

Program Specification

(2025-2026)

1. Basic Information

ProgramTitle (according to what is stated in the bylaw):	Bachelor of Pharmacy - Pharm D- Clinical Pharmacy
Total number of credit hours/points of the program:	182
Number of academic years/levels (expected program duration):	Five years of academic study and one year for Training
Departments Participating in teaching the program:	a) Departments affiliated to faculty of pharmacy: • Department of Analytical Chemistry • Department of Biochemistry • Department of Pharmaceutics • Department of Medicinal Chemistry • Department of Microbiology & Immunology • Department of Pharmaceutical Organic Chemistry • Department of Pharmacognosy • Department of Pharmacology & Toxicology • Department of Pharmacy Practice b) Departments not affiliated to faculty of pharmacy: • Histology and Anatomy departments (Faculty of Medicine) • Pediatrics department (Faculty of Medicine) • Clinical Oncology department (Faculty of Medicine) • Internal Medicine department (Faculty of Medicine)

	• General Surgery department (Faculty of Medicine) • Department of Chest Diseases department (Faculty of Medicine) • Department of Cardiology department (Faculty of Medicine) • Department of Physical Medicine, Rheumatology and Rehabilitation department (Faculty of Medicine) • Department of Dermatology and Venereology department (Faculty of Medicine) • Psychiatry Medicine department (Faculty of Medicine) • Mathematics department (Faculty of science) • Information Technology department (Faculty of computers and information) • English Language department (Faculty of Education and Faculty of Arts) • Psychology department (Faculty of Education and Faculty of Arts) • Management Sciences department (Faculty of Technology and Development)
Faculty/Institute:	Pharmacy
University/Academy:	Zagazig
Program majors/divisions/tracks/specialties in the final year:	None
Partnerships with other parties and the nature of each:	None
Name of the program coordinator (attach the assignment decision):	Asst. Prof. Dr./Yasmin Sharaf
Program Specification Approval Date:	11/8/2025
Council responsible for Program Specification Approval (Attach the Decision / Minutes):	Faculty Council

2. Program Aims (Brief description of the overall purpose of the program)

The program aims at preparing pharmacists able to provide appropriate health care to patients inside and outside hospitals as a member of the healthcare team through the design of proper therapeutic plans in collaboration with physicians, proper drug monitoring and studying drug pharmacokinetics resulting in improvement of healthcare outcomes and patient safety.

3. Program Structure (Curriculum)

• Program Components

Requirement Category/Type		Number of Courses	Number of Credit Hours/Points	Percentage from the total number of hours/points
University Requirements	Compulsory	6	6 hrs.	3.29%
Faculty Requirements		63 (Professional) ○ 56 Department courses ○ 7 Medical courses	161 hrs. ○ 147 hrs. ○ 14 hrs.	88.46 % ○ 80.77 % ○ 7.69 %
		5 Non-Professional	7 hrs.	3.85%
		Elective	4	8 hrs.
Program Requirements		78	182 hrs.	
Requirements of the majors/ divisions/ tracks/ specializations in the final year (if any)		---	---	---
Other requirements (Pass or fail)	Field Training (Preliminary training)		100 contact hrs.	Not included in total credit hours of the program
	Graduation Project (included in the mandatory training year)		180 contact hrs.	

	Mandatory training year	6 Rotations: ○ 4 mandatory rotations ○ 2 elective ones	1080 hrs. (six rotations, 180 hrs./rotation)	
Total Compulsory Courses		74	174 hrs.	95.60%
Elective Courses		4	8 hrs.	4.40%
Total		76	182	

