

# 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, problem solving 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, as part of or lead a technical team and take responsibility in managing interactions with others in a diverse range of clinical and non-clinical settings. (Technical Leaders).
6. Demonstrate professional attributes relevant to their role as pharmacist in their general as well as specialized field of practice by developing and maintaining professional competence and acquire new knowledge and skills with optimal incorporation of those into pharmacy practice.
7. Apply entrepreneurship and innovation skills to identify and create innovative opportunities and solutions that will strategically navigate the complex demands stemming from pharmacy and the healthcare overall. (Graduating Companies ).

### Diploma in Pharmacy

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

1. 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.
2. 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.
3. Uphold legal and ethical standards to accurately implement international best pharmacy practice in interpreting prescriptions, preparing, labeling, and packaging, processing and distributing medications while working under the supervision of a licensed pharmacist.
4. Demonstrate cognitive and psychomotor skills in using relevant advanced technologies, information systems, and communication devices in a variety of pharmacy practice settings.
5. 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.(Technical leaders).
6. Demonstrate professional attributes while functioning in technical and non-technical contexts and take the responsibility for planning own life-long learning in order to improve competencies while actively observing ethical professional standards. (Technical leaders)
7. Apply entrepreneurship and innovation skills to identify and create innovative opportunities and solutions that will strategically navigate the complex demands stemming from pharmacy and the healthcare overall. (Graduating Companies).

## Requirements Completion Requirements

Bachelor of Pharmacy

**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>

Diploma in Pharmacy

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

Code	Title	Credit Hours
<b>Health Science Core Courses</b>		
Required Credits: 15		
<b>Pharmacy Core Courses</b>		
Required Credits: 27		
<b>Pharmacy Preceptorship Courses</b>		
Required Credits: 8		
<b>General Studies</b>		
Required Credits: 21		
<b>Total Credit Hours</b>		
<b>71</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

#### Pharmacy Core Courses

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

#### Pharmacy Preceptorship Courses

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

#### General Studies

Required Credits: 33

#### English, Arabic or other Languages

Required Credits: 12

#### Humanities or Art

Required Credits: 3

#### Information Technology or Mathematics

Required Credits: 6

#### The Natural Sciences

Required Credits: 3

#### The Social or Behavioral Sciences

Required Credits: 9

Description	Data
Total Required Credits	139
Maximum Duration of Study	6 years
Minimum Duration of Study	4 years
Cost Recovery Program	No
Program Code	BHPRU
Major Code	HPH

## Ideal Study Plan Recommended Sequence of Study

### Year 1

Semester 1	Credit Hours
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
<b>Credit Hours</b>	<b>15</b>

### Semester 2

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
LSS 1123 Basic Research Methods	3
<b>Credit Hours</b>	<b>15</b>

### Summer

HPH 1503 Introduction to Pharmacy	3
AES 1003 Emirati Studies	3
<b>Credit Hours</b>	<b>6</b>

### Year 2

#### Semester 3

HPH 2003 Biological Organic Chemistry	3
HPH 2016 General Pharmacology	6
HPH 2023 Pharmaceutics I	3
HPH 2034 Community Pharmacy Preceptorship	4
<b>Credit Hours</b>	<b>16</b>

#### Semester 4

AES 1033 Islamic Culture	3
HPH 2113 Systems Pharmacology	3

HPH 2123	Microbiology and Immunology	3
HPH 2133	Pharmaceutics II	3
HPH 2153	Medicinal Chemistry I	3
	Credit Hours	15
<b>Summer</b>		
HPH 2144	Clinical Pharmacy Preceptorship I	4
	Diploma in Pharmacy exit	
	Credit Hours	4
<b>Year 3</b>		
<b>Semester 5</b>		
HPH 3006	Pathophysiology and Therapeutics I	6
HPH 3043	Medicinal Chemistry II	3
HPH 3054	Pharmaceutics III	4
LSM 1113	Statistical Mathematics	3
	Credit Hours	16
<b>Semester 6</b>		
BUS 2403	Innovation and Entrepreneurship	3
HPH 3133	Clinical Biochemistry and Toxicology	3
HPH 3143	Pharmaceutical Analysis	3
HPH 3163	Pathophysiology and Therapeutics II	3
LSC 2223	Future Skills Capstone	3
	Credit Hours	15
<b>Summer</b>		
HPH 3154	Clinical Pharmacy Preceptorship II	4
	Credit Hours	4
<b>Year 4</b>		
<b>Semester 7</b>		
HPH 4013	Complementary Medicine	3
HPH 4033	Pharmaceutical Care Practice Skills	3
HPH 4073	Pathophysiology and Therapeutics III	3
HSC 4003	Research Methods for Health Sciences	3
ICT 2013	Computational Thinking and Coding	3
	Credit Hours	15
<b>Semester 8</b>		
HPH 4003	Bio-Technology	3
HPH 4103	Pharmacy Law, Ethics and Pharmacoeconomics	3
HSC 4006	Capstone Research Project for Health Sciences	6
HPH 4042	Industrial Pharmacy Preceptorship	2
	Credit Hours	14
<b>Summer</b>		
HPH 4114	Advanced Pharmacy Practice	4
	Credit Hours	4
	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**, Assistant Professor, PhD Pharmacology, Uppsala University, Sweden, 1995

**Christianne Rizkalla**, Assistant Professor, PhD Pharmaceutical Sciences, Cairo University, Egypt, 2010

**Lamia AlHajri**, Assistant Professor and Program Coordinator, Doctor of Pharmacy (Pharm.D.), United Arab Emirates University, UAE, 2014

**Sima Jabbari**, Assistant Professor, Doctor of Pharmacy (Pharm.D.), Purdue University, USA, 2004

**Rajaa Mirgani**, Assistant Professor, PhD Pharmacology, Karolinska Institute, Sweden, 2002

**Heba Mohamed**, Assistant Professor, PhD Pharmaceutical Sciences, Cairo University, Egypt, 2011