Ministry of Higher Education and Scientific Research Scientific Supervision and Scientific Evaluation Apparatus Directorate of Quality Assurance and Academic Accreditation Accreditation Department



Academic Program and Course Description Guide

Academic Program Description Form

University Name: University of Mosul Faculty/Institute: College of Pharmacy Scientific Department: Academic or Professional Program Name: Bachelor of Pharmacy Final Certificate Name: B.Sc. in Pharmacy Academic System: Courses Description Preparation Date: 07.03.2024 File Completion Date: 07.03.2024

Signature:

Signature: Head of Department Name: Prof. Dr. Zeina Althanoon Date: 07.03.2024

Scientific Associate Name: Ass. Prof. Dr. Mohannad Alqazaz Date:07.03.2024

The file is checked by: Department of Quality Assurance and University Performance Director of the Quality Assurance and University Performance Department: Ass. Prof. Dr. Zahraa A. Hashim

Date: 25.03.2024 Signature: (



1. Program Vision

The College of Pharmacy seeks to prepare graduates in the field of pharmaceutical sciences to work in government departments and benefit from specialization in the practical and applied field

2. Program Mission

Work on preparing and graduating leading scientific and leadership competencies in the field of pharmaceutical sciences and in developing the knowledge balance in the field of scientific research in the field of pharmacy to serve the local, regional and international community, as well as training and refining students' minds scientifically and cognitively, emphasizing social and cultural values and responding to the requirements of the local market.

3. Program Objectives

1. Qualifying pharmaceutical staff and empowering them with knowledge at the practical and applied levels in the field of specialization.

2. Paying attention to the scientific outputs of preparing a generation of pharmaceutical competencies capable of achieving pharmaceutical practices in the health, academic and industrial sectors.

3. Seeking to graduate elements with the ability to creativity and innovation after their graduation and keep pace with scientific and technical development in all pharmaceutical fields.

4. Attention to the research aspect based on the use of modern laboratory equipment for the purpose of providing graduates with applied skills (drug analysis, preparation of different pharmaceutical forms, extraction of therapeutic

material from raw materials, determination of chemical and biological properties of compounds).

5. Familiarity with the applied aspects of the patient's pharmacological uses and interest in the clinical application of theoretical information.

6. Encouraging students to pay attention to modern pharmaceutical aspects such as the use of computers in the pharmaceutical aspects and the discovery of drug interactions

4. Program Accreditation

Local (National Accreditation Standards for Classification)

5. Other external influences

Scientific library, international information network, field visits to health

institutions, pharmaceutical laboratories and pharmacies of the private sector.

6. Program Structure						
Program Structure	Number of	Credit	Percentage	Reviews*		
	Courses	hours				
Institution	11	17	0.5			
Requirements		17	9.5			
College	52	166	00			
Requirements	55	100	90			
Department						
Requirements						
Summer Training	Yes					
Other	Graduation project	1	0.5			

* This can include notes whether the course is basic or optional.

7. Program Description					
Voor/Lovol	Course Code	Course Name	Credit H	lours	
rear/Lever	Course Code	Course Name	Theoretical	Practical	
	Phpch23_111	Analytical Chemistry	3	2	
	Phcls23_112	Computer Sciences		2	
	Phcls23_113	Human biology	2	2	
First Year–First	Phcls23_114	Mathematics and Biostatistics	3		
Semester	Phpht23_115	Medical Terminology	1		
	Phind23_116	Principles of Pharmacy Practice	2		
	Phcls23_117	Democracy & Human Rights	2		

Program Description					
Voor/Lovol	Course Code	Course Norme	Credit Hours		
r ear/Level	Course Code	e Code Course Name Theo		Practical	
	Phels23 128	Human	1	2	
	FIICI823_120	Anatomy	1	2	
First Year-	Phc1s23_129	Human	2	2	
	FIICI823_129	Histology	2	2	
	Phcls23_1210	Medical Physics	2	2	
	Dhush 22 1211	Organic	3	2	
Second	r npcn25_1211	Chemistry I		2	
Semester	Dhind 23 1212	Pharmaceutical	2	2	
	r mnu23_1212	Calculation			
	Dhalo 23 1213	Computer		2	
	FIICIS25_1215	Sciences		2	
	Dhala 22 1214	English	2		
	FIICIS23_1214	Language			

