

Program Specification

(2025-2026)

1. Basic Information

ProgramTitle (according to what is stated in the bylaw):	Bachelor of Pharmacy- Pharm D
Total number of credit hours/points of the program:	178
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) - Endemic Diseases department (Faculty of Medicine) - Internal Medicine department (Faculty of Medicine) - General Surgery 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):	Prof. Dr./Hanan El Nahas
Program Specification Approval Date:	8/11/2025
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 distinguished and qualified pharmacy graduates able to work in hospital and community pharmacies, pharmaceutical industries and companies, quality control laboratories and drug marketing as well as food analysis, promotion, research centers and universities.

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		6	6 hrs.	3.37%
Faculty Requirements	Compulsory	61 (Professional) ○ 55 Department courses ○ 6 Medical courses	157 hrs. ○ 145 hrs. ○ 12 hrs.	88.20 % ○ 81.46 % ○ 6.74 %
		5 Non-Professional	7 hrs.	3.93%
	Elective	4	8 hrs.	4.49 %
Program Requirements		76	178 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
	Graduation Project		180	

	(included in the mandatory training year)		contact hrs.	of the program
	Mandatory training year	6 Rotations: ○ 4 mandatory rotations ○ 2 elective ones	1080 hrs. (six rotations, 180 hrs./rotation)	
Total Compulsory Courses		72	170 hrs.	95.51%
Elective Courses		4	8 hrs.	4.49%
Total		76	178	

• 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 204	Principles of Quality Assurance	Compulsory	University	1	1	-	--
1st	2	UR 205	English language II	Compulsory	University	1	1	-	--
2 nd	3	PA 303	Pharmaceutical Analytical Chemistry III	Compulsory	Faculty	2	1	1	--
2 nd	3	PR 303	Pharmaceutical Organic Chemistry III	Compulsory	Faculty	3	2	1	--
2 nd	3	PG 303	Pharmacognosy II	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	PM 301	General Microbiology and Immunology	Compulsory	Faculty	3	2	1	--
2 nd	3	PT 303	Pharmaceutics I	Compulsory	Faculty	3	2	1	--
2 nd	4	PB 402	Biochemistry I	Compulsory	Faculty	3	2	1	--
2 nd	4	PA 404	Instrumental Analysis	Compulsory	Faculty	3	2	1	--
2 nd	4	MD 405	Pathology	Compulsory	Faculty	2	1	1	--
2 nd	4	PT 404	Pharmaceutics II	Compulsory	Faculty	3	2	1	--
2 nd	4	PO 401	Pharmacology I	Compulsory	Faculty	3	2	1	--
2 nd	4	PR 404	Raw materials	Compulsory	Faculty	2	1	1	--
2 nd	4	NP 403	Scientific Writing and Communication skills	Compulsory	Faculty	2	1	1	--

2 nd	4	NP 404	Pharmaceutical Legislations and Professional ethics	Compulsory	Faculty	1	1	---	--
3 rd	5	PB 503	Biochemistry II	Compulsory	Faculty	3	2	1	--
3 rd	5	PM 502	Pharmaceutical Microbiology	Compulsory	Faculty	3	2	1	--
3 rd	5	PG 504	Phytochemistry I	Compulsory	Faculty	3	2	1	--
3 rd	5	PT 505	Pharmaceutics III	Compulsory	Faculty	3	2	1	--
3 rd	5	PC 501	Medicinal Chemistry I	Compulsory	Faculty	3	2	1	--
3 rd	5	PO 502	Pharmacology II	Compulsory	Faculty	3	2	1	--
3 rd	6	PM 603	Parasitology and Virology	Compulsory	Faculty	3	2	1	--
3 rd	6	PT 606	Pharmaceutics IV	Compulsory	Faculty	3	2	1	--
3 rd	6	PT 607	Biopharmaceutics and Pharmacokinetics	Compulsory	Faculty	3	2	1	--
3 rd	6	PG 605	Phytochemistry II	Compulsory	Faculty	3	2	1	--
3 rd	6	PO 603	Pharmacology III	Compulsory	Faculty	3	2	1	--
3 rd	6	PC 602	Medicinal Chemistry II	Compulsory	Faculty	3	2	1	--
4 th	7	PB 704	Clinical Biochemistry	Compulsory	Faculty	3	2	1	--
4 th	7	PM 704	Medical microbiology	Compulsory	Faculty	3	2	1	--
4 th	7	PO 704	Pharmacology IV	Compulsory	Faculty	2	1	1	--
4 th	7	PG 706	Applied & Forensic Pharmacognosy	Compulsory	Faculty	2	1	1	--
4 th	7	PC 703	Medicinal chemistry III	Compulsory	Faculty	3	2	1	--
4 th	7	PT 708	Pharmaceutical Technology I	Compulsory	Faculty	3	2	1	--
4 th	7	PE	Elective	Elective	Faculty	2	1	1	--
4 th	8	PP 801	Clinical Pharmacokinetics	Compulsory	Faculty	3	2	1	--
4 th	8	PC 804	Drug Design	Compulsory	Faculty	2	1	1	--
4 th	8	PO 805	Basic & Clinical Toxicology	Compulsory	Faculty	3	2	1	--
4 th	8	PM 805	Biotechnology & Molecular biology	Compulsory	Faculty	3	2	1	--

