



Emirates International University
Faculty of Medicine & Health Sciences
Clinical Pharmacy Department

Pharm D

Program Specification

❖ Committee Members:

1. Ass. Prof. Dr. Ali Al-Yahawi
2. Assoc. Prof. Dr. Mokhtar Al-Ghorafi

Supervised by

1. Assoc. Prof. Sharif Al-Hommde

Reviewed by

Dr. Mogebe Alnahari



Faculty Medicine and Health Science. Emirates International University

Program Specification

1. Program Identification and General Information	
Program Title and degree	Bachelor in Doctor of pharmacy
Unit responsible to grant degree	Faculty of Medicine and Health Sciences
Unit responsible in program implementation	Department of Clinical Pharmacy
Department / scientific departments participating in the program	N/A
Program Study language	English
Beginning of the study year	2014
Program Attendance system	Compulsory Attendance (minimum 75 %)
Program place implementation	University Campus
Program Study system	Semester
Time required to graduate	6 Years (224 Credit Hours)
Admission Qualifications	High School Degree
Admission Appreciation	80% at least
Program Coordinator Name	Associate Professor : Mokhtar AbdulHafize Al-Ghorafi
last date approval for program specifications	

2. Introduction:

Pharm D program shall be six academic years (five years of study and one year of internship or residency). It is a phase of training wherein a student is exposed to actual pharmacy practice or clinical pharmacy services, and acquires the required skills under high qualified supervision so that he or she may become capable of functioning independently.

Promising Jobs/Employments for Graduates:

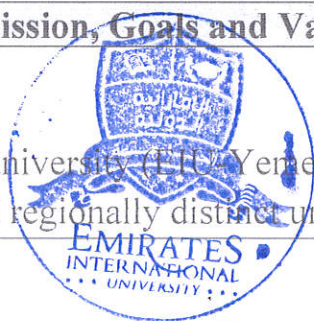
Graduates of the Doctor of pharmacy can look at opportunities and jobs in the following sectors:

- Working in hospital departments with hospital team as clinical pharmacy
- Working in public or private community pharmacies.
- Work in a hospital pharmacy.
- Working as medical representative or scientific supervisors in pharmaceutical companies.
- Work in drug research and control centers.
- Academic work as faculty members in universities.

3. University Vision, Mission, Goals and Values:

University Vision:

The Emirates International university (EIU, Yemen) aspires to be one of the nationally leading and regionally distinct universities.



3. University Vision, Mission, Goals and Values:

University Mission:

EIU Yemen seeks to Provide a distinguished education and research services That meet the needs of the National and regional labor Market through qualified Human Resources quality academic programs, scientific research directed to knowledge Production and applications and providing a supportive university environment and effective Community partnership.

University Values:

Quality, excellence, creativity, a adherence To ethical professional standards institutional loyalty, teamwork and partnership.

University General Goals

The University seeks to achieve the following objectives:

1. Improving governance and management systems, developing organizational Structure, promoting decentralization and adopting equality and transparency principles.
2. Expending infrastructure and developing self-resource.
3. Improving the quality of academic programs to meet development needs.
4. Enhancing the values of professional development and investing human resources on professional basis In accordance with the strategic framework of the University.
5. Developing a university environment conducive to teaching and learning with a view to achieve the professional competencies of the graduate.
6. Building and guiding Scientific research capacities based on planning that is linked to development goals.
7. Establishing a genuine and effective partnerships with the local community, other universities as well as the national and international Labor market

4. Vision, Mission & Aims of the Faculty

Faculty Vision:

To excel in medical education, scientific research and community service locally and regionally.

Faculty Mission:

To qualify graduates who are able to provide quality Medical services at the local and regional levels through academic programs that Conform to Quality standards,



4. Vision, Mission & Aims of the Faculty

academic accreditation and an educational environment that promotes creative thinking and establishes the values of medical practice in an ethical and human context .

Faculty Values:

Quality, teamwork, transparency and accountability, professional development and life-long learning and community partnership.

