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# College of Pharmacy Pharm.D Program

Alfaisal University



جامعة الفيصل  
Alfaisal University

كلية الصيدلة  
College of Pharmacy



# College of Pharmacy

## Pharm.D Program

A Doctor of Pharmacy (Pharm.D) is a professional degree in pharmacy. Alfaisal University offers the Pharm.D program in the College of Pharmacy. The program at Alfaisal University is designed to systemically provide a solid foundation in the basic sciences on which to build upon, and integrate the pharmaceutical sciences, social/ administrative/ behavioral sciences, and clinical sciences. Consistent with the College of Medicine at Alfaisal University, the Pharm.D curriculum uses the «SPICES» curriculum model as a guiding philosophy with these elements: Student-centered/active learning, Problem/practice based, Integrated, Community/systems-based, Electives, and Systematic approaches. In addition, the curriculum incorporates research and interprofessional experiences.

## Clinical Pharmacist Role

A clinical pharmacist deals directly with physicians, other health care professionals, and patients to ensure that the medications prescribed contribute to optimal health outcomes. Responsibilities for clinical pharmacists may include evaluating the appropriateness and effectiveness of medication use, consulting with health care professionals, monitoring patient therapeutic responses to drugs,

attending patient rounds on hospital units, and counseling patients. In addition, some clinical pharmacists can initiate, modify, or continue drug therapy for patients.

## Academia

Pharmacists are responsible to improve interdisciplinary pharmaceutical care education, research, practice and service focused on the health and well-being of underserved, rural, and indigenous communities. Alfaisal multidisciplinary faculty, comprised of basic, clinical, social, and behavioral scientists with expertise in both pharmaceutical sciences and practice, work to support this mission. Specific subjects taught in pharmacy

### schools include:

- Medicinal chemistry/ drug discovery
- Pharmacology & toxicology
- Pharmaceutics
- Pharmacogenomics
- Clinical Pharmacy
- Pharmacoeconomics
- Pharmacoepidemiology
- Pharmacy practice and regulation
- Industrial pharmacy

## Governmental agencies

Local, drug and therapeutics committees and governmental agencies, all require the expertise of skilled pharmacists. Within these settings, pharmacists can engage in a wide array of tasks including, protecting the public health by ensuring the safety, efficacy, and security of human and veterinary drugs, biological products, medical devices, cosmetics, and products that emit radiation. Also, has the responsibility for regulating the manufacturing, marketing, supplying, and

distribution.

### Agencies include:

- The Saudi Food and Drug Authority "SFDA"
- The Council of Cooperative Health Insurance
- National Unified Procurement Company «NUPCO»

## Pharmaceutical Industry

The pharmaceutical industry serves to discover, develop, produce, and market drugs or pharmaceuticals. Within the pharmaceutical industry. Pharmacists can engage in research and development, quality assurance, drug information, and clinical trials. Because all individuals deserve access to quality healthcare and the opportunity to lead healthy lives.

## Research & development

The main role of the pharmacist in the research and drug discovery is to determine appropriate formulation, dosing, as well as establish safety. Often, collaborative agreements between research organizations & large pharmaceutical companies are formed to explore the potential of new drug substances.

# Pharm.D. Curriculum Plan

Year 1-Phase 1 (Semester 1)							
Course code	Course title	Credit hour	Theory	Lab	Tutorial /practical	Pre-requisite	Co-requisite
PCHE 101	Chemistry I	3	2	1	-	-	-
PHSF 101	Human Structure and Function I	4	3	1	-	-	-
PAM 101	Algebra	3	3	-	-	-	-
PENG 005	English 005	4	UPP criteria are available for exemption from English courses.				
PENG 006	English 006	4					
<b>Total credit hour</b>		<b>10</b>					

Year 1-Phase 1 (Semester 2)							
Course code	Course title	Credit hour	Theory	Lab	Tutorial /practical	Pre-requisite	Co-requisite
PCHE 112	Chemistry II	3	2	1	-	PCHE101	-
PHSF 112	Human Structure and Function II	4	3	1	-	PHSF 101	-
PPHYM112	Physics for Medicine and Life Sciences	3	3	-	-	-	-
PBIO 112	Principles of biochemistry	3	3	-	-	PCHE101	-
PENG 007	English 007	3	UPP criteria are available for exemption from English courses.				
PENG 008	English 008	3					
<b>Total credit hour</b>		<b>13</b>					

