

# Program Specification

## (2025)

### 1. Basic Information

<b>ProgramTitle (according to what is stated in the bylaw):</b>	<b>Bachelor of Pharmacy (Pharm D)</b>
<b>Total number of credit points of the program:</b>	<b>590</b>
<b>Number of academic years (expected program duration):</b>	<b>5 academic years + 1 internship year</b>
<b>Department (s) Participating (if any) in teaching the program:</b>	-Pharmaceutical Chemistry (PMC) -Pharmacology (PCL) and Biochemistry (PBC) -Pharmaceutics & Pharmaceutical Technology (PCT) -Microbiology (PMB) and Pharmacognosy (PCG) -Clinical Pharmacy Practice (PCP)
<b>Faculty:</b>	<b>Faculty of Pharmacy</b>
<b>University:</b>	<b>British University in Egypt</b>
<b>Program majors/divisions/tracks/specialties in the final year (if any):</b>	<b>Not available</b>
<b>Partnerships with other parties and the nature of each (if any):</b>	<b>Not available</b>
<b>Name of the program coordinator (attach the assignment decision):</b>	<b>Prof. Shereen Hassib</b>
<b>Program Specification Approval Date:</b>	<b>9/30/2025</b>
<b>Council responsible for Program Specification Approval (Attach the Decision / Minutes):</b>	<b>Faculty council minutes</b>

## 2. Program Aims (Brief description of the overall purpose the program)

- Prepare pharmacists who are qualified to work in all fields of pharmacy (public and private pharmacies, pharmaceutical companies, drug control and food analysis laboratories, health media, pharmaceutical marketing, research centers and universities).
- Emphasize the importance of the role of the pharmacist in the healthcare system inside and outside hospitals through educating and counseling patients in order to improve therapeutic outcomes while acting responsibly and respecting the professional rules and ethics and patient rights.
- Prepare pharmacists capable of manufacturing and developing pharmaceutical products in addition to effective communication, leadership, management and entrepreneurship.
- Provide efficient pharmacists capable of continued learning and standing out in the job market nationally and regionally.
- Participation in community service and environment development and achieving significant healthcare cost savings through rational drug use.
- Achieving quality standards in pharmaceutical education through interactive learning and promoting self-learning.

## 3. Program Structure (Curriculum)

- Program Components

Requirement Category/Type		Number of Modules	Number of Credit Points	Number of Credit hours	Percentage from the total number of points
University Requirements		2	20	6	3.4%
Faculty Requirements (if applicable)		1	10	3	1.7%
Program Requirements		58 Core	560	156	94.9%
		4 Optional		12	
Requirements of the majors/ divisions/ tracks/ specializations in the final year (if any)		Not available	Not available		Not available
Other requirements	Field Training		No credit points (100 hrs)		---
	Graduation Project		---		---
	Mandatory training year		- Additional year after completing the program		---

			-No credit points (9 months)		
	Other (to be mentioned)		---		---
<b>Total Compulsory Modules</b>		<b>61</b>	<b>550</b>	<b>165</b>	<b>93.22%</b>
<b>Elective Modules</b>		<b>4</b>	<b>40</b>	<b>12</b>	<b>6.78%</b>
<b>Total</b>		<b>65</b>	<b>590</b>	<b>177</b>	<b>100%</b>

- Program modules according to the expected study plan

Academic Level	Semester	Module Code	Module Title	Module Type (Compulsory / Elective)	Requirement Category/ Type	Number of Credit Hours/ Points	Number of Weekly Hours		
							Theoretical teaching	Practical training	Other
Degree Year 1	Semester One	PHENG L01	English for Academic Purposes	Core	University	3 hrs (10 points)	3	---	---
Degree Year 1	Semester One	MTH101	Mathematics	Core	Faculty	3 hrs (10 points)	2	1	--
Degree Year 1	Semester One	PMC101	Pharmaceutical Analytical Chemistry-1	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 1	Semester One	PMC102	Pharmaceutical Organic Chemistry-1	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 1	Semester One	PCL101	Integrated body system-1	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 1	Semester One	PCT101	Pharmacy Orientation, legislation and Ethics	Core	Specialty	1.5 hrs (5 points)	1+1*	--	--
Degree Year 1	Semester Two	PHENG L02	English and Academic Writing	Core	University	3 hrs (10 points)	3	---	---
Degree Year 1	Semester Two	PMC103	Pharmaceutical Organic Chemistry-2	Core	Specialty	3 hrs (10 points)	2	1	--