Program Description				
Year/Level	Course Code		Crea	lit Hours
	Course Code	Course Name	Theoretical	Practical
	Phcls23_211	Baath's Party Crimes	2	
	Phcls23_212	Medical Microbiology I	3	2
Second Year-	Phpch23_213	Organic Chemistry II	3	2
Semester	Phind23_214	Physical Pharmacy I	3	2
	Phpht23_215	Physiology I	3	2
	Phcls23_216	Computer Sciences		2
	Phcls23_217	Democracy	1	

Program Description					
Voor/Lovol	Course Code	Course Nome	Credit	Hours	
I eal/Level	Course Coue	Course Maine	Theoretical	Practical	
Second Year- Second Semester	Phcls23_228	Medical Microbiology II	3	2	
	Phpch23_229	Organic Chemistry III	2	2	
	Phcog23_2210	Pharmacognosy I	3	2	
	Phind23_2211	Physical Pharmacy II	3	2	
	Phpht23_2212	Physiology II	3	2	
	Phcls23_2213	Computer Sciences		2	
	PhCls23_2214	Arabic Language	2		

Program Description					
Voor/Lovol	Course Code	Course Nome	Cred	it Hours	
I cal/Level	Course Code	Course Name	Theoretical	Practical	
	Phcls23_311	Biochemistry I	3	2	
		Inorganic			
	Phpch23_312	Pharmaceutical	2	2	
Third Year-		Chemistry			
First	Phcls23_313	Pathophysiology	3	2	
Semester	Phind23_314	Pharmaceutical Technology I	3	2	
	Phcog23_315	Pharmacognosy II	2	2	

Program Description				
Year/Level	Course Code	Course Name	Credit	Hours
			Theoretical	Practical
	Phcls23_326	Biochemistry II	3	2
	Phclp23_327	Pharmacy Ethics	1	
Third Year-	Phpch23_328	Organic Pharm.	2	C
Second		Chemistry I	5	2
Semester	Phind23_329	Pharm.Technology II	3	2
	Phcog23_3210	Pharmacognosy III	2	2
	Phpht23_3211	Pharmacology I	3	

Program Description					
Voor/Lovol	Gamma Galla	Course Nome	Credit	Hours	
I eal/Level	Course Coue	Course Maine	Theoretical	Practical	
	Phind23_411	Biopharmaceutics	2	2	
	Phclp23_412	Clinical Pharmacy I	2	2	
Fourth Year-	Phpch23 413	Organic	3	2	
First		Pharm.Chemistry II		—	
Semester	Phpht23_414	Pharmacology II	3	2	
	Phcls23_415	Public Health	2		
	Phcls23_416	English Language	2		

Program Description					
Year/Level	Course Code	Course Name	Credit	Hours	
			Theoretical	Practical	
	Phclp23_427	Communication Skills	2		
	Phclp23_428	Clinical Pharmacy II	2	2	
Fourth Veen Second	Phpht23_429	General Toxicology	2	2	
Semester	Phind23_4210	Industrial Pharmacy I	3	2	
	Phpch23_4211	Organic Pharm. Chemistry III	3	2	
	Phpht23_4212	Pharmacology III	2		

Program Description					
Voor/Lovol	Course Code	Course Nome	Credit	Hours	
Y ear/Level	Course Code	Course Maine	Theoretical	Practical	
Fifth Veer	Phclp23_511	Applied Therapeutics- I	3		
	Phcls23_512	Clinical Chemistry	3	2	
Fillin Year-	Phclp23_513	Hospital Training		4	
FIISt Somostor	Phpht23_514	Clinical Toxicology	2	2	
Semester	Phind23_515	Industrial Pharmacy- II	3	2	
	Phpch23_516	Org. Pharm. Chem. IV	2		
		Graduation project	1		