• Program courses according to the expected study plan

Academic Level	Semester	Course Code	Course Title	Course Type (Compulsory / Elective)	Requirement Category/ Type	Number of Credit Hours/ Points	Number of Weekly Hours		
							Theoretical teaching	Practical training	Other
1st	1	PA 101	Pharmaceutical Analytical Chemistry I	Compulsory	Faculty	3	2	1	--
1st	1	PR 101	Pharmaceutical Organic Chemistry I	Compulsory	Faculty	3	2	1	--
1st	1	PT 101	Pharmacy Orientation	Compulsory	Faculty	1	1	--	--
1st	1	PG 101	Medicinal plants	Compulsory	Faculty	3	2	1	--
1st	1	MD 101	Medical Terminology	Compulsory	Faculty	1	1	--	--
1st	1	NP 101	Information Technology	Compulsory	Faculty	2	1	1	--
1st	1	NP 102	Mathematics	Compulsory	Faculty	1	1	--	--
1st	1	UR 101	English language I	Compulsory	University	1	1	--	--
1st	1	UR 102	Social Issues	Compulsory	University	1	1	--	--
1st	2	PA 202	Pharmaceutical Analytical Chemistry II	Compulsory	Faculty	3	2	1	--
1st	2	PR 202	Pharmaceutical Organic Chemistry II	Compulsory	Faculty	3	2	1	--
1st	2	MD 202	Anatomy & Histology	Compulsory	Faculty	3	2	1	--

1st	2	PT 202	Physical pharmacy	Compulsory	Faculty	3	2	1	--
1st	2	PG 202	Pharmacognosy I	Compulsory	Faculty	3	2	1	--
1st	2	UR 203	Psychology	Compulsory	University	1	1	-	--
1st	2	PB 201	Cell Biology	Compulsory	Faculty	2	1	1	--
1st	2	UR 205	English language II	Compulsory	University	1	1	-	--
2 nd	3	PR 303	Pharmaceutical Organic Chemistry III	Compulsory	Faculty	3	2	1	--
2 nd	3	PB 302	Biochemistry I	Compulsory	Faculty	3	2	1	--
2 nd	3	PG 303	Pharmacognosy II	Compulsory	Faculty	3	2	1	--
2 nd	3	PM 301	General Microbiology and Immunology	Compulsory	Faculty	3	2	1	--
2 nd	3	MD 303	Biophysics	Compulsory	Faculty	2	1	1	--
2 nd	3	MD 304	Physiology and Pathophysiology	Compulsory	Faculty	3	2	1	--
2 nd	3	PT 303	Pharmaceutics I	Compulsory	Faculty	3	2	1	--
2 nd	4	PO 401	Pharmacology I	Compulsory	Faculty	3	2	1	--
2 nd	4	PM 402	Pharmaceutical Microbiology	Compulsory	Faculty	3	2	1	--
2 nd	4	NP 403	Scientific Writing and Communication skills	Compulsory	Faculty	2	1	1	--
2 nd	4	PT 404	Pharmaceutics II	Compulsory	Faculty	3	2	1	--
2 nd	4	PB 403	Biochemistry II	Compulsory	Faculty	3	2	1	--
2 nd	4	PA 403	Instrumental Analysis	Compulsory	Faculty	2	1	1	--
2 nd	4	NP 404	Pharmaceutical Legislations and Professional ethics	Compulsory	Faculty	1	1	---	--
2 nd	4	UR 405	Principles of Quality Assurance	Compulsory	University	1	1	-	--
3 rd	5	PO 502	Pharmacology II	Compulsory	Faculty	3	2	1	--
3 rd	5	MD 505	Pathology	Compulsory	Faculty	2	1	1	--
3 rd	5	PM 503	Parasitology and Virology	Compulsory	Faculty	3	2	1	--
3 rd	5	PT 505	Pharmaceutics III	Compulsory	Faculty	3	2	1	--
3 rd	5	PG 504	Phytochemistry I	Compulsory	Faculty	3	2	1	--