Degree Year 1	Semester Two	PCG101	Pharmacology-1	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 1	Semester Two	PCT102	Physical Pharmacy	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 1	Semester Two	PCL102	Integrated body system-2	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 1	Semester Two	PCP101	Scientific Thinking and Communication skills	Core	Specialty	1.5 hrs (5 points)	1+1*	--	--
Degree Year 1	Semester Two	PCP102	Human Rights and Fighting Corruption	Core	Specialty	1.5 hrs (5 points)	1+1*	--	--
Degree Year 2	Semester One	PCP203	Psychology	Core	Specialty	1.5 hrs (5 points)	1	0.5	--
Degree Year 2	Semester One	PBC201	Biochemistry-1	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 2	Semester One	PCT203	Pharmaceutics-1	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 2	Semester One	PCG202	Pharmacology-2	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 2	Semester One	PCL203	Integrated body system-3	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 2	Semester One	PMC204	Pharmaceutical Analytical Chemistry-2	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 2	Semester Two	PCL204	Pharmacology-1	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 2	Semester Two	PMB201	General Microbiology	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 2	Semester Two	PMC205	Pharmaceutical Analytical Chemistry-3	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 2	Semester Two	PCT204	Pharmaceutics-2	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 2	Semester Two	PBC202	Biochemistry-2	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 2	Semester Two	PMC206	Pharmaceutical Organic Chemistry-3	Core	Specialty	3 hrs (10 points)	2	1	--



Degree Year 3	Semester One	PMB302	Pharmaceutical Microbiology	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 3	Semester One	PCG303	Phytochemistry-1	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 3	Semester One	PBC303	Clinical Biochemistry	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 3	Semester One	PCL305	Pharmacology-2	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 3	Semester One	PCT305	Pharmaceutics-3	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 3	Semester One	PCP304	First Aid & Basic Life Support (BLS)	Core	Specialty	1.5 hrs (5 points)	1	0.5	--
Degree Year 3	Semester One	PMB303	Immunology	Core	Specialty	1.5 hrs (5 points)	1	0.5	--
Degree Year 3	Semester Two	PMB304	Medical Microbiology-1 (Parasitology & Virology)	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 3	Semester Two	PMC308	Medicinal Chemistry-1	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 3	Semester Two	PMC307	Instrumental Analysis	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 3	Semester Two	PCG304	Phytochemistry-2	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 3	Semester Two	PCL306	Pharmacology-3	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 3	Semester Two	PCP305	Community Pharmacy Practice	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 4	Semester One	PCP406	Hospital Pharmacy	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 4	Semester One	PCL407	Toxicology	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 4	Semester One	PCT406	Pharmaceutics-4	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 4	Semester One	PCP407	Clinical pharmacy-1	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 4	Semester One	PMC409	Medicinal Chemistry-2	Core	Specialty	3 hrs (10 points)	2	1	--



Degree Year 4	Semester One	PxxO??	Optional	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year 4	Semester Two	PMB405	Medical Microbiology-2 (Bacteriology & Mycology)	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 4	Semester Two	PCT408	Pharmaceutical Technology-1	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 4	Semester Two	PCP408	Drug information and Pharmacovigilance	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 4	Semester Two	PCT407	Dosage Form Design	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 4	Semester Two	PCP409	Clinical pharmacy-2	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 4	Semester Two	PxxO??	Optional	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year 5	Semester One	PCP510	Clinical pharmacy-3	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 5	Semester One	PMB506	Biotechnology	Core	Specialty	1.5 hrs (5 points)	1	0.5	--
Degree Year 5	Semester One	PCG505	Phytotherapy and Aromatherapy	Core	Specialty	1.5 hrs (5 points)	1	0.5	--
Degree Year 5	Semester One	PCT510	Pharmaceutical Technology -2 & GMP	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 5	Semester One	PCT509	Biopharmaceutics and Pharmacokinetics	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 5	Semester One	PCL508	Research Methodology & Biostatistics	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 5	Semester One	PxxO??	Optional	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year 5	Semester Two	PCP511	Marketing & Pharmacoeconomics	Core	Specialty	3 hrs (10 points)	2	1	--

Degree Year 5	Semester Two	PCP512	Clinical Pharmacokinetics	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 5	Semester Two	PMB507	Public Health and Preventive Medicine	Core	Specialty	1.5 hrs (5 points)	1	0.5	--
Degree Year 5	Semester Two	PCP513	Entrepreneurship	Core	Specialty	1.5 hrs (5 points)	1+1*	--	--
Degree Year 5	Semester Two	PMC511	Drug Design	Core	Specialty	3 hrs (10 points)	2	1	--
Degree Year 5	Semester Two	PCG506	Applied Pharmacology	Core	Specialty	1.5 hrs (5 points)	1+1*	--	--
Degree Year 5	Semester Two	PMC510	Quality Control of Pharmaceuticals	Core	Specialty	1.5 hrs (5 points)	1+1*	--	--
Degree Year 5	Semester Two	PxxO??	Optional	Optional	Specialty	3 hrs (10 points)	2	1	--