4 th	8	PP 802	Hospital Pharmacy	Compulsory	Faculty	2	1	1	--
4 th	8	PT 809	Pharmaceutical Technology II	Compulsory	Faculty	2	1	1	--
4 th	8	PE	Elective	Elective	Faculty	2	1	1	--
5 th	9	PP 903	Clinical Pharmacy & Pharmacotherapeutics I	Compulsory	Faculty	3	2	1	--
5 th	9	PO 906	Drug Information	Compulsory	Faculty	1	1	--	--
5 th	9	PP 904	Community Pharmacy Practice	Compulsory	Faculty	3	2	1	--
5 th	9	PT 910	Good Manufacturing Practice	Compulsory	Faculty	2	1	1	--
5 th	9	PA 905	Quality Control of Pharmaceuticals	Compulsory	Faculty	3	2	1	--
5 th	9	NP 905	Marketing & Pharmacoeconomics	Compulsory	Faculty	1	1	--	--
5 th	9	MD 906	First Aid and Basic Life Support	Compulsory	Faculty	1	1	--	--
5 th	9	PE	Elective	Elective	Faculty	2	1	1	--
5 th	10	PG 007	Phytotherapy and Aromatherapy	Compulsory	Faculty	3	2	1	--
5 th	10	PT 011	Advanced Drug Delivery Systems	Compulsory	Faculty	2	2	--	--
5 th	10	PM 006	Public Health and Preventive Medicine	Compulsory	Faculty	2	2	--	--
5 th	10	PP 005	Clinical pharmacy & Pharmacotherapeutics II	Compulsory	Faculty	2	1	1	--
5 th	10	PP 006	Drug Interaction	Compulsory	Faculty	2	1	1	--
5 th	10	PP 007	Clinical Research methodology & Pharmacovigilance	Compulsory	Faculty	2	1	1	--
5 th	10	PO 007	Biostatistics	Compulsory	Faculty	1	1	--	--
5 th	10	UR 006	Entrepreneurship	Compulsory	University	1	1	--	--

5 th	10	PE	Elective	Elective	Faculty	2	1	1	--
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- 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	PM E 07	Gene Regulation and Epigenetic	Faculty	2	1	1	--
4 th /5 th	7- 10	PM E 0	Infection Control	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	PA E 06	Advanced Pharmaceutical Analysis – Spectroscopy	Faculty	2	1	1	--
4 th /5 th	8- 10	PO E 08	Veterinary Pharmacology	Faculty	2	1	1	--
4 th /5 th	7- 10	PO E 09	Biological Standardization	Faculty	2	1	1	--
5 th	9- 10	MD E 07	Bioinformatics	Faculty	2	1	1	--
4 th /5 th	8- 10	PP E 08	Oncology	Faculty	2	1	1	--
4 th /5 th	8- 10	PP E 09	Pediatrics & Geriatric	Faculty	2	1	1	--
4 th /5 th	7- 10	PT E 012	Cosmetic Preparations	Faculty	2	1	1	--
5 th	9- 10	PT E 013	Applied Industrial Pharmacy	Faculty	2	1	1	--