Faculty Objectives:

The educational goals of the college

- 1- Preparing and qualifying distinguished medical cadres with high efficiency in the medical field.
- 2- Providing students with basic knowledge of biomedical and clinical sciences in order to apply that knowledge to deal with complex clinical cases.
- 3- Providing students with basic knowledge to understand the impact of different life stages, gender differences, different lifestyles, psychological, social and epidemiological genetic factors and their impact on the spread of diseases and methods of prevention.
- 4- Enabling students to know the basic concepts of preventive and rehabilitative medicine and to diagnose acute medical problems so that they are able to apply the concepts in clinical practice.
- 5- Providing students with the ability to assess patients and the severity of their health problems by completing the comprehensive disease story.
- 6- Providing students with the scientific method in medical diagnosis, treatment and medical analyzes, so that they are able to use them in solving patients' problems.
- 7- Providing students with the skills of communicating with patients and enabling them to acquire the skills of field examination and the proper use of diagnostic tools and methods.
- 8- Practice appropriate professional behavior with patients and colleagues, adhere to professional standards of ethical behavior, and work in harmony with one team spirit.
- 9 - Activating the partnership with civil society institutions and the relevant authorities locally, regionally and internationally to provide a stimulating and supportive educational environment, in a way that serves the promotion of public health efforts and community safety.
- 10- Providing students with self-learning skills, using information technology, medical evidence and scientific research to keep pace with the developments of the specialization.



5. Department of Clinical Pharmacy Vision, Mission, Values and Objectives

Vision of the Department:

Excellent in pharmaceutical education locally and regionally

Mission of the Department of Clinical Pharmacy

The department seeks to prepare scientifically and professionally qualified pharmaceutical cadres to contribute to improving health care and community service and developing the profession, by providing quality academic programs in pharmaceutical education and scientific research.

Department Values:- . Continuing education, quality, working with one team spirit, and effective partnership.

Objectives of the Department:

- 1.Prepare graduates specialized in the field of clinical pharmacy sciences, who are well-qualified academically and professionally to work efficiently in the field of curative health care
2. Providing students with basic concepts and skills for research, developing their initiative and their ability to conduct independent research related to society
3. Developing a partnership with the public and private sectors by conducting studies and providing consultations in the field of clinical pharmacy.
4. Providing students with self-learning skills and using information technology and scientific research to keep up with the developments of the specialization.

6. Doctor of Pharmacy Program Mission and Objectives:

Program Mission:

Preparing a pharmacist with scientific competence and professional ethics by providing quality scientific programs in the field of pharmaceutical care to contribute in improving health care for the community.

Program Objectives:

- 1.Prepare graduates and equip them with the necessary knowledge, skills and abilities to be future experts in the field of clinical pharmacy



- 2- Improving patients' health and well-being by facilitating and providing safe and effective medicines.
3. Enhancing the role of pharmacists in improving public health by preventing disease through education and training.
4. Providing continuous pharmacy education programs and participating in organizing and holding seminars, courses and conferences in various pharmaceutical sciences.
- 5- Contributing to the field of scientific publishing and awareness through various publications and research work in the field of patient care and public health.

7. Program Standards & Benchmarks:

This program based on a number of similar references and programs in the Yemeni, regional and international Universities, which include the following:

Academic Standards:

1. National Academic Reference Standards (NARS) 2018 for Undergraduate Pharmacy Programs, Yemen, First Edition, Council for Accreditation & Quality Assurance, Yemen.
2. Criteria of the Canadian Council for Accreditation of Pharmacy programs "CCAPP" ,.
3. Australian Pharmacy Council, APC

Similar Pharma D programs awarded by regional and international Universities and have been accredited by CCAPP or APC

Benchmarks:

1. Massachusetts University, USA
2. University of Alberta, Canada.
3. Cyprus International University, Cyprus
4. Alfaisal University, Saudi Arabia
5. Jordan University, Jordan
6. Helwan University, Egypt