#### Optional modules:

Academic Level	Semester	Module Code	Module Title	Module Type (Compulsory / Elective)	Requirement Category/ Type	Number of Credit Hours/ Points	Number of Weekly Hours		
							Theoretical teaching	Practical training	Other
Degree Year4/ Degree Year 5	Semester One/ Semester Two	PMCO1 2	Advanced Pharmaceutical Analysis	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/ Semester Two	PMCO1 3	Radiopharmaceutical Chemistry	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/ Semester Two	PMCO1 4	Nanochemistry	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/ Semester Two	PBCO0 4	Molecular Biology & Gene Therapy	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/ Semester Two	PCL009	Biological screening of drug activities	Optional	Specialty	3 hrs (10 points)	2	1	--



Degree Year4/ Degree Year 5	Semester One/Semester Two	PCLO10	High-Throughput Screening of Drug activities	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/Semester Two	PCLO11	Evaluation of Safety of Drugs	Optional	University	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/Semester Two	PCLO12	Neuroscience-1	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/Semester Two	PCLO13	Neuroscience-2	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/Semester Two	PCTO11	Advanced Drug Delivery and Nanopharmaceuticals	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/Semester Two	PCTO12	Cosmetics	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/Semester Two	PCTO13	Veterinary Pharmacy	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/Semester Two	PMBO08	Infection control and Antimicrobial stewardship	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/Semester Two	PMBO09	Biopharmaceuticals and Immunological Products	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/Semester Two	PMBO10	Bioinformatics, Genomics, Pharmacogenomics, and Pharmacology	Optional	Specialty	3 hrs (10 points)	2	1	--

			microbiomics						
Degree Year4/ Degree Year 5	Semester One/Semester Two	PMBO1 1	Diagnostic Microbiology	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/Semester Two	PCPO1 4	Health Media	Optional	University	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/Semester Two	PCPO1 5	Personalized Medicine	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/Semester Two	PCPO1 6	Palliative Care	Optional	Specialty	3 hrs (10 points)	2	1	--
Degree Year4/ Degree Year 5	Semester One/Semester Two	PCPO1 7	Paediatric and geriatric pharmacotherapy	Optional	Specialty	3 hrs (10 points)	2	1	--

#### 4. Academic Standards

- **Adopted Academic Standards (NARS/ARS): NARS**
- **Date of Adoption of Standards in the governing Council: 9/29/2019**  
\* **Decision/Minutes of the governing Council to be attached**
- **Attributes from NARS**

National Academic Reference Standards (NARS) for Pharmacy Education Attributes of the Pharmacy Graduates Pharmacy graduates work in a multi-disciplinary profession to improve the quality of life of individuals and communities. Based on multi-national requirements, the pharmacy graduate must develop competencies of a learner, health caregiver and provider, professional, collaborator, manager, promoter, problem solver, educator and communicator, self-aware, leader, and innovator. Pharmacy graduates must acquire the necessary attributes related to various pharmacy aspects including drug-oriented and patient-oriented pharmacy disciplines to actively participate in pharmaceutical care. Pharmacy graduates must be able to:

1. Educate and counsel individuals and communities to participate in optimizing therapeutic outcomes and minimizing the incidence of illness of individuals and populations.

2. Practice and perform responsibilities and authorities legally, professionally, and ethically respecting patients' rights.
3. Utilize evidence-based data to deliver contemporary pharmaceutical products and pharmacy services.
4. Assure the quality of pharmaceutical materials and products.
5. Apply integrated evidence-based pharmaceutical and clinical information in assessing the appropriateness, effectiveness, and safety of medications.
6. Contribute effectively in planning and conducting research using appropriate methodologies.
7. Work collaboratively and share therapeutic decision-making as a member of an interprofessional health care team.
8. Demonstrate effective communication, leadership, business administration, and entrepreneurial skills.
9. Work as a life-long learner for continuous professional improvement and demonstrate capabilities of performance appraisal and self-assessment.

- **Competencies of the Pharmacy Graduates according to National Academic Reference Standards**

Four **Competency Domains** are included in these competency-based National Academic Reference Standards for Pharmacy Education. These domains are designed to cover all essentials for practicing pharmacy profession including both drug-oriented and patient oriented disciplines. Each domain should be achieved through a number of **Competencies** ranging from one to six, with a total of twelve competencies for all domains. These competencies are overall broad statements that cover various areas of the graduate performance. A number of **Key Elements** ranging from two to seven are included in each competency, with a total of forty-two key elements for all competencies. These key elements demonstrate how pharmacy graduate will reflect each competency in practice. The competency domains are the followings:

**Domain 1:** Fundamental Knowledge

**Domain 2:** Professional and Ethical Practice

**Domain 3:** Pharmaceutical Care

**Domain 4:** Personal Practice

### **DOMAIN 1- FUNDAMENTAL KNOWLEDGE**

#### **1-1 COMPETENCY**

Integrate knowledge from basic and applied pharmaceutical and clinical sciences to standardize materials, formulate and manufacture products, and deliver population and patient-centred care.