Year 2-Phase 2 (Semester 3)							
Course code	Course title	Credit hour	Theory	Lab	Tutorial /practical	Pre-requisite	Co-requisite
ENG 231	Medical terminology	2	2	-	-	All Phase I subjects	-
CHM 232	Organic chemistry	4	3	1	-		-
ANT 233	Anatomy and histology	4	3	1	-		PHY 234
PHY 234	Physiology	3	3	-	-		ANT 233
MAT 235	Calculus	3	2	-	1		-
ARB 102	Elective; Arabic Language I	2	2	-	-		-
<b>Total credit hours</b>		<b>18</b>					

Year 2-phase 2 (Semester 4)							
Course code	Course title	Credit hour	Theory	Lab	Tutorial /practical	Pre-requisite	Co-requisite
MCH 241	Medicinal chemistry	4	3	1	-	CHM 232	-
BCH 242	Biochemistry	4	3	1	-	CHM 232	-
MIC 243	Microbiology	3	2	1	-	ENG 231	-
IMM 244	Immunology	2	2	-	-	PHY 234	-
BST 245	Biostatistics and basic research methods	3	2	-	1	MAT 235	-
ISL 102	Elective: Islamic studies I	2	2	-	-	-	-
<b>Total credit hours</b>		<b>18</b>					

Year 3-Phase 2 (Semester 5)							
Course code	Course title	Credit hour	Theory	Lab	Tutorial /practical	Pre-requisite	Co-requisite
CAL 351	Pharmacy calculations	1	-	-	1	MAT 235	-
KIN 352	Pharmacokinetics	3	2	-	1	MAT 235 MCH 241	-
PHC 353	Pharmaceutics I: Dosage forms and stability	3	2	1	-	MCH 241	-
MIC 354	Advanced microbiology	2	1	1	-	MIC 243	-
IMM 355	Clinical immunology	1	1	-	-	IMM 244	-
PRC 356	Pharmacy practice and health care systems	3	3	-	-	ENG 231	-
ARB 113	Elective; Arabic language II	2	2	-	-	-	-
ESP 224 PSY 101 SOC 101	Elective	3	3	-	-	-	-
<b>Total credit hours</b>		<b>18</b>					
<b>Electives available:</b> English for Specific Purposes <b>ESP 224</b> , Introduction to psychology <b>PSY 101</b> , and Introduction to sociology <b>SOC 101</b>							

Year 3-Phase 2 (Semester 6)							
Course code	Course title	Credit hour	Theory	Lab	Tutorial/practical	Pre-requisite	Co-requisite
PHC 361	Pharmaceutics II: Drug delivery	2	2	-	-	PHC 353	-
PTH 362	Parenteral therapy	2	1	1	-	PHC 353 CAL 351	-
REG 363	Pharmacy regulations and health ethics	2	2	-	-	PRC 356	-
SCR 364	Self-care and non-prescription drugs	1	1	-	-	-	BPH 365
BPH 365	Basic pharmacotherapy	3	3	-	-	-	BPH 366
BPH 366	Basic pharmacotherapy; case based seminars	1	-	-	1	-	BPH 365
BPH 367	Pharmacotherapy of antimicrobial agents	3	3	-	-	MIC 354	-
ISL 113	Elective; Islamic studies II	2	2	-	-	-	-
<b>Total credit hours</b>		<b>16</b>					

Year 4-Phase 3 (Semester 7)							
Course code	Course title	Credit hour	Theory	Lab	Tutorial/practical	Pre-requisite	Co-requisite
MTM 471	Medication therapy management	2	2	-	-	All phase 2 subjects	-
DIT 472	Drug information and evidence-based practice	3	2	1	-		-
IPH 473	Integrated pharmacotherapy: cardiovascular CVS and renal I	3	3	-	-		IPH 474
IPH 474	Integrated pharmacotherapy: cardiovascular CVS and renal I "case based seminars"	1	-	-	1		IPH 473
IPH 475	Integrated pharmacotherapy: musculoskeletal MSK and respiratory RES	3	3	-	-		IPH 476
IPH 476	Integrated pharmacotherapy: musculoskeletal MSK and respiratory RES "case based seminars"	1	-	-	1		IPH 475
PCL 477	Patient care and health system management lab I	2	1	1	-		IPH 473 IPH 474 IPH 475 IPH 476
PHG 478	Elective/ selective Pharmacogenomics and personalized medicine	2	2	-	-		-
<b>Total credit hours</b>		<b>17</b>					