4 th /5 th	8- 10	PB E 05	Clinical Nutrition	Faculty	2	1	1	--
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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-	1-1-	1-1-	1-1-	1-1-	1-1-	2-1-	2-1-	2-1-	2-2-	2-2-	2-2-	2-2-	2-3-	2-3-	2-4-	2-4-	2-4-	2-4-	2-5-	2-5-	2-5-	2-6-	2-6-	3-1-	3-1-	3-1-	3-1-	3-2-	3-2-	3-2-	3-2-	3-2-	3-2-	4-1-	4-1-	4-1-	4-2-	4-2-	4-3-	4-3-		
PA 101 Pharmaceutic al Analytical Chemistry 1	✓		✓								✓		✓		✓																						✓							
PR 101 Pharmaceutic al Organic Chemistry I	✓		✓								✓				✓																					✓			✓					
PT 101 Pharmacy Orientation	✓	✓						✓																																✓				
PG 101 Medicinal plants	✓		✓								✓				✓																										✓			

(Name and code)	1-1-	1-1-	1-1-	1-1-	1-1-	1-1-	1-1-	2-1-	2-1-	2-1-	2-2-	2-2-	2-2-	2-2-	2-3-	2-3-	2-4-	2-4-	2-4-	2-4-	2-5-	2-5-	2-5-	2-6-	2-6-	3-1-	3-1-	3-1-	3-1-	3-2-	3-2-	3-2-	3-2-	3-2-	3-2-	4-1-	4-1-	4-1-	4-2-	4-2-	4-3-	4-3-		
MD 101 Medical Terminology	✓	✓																																					✓	✓				
NP 101 Information Technology	✓																																		✓				✓					
NP 102 Mathematics	✓																																			✓								
UR 101 English language I	✓																																						✓					
UR 102 Social Issues	✓																																											
PA 202 Pharmaceutic al Analytical Chemistry II	✓		✓								✓				✓																					✓								
PR 202 Pharmaceutic al Organic Chemistry II	✓		✓								✓		✓		✓	✓																				✓								
MD 202 Anatomy & Histology	✓																									✓		✓								✓								
PT 202 Physical pharmacy	✓													✓																										✓				
PG 202 Phannacogno sy I	✓		✓								✓				✓																					✓				✓				
UR 203 Psychology	✓								✓																												✓							
PB 201 Cell Biology	✓																									✓														✓				
UR 204 Principles of Quality Assurance	✓																							✓																✓				

(Name and code)	1-1-	1-1-	1-1-	1-1-	1-1-	1-1-	1-1-	2-1-	2-1-	2-1-	2-2-	2-2-	2-2-	2-2-	2-3-	2-3-	2-4-	2-4-	2-4-	2-4-	2-5-	2-5-	2-5-	2-6-	2-6-	3-1-	3-1-	3-1-	3-1-	3-2-	3-2-	3-2-	3-2-	3-2-	3-2-	4-1-	4-1-	4-1-	4-2-	4-2-	4-3-	4-3-
UR 205 English language II	✓																																					✓	✓			
PA 303 Pharmaceutical Analytical Chemistry III	✓		✓								✓				✓																				✓	✓						
PR 303 Pharmaceutical Organic Chemistry III	✓		✓								✓		✓		✓																					✓	✓					
PG 303 Pharmacognosy II	✓		✓								✓				✓																				✓				✓			
MD 303 Biophysics	✓																										✓										✓					
MD 304 Physiology and Pathophysiology	✓																										✓		✓									✓				
PM 301 General Microbiology and Immunology	✓	✓																											✓								✓					
PT 303 Pharmaceuticals I	✓											✓			✓	✓																				✓						
PB 402 Biochemistry I	✓														✓												✓		✓											✓		
PA 404 Instrumental Analysis	✓												✓		✓																					✓			✓			
MD 405 Pathology	✓																										✓		✓										✓			
PT 404 Pharmaceuticals II	✓											✓			✓	✓																				✓						