#### **KEY ELEMENTS**

1-1-1- Demonstrate understanding of knowledge of pharmaceutical, biomedical, social, behavioural, administrative, and clinical sciences.

1-1-2- Utilize the proper pharmaceutical and medical terms, abbreviations and symbols in pharmacy practice.

1-1-3- Integrate knowledge from fundamental sciences to handle, identify, extract, design, prepare, analyse, and assure quality of synthetic/natural pharmaceutical materials/products.

1-1-4- Articulate knowledge from fundamental sciences to explain drugs' actions and evaluate their appropriateness, effectiveness, and safety in individuals and populations.

- 1-1-5- Retrieve information from fundamental sciences to solve therapeutic problems.
- 1-1-6- Utilize scientific literature and collect and interpret information to enhance professional decision.
- 1-1-7- Identify and critically analyse newly emerging issues influencing pharmaceutical industry and patient health care.

## DOMAIN 2: PROFESSIONAL AND ETHICAL PRACTICE

### **2-1- COMPETENCY**

Work collaboratively as a member of an inter-professional health care team to improve the quality of life of individuals and communities and respect patients' rights.

#### **KEY ELEMENTS**

- 2-1-1- Perform responsibilities and authorities in compliance with the legal and professional structure and role of all members of the health care professional team.
- 2-1-2- Adopt ethics of health care and pharmacy profession respecting patients' rights and valuing people diversity.
- 2-1-3- Recognize own personal and professional limitations and accept the conditions of referral to or guidance from other members of the health care team.

### **2-2- COMPETENCY**

Standardize pharmaceutical materials, formulate, and manufacture pharmaceutical products, and participate in systems for dispensing, storage, and distribution of medicines.

#### **KEY ELEMENTS**

- 2-2-1- Isolate, design, identify, synthesize, purify, analyse, and standardize synthetic/natural pharmaceutical materials.
- 2-2-2- Apply the basic requirements of quality management system in developing, manufacturing, analysing, storing, and distributing pharmaceutical materials/products considering various incompatibilities.
- 2-2-3- Recognize the principles of various tools and instruments and select the proper techniques for synthesis and analysis of different materials and production of pharmaceuticals.
- 2-2-4- Adopt the principles of pharmaceutical calculations, biostatistical analysis, bioinformatics, pharmacokinetics, and biopharmaceutics and their applications in new drug delivery systems, dose modification, bioequivalence studies, and pharmacy practice.

### **2-3- COMPETENCY**

Handle and dispose biologicals and synthetic/natural pharmaceutical materials/products effectively and safely with respect to relevant laws and legislations.

#### **KEY ELEMENTS**

- 2-3-1- Handle, identify, and dispose biologicals, synthetic/natural materials, biotechnology-based and radio-labelled products, and other materials/products used in pharmaceutical field.
- 2-3-2- Recognize and adopt ethical, legal, and safety guidelines for handling and disposal of biologicals, and pharmaceutical materials/products.

### **2-4- COMPETENCY**

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Actively share professional decisions and proper actions to save patient's life in emergency situations including poisoning with various xenobiotics, and effectively work in forensic fields.

#### **KEY ELEMENTS**

- 2-4-1- Ensure safe handling/use of poisons to avoid their harm to individuals and communities.
- 2-4-2- Demonstrate understanding of the first aid measures needed to save patient's life.
- 2-4-3- Take actions to solve any identified medicine-related and pharmaceutical care problems.
- 2-4-4- Assess toxicity profiles of different xenobiotics and detect poisons in biological specimens.

#### **2-5- COMPETENCY**

Contribute in pharmaceutical research studies and clinical trials needed to authorize medicinal products.

#### **KEY ELEMENTS**

- 2-5-1- Fulfill the requirements of the regulatory framework to authorize a medicinal product including quality, safety, and efficacy requirements.
- 2-5-2- Retrieve, interpret, and critically evaluate evidence-based information needed in pharmacy profession.
- 2-5-3- Contribute to planning and conducting research studies using appropriate methodologies.

#### **2-6- COMPETENCY**

Perform Pharmacoeconomics analysis and develop promotion, sales, marketing, and business administration skills.

#### **KEY ELEMENTS**

- 2-6-1- Apply the principles of business administration and management to ensure rational use of financial and human resources.
- 2-6-2- Utilize the principles of drug promotion, sales, marketing, accounting, and Pharmacoeconomics analysis.