Program Description					
Voor/Lovol	Course Code	Course Nome	Credit I	Hours	
1 eal7Level	Course Coue	Course Maine	Theoretical	Practical	
Fifth Year- Second Semester		Advanced			
	Phpch23_528	Pharmaceutical	3	2	
		Analysis			
	Phclp23_529	Applied Therapeutics- II	2		
	Phind23_5210	Dosage Form Design	2		
	Phcls23_5211	Clinical Laboratory Training		4	

H	Phclp23_5212	Pharmacoeconomic	2	
Т	Dhalp 23 5213	Therapeutic Drug	r	2
I	Pheip25_5215	Monitoring (TDM)	2	Δ
г	Dhind 22 5214	Pharmaceutical	1	
ſ	Piiiiu25_5214	Biotechnology	1	

8. Expected learning outcomes of the program

Knowledge

1. Knowledge of the basics of various sciences related to the human body and diseases, such as: microbiology, physiology, organic, inorganic and life chemistry, pathophysiology, immunology, anatomy, histology and medical statistics

2. Know the characteristics of the drug, its mechanism of action and the side effects caused by its use.

3. Knowing the appropriate medication for the patient according to the pathological condition, medical history and diagnosis through clinical application

4. Know the physical and chemical properties of the compounds involved in the pharmaceutical industry and determine the appropriate pharmaceutical forms for each substance accordingly

5. Familiarity with the pharmaceutical industry and the mechanism of preparation of various pharmaceutical forms. Identify the important devices involved in pharmaceutical manufacturing.

Skills

1. Acquire skills in the mechanism of functioning of vital body systems in a healthy state

2. Acquire skills in the imbalance in the functioning of vital body systems in the pathological condition

3. Acquire skills in the mechanism of action of chemical compounds manufactured chemically or extracted from natural sources

4. Acquire clinical applied skills in the mechanism of dealing with the patient, prescribing treatment, detecting imbalances in doses and drug-pharmacological and pharmaco-nutritional interactions

5. Acquire pharmaceutical skills related to drug sources and the mechanism of comparison between types and the quality of the people for the purpose of determining the best in the local and international markets

Ethics

Developing students' abilities to share ideas.

Developing students' abilities to deal with patients and medical staff in healthcare institutions.

Developing students' knowledge of research ethics.

9. Teaching and Learning Strategies

Explain the scientific material to students in detail.

Discussion and dialogue on topical vocabulary.

Theoretical, practical and practical lectures, daily assignments and discussions.

10. Evaluation methods

Exams: Mixed theoretical questions consisting of explaining the choice of the correct answer and filling in the blanks. Daily tasks and duties (classroom or classroom) Discussions Laboratory reports on applied trials or clinical cases Graduation project (for the fifth stage).

11. Facu	lty					
Faculty Me Academic	mbers Specialization		Special		Numb	er of the
Rank			Requireme	nts/Skills	teach	ing staff
			(if applicab	le)		
	General	Special			Staff	Lecturer
		Pharmaceutical	Teaching		1	
Defense		Chemistry	Theoretical		1	
Protessors	Pharmacy		Teaching			
		Pharmacology	Theoretical		1	
		Pharmaceutical	Teaching	Teaching	4	
		Chemistry	Theoretical	Practical	4	
		Dischamistry	Teaching	Teaching	2	
		вюспетніяцу	Theoretical	Practical	2	
		Clinical	Teaching	Teaching	2	
Assistant	Pharmacy	Pharmacy	Theoretical	Practical	2	
Professors	Thanhaoy	Pharmacology	Teaching	Teaching	12	
		Tharmacology	Theoretical	Practical	12	
		Microbiology	Teaching	Teaching	3	
		wile oblology	Theoretical	Practical	5	
		Physiology	Teaching	Teaching	2	
		i iiysiology	Theoretical	Practical		