Program No.	The Academic Program	The University	Website	The Faculty	The Department	The Country	Degree Award at Program Completion	No of Years
Current Program	Doctor of Pharmacy Program	Emirates International University	https://eiu.edu.ye/majors/9	, Faculty of Medicine and Health Sciences	Department of Clinical Pharmacy,	Yemen	Bachelor in Clinical Pharmacy (Doctor of pharmacy)	5 years + 1 year internship
The 1 st Program	Doctor of Pharmacy	Alfaisal University	https://eop.alfaisal.edu/en/programs/clinical-pharmacy	Faculty of Pharmacy	Department of Pharmacy Practice	Saudi Arabia	(Doctor of pharmacy)	5 years + 1 year internship

Program No.	The Academic Program	The University	Website	The Faculty	The Department	The Country	Degree Award at Program Completion	No of Years
The 2 nd Program	Doctor of Pharmacy	Jordan University	www.just.edu.jo/FacultiesandDepartments/FacultyofPharmacy/Departments/ClinicalPharmacy/Pages/Welcome.aspx	Faculty of Pharmacy,	Department of Clinical Pharmacy,	Jordan	Bachelor in Clinical Pharmacy (Doctor of pharmacy)	5 years + 1 year internship
The 3 rd Program	Doctor of Pharmacy	Helwan University	http://pharmacy.helwan.edu.eg/	Faculty of Pharmacy	Department of Clinical Pharmacy	Egypt	Bachelor in Clinical Pharmacy (Doctor of pharmacy)	5 years + 1 year internship
The 4 th Program	Doctor of Pharmacy	Cyprus International University	https://www.ciu.edu.tr/en/programs/undergraduate/pharmacy-pharmd	Faculty of Pharmacy	Pharmacy	Cyprus	5 years + 1 year internship = 6 Years	6 Years
The 5 th Program	Doctor of Pharmacy Program	University of Alberta	https://calendar.ualberta.ca/preview_program.php?catoid=39&poid=48100	Faculty Pharmacy & Pharmaceutical Sci	Department Pharmacy & Pharmaceutical Sc	Canada.	University of Alberta	5 years + 1 year internship = 6 Years
The 6 th Program	Doctor of Pharmacy (PharmD)	Massachusetts University	https://www.mcpshs.edu/academics/programs/pharmacy-pharmd	College of Pharmacy and Health Sciences	Pharm D	USA	Massachusetts University, College of Pharmacy and Health Sciences	5 years + 1 year internship



8. Graduate Attributes

Upon successful completion of an undergraduate pharmacy education program, the graduates will be able to:

1. Demonstrate scientific knowledge and principles of chemical, biomedical, microbiological, physiological, pathological, behavioral, and other basic sciences related to the pharmacy profession.
2. Integrate knowledge from fundamental sciences necessary for handling, disposing of, preparing, compounding, and analyzing total parenteral nutrition I.V admixtures and small-batch preparation.
3. Provide pharmaceutical care in a professional, legal and ethical manner and based on fundamental concepts of pharmacokinetics, and pharmacodynamics of medicines, clinical conditions, and patient's drug-related needs.
4. Provide patient education, appropriate advice, and counseling services about safe, rational, cost-effective use of natural/synthetic medicines, complementary therapies (including phytotherapy), and over-the-counter products using endorsed professional protocols.
5. Demonstrate self-commitment to independent and lifelong learning through evaluating medical literature, and conducting pharmaceutical research in pharmacy settings updating knowledge and information.
6. Demonstrate the responsibilities and roles of the pharmacist in contributing to the health care system of society taking into account pharmacovigilance, pharmacoconomics and pharmacoepidemiological factors, and legal, ethical, and professional rules.
7. Work as part of a team with self-assurance, interpersonal collaboration, and communication skills, leadership and time management, professionalism, critical thinking, problem-solving, entrepreneurship, and decision-making ability.
8. Apply patient-centered care as the medication expert (collect and interpret evidence, identify drug-related problems, prioritize, formulate assessments and recommendations, implement, monitor, and adjust plans, and document activities).
9. Track the continuous updates concerning new therapeutic guidelines and regulations that are recently introduced
10. Use evidence-based medicine to detect, prevent, and resolve drug-related problems
11. Participate effectively in planning and conducting research in all health care settings.
12. Utilize the hospital's resources in an effective manner.