3 rd	5	PP 501	Community Pharmacy Practice	Compulsory	Faculty	3	2	1	--
3 rd	6	PO 603	Pharmacology III	Compulsory	Faculty	3	2	1	--
3 rd	6	PG 605	Phytochemistry II	Compulsory	Faculty	3	2	1	--
3 rd	6	PT 606	Pharmaceutical Technology	Compulsory	Faculty	3	2	1	--
3 rd	6	PP 602	Hospital Pharmacy	Compulsory	Faculty	3	2	1	--
3 rd	6	PP 603	Clinical Pharmacy Practice	Compulsory	Faculty	3	2	1	--
3 rd	6	MD 606	First Aid and Basic Life Support	Compulsory	Faculty	2	1	1	--
3 rd	7	PC 701	Medicinal Chemistry I	Compulsory	Faculty	3	2	1	--
3 rd	7	PO 704	Drug Information	Compulsory	Faculty	1	1	--	--
3 rd	7	PT 707	Advanced Drug Delivery Systems	Compulsory	Faculty	2	2	--	--
3 rd	7	PT 6708	Biopharmaceutics and Pharmacokinetics	Compulsory	Faculty	3	2	1	--
3 rd	7	PM 704	Medical microbiology	Compulsory	Faculty	3	2	1	--
3 rd	7	PA 704	Quality Control of Pharmaceuticals	Compulsory	Faculty	2	1	1	--
3 rd	7	PO 705	Pharmacology IV	Compulsory	Faculty	2	1	1	--
4 rd	7	PE	Elective	Elective	Faculty	2	1	1	--
4 th	8	PC 802	Medicinal Chemistry II	Compulsory	Faculty	3	2	1	--
4 th	8	PP 804	Pharmacotherapy of Endocrine and Renal Disease	Compulsory	Faculty	3	2	1	--
4 th	8	PP 805	Pharmacotherapy of Oncological Disease and Radiotherapy	Compulsory	Faculty	3	2	1	--
4 th	8	PP 806	Clinical Pharmacokinetics	Compulsory	Faculty	3	2	1	--
4 th	8	PB 804	Clinical Biochemistry	Compulsory	Faculty	3	2	1	--
4 th	8	PM 805	Public Health and Preventive Medicine	Compulsory	Faculty	2	2	--	--
4 th	8	PE	Elective	Elective	Faculty	2	1	1	--
5 th	9	PO 906	Basic & Clinical Toxicology	Compulsory	Faculty	3	2	1	--

5 th	9	PP 907	Pharmacotherapy of Neuropsychiatric Disease	Compulsory	Faculty	2	1	1	--
5 th	9	PM 906	Biotechnology & Molecular Biology	Compulsory	Faculty	3	2	1	--
5 th	9	PP 908	Pharmacotherapy of Dermatological, Reproductive, and Musculoskeletal Disease	Compulsory	Faculty	3	2	1	--
5 th	9	PC 903	Medicinal chemistry III	Compulsory	Faculty	3	2	1	--
5 th	9	NP 905	Drug Marketing & Pharmacoeconomics	Compulsory	Faculty	1	1	--	--
5 th	9	UR 906	Entrepreneurship	Compulsory	University	1	1	--	--
5 th	9	PE	Elective	Elective	Faculty	2	1	1	--
5 th	10	PP 009	Pharmacotherapy of Critical Care Patients	Compulsory	Faculty	2	1	1	--
5 th	10	PP 010	Pharmacotherapy of Pediatric Disease	Compulsory	Faculty	2	1	1	--
5 th	10	PG 006	Phytotherapy	Compulsory	Faculty	3	2	1	--
5 th	10	PP 011	Pharmacotherapy of Cardiovascular Disease	Compulsory	Faculty	2	1	1	--
5 th	10	PP 012	Pharmacotherapy of Gastrointestinal Disease	Compulsory	Faculty	2	1	1	--
5 th	10	PP 013	Pharmacotherapy of Respiratory Disease	Compulsory	Faculty	2	1	1	--
5 th	10	PP 014	Clinical Research & Pharmacovigilance	Compulsory	Faculty	1	1	--	--
5 th	10	PO 007	Biostatistics	Compulsory	Faculty	1	1	--	--
5 th	10	MD 007	Bioinformatics	Compulsory	Faculty	1	1	--	--
		PP 015	Professional Practice	Compulsory	Faculty	2	1	1	--
5 th	10	PE	Elective	Elective	Faculty	2	1	1	--