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PO 401 Pharmacology I	✓			✓										✓																							✓				✓			
PR 404 Raw materials	✓		✓										✓																												✓			
NP 403 Scientific Writing and Communication skills	✓								✓														✓												✓				✓					
NP 404 Pharmaceutical Legislations and Professional ethics	✓								✓														✓																					
PB 503 Biochemistry II	✓														✓												✓		✓												✓			
PM 502 Pharmaceutical Microbiology	✓	✓		✓											✓	✓												✓	✓	✓											✓			
PG 504 Phytochemistry I	✓		✓								✓		✓		✓																	✓								✓				
PT 505 Pharmaceuticals III	✓											✓			✓																					✓								
PC 501 Medicinal Chemistry I	✓		✓								✓					✓																				✓								
PO 502 Pharmacology II	✓			✓							✓																		✓	✓							✓			✓				
PM 603 Parasitology and Virology	✓	✓		✓																								✓								✓				✓				
PT 606 Pharmaceuticals IV	✓											✓																									✓							

(Name and code)	1-1-	1-1-	1-1-	1-1-	1-1-	1-1-	1-1-	2-1-	2-1-	2-1-	2-2-	2-2-	2-2-	2-2-	2-3-	2-3-	2-4-	2-4-	2-4-	2-4-	2-5-	2-5-	2-5-	2-6-	2-6-	3-1-	3-1-	3-1-	3-1-	3-2-	3-2-	3-2-	3-2-	3-2-	3-2-	4-1-	4-1-	4-1-	4-2-	4-2-	4-3-	4-3-
PT 607 Biopharmaceutics and Pharmacokinetics	✓													✓																							✓					
PG 605 Phytochemistry II	✓		✓								✓		✓		✓																				✓				✓			
PO 603 Pharmacology III	✓			✓															✓									✓							✓	✓			✓			
PC 602 Medicinal Chemistry II	✓		✓								✓			✓	✓	✓																			✓							
PB 704 Clinical Biochemistry	✓														✓											✓		✓							✓				✓			
PM 704 Medical microbiology	✓	✓																										✓	✓											✓		
PO 704 Pharmacology IV	✓			✓															✓										✓	✓						✓	✓			✓		
PG 706 Applied & Forensic Pharmacognosy	✓	✓	✓								✓		✓		✓				✓													✓	✓		✓				✓			
PC 703 Medicinal chemistry III	✓		✓	✓							✓		✓	✓	✓	✓																				✓				✓		
PT 708 Pharmaceutical Technology I	✓						✓				✓		✓																						✓	✓						
PP 801 Clinical Pharmacokinetics	✓												✓														✓									✓						
PC 804 Drug Design	✓	✓	✓								✓		✓																							✓				✓		
PO 805 Basic & Clinical Toxicology	✓										✓		✓		✓	✓	✓		✓												✓	✓							✓			

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PM 805 Biotechnology & Molecular biology	✓	✓													✓																											✓	
PP 802 Hospital Pharmacy	✓							✓							✓																				✓				✓				
PT 809 Pharmaceutica I Technology II	✓						✓					✓	✓																						✓	✓							
PP 903 Clinical Pharmacy & Pharmacotherapeutics I	✓	✓		✓	✓					✓							✓		✓			✓						✓							✓								
PO 906 Drug Information	✓					✓	✓														✓	✓	✓												✓				✓				
PP 904 Community Pharmacy Practice	✓							✓		✓							✓																✓						✓				
PT 910 Good Manufacturing Practice	✓						✓					✓																							✓								
PA 905 Quality Control of Pharmaceuticals	✓		✓										✓		✓	✓																				✓							
NP 905 Marketing & Pharmacoeconomics	✓																							✓	✓															✓			
MD 906 First Aid and Basic Life Support	✓									✓								✓																	✓								
PG 007 Phytotherapy and Aromatherapy	✓			✓																												✓		✓		✓			✓				
PT 011 Advanced Drug Delivery Systems	✓						✓							✓																													

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PM 006 Public Health and Preventive Medicine	✓	✓																									✓								✓					✓			
PP 005 Clinical pharmacy & Pharmacotherapeutics II	✓	✓		✓	✓					✓							✓		✓			✓							✓						✓								
PP 006 Drug Interaction	✓				✓														✓											✓	✓												
PP 007 Clinical Research methodology & Pharmacovigilance	✓																					✓								✓													
PO 007 Biostatistics	✓													✓																						✓							
UR 006 Entrepreneurship	✓																						✓											✓		✓							
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-	2-2-2-	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-	
PM E 07 Gene Regulation and Epigenetic	✓																									✓																	
PM E 07 Infection Control																✓											✓								✓		✓						
PG E 08 Chromatography and Separation Techniques	✓		✓								✓				✓																						✓				✓		

