2	
		Research thesis-I	1105635	3	
	Spring	Research thesis-II	1105636	3	3