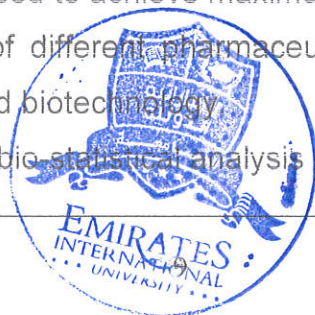


9. Intended Learning Outcomes: At the end of this program student will:

A.Knowledge and Understanding:

Upon successful completion of an undergraduate pharmacy education program, the graduates will be able to:

- A1. Show understanding of the fundamentals of the basic and biomedical sciences including physics, mathematics, chemistry, structure of human body, normal and abnormal body functions, basis of genomes and different biochemical pathways and their relations with different diseases.
- A2. Explain the fundamentals of social and behavioral sciences relevant to pharmacy, ethics of the care and its impact on relationship with patients and others healthcare professionals.
- A3. Explain the physicochemical properties of pharmaceutical products and their relationship to molecular structure and the design of medicinal agents.
- A4. Describe the analytical methods, principles, design, development, and validation of pharmaceutical products.
- A5. Identify the actions of the medicines within living systems, therapeutics uses of medicines in human, adverse reactions, interactions of medicines, toxicity, and misuse or abuse.
- A6. Explain the basis of complementary and alternative medicine.
- A7. Identify the types of poisonous substances, sources, mechanisms of toxicity, analysis, clinical pictures, and management.
- A8. Describe the bio-pharmaceutics and pharmacokinetics of medicines and their applications.
- A9. Define the basis of health policy, pharmacoconomics, pharmacoepidemiology, marketing, and administration particularly to pharmacy .
- A10. Describe the pharmacist's role in health care; dispensing, designing, implementing, monitoring, evaluation, and adjustment of medication therapy plans that are patient-specific and evidence-based to achieve maximum clinical effectiveness.
- A11. Identify the properties of different pharmaceutical dosage forms including Novel drug delivery systems and biotechnology
- A12. Describe the methods of bio-statistical analysis and pharmaceutical calculations.



B. Cognitive/ Intellectual Skills:

Upon successful completion of an undergraduate pharmacy education program, the graduates will be able to:

- B1. Collect, interpret and assess relevant pharmaceutical and biomedical sciences to construct the pharmacophores of the structure and their effect on the stability, pharmacokinetic and pharmacodynamics profile of the drug.
- B2. Classify the synthetic and natural drugs according to their mechanism of action, systemic effect, therapeutic uses, contraindication and toxicity.
- B3. Design and evaluate different types of safe and effective pharmaceutical dosage forms.
- B4. Select appropriate Standard Operating Procedures (SOP) to conduct qualitative and quantitative analysis of pharmaceutical preparations.
- B5. Plan a modern system for administration of medical foundations and merge the ethics to business in the drug marketing
- B6. Develop and design a suitable method for extraction, isolation, purification, identification, and Standardization of active substances from various sources.
- B7. Formulate and evaluate patient care plan about rational use of pharmacotherapy regimen to improve patient safety and efficacy.
- B8. Identify appropriate research methods to solve practice problems.
- B 9. Select pharmaceutical calculation in different pharmaceutical practice.

C. Practical and Professional Skills:

Upon successful completion of an undergraduate pharmacy education program, the graduates will be able to:

- C 1. Handle the chemical, biological, and pharmaceutical materials safely, taking into account their physical and chemical properties, including any specific hazards associated with their use, distribute, and storage.
- C 2. Operate different pharmaceutical equipment's and instruments and use emerging technologies in pre-formulation, formulation, packaging, storage and analysis of pharmaceutical products according to Good Laboratory Practice (GLP) , Good Storage Practice (GSP) and cGMP guidelines.
- C 3. Screen drug from the different sources, bioassay, and carry out pharmacological and biopharmaceutical experiments.
- C 4. Extract, isolate, purify, identify, standardize, formulate natural products and assure their rational use.
- C 5. Apply the highest levels of pharmaceutical care for patients and providing the necessary knowledge for patients and members of health care to optimize pharmacotherapy regimen use based on updated professional medical references.
- C 6. Employ the relevant way of preparation and presentation of medicines including

extemporaneous, Total Parenteral Nutrition (TPN), and Intravenous (I.V.) admixtures.

