

# PHARMACY

## Bachelor of Pharmacy

and Diploma in Pharmacy

## Admission to Program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalog.

## Program Mission

The mission of the Bachelor of Pharmacy program is to produce graduates, in response to the stakeholders' demand, who are work-ready to operate as Pharmacists in various areas of the technology driven pharmaceutical care, research, education and pharmaceutical industries.

## Program Description

The Bachelor of Pharmacy program is a four year post foundations program preparing graduates as Pharmacists for professional practice in different areas of Pharmacy. Graduates are educated to provide quality pharmaceutical care with a patient centered focus.

The program stresses knowledge of the biological, chemical, pharmaceutical, clinical and social sciences that underpins pharmacy, an understanding of the relevance of that knowledge to patient care and pharmaceutical problem solving and the skills to apply that knowledge to specific pharmaceutical care circumstances. The program provides students with a firm foundation for lifelong learning by promoting the development of analytical thinking, problemsolving abilities, communication skills, technical skills, intellectual leadership potential and a commitment to professional ethics, social responsibility, professional citizenship and the ability to adapt to changes and respond to challenges in pharmaceutical healthcare delivery.

Graduates of this program will be competent to provide quality pharmaceutical care, current information and products in different areas of pharmacy with a patient centered focus.

Students will have the option to graduate with a Diploma in Pharmacy upon the successful completion of all required courses and preceptorships after 2 years of study.

## Program Learning Outcomes

### Bachelor of Pharmacy

*On successful completion of this program, the graduate will be able to:*

1. Apply knowledge, management and decision making aspects to provide quality pharmacy services to meet patients' drug related needs with the objective of achieving optimal patient outcomes and patient safety in clinical and non-clinical settings.
2. Demonstrate a broad and coherent body of knowledge of the major principles of physical-chemical, life, bio- medical, administrative and pharmaceutical sciences to successfully solve problems both in disciplinary and interdisciplinary areas of pharmacy.
3. Demonstrate effective cognitive and technical skills within the framework of evidence-based practice and continuing quality assurance to develop, implement and enhance processes and actions that ensure the safety, accuracy and high standards of pharmaceutical services and supplied products.

4. Demonstrate skills in using relevant advanced technologies, information systems, and communication devices that support quality professional practice routine as well as complex problems in a variety of pharmacy settings.
5. Demonstrate the ability to work independently or as part of a team and take responsibility in managing interactions with others in a diverse range of clinical and non-clinical settings.
6. Demonstrate professional attributes relevant to their role as pharmacist in their general as well as specialized field of practice.
7. Develop, and maintain professional competence and acquire new knowledge and skills with optimal incorporation of those into pharmacy practice.

### Diploma in Pharmacy

*Students exiting with the Diploma will be able to:*

Demonstrate a comprehensive knowledge of fundamental concepts of mathematics, bio-medical and pharmaceutical sciences including an understanding of the underlying theoretical and abstract concepts with significant depth in pharmacy and interdisciplinary areas.

Demonstrate knowledge and familiarity with brand and generic drug names, appearance, manufacturer, dosage forms(s), and route of administration for the most commonly used drugs.

1. Uphold legal and ethical standards to accurately implement international best pharmacy practice in interpreting prescriptions, preparing, labeling, packaging, processing and distributing medications while working under the supervision of a licensed pharmacist.
2. Demonstrate cognitive and psychomotor skills in using relevant advanced technologies, information systems, and communication devices in a variety of pharmacy practice settings.
3. Function, professionally, safely, and competently with little support as well as part of a team and take responsibility for developing appropriate approaches to managing complex work procedures and processes.
4. Demonstrate professional attributes while functioning in technical and non-technical contexts and take responsibility to develop the performance of their own and others.
5. Demonstrate responsibility for planning own life-long learning in order to improve competencies while actively observing ethical professional standards.

## Requirements

### Completion Requirements

**Students must successfully complete a minimum of 139 credits as follows:**

Code	Title	Credit Hours
	Health Science Core Courses	24
	Pharmacy Core Courses	64
	Pharmacy Preceptorship Courses	18
	General Studies	33
	<b>Total Credit Hours</b>	<b>139</b>