		Pharmaceutics	Teaching Theoretical	Teaching Practical	1	
		Physiology	Teaching Theoretical	Teaching Practical	1	
		Pharmacology	Teaching Theoretical	Teaching Practical	8	
		Clinical Pharmacy	Teaching Theoretical	Teaching Practical	7	
Lecturer	Pharmacy	Pharmaceutics	Teaching Theoretical	Teaching Practical	6	
		Pharmaceutical Chemistry	Teaching Theoretical	Teaching Practical	2	
		Biochemistry	Teaching Theoretical	Teaching Practical	6	
		Microbiology	Teaching Theoretical	Teaching Practical	1	
Assistant Lecturer		Pharmacology	Teaching Theoretical	Teaching Practical	5	
	Pharmacy	Physiology	Teaching Theoretical	Teaching Practical	5	
		Pharmaceutical Chemistry	Teaching Theoretical	Teaching Practical	6	

	Pharmaceutics	Teaching	Teaching	12	
		Theoretical	Practical		
	Biochemistry	Teaching	Teaching	3	
		Theoretical	Practical		
	Clinical	Teaching	Teaching	Δ	
	Pharmacy	Theoretical	Practical	-	
	Microbiology	Teaching	Teaching	1	
	Willings	Theoretical	Practical	1	
	Biochemistry	Teaching	Teaching	1	
	Diodiciniotry	Theoretical	Practical	1	
l ife Science	Microbiology	Teaching	Teaching	3	
	Microbiology	Theoretical	Practical	5	
	Physiology	Teaching	Teaching	1	
	Thyolology	Theoretical	Practical	1	
	Microbiology	Teaching	Teaching	2	
	Willings	Theoretical	Practical	2	
Life Science	Chemistry	Teaching	Teaching	6	
	Chonnolly	Theoretical	Practical	U	
	Biochemistry	Teaching	Teaching	2	
	Diodiomotry	Theoretical	Practical	2	
Life Science	Chemistry	Teaching	Teaching	3	
	Chomiotry	Theoretical	Practical	5	
	Life Science Life Science	PharmaceuticsBiochemistryClinical PharmacyMicrobiologyLife ScienceMicrobiologyPhysiologyLife ScienceMicrobiologyLife ScienceSiochemistryLife ScienceChemistryLife ScienceSiochemistrySiochemistrySiochemistrySiochemistrySiochemistry	PharmaceuticsTeaching TheoreticalBiochemistryTeaching TheoreticalClinicalTeaching TheoreticalPharmacyTeaching TheoreticalMicrobiologyTeaching TheoreticalBiochemistryTeaching TheoreticalLife ScienceMicrobiologyTeaching TheoreticalPhysiologyTeaching TheoreticalPhysiologyTeaching TheoreticalLife ScienceChemistryTeaching TheoreticalLife ScienceChemistryTeaching Theoretical	PharmaceuticsTeaching TheoreticalTeaching PracticalBiochemistryTeaching TheoreticalTeaching PracticalClinicalTeaching TheoreticalTeaching PracticalClinicalTeaching TheoreticalTeaching PracticalMicrobiologyTeaching TheoreticalTeaching PracticalLife ScienceMicrobiologyTeaching TheoreticalTeaching PracticalLife ScienceMicrobiologyTeaching TheoreticalTeaching PracticalLife ScienceMicrobiologyTeaching TheoreticalTeaching PracticalLife ScienceChemistryTeaching TheoreticalTeaching PracticalLife ScienceChemistryTeaching TheoreticalTeaching Practical <td>PharmaceuticsTeaching TheoreticalTeaching Practical12BiochemistryTeaching TheoreticalTeaching Practical3Clinical PharmacyTeaching TheoreticalTeaching Practical4MicrobiologyTeaching TheoreticalTeaching Practical1Life ScienceMicrobiologyTeaching TheoreticalTeaching Practical1Life ScienceMicrobiologyTeaching TheoreticalTeaching Practical3Life ScienceMicrobiologyTeaching TheoreticalTeaching Practical3Life ScienceChemistryTeaching TheoreticalTeaching Practical1Life ScienceChemistryTeaching TheoreticalTeaching Practical2Life ScienceChemistryTeaching TheoreticalTeaching Practical2Life ScienceChemistryTeaching TheoreticalTeaching Practical2Life ScienceChemistryTeaching TheoreticalTeaching Practical2Life ScienceChemistryTeaching TheoreticalTeaching Practical2Life ScienceChemistryTeaching TheoreticalTeaching Practical2Life ScienceChemistryTeaching TheoreticalTeaching Practical3Life ScienceChemistryTeaching TheoreticalTeaching Practical3</td>	PharmaceuticsTeaching TheoreticalTeaching Practical12BiochemistryTeaching TheoreticalTeaching Practical3Clinical PharmacyTeaching TheoreticalTeaching Practical4MicrobiologyTeaching TheoreticalTeaching Practical1Life ScienceMicrobiologyTeaching TheoreticalTeaching Practical1Life ScienceMicrobiologyTeaching TheoreticalTeaching Practical3Life ScienceMicrobiologyTeaching TheoreticalTeaching Practical3Life ScienceChemistryTeaching TheoreticalTeaching Practical1Life ScienceChemistryTeaching TheoreticalTeaching Practical2Life ScienceChemistryTeaching TheoreticalTeaching Practical2Life ScienceChemistryTeaching TheoreticalTeaching Practical2Life ScienceChemistryTeaching TheoreticalTeaching Practical2Life ScienceChemistryTeaching TheoreticalTeaching Practical2Life ScienceChemistryTeaching TheoreticalTeaching Practical2Life ScienceChemistryTeaching TheoreticalTeaching Practical3Life ScienceChemistryTeaching TheoreticalTeaching Practical3