- C 7. Apply administrative and pharmaeconomic rules in pharmacy and ethically use marketing skills for promoting the pharmaceutical and cosmetic products.
- C 8. Conduct research studies and utilize the results in different pharmaceutical fields.
- C 9. Use clinical data, patient assessment and appropriate medical literatures to optimize therapeutic drug regimens.

D. General and Transferable Skills:

Upon successful completion of an undergraduate pharmacy education program, the graduates will be able to:

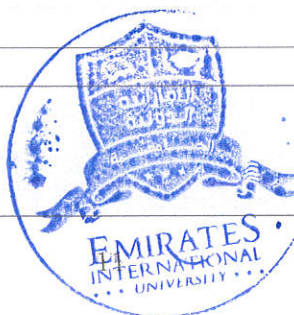
- D 1. Interact and communicate effectively and ethically with patients, public, and health care professionals.
- D 2. Apply financial, management, decision making, time management, organization, sales and marketing skills.
- D 3. Appraise the importance of team work and the need to work within personal limitations.
- D 4. Take responsibility for adaptation to change needs in pharmacy practice.
- D 5. Retrieve the essential references of evidence-based practice to achieve maximum clinical effectiveness.

10. Teaching and Learning Strategies

- Interactive Lectures
- Seminars
- Discussions & Small group discussions
- Presentation
- Lab Experiments
- Simulated software program
- Use of communication and information technology,
- Problems solving
- Self-learning
- Group work
- brain storming
- Report
- Group learning and Problem-based learning,
- Clinical cases studies
- Training
- Office hours

11. Assessment Strategy

- Final Written Exam
- Quizzes



- Midterm Exam
- Discussion.
- Group work
- Final oral Exam
- Researches
- Homework
- laboratory and other written reports
- Assignments
- Final Practical Exam
- Oral case discussions during clinical rounds
- Pharmacy practice manual
- Formal case presentation

Alignment of Program Intended Learning Outcomes (PILOs) to Teaching Strategies and Assessment Methods:

(A) Alignment of Program Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

PILOs	Teaching Strategies	Assessment Methods
A1. Show understanding of the fundamentals of the basic and biomedical sciences including physics, mathematics, chemistry, structure of human body, normal and abnormal body functions, basis of genomes and different biochemical pathways and their relations with different diseases.	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • Discussions & Small group discussions • Presentation 	<ul style="list-style-type: none"> • Written examinations • Quizzes
A2. Explain the fundamentals of social and behavioral sciences relevant to pharmacy, ethics of the care and its impact on relationship with patients and others healthcare professionals.	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • discussions • Presentation 	<ul style="list-style-type: none"> • Written examinations • Quizzes
A3. Explain the physicochemical properties of pharmaceutical products and their relationship to molecular structure and the design of medicinal agents.	<ul style="list-style-type: none"> • Interactive Lectures • Discussions & Small group discussions • Presentation 	<ul style="list-style-type: none"> • Written examinations • Quizzes
A4. Describe the analytical methods, principles, design, development, and validation of pharmaceutical products.	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • discussions • Presentation 	<ul style="list-style-type: none"> • Written examinations • Quizzes