Code	Title	Credit Hours
<b>Health Science Core Courses</b>		
Required Credits: 24		
HSC 1023	Chemistry for Health Sciences	3
HSC 1033	Anatomy and Physiology	3
HSC 1113	Introduction to Healthcare Systems and Professional Practice	3
HSC 1123	Work Health and Safety	3
HSC 1803	Medical Terminology for Health Sciences	3
HSC 4003	Research Methods for Health Sciences	3
HSC 4006	Capstone Research Project for Health Sciences	6
<b>Pharmacy Core Courses</b>		
Required Credits: 64		
HPH 1503	Introduction to Pharmacy	3
HPH 2003	Biological Organic Chemistry	3
HPH 2016	General Pharmacology	6
HPH 2023	Pharmaceutics I	3
HPH 2113	Systems Pharmacology	3
HPH 2123	Microbiology and Immunology	3
HPH 2133	Pharmaceutics II	3
HPH 2153	Medicinal Chemistry I	3
HPH 3006	Pathophysiology and Therapeutics I	6
HPH 3043	Medicinal Chemistry II	3
HPH 3054	Pharmaceutics III	4
HPH 3133	Clinical Biochemistry and Toxicology	3
HPH 3143	Pharmaceutical Analysis	3
HPH 3163	Pathophysiology and Therapeutics II	3
HPH 4003	Bio-Technology	3
HPH 4013	Complementary Medicine	3
HPH 4033	Pharmaceutical Care Practice Skills	3
HPH 4073	Pathophysiology and Therapeutics III	3
HPH 4103	Pharmacy Law, Ethics and Pharmacoeconomics	3
<b>Pharmacy Preceptorship Courses</b>		
Required Credits: 18		
HPH 2034	Community Pharmacy Preceptorship	4
HPH 2144	Clinical Pharmacy Preceptorship I	4
HPH 3154	Clinical Pharmacy Preceptorship II	4
HPH 4042	Industrial Pharmacy Preceptorship	2
HPH 4114	Advanced Pharmacy Practice	4
<b>General Studies</b>		
Required Credits: 33		
<b>English, Arabic or other Languages</b>		
Required Credits: 12		
<b>Humanities or Art</b>		
Required Credits: 3		
<b>Information Technology or Mathematics</b>		
Required Credits: 6		
<b>The Natural Sciences</b>		
Required Credits: 3		
<b>The Social or Behavioral Sciences</b>		
Required Credits: 9		

## Diploma in Pharmacy Completion Requirement

Students must successfully complete all Year 1 and 2 courses with a minimum of 71 credits including:

Code	Title	Credit Hours
Health Science Core Courses		15
Pharmacy Core Courses		27
Pharmacy Preceptorship Courses		8
General Studies		21
Total Credit Hours		71

## Ideal Study Plan Recommended Sequence of Study

Year 1		Credit Hours
<b>Semester 1</b>		
HSC 1013	Human Biology	3
HSC 1113	Introduction to Healthcare Systems and Professional Practice	3
HSC 1803	Medical Terminology for Health Sciences	3
LSC 1103	Professional Communication and Reporting	3
LSS 1003	Life and Future Skills	3
Credit Hours		15
<b>Semester 2</b>		
AES 1013	Arabic Communications I	3
HSC 1023	Chemistry for Health Sciences	3
HSC 1033	Anatomy and Physiology	3
HSC 1123	Work Health and Safety	3
LSM 1113	Statistical Mathematics	3
Credit Hours		15
<b>Summer</b>		
HPH 1503	Introduction to Pharmacy	3
Credit Hours		3
<b>Year 2</b>		
<b>Semester 1</b>		
HPH 2003	Biological Organic Chemistry	3
HPH 2016	General Pharmacology	6
HPH 2023	Pharmaceutics I	3
HPH 2034	Community Pharmacy Preceptorship	4
Credit Hours		16
<b>Semester 2</b>		
HPH 2113	Systems Pharmacology	3
HPH 2123	Microbiology and Immunology	3
HPH 2133	Pharmaceutics II	3
HPH 2144	Clinical Pharmacy Preceptorship I	4
HPH 2153	Medicinal Chemistry I	3
Credit Hours		16
<b>Summer</b>		
AES 1003	Emirati Studies	3
ICT 2013	Computational Thinking and Coding	3
Diploma in Pharmacy exit		6
Credit Hours		6
<b>Year 3</b>		
<b>Semester 1</b>		
HPH 3006	Pathophysiology and Therapeutics I	6
HPH 3043	Medicinal Chemistry II	3
HPH 3054	Pharmaceutics III	4

LSS 1123	Basic Research Methods	3
	Credit Hours	16
<b>Semester 2</b>		
HPH 3133	Clinical Biochemistry and Toxicology	3
HPH 3143	Pharmaceutical Analysis	3
HPH 3154	Clinical Pharmacy Preceptorship II	4
HPH 3163	Pathophysiology and Therapeutics II	3
BUS 2403	Innovation and Entrepreneurship	3
	Credit Hours	16
<b>Summer</b>		
AES 3003	Professional Arabic	3
LSC 2103	Academic Reading and Writing II	3
	Credit Hours	6
<b>Year 4</b>		
<b>Semester 1</b>		
HPH 4013	Complementary Medicine	3
HPH 4033	Pharmaceutical Care Practice Skills	3
HPH 4042	Industrial Pharmacy Preceptorship	2
HPH 4073	Pathophysiology and Therapeutics III	3
HSC 4003	Research Methods for Health Sciences	3
	Credit Hours	14
<b>Semester 2</b>		
HPH 4003	Bio-Technology	3
HPH 4103	Pharmacy Law, Ethics and Pharmacoeconomics	3
HPH 4114	Advanced Pharmacy Practice	4
HSC 4006	Capstone Research Project for Health Sciences	6
	Credit Hours	16
	Total Credit Hours	139

Additional courses may be offered in each Summer Semester at the discretion of the Academic Faculty.

## Faculty and Academic Staff

**Amged Mustafa**, PhD Pharmacology, Uppsala University, Sweden

**Christianne Rizkalla**, PhD Pharmaceutical Sciences, Cairo University, Egypt

**Lamia AlHajri**, Pharm.D. United Arab Emirates University, UAE

**Sima Jabbari**, Pharm.D. Purdue University, USA

**Rajaa Mirgani**, PhD Pharmacology, Karolinska Institute, Sweden

**Heba Mohamed**, PhD Pharmaceutical Sciences, Cairo University, Egypt