		Microbiology	Teaching Theoretical	Teaching Practical	3	
Lecturer	Medicine	Hematology	Teaching Theoretical	Teaching Practical	1	
Assistant Lecturer	Veterinary Medicine	Biochemistry	Teaching Theoretical	Teaching Practical	1	
Lecturer	Engineering Computer Science		Teaching Theoretical	Teaching Practical	1	
Assistant Lecturer	Engineering	neering Computer Science		Teaching Practical	1	
Assistant Lecturer	Finance and Administration	Finance	Teaching Theoretical	Teaching Practical	4	

Professional Development

Mentoring new faculty members

The presence of the Capacity Development Center (Continuing Education

Center) at the university

Holding workshops and seminars (4-6 workshops and seminars annually)

Delivering seminars by the staff

Professional development of faculty members

The presence of the Capacity Development Center (Continuing Education

Center) at the university

Holding workshops and seminars (4-6 workshops and seminars annually)

Delivering seminars by the staff

12. Acceptance Criterion

Central Admission

13. The most important sources of information about the program

University Central Library (Book based and Electronic Library)

College Library (Book based and Electronic Library)

Textbooks for pharmacy faculties

Websites

YouTube Movies

14. Program Development Plan

 $1. \ \mbox{Using new concepts}$ in the field of pharmaceutical sciences and using electronic

devices to display information and issues

- 2. E-learning by sharing websites and links
- 3. Student seminars and debates
- 4. Work as a research team in the form of research groups

		Pro	ogram Skills	Outlin	е										
						Requ	uired	prog	ram	Learr	ning	outco	omes		
Year/Level	Course Code	Course Name	Basic or	Kno	wled	ge		Skil	ls			Ethi	ics		
			optional	A1	A2	A3	A4	В1	В2	В3	В4	C1	C2	C3	C4
	Phpch23_111	Analytical Chemistry	Basic				*				*				*
	Phcls23_112	Computer Sciences	Basic				*				*				*
	Phcls23_113	Human biology	Basic				*				*				*
- First Year-First -	Phcls23_114	Mathematics and Biostatistics	Basic				*				*				*
Semester	Phpht23_115	Medical Terminology	Basic				*				*				*
F	Phind23_116	Principles of Pharmacy Practice	Basic				*				*				*
	Phcls23_117	Democracy & Human Rights	Basic				*				*				*