- **Elective courses**

Academic Level	Semester	Course Code	Course Title	Requirement Category/ Type*	Number of Credit Hours/ Points	Number of Weekly Hours		
						Theoretical teaching	Practical training	Other
4 th /5 th	7-10	PA E 05	Advanced Pharmaceutical Analysis – Spectroscopy	Faculty	2	1	1	--
4 th /5 th	7-10	PG E07	Quality Control of Natural Product	Faculty	2	1	1	--
4 th /5 th	7-10	PG E 08	Chromatography and Separation Techniques	Faculty	2	1	1	--
4 th /5 th	7-10	PG E 09	Analysis of Food and Flavor	Faculty	2	1	1	--
4 th /5 th	7-10	PG E10	Aromatherapy and Herbal Cosmetics	Faculty	2	1	1	--
4 th /5 th	7-10	PG E11	Biotechnology of Medicinal Plants	Faculty	2	1	1	--
4 th /5 th	7-10	PO E 08	Biological Standardization	Faculty	2	1	1	--
4 th /5 th	7-10	PO E 09	Veterinary Pharmacology	Faculty	2	1	1	--
4 th /5 th	7-10	PT E 09	Applied Industrial Pharmacy	Faculty	2	1	1	--
4 th /5 th	7-10	PT E 10	Good Manufacturing Practice	Faculty	2	1	1	--
4 th /5 th	8-10	PT E 11	Protein Pharmaceuticals	Faculty	2	1	1	--
4 th /5 th	8-10	PT E 12	Drug Metabolism and Transport	Faculty	2	1	1	--
4 th /5 th	7-10	PT E 13	Cosmetic Preparations	Faculty	2	1	1	--
4 th /5 th	7-10	PPE 16	Quality Improvement of Health Care	Faculty	2	1	1	--
4 th /5 th	7-10	PC E 04	Drug Design	Faculty	2	1	1	--

4 th /5 th	7-10	PM E 07	Infection Control	Faculty	2	1	1	--
5 th	9-10	PB E 05	Clinical Nutrition	Faculty	2	1	1	--
5 th	9-10	PO E 10	Teratogenic drugs	Faculty	2	1	1	--

4. Academic Standards

- Adopted Academic Standards (NARS/ARS): NARS 2017
- Date of Adoption of Standards in the governing Council: 9/10/2018
- * Decision/Minutes of the governing Council to be attached

5. Matrix of Academic Standards (Program Outcomes POs) with Courses

Compulsory Courses	Academic Standards (NARS key element code)																																										
	Domain 1: Fundamental Knowledge							Domain 2: Professional and Ethical Practice								Domain 3: Pharmaceutical Care						Domain 4: Personal practice																					
	1-1- Competency							2-1- Competency	2-2- Competency		2-3- Compe tency	2-4- Competency		2-5- Competency		2-6- Compe tency	3-1- Competency		3-2- Competency				4-1- Competency		4-2- Compe tency	4-3- Compe tency																	
(Name and code)	1-1-1-	1-1-2-	1-1-3-	1-1-4-	1-1-5-	1-1-6-	1-1-7-	2-1-1-	2-1-2-	2-1-3-	2-2-1-	2-2-2-	2-2-3-	2-2-4-	2-3-1-	2-3-2-	2-4-1-	2-4-2-	2-4-3-	2-4-4-	2-5-1-	2-5-2-	2-5-3-	2-6-1-	2-6-2-	3-1-1-	3-1-2-	3-1-3-	3-1-4-	3-2-1-	3-2-2-	3-2-3-	3-2-4-	3-2-5-	3-2-6-	4-1-1-	4-1-2-	4-1-3-	4-2-1-	4-2-2-	4-3-1-	4-3-2-	
PA 101 Pharmaceutical Analytical Chemistry 1	✓										✓		✓		✓																					✓					✓		
PR 101 Pharmaceutical Organic Chemistry I	✓		✓								✓				✓																				✓				✓	✓			
PT 101 Pharmacy Orientation	✓	✓						✓																																✓			
PG 101 Medicinal plants	✓		✓								✓				✓																										✓		