<p>A5. Identify the actions of the medicines within living systems, therapeutics uses of medicines in human, adverse reactions, interactions of medicines, toxicity, and misuse or abuse.</p>	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • discussions • Presentation 	<ul style="list-style-type: none"> • Written examinations • Quizzes
<p>A6. Explain the basis of complementary and alternative medicine.</p>	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • discussions • Presentation 	<ul style="list-style-type: none"> • Written examinations • Quizzes •
<p>A7. Identify the types of poisonous substances, sources, mechanisms of toxicity, analysis, clinical pictures, and management.</p>	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • discussions • Presentation 	<ul style="list-style-type: none"> • Written examinations • Quizzes
<p>A8. Describe the bio-pharmaceutics and pharmacokinetics of medicines and their applications.</p>	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • discussions • Presentation 	<ul style="list-style-type: none"> • Written examinations • Quizzes •
<p>A9. Define the basis of health policy, pharmacoeconomics, pharmacoepidemiology, marketing, and administration particularly to pharmacy .</p>	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • discussions • Presentation 	<ul style="list-style-type: none"> • Written examinations • Quizzes •
<p>A10. Describe the pharmacist's role in health care; dispensing, designing, implementing, monitoring, evaluation, and adjustment of medication therapy plans that are patient-specific and evidence-based to achieve maximum clinical effectiveness.</p>	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • Discussions & Small group discussions • Presentation 	<ul style="list-style-type: none"> • Written examinations • Quizzes
<p>A11. Identify the properties of different pharmaceutical dosage forms including Novel drug delivery systems and biotechnology.</p>	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • Discussions & Small group discussions • Presentation 	<ul style="list-style-type: none"> • Written examinations • Quizzes •
<p>A12. Describe the methods of bio-statistical analysis and pharmaceutical calculations.</p>	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • Discussions & Small group discussions • Presentation 	<ul style="list-style-type: none"> ○ Written examinations ○ Quizzes

(B) Alignment of Program Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

PILOs	Teaching Strategies	Assessment Methods
B1. Collect, interpret and asses relevant pharmaceutical and biomedical sciences to construct the pharmacophores of the structure and their effect on the stability, pharmacokinetic and pharmacodynamics profile of the drug.	<ul style="list-style-type: none"> Interactive Lectures Discussions & Small group discussions Presentation 	<ul style="list-style-type: none"> Written examinations Quizzes
B2. Classify the synthetic and natural drugs according to their mechanism of action, systemic effect, therapeutic uses, contraindication and toxicity.	<ul style="list-style-type: none"> Interactive Lectures Discussions & Small group discussions 	<ul style="list-style-type: none"> Written examinations Quizzes
B3. Design and evaluate different types of safe and effective pharmaceutical dosage forms.	<ul style="list-style-type: none"> Seminars Discussions & Small group discussions 	<ul style="list-style-type: none"> Written examinations Quizzes
B4. Select appropriate Standard Operating Procedures (SOP) to conduct qualitative and quantitative analysis of pharmaceutical preparations.	<ul style="list-style-type: none"> Interactive Lectures Seminars Discussions & Small group discussions 	<ul style="list-style-type: none"> Written examinations Quizzes
B5. Plan a modern system for administration of medical foundations and merge the ethics to business in the drug marketing	<ul style="list-style-type: none"> Interactive Lectures Seminars 	<ul style="list-style-type: none"> Written examinations Quizzes
B6. Develop and design a suitable method for extraction, isolation, purification, identification, and Standardization of active substances from various sources.	<ul style="list-style-type: none"> Interactive Lectures Seminars Discussions & Small group discussions Presentation 	<ul style="list-style-type: none"> Written examinations Quizzes
B7. Formulate and evaluate patient care plan about rational use of medications to improve patient safety and efficacy.	<ul style="list-style-type: none"> Interactive Lectures Seminars Discussions & Small group discussions Presentation 	<ul style="list-style-type: none"> Written examinations Quizzes
B8. Identify appropriate research methods to solve practice problems.	<ul style="list-style-type: none"> Interactive Lectures Seminars Discussions & Small group discussions 	<ul style="list-style-type: none"> Written examinations Quizzes

	<ul style="list-style-type: none"> • Presentation <ul style="list-style-type: none"> ○ 	
B 9. Select pharmaceutical calculation in different pharmaceutical practice.	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • Discussions & Small group discussions • Presentation 	<ul style="list-style-type: none"> ○ Written examinations ○ Quizzes