			Pro	ogram	Skills	Outli	ne								
							Requi	red p	rogra	m Le	arning	g outcor	nes		
Vear/Level	Course Code	Course	Basic or		Know	ledge			Sk	ills			Eth	nics	
rear/Lever		Name	optional	A1	A2	A3	A4	B1	B2	В3	В4	C1	C2	C3	C4
	Dhale22,129	Human	Basia				*				*				*
	PTICIS25_128	Anatomy	Dasic												
	Phcls23_129	Human	Peoie				*				*				*
		Histology	Dasic												
First Year-	Bholo22 1210	Medical	Pasia				*				*				*
Second	Phois23_1210	Physics	Dasic								4.				
Semester	Dbpsh22, 1211	Organic	Pasia				*				*				*
Phpch23_1211	Chemistry I	Dasic								4.					
		Pharmaceu													
	Phind23_1212	tical	Basic				*				*				*
		Calculation													

Phcls23_1213	Computer Sciences	Basic		*		*		*
Phcls23_1214	English Language	Basic		*		*		*

			Pro	ogram	Skills	Outli	ne								
							Requ	ired p	orogra	ım Le	earning	g outcor	nes		
Year/Level	Course Code	Course	Basic or	Knov	wledge	•		Skill	ls			Ethics			
		Name	optional	A1	A2	A3	A4	B1	В2	В3	B4	C1	C2	C3	C4
		Baath's													
	Phcls23_211	Party	Basic				*				*				*
		Crimes													
		Medical													
Second	Phcls23_212	Microbiology	Basic				*				*				*
Year-First		I													
Semester	Dhech 22, 212	Organic	Pasia				*				*				*
	Phpch25_215	Chemistry II	Dasic				4				*				*
	Dhind 22 214	Physical	Pasia				*				*				*
	F1111023_214	Pharmacy I	Dasic				-14								
	Phpht23_215	Physiology I	Basic				*				*				*

	Phcls23_216	Computer Sciences	Basic		*		*		*
	Phcls23_217	Democracy	Basic		*		*		*

			Pro	ogram	Skills	Outli	ne								
							Requ	ired p	orogra	am Le	earning	g outcor	nes		
Year/Level	Course	Course	Basic or	Knov	wledge)		Skil	ls			Ethics			
	Code	Name	optional	A1	A2	A3	A4	B1	B2	В3	В4	C1	C2	C3	C4
	Phcls23_228	Medical Microbiology II	Basic				*				*				*
Second Year– Second Semester	Phpch23_22 9	Organic Chemistry III	Basic				*				*				*
	Phcog23_22 10	Pharmacogn osy I	Basic				*				*				*
	Phind23_221	Physical Pharmacy II	Basic				*				*				*
	Phpht23_22 12	Physiology II	Basic				*				*				*

Phcls23_221 3	Computer Sciences	Basic		*		*		*
PhCls23_22	Arabic	Basic		*		*		*
14	language	Basic						

			Pro	ogram	Skills	Outli	ne								
							Requ	ired p	orogra	ım Le	arnin	g outcor	nes		
Year/Level	Course Code	Course	Basic or	Knov	wledge	•		Skil	ls			Ethics			
		Name	optional	A1	A2	A3	A4	B1	B2	В3	В4	C1	C2	C3	C4
	Phcls23_311	Biochemistry I	Basic				*				*				*
Third	Phpch23_312	Inorganic Pharmaceutic al Chemistry	Basic				*				*				*
Third Year–First	Phcls23_313	Pathophysiolo gy	Basic				*				*				*
Year–First Semester	Phind23_314	Pharmaceutic al Technology I	Basic				*				*				*
	Phcog23_315	Pharmacogno sy II	Basic				*				*				*

			Pro	ogram	Skills	Outli	ne								
							Requ	ired _I	orogra	am Le	earning	g outcor	nes		
Year/Leve	Course Code	Course Name	Basic or	Knov	wledge	;		Skil	ls			Ethics			
I			optional	A1	A2	A3	A4	B1	B2	В3	В4	C1	C2	C3	C4
Third	Phcls23_326	Biochemistry													
Year-		П	Pasia				*				*				*
Second			Dasic				*				*				*
Semester															
	Phclp23_327	Pharmacy	Pagia				*				*				*
		Ethics	Dasic												
	Phpch23_328	Organic													
		Pharm.	Basic				*				*				*
		Chemistry I													
	Phind23_329	Pharm.	Basic				*				*				*
		Technology II	DASIC								-				Ŧ