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MD 101 Medical Terminology	✓	✓																																						✓	✓		
NP 101 Information Technology	✓																																			✓			✓	✓			
NP 102 Mathematics	✓																																				✓						
UR 101 Social Issues	✓																																										
UR 102 English language I	✓																																						✓	✓			
PA 202 Pharmaceutical Analytical Chemistry II	✓		✓								✓				✓																						✓						
PR 202 Pharmaceutical Organic Chemistry II	✓		✓								✓		✓		✓																					✓	✓						
MD 202 Anatomy & Histology	✓																									✓		✓								✓				✓			
PT 202 Physical pharmacy	✓													✓																											✓		
PG 202 Phannacognosy I	✓		✓								✓				✓																					✓				✓			
UR 203 Psychology	✓								✓																													✓					
PB 201 Cell Biology	✓																									✓															✓		
UR 204 English language II	✓	✓																																			✓			✓			

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PR 303 Pharmaceutical Organic Chemistry III	✓		✓								✓				✓																					✓							✓	
PB 302 Biochemistry I	✓														✓												✓		✓												✓			
PG 303 Pharmacognosy II	✓		✓								✓				✓																					✓				✓				
PM 301 General Microbiology and Immunology	✓	✓														✓													✓								✓							
MD 303 Biophysics	✓																										✓											✓						
MD 304 Physiology and Pathophysiology	✓																										✓		✓									✓			✓			
PT 303 Pharmaceutics I	✓											✓			✓	✓																						✓						
PO 401 Pharmacology I	✓			✓										✓																								✓				✓		
PM 402 Pharmaceutical Microbiology	✓	✓		✓											✓	✓														✓												✓		
NP 403 Scientific Writing and Communication skills	✓								✓														✓														✓				✓			
PT 404 Pharmaceutics II	✓											✓			✓	✓																												
PB 403 Biochemistry II	✓														✓												✓		✓													✓		

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PA 403 Instrumental Analysis	✓												✓		✓																							✓				✓			
NP 404 Pharmaceutical Legislations and Professional ethics	✓							✓	✓												✓																								
UR 405 Principles of Quality Assurance	✓																								✓																		✓		
PO 502 Pharmacology II	✓			✓							✓																			✓	✓						✓				✓				
MD 505 Pathology	✓	✓																									✓		✓													✓			
PM 503 Parasitology and Virology	✓	✓		✓																								✓										✓				✓			
PT 505 Pharmaceutics III	✓											✓			✓																						✓								
PG 504 Phytochemistry I	✓		✓								✓		✓		✓																			✓			✓				✓				
PP 501 Community Pharmacy Practice	✓			✓					✓	✓																						✓			✓							✓			
PO 603 Pharmacology III	✓			✓															✓										✓													✓			
PG 605 Phytochemistry II	✓		✓								✓		✓		✓																						✓				✓				
PT 606 Pharmaceutical Technology I	✓						✓				✓		✓																								✓	✓							