### **DOMAIN 3: PHARMACEUTICAL CARE**

#### **3-1- COMPETENCY**

Apply the principles of body functions to participate in improving health care services using evidence-based data.

#### **KEY ELEMENTS**

- 3-1-1- Apply the principles of body function and basis of genomics in health and disease states to manage different diseases.
- 3-1-2- Apply the principles of public health and pharmaceutical microbiology to select and assess proper methods of infection control.
- 3-1-3- Monitor and control microbial growth and carry out laboratory tests for identification of infections/diseases.
- 3-1-4- Relate aetiology, epidemiology, pathophysiology, laboratory diagnosis, and clinical features of infections/diseases and their pharmacotherapeutic approaches.

#### **3-2- COMPETENCY**

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Provide counselling and education services to patients and communities about safe and rational use of medicines and medical devices.

#### **KEY ELEMENTS**

3-2-1- Integrate the pharmacological properties of drugs including mechanisms of action, therapeutic uses, dosage, contra-indications, adverse drug reactions and drug interactions.

3-2-2- Apply the principles of clinical pharmacology and pharmacovigilance for the rational use of medicines and medical devices.

3-2-3- Provide evidence-based information about safe use of complementary medicine including phytotherapy, aromatherapy, and nutraceuticals.

3-2-4- Provide information about toxic profiles of drugs and other xenobiotics including sources, identification, symptoms, and management control.

3-2-5- Educate and counsel patients, other health care professionals, and communities about safe and proper use of medicines including OTC preparations and medical devices.

3-2-6- Maintain public awareness on social health hazards of drug misuse and abuse.

### **DOMAIN 4: PERSONAL PRACTICE**

#### **4-1- COMPETENCY**

Express leadership, time management, critical thinking, problem solving, independent and team working, creativity and entrepreneurial skills.

#### **KEY ELEMENTS**

4-1-1- Demonstrate responsibility for team performance and peer evaluation of other team members, and express time management skills.

4-1-2- Retrieve and critically analyse information, identify and solve problems, and work autonomously and effectively in a team.

4-1-3- Demonstrate creativity and apply entrepreneurial skills within a simulated entrepreneurial activity.

#### **4-2- COMPETENCY**

Effectively communicate verbally, non-verbally and in writing with individuals and communities.

#### **KEY ELEMENTS**

4-2-1- Demonstrate effective communication skills verbally, non-verbally, and in writing with professional health care team, patients, and communities.

4-2-2- Use contemporary technologies and media to demonstrate effective presentation skills.

#### **4-3- COMPETENCY**

Express self-awareness and be a life-long learner for continuous professional improvement.

#### **KEY ELEMENTS**

4-3-1- Perform self-assessment to enhance professional and personal competencies.

4-3-2- Practice independent learning needed for continuous professional development.

## 5. Matrix of Academic Standards (Program Outcomes POs) with Modules

Compulsory Modules		Part-A-Academic Standards (Domain-1 and Domain-2, Key elements 1-1-1 to 2-6-2)																								
Code	Name	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	2-2-1	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
PHENGL01	English for Academic Purposes	✓																								
PHENGL02	English and Academic Writing	✓																								
MTH101	Mathematics														✓											
PMC101	Pharmaceutical Analytical Chemistry-1	✓		✓								✓														
PMC102	Pharmaceutical Organic Chemistry-1	✓										✓					✓									
PCL101	Integrated body system-1	✓	✓																							
PCT101	Pharmacy Orientation, legislation and Ethics	✓	✓						✓	✓	✓				✓											
PMC103	Pharmaceutical Organic Chemistry-2	✓										✓														
PCG101	Pharmacognosy-1			✓								✓														
PCT102	Physical Pharmacy	✓		✓		✓																			✓	
PCL102	Integrated body system-2	✓	✓																							
PCP101	Scientific Thinking and Communication skills						✓			✓	✓															
PCP102	Human Rights and Fighting Corruption	✓								✓	✓															
PCP203	Psychology	✓								✓	✓															
PBC201	Biochemistry-1	✓															✓									
PCT203	Pharmaceutics-1	✓		✓										✓	✓								✓			
PCG202	Pharmacognosy-2			✓								✓														
PCL203	Integrated body system-3	✓	✓																							
PMC204	Pharmaceutical Analytical Chemistry-2	✓		✓								✓				✓										