Phcog23_3210	Pharmacogno sy III	Basic		*		*		*
Phpht23_3211	Pharmacology I	Basic		*		*		*

			Pro	ogram	Skills	Outli	ne								
							Requi	red p	rogra	m Le	arnin	g outcor	nes		
Year/Level	Course	Course	Basic or	Kno	wledge	9		Skill	ls			Ethics			
	Code	Name	optional	A1	A2	A3	A4	B1	B2	В3	В4	C1	C2	C3	C4
	Phind23_4 11	Biopharma ceutics	Basic				*				*				*
Fourth Year– First Semester	Phclp23_4 12	Clinical Pharmacy I	Basic				*				*				*
	Phpch23_ 413	Organic Pharm.Ch emistry II	Basic				*				*				*
	Phpht23_4 14	Pharmacol ogy II	Basic				*				*				*

Phcls23_4	Public	Basia		*		*		*
15	Health	Dasic						
Phcls23_4	English	Basia		*		*		*
16	Language	Dasic						

			Pro	ogram	Skills	Outli	ne								
						l	Requi	red p	rogra	m Le	arning	g outcoi	mes		
Year/	Course Code	Course Name	Basic	Kno	wledge	9		Skill	ls			Ethics			
Level			or optiona I	A1	A2	A3	A4	B1	B2	В3	В4	C1	C2	C3	C4
Fourt	Phclp23_427	Communication Skills	Basic				*				*				*
n Year–	Phclp23_428	Clinical Pharmacy II	Basic				*				*				*
d	Phpht23_429	General Toxicology	Basic				*				*				*
ster	Phind23_4210	Industrial Pharmacy I	Basic				*				*				*

Phpch23_4211	Organic Pharm. Chemistry III	Basic		*		*		*
Phpht23_4212	Pharmacology III	Basic		*		*		*

			Pro	ogram	Skills	Outli	ne								
							Requi	red p	rogra	m Le	arning	g outcor	nes		
Year/Level	Course Code	Course Name	Basic or	Knov	wledge)		Skill	s			Ethics			
			optional	A1	A2	A3	A4	B1	B2	В3	В4	C1	C2	C3	C4
		Applied													
	Phclp23_511	Therapeutics-	Basic				*				*				*
		I													
	Dhele22,512	Clinical	Basic				*				*				*
Fifth	FIICIS25_512	Chemistry	Dasic												-
Year-First	Pholo23 513	Hospital	Basic				*				*				*
Semester	FIICIP25_515	Training	Dasic												-
	Dhubt22,514	Clinical	Basic				*				*				*
	Filplit25_514	Toxicology	Dasic												*
	Phind 23 515	Industrial	Basic				*				*				*
	F10025_515	Pharmacy- II	Dasic												

Phpch23_516	Org. Pharm. Chem. IV	Basic		*		*		*
	Graduation project	Basic		*		*		*

			Pro	ogram	Skills	Outli	ne								
							Requ	ired p	orogra	ım Lea	arning	g outcor	nes		
Year/Level	Course	Course Name	Basic or	Knov	wledge	•		Skil	ls			Ethics			
	Code		optional	A1	A2	A3	A4	B1	В2	В3	В4	C1	C2	C3	C4
	Phpch23_ 528	Advanced Pharmaceutical Analysis	Basic				*				*				*
Fifth Year−	Phclp23_ 529	Applied Therapeutics- II	Basic				*				*				*
Second Semester	Phind23_ 5210	Dosage Form Design	Basic				*				*				*
	Phcls23_ 5211	Clinical Laboratory Training	Basic				*				*				*

Phclp23_ 5212	Pharmacoeconomi c	Basic		*		*		*
Phclp23_ 5213	Therapeutic Drug Monitoring (TDM)	Basic		*		*		*
Phind23_ 5214	Pharmaceutical Biotechnology							

Please tick the boxes corresponding to the individual program learning outcomes under evaluation.