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PP 602 Hospital Pharmacy	✓								✓				✓	✓	✓				✓															✓				✓										
PP 603 Clinical Pharmacy Practice	✓				✓	✓		✓						✓					✓												✓						✓			✓								
MD 606 First Aid and Basic Life Support	✓									✓								✓																		✓												
PC 701 Medicinal Chemistry I	✓		✓								✓					✓																					✓											
PO 704 Drug Information	✓				✓																✓	✓			✓											✓				✓								
PT 707 Advanced Drug Delivery Systems	✓						✓							✓																																		
PT 708 Biopharmaceutics and Pharmacokinetics	✓	✓												✓																								✓										
PM 704 Medical microbiology	✓	✓																										✓	✓														✓					
PA 704 Quality Control of Pharmaceuticals	✓		✓									✓			✓	✓																					✓											
PO 705 Pharmacology IV	✓			✓															✓												✓												✓					
PC 802 Medicinal Chemistry II	✓		✓								✓			✓	✓	✓																					✓											
PP 804 Pharmacotherapy of Endocrine and Renal Disease	✓	✓		✓			✓																					✓	✓	✓																		

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PP 805 Pharmacotherapy of Oncological Disease and Radiotherapy	✓						✓										✓						✓							✓								✓							
PP 806 Clinical Pharmacokinetics	✓													✓															✓								✓								
PB 804 Clinical Biochemistry	✓														✓												✓		✓								✓				✓				
PM 805 Public Health and Preventive Medicine	✓																											✓								✓				✓					
PO 906 Basic & Clinical Toxicology	✓										✓		✓		✓	✓	✓			✓													✓		✓					✓					
PP 907 Pharmacotherapy of Neuropsychiatric Disease	✓	✓		✓		✓											✓												✓	✓															
PM 906 Biotechnology & Molecular biology	✓	✓													✓												✓															✓			
PP 908 Pharmacotherapy of Dermatological, Reproductive, and Musculoskeletal Disease.	✓	✓		✓				✓																					✓	✓								✓							
PC9 Medicinal Chemistry III	✓		✓	✓							✓		✓	✓	✓	✓																					✓			✓					

(Name and code)	1-1-1-	1-1-2-	1-1-3-	1-1-4-	1-1-5-	1-1-6-	1-1-7-	2-1-1-	2-1-2-	2-1-3-	2-2-1-	2-2-2-	2-2-3-	2-2-4-	2-3-1-	2-3-2-	2-4-1-	2-4-2-	2-4-3-	2-4-4-	2-5-1-	2-5-2-	2-5-3-	2-6-1-	2-6-2-	3-1-1-	3-1-2-	3-1-3-	3-1-4-	3-2-1-	3-2-2-	3-2-3-	3-2-4-	3-2-5-	3-2-6-	4-1-1-	4-1-2-	4-1-3-	4-2-1-	4-2-2-	4-3-1-	4-3-2-			
NP 905 Marketing & Pharmacoeconomic s	✓																							✓	✓																				
UR 906 Entrepreneurshi p	✓																							✓												✓	✓	✓							
PP 009 Pharmacotherap y of Critical Care Patients				✓		✓													✓										✓																
PP 010 Pharmacotherap y of Pediatric Disease	✓	✓		✓		✓											✓												✓								✓								
PG 006 Phytotherapy	✓			✓																													✓		✓						✓				
PP 011 Pharmacotherap y of Cardiovascular Disease	✓	✓		✓		✓											✓												✓								✓								
PP 012 Pharmacotherapy of Gastrointestinal Disease	✓	✓		✓		✓											✓												✓								✓								
PP 013 Pharmacotherapy of Respiratory Disease	✓	✓		✓		✓											✓												✓								✓								
PP 014 Clinical Research & Pharmacovigilance	✓																						✓								✓														
PO 007 Biostatistics	✓													✓																							✓								
MD 007 Bioinformatics	✓													✓													✓															✓			