Year 4-Phase 3 (Semester 8)							
Course code	Course title	Credit hour	Theory	Lab	Tutorial/practical	Pre-requisite	Co-requisite
KIN 481	Clinical pharmacokinetics	2	1	-	1	-	-
ECO 482	Pharmacoeconomics and health outcomes	3	3	-	-	-	-
IPH 483	Integrated pharmacotherapy: Endocrine and women's health	3	3	-	-	-	IPH 484
IPH 484	Integrated pharmacotherapy: Endocrine and women's health "case based seminars"	1	-	-	1	-	IPH 483
IPH 485	Integrated pharmacotherapy: central nervous system CNS and gastrointestinal GIT	3	3	-	-	-	IPH 486
IPH 486	Integrated pharmacotherapy: central nervous system CNS and gastrointestinal GIT "case based seminars"	1	-	-	1	-	IPH 485
PCL 487	Patient care and health system management lab II	2	1	1	-	-	IPH 483 IPH 484 IPH 485 IPH 486
CAM 488	Elective/ selective Complementary and alternative medicine	2	2	-	-	-	-
<b>Total credit hours</b>		<b>17</b>					

Introductory Pharmacy Practice I (IPP 489): 3 credit hours, 4 weeks training in the summer in; Community service/pharmacy, and pharmacies in primary health care centers

Year 5-Phase 3 (Semester 9)							
Course code	Course title	Credit hour	Theory	Lab	Tutorial/practical	Pre-requisite	Co-requisite
IPH 591	Integrated pharmacotherapy: cardiovascular CVS and renal II	3	3	-	-		IPH 592
IPH 592	Integrated pharmacotherapy: cardiovascular CVS and renal II "case based seminars"	1	-	-	1	IPH 473 IPH 474	IPH 591
IPH 593	Integrated pharmacotherapy: Infectious disease	3	3	-	-		IPH 594
IPH 594	Integrated pharmacotherapy: Infectious disease "case based seminars"	1	-	-	1	BPH 367	IPH 593
PCL 595	Patient care and health system management laboratory III	2	1	1	-	PCL 477 PCL 487	IPH 591 IPH 592 IPH 593 IPH 594
IPP 596	Introductory Pharmacy practice experience (IPPE) II (out-patient pharmacy)	2	-	-	2	Semester 7,8	-
RES 5X6	Research project	0	0	0	0	-	-
PHI 597 MRT 598 MIM 599	Elective	3	3	-	-	-	-
<b>Total credit hours</b>		<b>14</b>					

**Electives available:** Pharmaceutical industry **PHI 597**, Marketing for pharmacists **MRT 598**, Medical imaging for pharmacists **MIM 599**

Year 5-Phase 3 (Semester 10)							
Course code	Course title	Credit hour	Theory	Lab	Tutorial/practical	Pre-requisite	Co-requisite
IPH 5X1	Integrated pharmacotherapy: Hematology/ oncology and palliative care	3	3	-	-	-	IPH 5X2
IPH 5X2	Integrated pharmacotherapy: Hematology/ oncology and palliative care "case based seminars"	1	-	-	1	-	IPH 5X1
MSF 5X3	Medication safety and health informatics	3	2	1	-	Semester 7,8	-
PCL 5X4	Patient care and health system management laboratory IV	2	1	1	-	PCL 477 PCL 487	IPH 5X1 IPH 5X2
IPP 5X5	Introductory Pharmacy practice experience (IPPE) III (in-patient pharmacy)	2	-	-	2	Semester 7,8	-
RES 5X6	Research project	3	-	-	3	-	-
<b>Total credit hours</b>		<b>14</b>					

**Year 6:40 weeks Advanced Pharmacy Practice Experience (APPE)**

**Core rotations:** Ambulatory care, General internal medicine, Institutional pharmacy practice, Community pharmacy practice  
**Selective/ Elective rotations:** General pediatrics, Infectious diseases, Cardiology, Adult critical care, Paediatric/ neonatal critical care

**Free/ Elective rotations:** Organ Transplant, Adult hematology/Oncology, Nephrology, Acute care, TPN, Pharmacy administration and management, Pharmacy automation and informatics, Surgery, Drug Information, Investigational drug services, Medication safety, Pharmacy quality improvement

**All students after finishing phase 3, are expected to finish 10 rotations for 40 weeks of APPE. Core rotations are mandatory for all. From the elective rotations, 3 can be chosen from the selective/ elective rotations, and the remaining ones are freely chosen from the free elective list.**



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**For further information:**

Please visit our website: <https://cop.alfaisal.edu>