

STRUCTURE OF PHARMACY CURRICULUM

Outline

The curriculum consists of biomedical sciences (anatomy, biochemistry, physiology, microbiology, pathology, pharmacology and statistics), pharmaceutical sciences (pharmaceutical mathematics, physical pharmacy, drug delivery and dosage forms, biopharmaceuticals and pharmacokinetics, biomedical chemistry and biotechnology), clinical and administrative sciences (pathophysiology, pharmacotherapy, drug information, management and pharmacoepidemiology) and pharmacy practice (dispensing, jurisprudence, contemporary pharmacy practice, drug and society and ethics). The emphasis in clinical pharmacy track is on pharmacotherapy.

Curriculum phases and timetable

Curriculum phases

The program is of five years' (10 semesters') duration divided into three phases, comprising about 200 CHs. A semester is 18-20 weeks in Phase 1 and 2, and 22-24 weeks in Phase 3. There are three compulsory Summer courses and three electives; credit hours of electives are included in the total.

Phase 1: Introductory courses and College requirements = Semesters 1

Phase 2: Integrated basic pharmacy course = Semesters 2-6

Phase 3: Clerkships in Clinical and/or Industrial Pharmacy = Semesters 7-8

Clerkships in Clinical and/or Industrial Pharmacy = Semesters 9-10

Curriculum timetable

Phase 1 (General requirements):

Semester 1 [20 CHs- 18 weeks]:

#	Title	Code	Weeks	Credits
1	Islamic studies	ISLAM-111	Longit.	2
2	Arabic language	ARAB-112	Longit.	2
3	English language	ENG-113	Longit.	2
4	Introduction to medicine and medical education	ME-EDU-114	3	2
5	Physics for medical equipments and investigations	ME-PHYS-115	2	2
6	Computer science	ME-COMP-116	3	2
7	Biostatistics	ME-STAT-117	2	2
8	Basic biochemistry	ME-BIOC-118	3	2
9	Behavioral science	ME-BEHAV-119	3	2

Examination of longitudinal courses (+re-sits) 2 weeks

Semester 2 [20 CHs- 18 weeks]:

#	Title	Code	Weeks	Credits
1	Islamic studies	ISLAM-121	Longit.	2
2	Arabic language	ARAB-122	Longit.	2
3	English language	ENG-123	Longit.	2
4	Computer science-2	ME-COMP-124	3	2
5	Human body structure and function	PA-NAT-126	6	6
6	Medical entomology and parasitology	ME-PAR-125	3	3
7	Human cells and systems (Basic physiology)	PA-CELL-127	3	3
8	Organic Chemistry for Pharmacy	PA-CHEM-128	2	2

Examination of longitudinal courses (+re-sits) 1 week

SUMMAR 1: Professional practice and personal development (PA-SUM-131) 2 CHs

Elective (E-132): A 1000 –word report on “Internet Sources of Health Sciences” 1CH

Semester 3 [20 CHs- 18 weeks]:

#	Title	Code	Weeks	Credits
1	Professional skills-1 communication	PA-SKIL-211	Longit.	2
2	Principles of disease (pathology-microbiology)	ME-DIS-212	5	5
3	Pharmaceutical microbiology -1	PA-MIC-213	3	3
4	Principles of pharmaceutical science	PA-CEUT-214	4	4
5	Pharmacognosy and plant sciences-1	PA-COG	5	5

Examination of longitudinal courses (+re-sits) 1 week

Semester 4 [20 CHs- 18 weeks]:

#	Title	Code	Weeks	Credits
1	Professional skills-2 laboratory skills	PA-SKIL-221	Longit.	2
2	Introductory pharmacology	PA PHAR-222	2	2
3	Pharmaceutical microbiology -2	PA-MIC-223	3	3
4	Medicinal chemistry	PA-CHEM--224	5	5
5	Pharmacognosy and plant sciences-2	PA-COG-225	5	5
6	Introduction to medical ethics	ME-PAR-226	2	2

Examination of longitudinal courses (+re-sits) 1 week

SUMMAR 2: Research methodology and scientific writing (PA-SUM-231) 2 CHs

Elective (E232): Visit to pharmaceutical industries in Sudan and report writing (PAVIS-2 CHs.