(Name and code)	1-1-1-	1-1-2-	1-1-3-	1-1-4-	1-1-5-	1-1-6-	1-1-7-	2-1-1-	2-1-2-	2-1-3-	2-2-1-	2-2-2-	2-2-3-	2-2-4-	2-3-1-	2-3-2-	2-4-1-	2-4-2-	2-4-3-	2-4-4-	2-5-1-	2-5-2-	2-5-3-	2-6-1-	2-6-2-	3-1-1-	3-1-2-	3-1-3-	3-1-4-	3-2-1-	3-2-2-	3-2-3-	3-2-4-	3-2-5-	3-2-6-	4-1-1-	4-1-2-	4-1-3-	4-2-1-	4-2-2-	4-3-1-	4-3-2-	
PP 015 Professional Practice	✓							✓														✓															✓			✓	✓		
Elective Courses																																											
Courses	1-1-1-	1-1-2-	1-1-3-	1-1-4-	1-1-5-	1-1-6-	1-1-7-	2-1-1-	2-1-2-	2-1-3-	2-2-1-	2-2-2-	2-2-3-	2-2-4-	2-3-1-	2-3-2-	2-4-1-	2-4-2-	2-4-3-	2-4-4-	2-5-1-	2-5-2-	2-5-3-	2-6-1-	2-6-2-	3-1-1-	3-1-2-	3-1-3-	3-1-4-	3-2-1-	3-2-2-	3-2-3-	3-2-4-	3-2-5-	3-2-6-	4-1-1-	4-1-2-	4-1-3-	4-2-1-	4-2-2-	4-3-1-	4-3-2-	
PA E 06 Advanced Pharmaceutical Analysis – Spectroscopy			✓									✓	✓																														
PG E07 Quality Control of Natural Product	✓		✓								✓	✓	✓		✓																										✓		
PG E 08 Chromatography and Separation Techniques	✓		✓								✓				✓																					✓					✓		
PG E 09 Analysis of Food and Flavor	✓		✓								✓		✓																												✓		
PG E10 Aromatherapy and Herbal Cosmetics	✓		✓								✓																						✓			✓				✓			
PG E11 Biotechnology of Medicinal Plants	✓						✓						✓		✓																									✓			
PO E 08 Biological Standardization	✓					✓							✓								✓		✓														✓				✓		
PO E 09 Veterinary Pharmacology	✓	✓		✓													✓												✓						✓						✓		
PO E 10 Teratogenic drugs	✓			✓		✓		✓		✓												✓							✓		✓			✓			✓			✓			

(Name and code)	1-1-1-	1-1-2-	1-1-3-	1-1-4-	1-1-5-	1-1-6-	1-1-7-	2-1-1-	2-1-2-	2-1-3-	2-2-1-	2-2-2-	2-2-3-	2-2-4-	2-3-1-	2-3-2-	2-4-1-	2-4-2-	2-4-3-	2-4-4-	2-5-1-	2-5-2-	2-5-3-	2-6-1-	2-6-2-	3-1-1-	3-1-2-	3-1-3-	3-1-4-	3-2-1-	3-2-2-	3-2-3-	3-2-4-	3-2-5-	3-2-6-	4-1-1-	4-1-2-	4-1-3-	4-2-1-	4-2-2-	4-3-1-	4-3-2-		
PTE 09 Applied Industrial Pharmacy	✓						✓						✓																							✓				✓				
PTE 10 Good Manufacturing Practice	✓						✓					✓																								✓								
PTE 11 Protein Pharmaceuticals	✓						✓						✓																							✓				✓				
PTE 12 Drug Metabolism and Transport	✓			✓																																				✓				
PTE 13 Cosmetic Preparations	✓											✓			✓	✓																					✓							
PP E 16 Quality Improvement of Health Care		✓																						✓														✓						
PC E 04 Drug Design	✓	✓	✓								✓																												✓					
PM E 07 Infection Control															✓												✓								✓		✓							
PB E 05 Clinical Nutrition																										✓											✓	✓						
Other Requirements																																												
Preliminary Training	✓	✓		✓				✓	✓	✓		✓					✓		✓					✓	✓		✓							✓	✓	✓	✓	✓	✓			✓		