Compulsory Modules		Part-A-Academic Standards (Domain-1 and Domain-2, Key elements 1-1-1 to 2-6-2)																								
		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	2-2-1	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
Code	Name																									
PMB201	General Microbiology	✓														✓										
PMC205	Pharmaceutical Analytical Chemistry-3	✓		✓							✓		✓		✓											
PCT204	Pharmaceutics-2	✓		✓			✓									✓										
PBC202	Biochemistry-2	✓					✓									✓							✓			
PMC206	Pharmaceutical Organic Chemistry-3	✓												✓												
PCL204	Pharmacology-1				✓																					
PMB302	Pharmaceutical Microbiology	✓			✓											✓										
PCG303	Phytochemistry-1			✓							✓					✓										
PBC303	Clinical Biochemistry	✓					✓						✓		✓											
PCL305	Pharmacology-2				✓																✓					
PCT305	Pharmaceutics-3	✓		✓			✓										✓									
PCP304	First Aid & Basic Life Support	✓								✓									✓							
PMB303	Immunology	✓																								
PMB304	Medical Microbiology-1	✓																								
PMC308	Medicinal Chemistry-1	✓	✓								✓		✓		✓	✓							✓			
PMC307	Instrumental Analysis	✓		✓									✓													
PCG304	Phytochemistry-2			✓							✓					✓										
PCL306	Pharmacology-3				✓																					
PCP305	Community Pharmacy Practice	✓	✓						✓	✓	✓										✓					
PCP406	Hospital Pharmacy		✓				✓		✓				✓				✓			✓						
PCL407	Toxicology				✓														✓			✓				
PCT406	Pharmaceutics- 4	✓		✓			✓						✓	✓	✓								✓		✓	
PCP407	Clinical pharmacy-1	✓			✓	✓				✓										✓						
PMC409	Medicinal Chemistry-2	✓	✓	✓							✓	✓			✓	✓							✓			
PMB405	Medical Microbiology-2	✓														✓										
PCT408	Pharmaceutical Technology-1	✓		✓			✓							✓												

Compulsory Modules		Part-A-Academic Standards (Domain-1 and Domain-2, Key elements 1-1-1 to 2-6-2)																								
Code	Name	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	2-2-1	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
PCP408	Drug information and Pharmacovigilance						✓	✓										✓					✓			
PCT407	Dosage Form Design	✓		✓									✓		✓								✓	✓		
PCP409	Clinical pharmacy-2	✓			✓	✓				✓											✓					
PCP510	Clinical pharmacy-3				✓	✓	✓			✓											✓					
PMB506	Biotechnology						✓	✓						✓		✓							✓			
PCG505	Phytotherapy and Aromatherapy	✓		✓	✓	✓			✓			✓														
PCT510	Pharmaceutical Technology-2 & GMP			✓									✓													
PCT509	Biopharmaceutics and Pharmacokinetics	✓			✓										✓									✓		
PCL508	Research Methodology & Biostatistics						✓								✓									✓		
PCP511	Marketing & Pharmacoeconomic s							✓			✓											✓		✓	✓	
PCP512	Clinical Pharmacokinetics	✓				✓									✓											
PMB507	Public Health and Preventive Medicine	✓						✓		✓																
PCP513	Entrepreneurship							✓			✓														✓	
PMC511	Drug Design			✓								✓														
PCG506	Applied Pharmacognosy			✓																						
PMC510	Quality Control of Pharmaceuticals			✓									✓											✓		

Optional Modules		Part-A-Academic Standards (Domain-1 and Domain-2, Key elements 1-1-1 to 2-6-2)																								
Code	Name	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	2-2-1	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
PMCO12	Advanced Pharmaceutical Analysis			✓								✓	✓			✓										
PMCO13	Radiopharmaceutical Chemistry	✓		✓					✓					✓						✓				✓		
PBCO04	Molecular Biology & Gene Therapy	✓												✓		✓							✓			
PCLO09	Biological screening of drug activities				✓																		✓	✓		
PCLO10	High-Throughput Screening of Drug activities	✓			✓									✓										✓		
PCLO11	Evaluation of Safety of Drugs	✓			✓																	✓	✓	✓		
PCLO12	Neuroscience-1	✓																								
PCTO11	Advanced Drug Delivery and Nanopharmaceuticals	✓		✓			✓									✓										
PCTO12	Cosmetics	✓		✓			✓															✓				
PMBO11	Diagnostic Microbiology	✓															✓									
PCPO15	Personalized Medicine				✓															✓			✓			
PCPO16	Palliative Care		✓					✓	✓	✓									✓							
PCPO17	Paediatric and geriatric pharmacotherapy	✓			✓	✓				✓										✓						
PMCO14	Nanochemistry	✓		✓								✓														
PCLO13	Neuroscience-2	✓																								
PMBO08	Infection control and antimicrobial stewardship	✓	✓				✓										✓									
PMBO09	Biopharmaceuticals and immunological products	✓		✓									✓				✓									
PMBO10	Bioinformatics, Genomics, Pharmacogenomics, and Pharmacomicrobics	✓													✓											
PCPO14	Health media							✓		✓	✓															
PCTO13	Veterinary pharmacy	✓		✓			✓									✓										