(C) Alignment of Program Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

PILOs	Teaching Strategies	Assessment Methods
C 1. Handle the chemical , biological , and pharmaceutical materials safely, taking into account their physical and chemical properties, including any specific hazards associated with their use, distribute, and storage.	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • Discussions & Small group discussions 	<ul style="list-style-type: none"> ○ Written examinations ○ Practical exam ○ Assignments ○ Quizzes • laboratory and other written reports
C 2. Operate different pharmaceutical equipment's and instruments and use emerging technologies in pre-formulation, formulation, packaging, storage and analysis of pharmaceutical products according to Good Laboratory Practice (GLP) , Good Storage Practice (GSP) and cGMP guidelines.	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • Discussions & Small group discussions • Presentation 	<ul style="list-style-type: none"> ○ Written examinations ○ Practical exam ○ Assignments ○ Quizzes • laboratory and other written reports
C 3. Screen drug from the different sources, bioassay, and carry out pharmacological and biopharmaceutical experiments.	<ul style="list-style-type: none"> • Interactive Lectures • Discussions & Small group discussions • Presentation 	<ul style="list-style-type: none"> ○ Written examinations ○ Practical exam ○ Assignments ○ Quizzes • laboratory and other written reports
C 4. Extract, isolate, purify, identify, standardize, formulate natural products and assure their rational use.	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • Discussions & Small 	<ul style="list-style-type: none"> ○ Written examinations ○ Practical exam ○ Assignments ○ Quizzes • laboratory and other

	group discussions	written reports
C 5. Apply the highest levels of pharmaceutical care for patients and providing the necessary knowledge for patients and members of health care to optimize medicines use based on updated drug information	<ul style="list-style-type: none"> • Presentation • Interactive Lectures • Seminars • Discussions & Small group discussions • Presentation 	<ul style="list-style-type: none"> ○ Written examinations ○ Practical exam ○ Assignments ○ Quizzes • laboratory and other written reports
C 6. Employ the relevant way of preparation and presentation of medicines including extemporaneous, Total Parenteral Nutrition (TPN), and Intravenous (I.V.) admixtures.	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • Discussions & Small group discussions • Presentation 	<ul style="list-style-type: none"> ○ Written examinations ○ Practical exam ○ Assignments ○ Quizzes • laboratory and other written reports
C 7. Apply administrative and pharmaeconomic rules in pharmacy and ethically use marketing skills for promoting the pharmaceutical and cosmetic products.	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • Discussions & Small group discussions • Presentation 	<ul style="list-style-type: none"> ○ Written examinations ○ Practical exam ○ Assignments ○ Quizzes • laboratory and other written reports
C 8. Conduct research studies and utilize the results in different pharmaceutical fields.	<ul style="list-style-type: none"> • Interactive Lectures • Seminars • Discussions & Small group discussions • Presentation 	<ul style="list-style-type: none"> ○ Written examinations ○ Practical exam ○ Assignments ○ Quizzes • laboratory and other written reports

(D) Alignment of Program Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

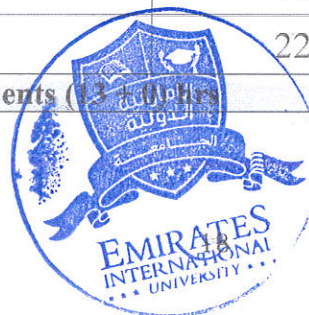
PILOs	Teaching Strategies	Assessment Methods
D 1. Interact and communicate effectively and ethically with patients, public, and health care professionals.	<ul style="list-style-type: none"> ○ Use of communication and information technology, ○ Group learning and Problem-based learning, ○ Clinical cases studies ○ Training 	<ul style="list-style-type: none"> ● Researches and seminars. ● Homework ● Assignments
D 2. Apply financial, management, decision making, time management, organization, sales and marketing skills.	<ul style="list-style-type: none"> ○ Problems solving ○ Self-learning ○ Group work ○ brain storming ○ Self Learning ○ Discussions & Small group discussions ○ Presentation 	<ul style="list-style-type: none"> ● Researches and seminars. ● Homework ○ Assignments
D 3. Appraise the importance of team work and the need to work within personal limitations.	<ul style="list-style-type: none"> ○ Use of communication and information technology, ○ Group learning and Problem-based learning, ○ Clinical cases studies ○ Training 	<ul style="list-style-type: none"> ● Researches and seminars. ● Homework ● Assignments
D 4. Take responsibility for adaptation to change needs in pharmacy practice.	<ul style="list-style-type: none"> ○ Problems solving ○ Self-learning ○ Group work ○ brain storming ○ Self-Learning ○ Discussions & Small group discussions ○ Presentation 	<ul style="list-style-type: none"> ● Researches and seminars. ● Homework ● Assignments
D 5. Retrieve the essential references of evidence-based practice to achieve maximum clinical effectiveness.	<ul style="list-style-type: none"> ○ Guided individual reading. ○ Group work and problem-solving learning. ○ Tutorials/ seminars. ○ Presentations and discussions in class 	<ul style="list-style-type: none"> ○ Exam ○ Presentations ○ Assignments including problem-solving exercises ○ Individual and group project work ○ Homework