(Name and code)	Obligatory Rotations				Clinical Pharmacy Elective Rotations			
	Applied Research Project	Drug Tour	Clinical Pharmacy in Adult General Medicine	Institutional/Hospital Pharmacy	Nephrology and Urology	Gastroenterology and Hepatology	Cardiology & Cardiovascular	Critical Care
1-1-1-		✓	✓	✓	✓	✓	✓	✓
1-1-2-		✓	✓	✓	✓	✓	✓	✓
1-1-3-		✓						
1-1-4-		✓	✓	✓	✓	✓	✓	✓
1-1-5-		✓	✓	✓	✓	✓	✓	✓
1-1-6-		✓	✓	✓	✓	✓	✓	✓
1-1-7-	✓	✓			✓	✓	✓	✓
2-1-1-		✓	✓	✓	✓	✓	✓	✓
2-1-2-		✓	✓	✓	✓	✓	✓	✓
2-1-3-		✓		✓				
2-2-1-		✓						
2-2-2-		✓		✓	✓	✓		
2-2-3-		✓						
2-2-4-		✓	✓	✓	✓	✓	✓	✓
2-3-1-		✓						
2-3-2-		✓		✓				
2-4-1-				✓				
2-4-2-			✓					
2-4-3-		✓	✓		✓	✓		
2-4-4-								
2-5-1-		✓						
2-5-2-		✓	✓	✓	✓	✓	✓	✓
2-5-3-	✓	✓						
2-6-1-		✓		✓				
2-6-2-		✓						
3-1-1-		✓		✓	✓	✓		
3-1-2-		✓		✓				
3-1-3-		✓			✓		✓	✓
3-1-4-		✓	✓		✓	✓	✓	✓
3-2-1-	✓	✓	✓	✓			✓	✓
3-2-2-		✓	✓	✓	✓	✓	✓	✓
3-2-3-		✓		✓	✓	✓		
3-2-4-		✓			✓	✓		
3-2-5-		✓	✓	✓	✓	✓		✓
3-2-6-		✓	✓	✓				✓
4-1-1-	✓	✓	✓	✓	✓		✓	✓
4-1-2-	✓	✓	✓	✓	✓	✓	✓	✓
4-1-3-								
4-2-1-		✓	✓	✓	✓	✓	✓	✓
4-2-2-	✓		✓		✓	✓	✓	✓
4-3-1-	✓		✓	✓	✓	✓		✓
4-3-2-	✓		✓	✓	✓	✓	✓	✓

(Name and code)					
		Oncology and Hematology	Infectious Disease	Pediatrics and Neonates	Geriatrics
	Clinical Nutrition	✓	✓	✓	✓
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6. Teaching and Learning strategies/methods to achieve Program Outcomes:

- | | |
|--------------------------|-------------------------------|
| 1. Lectures | 8. Field training |
| 2. Practical sessions | 9. Self-learning |
| 3. Case study | 10. Electronic-based learning |
| 4. Role play | 11. Problem solving |
| 5. Simulation | 12. Blended learning |
| 6. Co-operative learning | 13. Flipped class |
| 7. Brain-storming | |

7. Student Assessment strategies/methods to verify and ensure students' acquisition of Program Outcomes:

1. Written exam (periodical and final)
2. Practical exam
3. Oral exam
4. Activity (posters, presentation, report)
5. Field training (assessment by supervisors)

8. Program Key Performance Indicators (if any)

No.	Performance Indicator	Target Level	Method	Measurement Timing
1.	Statistics			
	Graduation /completion rate	≥ 70 %	Student results	After student graduation
	Success rate	≥ 80%	Student results	
2.	Stakeholder satisfaction			
	Student satisfaction with the program	≥ 70 %	Questionnaire	After student graduation
	Staff members satisfaction with the program	≥ 70 %	Questionnaire	After student graduation

**Name & Signature
Program Coordinator**

Asst. Prof. Dr./Yasmin Sharaf

**Name & Signature
Vice Dean for Education and Student Affairs**

Prof. Dr./ Hanan El-Nahas