Semester 5 [20 CHs- 18 weeks]:

#	Title	Code	Weeks	Credits
1	Professional skills-3- laboratory skills	PA-SKIL-311	Longit.	2
2	Pharmaceutical analysis	ME-NAL-312	Longit	2
3	Pharmacy practice-1	PA-PRAC-313	4	4
4	Dosage form design	PA-DOS-314	4	5
5	Pharmaceutical technology	PA-TEC-315	4	4
6	Quality assurance-1	ME-QUAL-316	4	4

Examination of longitudinal course (+ re-sits)

1 week

Semester 6 [18 CHs- 18 weeks]:

#	Title	Code	Weeks	Credits
1	Professional skills-4- Pharmacy skills	PA-SKIL-321	Longit.	2
2	Clinical pharmacy	PA-CLIN-322	Longit	2
3	Pharmacy practice-2	PA-PRAC-323	4	5
4	Pharmacoinformatics	PA-INFO-324	2	2
5	Basic therapeutics	PA-TREAT-325	4	5
6	Quality assurance-2	ME-QUAL-326	4	5

Examination of longitudinal courses (+ re-sits)

1 week

SUMMAR 3: Rural Hospital Residency (PA-SUM-331) 2 CHs Block 2 weeks

Elective (E332): A 1000 work essay on antimicrobial therapy 1CH

Phase 3: Clerkships for Clinical and/or Industry Rotation

Semester 7-8/9-10 CLINICAL PHARMACY OPTION

Two semesters, 17 courses, four major rotation, and four longitudinal courses including one elective.

#	Rotation Groups	Disciplines (symbol-number)	Credit Hours	Duration (weeks)	Longitudinal Courses
1	A	Internal Medicine (PA-MED-411)	5	5	(14) Drug abuse (PA-DAB-416) 2CHs (Semester 7)
2		Emergency Medicine (PA-MER-412)	2	2	
3		Chest and cardiology (PA-CHES-413)	2	2	
					(15) Pharmacy

4	B	<i>General Surgery – including anesthesia (PA-SURG-414)</i>	5	5	<i>ethics (PA-ETHIC-417) 2CHs (Semesters 7)</i>
5		<i>Orthopedics (PA-ORTOP-415)</i>	2	2	
6		<i>Ophthalmology (PA-OPTAL-416)</i>	1	1	
7		<i>Ear, Nose and Throat (PAENT-417)</i>	1	1	
8	C	<i>Obstetrics and Gynecology (PA-BGN-421)</i>	5	5	<i>(16) Traditional pharmacy (PA-TRAD-427) 2 CHs (Semesters 8)</i>
9		<i>Psychiatry (PA-SYC-422)</i>	4	4	
10		<i>Family Medicine (PA-FAM-423)</i>	4	4	
11	D	<i>Pediatrics (PA-PED-424)</i>	5	5	<i>(17) Elective (E-428) 2 CHs (Semesters 8)</i>
12		<i>Dermatology (PA-DERM-425)</i>	2	2	
13		<i>Health Economics and Hospital Management (PA-HM-426)</i>	2	2	

Rotation of the groups is as follows:

Semester 7 (first 9 weeks) = A B C D
 Semester 7 (second 9 weeks) = B C D A
 Semester 8 (first 9 weeks) = C D A B
 Semester 8 (second 9 weeks) = D A B C

Phase 3: Clerkships for Clinical and/or Industry Rotation

Semester 7-8/9-10 INDUSTRIAL PHARMACY

Two semesters, 17 courses, four major rotation, and four longitudinal courses including one elective.

#	Rotation Groups	Disciplines (symbol-number)	Credit Hours	Duration (weeks)	Longitudinal Courses
1	A	<i>Drug design (PA-DRUG-411)</i>	5	5	<i>(14) Drug abuse (PA-DAB-416) 2CHs (Semsters 7)</i>
2		<i>Quality assurance in Industry (PA-QUAL-412)</i>	2	2	
3		<i>Pharmaceutical analysis (PA-NAL-413)</i>	2	2	
4		<i>Packaging technology (PA-PAC-414)</i>	5	5	<i>(15) Pharmacy ethics (PA-ETHIC-417) 2CHs (Semesters 7)</i>
5		<i>Drug factory architectural design (PA-ARC-415)</i>	2	2	

6	B	..... (PAP.....-416)	1	1	
7		..... (PA.....-417)	1	1	
8	C	..... (PA.....-421)	5	5	(16) Traditional pharmacy (PA-TRAD-427) 2 CHs (Semesters 8)
9		.....(PA.....-422)	4	4	
10		..... (PA.....-423)	4	4	
11	D	..... (PA.....-424)	5	5	(17) Elective (E-428) 2 CHs (Semesters 8)
12		..... (PA.....-425)	2	2	
13		Health Economics and Hospital Management (PA-EM-426)	2	2	

Rotation of the groups is as follows:

Semester 7 (first 9 weeks) = A B C D
Semester 7 (second 9 weeks) = B C D A
Semester 8 (first 9 weeks) = C D A B
Semester 8 (second 9 weeks) = D A B C