Compulsory Modules		Part-B-Academic Standards (Domain-3 and Domain-4, Key elements 3-1-1 to 4-3-2)																
Code	Name	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
PMC206	Pharmaceutical Organic Chemistry-3												✓					
PCL204	Pharmacology-1					✓							✓			✓		✓
PMB302	Pharmaceutical Microbiology		✓	✓								✓	✓					
PCG303	Phytochemistry-1											✓	✓					
PBC303	Clinical Biochemistry	✓			✓							✓	✓					
PCL305	Pharmacology-2					✓							✓			✓		
PCT305	Pharmaceutics-3												✓			✓		
PCP304	First Aid & Basic Life Support				✓								✓					
PMB303	Immunology			✓	✓								✓		✓	✓		
PMB304	Medical Microbiology-1			✓	✓								✓		✓	✓		
PMC308	Medicinal Chemistry-1											✓	✓					
PMC307	Instrumental Analysis												✓		✓			
PCG304	Phytochemistry-2											✓	✓					
PCL306	Pharmacology-3	✓				✓												
PCP305	Community Pharmacy Practice	✓					✓			✓	✓				✓			
PCP406	Hospital Pharmacy						✓						✓					
PCL407	Toxicology								✓		✓		✓			✓		
PCT406	Pharmaceutics- 4												✓				✓	
PCP407	Clinical pharmacy-1	✓			✓	✓	✓								✓			
PMC409	Medicinal Chemistry-2											✓	✓					
PMB405	Medical Microbiology-2			✓	✓								✓					
PCT408	Pharmaceutical Technology-1												✓			✓		
PCP408	Drug information and Pharmacovigilance					✓	✓		✓						✓			
PCT407	Dosage Form Design												✓					
PCP409	Clinical pharmacy-2				✓	✓	✓				✓				✓		✓	
PCP510	Clinical pharmacy-3	✓			✓	✓	✓				✓				✓			
PMB506	Biotechnology	✓											✓			✓		
PCG505	Phytotherapy and Aromatherapy					✓		✓		✓			✓		✓	✓		
PCT510	Pharmaceutical Technology-2 & GMP												✓					
PCT509	Biopharmaceutics and Pharmacokinetics											✓	✓					
PCL508	Research Methodology & Biostatistics												✓					

Compulsory Modules		Part-B-Academic Standards (Domain-3 and Domain-4, Key elements 3-1-1 to 4-3-2)																
Code	Name	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
PCP511	Marketing & Pharmacoeconomics												✓					
PCP512	Clinical Pharmacokinetics					✓							✓					
PMB507	Public Health and Preventive Medicine		✓										✓					
PCP513	Entrepreneurship											✓		✓				
PMC511	Drug Design												✓					
PCG506	Applied Pharmacognosy							✓										
PMC510	Quality Control of Pharmaceuticals												✓					

Optional Modules		Part-B-Academic Standards (Domain-3 and Domain-4, Key elements 3-1-1 to 4-3-2)																
		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
Code	Name																	
PMCO12	Advanced Pharmaceutical Analysis											✓			✓			
PMCO13	Radiopharmaceutical Chemistry								✓			✓	✓					
PBCO04	Molecular Biology & Gene Therapy	✓			✓							✓		✓	✓			✓
PCLO09	Biological screening of drug activities											✓			✓			
PCLO10	High-Throughput Screening of Drug activities								✓			✓	✓		✓			
PCLO11	Evaluation of Safety of Drugs	✓										✓			✓			
PCLO12	Neuroscience-1	✓			✓							✓	✓			✓		
PCTO11	Advanced Drug Delivery and Nanopharmaceuticals											✓			✓			
PCTO12	Cosmetics											✓			✓			
PMBO11	Diagnostic Microbiology			✓	✓							✓						
PCPO15	Personalized Medicine	✓				✓						✓					✓	
PCPO16	Palliative Care	✓													✓			✓
PCPO17	Paediatric and geriatric pharmacotherapy	✓			✓		✓								✓			
PMCO14	Nanochemistry							✓	✓									✓
PCLO13	Neuroscience-2	✓			✓							✓	✓			✓		
PMBO08	Infection control and antimicrobial stewardship		✓										✓					
PMBO09	Biopharmaceuticals and immunological products	✓										✓			✓			
PMBO10	Bioinformatics, Genomics, Pharmacogenomics, and Pharmacomicrobiomics	✓										✓						
PCPO14	Health media									✓	✓				✓			
PCTO13	Veterinary pharmacy											✓			✓			
XXX	Summer Training									✓		✓			✓		✓	✓
PIY	Internship Training	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓

## 6. Teaching and Learning strategies/methods to achieve Program Outcomes:

1. Lectures on campus
2. Lectures off campus
3. Laboratory classes
4. Tutorials
5. Presentation
6. Poster/Model/Brochures
7. Cosmetics / Aromatherapy preparations and exhibitions
8. Discussion groups

9. Problem solving
10. Research/ Reports/ Newsletter
11. Case studying
12. Group Learning
13. Brainstorming
14. Role playing
15. Field survey
16. Field visit
17. eLearning
18. Flipped classes
19. Library session
20. Virtual labs / Simulation based learning
21. Games
22. Assignments
23. Mock Pharmacy
24. Electronic based learning/ Interactive learning/ Online applications
25. Movies/ Videos
26. Self-learning/ Self-assessment
27. Team working
28. Awareness Campaign

## 7. Student Assessment strategies/methods to verify and ensure students' acquisition of Program Outcomes:

The overall module mark consists of the sum of the marks of coursework, practical, written and oral exams as shown in the program curriculum tables. The minimum overall module mark for pass and award of credit at the specified level in each module shall be 60% except for English and Mathematics modules where the minimum passing mark is 50% according to the BUE General Academic Regulations (GAR). The student does not pass a module unless 30% of the final (unseen) written exam mark is achieved. The grading scale is shown in the following table:

**BUE Grading Scale**

Grade	Egyptian Equivalent %	GPA
A <sup>+</sup>	89 and above	4.0
A	87 – 88	3.9
A <sup>-</sup>	85 – 86	3.7
B <sup>+</sup>	82 – 84	3.5
B	79 – 81	3.1
B <sup>-</sup>	75 – 78	2.7
C <sup>+</sup>	72 – 74	2.5

C	69 – 71	2.3
C <sup>-</sup>	65 – 68	2.0
D <sup>+</sup>	60 – 64	1.8
<b>All Modules Except English and Mathematics</b>		
F	Less than 60	0
<b>For English and Mathematics only</b>		
D	55 – 59	1.6
D <sup>-</sup>	50 – 54	1.3
F	Less than 50	0

The overall grade for each level of study is calculated on the basis of the average mark of all modules for that level, weighted according to their credit value where the student cannot get more than (D) grade in modules that were failed or missed with an unaccepted excuse. However, if the student was absent with an accepted impaired performance claim or appeal, then his actual grade shall be counted.

The final overall average and grade, which determines the Honors classification, is calculated as an average of all study levels and students are ranked according to the overall average percentage grade.

An “Honors” standing is granted to the student provided that his overall grade is Excellent or Very Good and his year average has not fallen below “Very Good” (GPA 2.7 = 75 %) in any single year of the program and he has not failed any modules during his program of study, while it shall not be considered in the student ranking.

Weighted Average (per semester/year/overall cumulative total) = [Sum of (each module percentage x module credits)] / Total credits (per semester/year/all semesters)

The cumulative average for all semesters is calculated according to the previous table.

## 8. Program Key Performance Indicators (if any)

No.	Performance Indicator	Target Level	Method	Measurement
1.	Program evaluation	Senior students	Questionnaire	Scores out of 5
2.	Annual Modules' files review	External evaluator	Reports	Feedback
3.	Annual Modules' files review	Internal evaluator	Reports	Feedback
4.	Evaluation of the level of Pharmacy graduates/students	Employment agencies (Stakeholders)	Questionnaire	Feedback
5.	Student Progression Rate	≥ 85% successful progression to next level each academic year	Student records, annual programme report	Percentage of students progressing to next level divided by total enrolled students
6.	Graduation Rate	≥ 80% of students complete within 6 years (5 years + 1 internship)	Graduation statistics	Number of graduates within 6 years ÷ total cohort intake × 100
7.	Alignment of Exam Papers with Learning Outcomes (NARS Alignment)	100% of exams mapped to module Learning Outcomes (LOs) and blueprint	Exam blueprints	Verification that all exam papers are aligned with the approved blueprint and adequately cover the learning outcomes according to NARS requirements.
8.	Staff-to-Student Ratio	1:25 or better	Faculty, HR and enrolment data	Total number of teaching staff ÷ total number of enrolled students
9.	Community Engagement Activities (by students)	≥ 3 awareness campaigns or outreach activities per semester	Department reports, photos, attendance lists	Number of community engagement activities conducted by students per semester

Name & Signature  
Program Coordinator  
Prof. Shereen Hassib

*Shereen Hassib*

Name & Signature  
Vice Dean for Education and Student Affairs  
Prof. Abdel Gawad Hashem

*Abdel Gawad Hashem*