(Name and code)	1-1-	1-1-	1-1-	1-1-	1-1-	1-1-	1-1-	2-1-	2-1-	2-1-	2-2-	2-2-	2-2-	2-2-	2-3-	2-3-	2-4-	2-4-	2-4-	2-4-	2-5-	2-5-	2-5-	2-6-	2-6-	3-1-	3-1-	3-1-	3-1-	3-2-	3-2-	3-2-	3-2-	3-2-	3-2-	4-1-	4-1-	4-1-	4-2-	4-2-	4-3-	4-3-		
PG E 09 Analysis of Food and Flavor	✓		✓								✓		✓																															
PA E 06 Advanced Pharmaceutical Analysis – Spectroscopy			✓									✓	✓																															
PO E 08 Veterinary Pharmacology	✓	✓		✓													✓											✓					✓											
PO E 09 Biological Standardization	✓					✓							✓									✓		✓													✓							
MD E 07 Bioinformatics	✓													✓													✓																	
PP E 08 Oncology	✓						✓										✓						✓					✓									✓							
PP E 09 Pediatrics & Geriatric	✓	✓		✓		✓											✓											✓										✓						
PT E 012 Cosmetic Preparations	✓											✓			✓	✓																					✓							
PT E 013 Applied Industrial Pharmacy	✓						✓						✓																								✓				✓			
PB E 05 Clinical Nutrition					✓																						✓									✓					✓			
Other Requirements																																												
Preliminary Training	✓	✓		✓				✓	✓	✓		✓					✓		✓					✓	✓		✓						✓	✓	✓	✓	✓		✓				✓	

Elective Rotations				Obligatory Rotations				(Name and code)
Pharmaco-vigilance	Quality Management in Pharmaceutical Industry	Pharmaceutical Product Development	Applied Research Project	Institutional/Hospital Pharmacy	Clinical Pharmacy in Adult General Medicine	Drug Tour		
✓	✓	✓		✓	✓		✓	1-1-
✓				✓	✓		✓	1-1-
	✓	✓					✓	1-1-
✓				✓	✓		✓	1-1-
				✓	✓		✓	1-1-
✓		✓		✓	✓		✓	1-1-
✓	✓	✓	✓				✓	1-1-
				✓	✓		✓	2-1-
✓				✓	✓		✓	2-1-
✓				✓			✓	2-1-
	✓	✓					✓	2-2-
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		✓		✓	✓		✓	2-2-
	✓	✓					✓	2-3-
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✓	✓	✓					✓	2-5-
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				✓			✓	2-6-
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			✓	✓			✓	4-3-
			✓	✓			✓	4-3-

(Name and code)					
Quality by Design and Process Analytical Technology	Pharmaceutical Production	Pharmaceutical Sales & Marketing	Drug Discovery and Development	Regulatory Inspection	
✓	✓	✓	✓	✓	1-1-
		✓		✓	1-1-
✓	✓		✓	✓	1-1-
		✓			1-1-
			✓		1-1-
✓	✓		✓	✓	1-1-
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	✓				2-1-
	✓				2-1-
	✓				2-1-
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✓	✓		✓		2-2-
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					2-4-
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6. Teaching and Learning strategies/methods to achieve Program Outcomes:

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

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.	Graduation /completion rate	≥ 70 %	Student results	The end of obligatory training year
2.	Success rate	≥ 80%	Student results	
3.	Student satisfaction with the program	≥ 70 %	Questionnaire	By the end of obligatory training year
4.	Student satisfaction with graduation project rotation	≥ 70 %	Questionnaire	The end of rotation
5.	Student satisfaction with clinical training rotation	≥ 70 %	Questionnaire	The end of rotation
6.	Staff members satisfaction with the program	≥ 70 %	Questionnaire	After student graduation

No.	Performance Indicator	Target Level	Method	Measurement Timing
7.	Training sites satisfaction with training rotations	≥ 70 %	Questionnaire	By the end of rotations
8.	Supervisors' satisfaction with training rotations	≥ 70 %	Questionnaire	By the end of rotations

Name & Signature
Program Coordinator

Name & Signature
Vice Dean for Education and Student Affairs