Project Assessment:	
Item	Marks Distribution
Proposal writing	15%
Project Duties	15%
Field and practical duties	20%
Pre-examination and Evolution of research	20%
Final and Oral Witting examination by the examiner	30%
Total	100%

Training Course Assessment:	Proportion of Final Assessment
• Assignments	• 10%
• Oral case discussions during clinical rounds	• 10%
• Pharmacy practice manual	• 15%
• Formal case presentation	• 10%
• Presentation for one of the course content topics.	• 5%
• Final exam	• 50%
Total	• 100%

12. Program Structure:		
Credit hours	No. Of Credit hours	Percentage of total program hours
University Requirement	13	5.8%
Faculty Requirement	11	4.9%
Department Requirement	91	40.6%
Program Requirement	109	48.7%
Total	224	100%

12.1. University Requirements (13 Credit hours)



Compulsory Courses (13+0 hrs)

No.	Level-Sem.	Course Code	Course Name	L	T	P	Cr. Hrs.	Prerequisites, Co-requisites
1	1/1	UR	English Language I	2	-	Nil	2	Nil
2	1/1	UR	Islamic Culture	2	-	Nil	2	Nil
3	1/1	UR	Arabic language	2	-	Nil	2	Nil
4	1/1	UR	English Language II	2	-	UR	2	Nil
5	1/2	BHSC 108	Human Behavior and Socialization	2	-	Nil	2	Nil
6	1/2	UR	Computer Skills	2	2	Nil	3	Nil
6 Course				12	2		13	
Elective Courses: None (0 hrs)								

13.2.Faculty Requirements (11) hrs

Compulsory Courses (11 hrs)

No.	Level-Sem.	Course Code	Course Name	L	T	P	Cr. Hrs.	Prerequisites, Co-requisites
1	1/1	PHYSC 111	Biology	2	2	Nil	3	Nil
2	1/1	PHYSC 112	General Chemistry	2	2	Nil	3	Nil
3	1/1	PHYSC 113	Medical Physics	2	2	Nil	3	Nil
4	1/2	UR	Medical Terminology	2	-	Nil	2	Nil
4 Course				8	6		11	

13.3.Department Requirements (91) credit hours

Compulsory Department Requirements Courses (91 hrs)

No.	Level-Sem.	Course Code	Course Name	L	T	P	Cr. Hrs.	Prerequisites, Co-requisites
1	1/1	PHAR.CAL101	Mathematics and Pharmaceutical Calculations	2	--		2	Nil
2	1/1	PHAR.ORI 102	Pharmacy Orientation	2	-		2	Nil
3	1/2	BOT 103	Botany	2		2	3	Nil

4	1/2	ANA 104	Principles of Human Anatomy	2	2	3	PHYSC 111
5	1/2	PHYP 105	Physical Pharmacy	2		2	PHYSC 112, PHYSC 113
6	1/2	OCH 106	Pharmaceutical Organic Chemistry I	2	2	3	PHYSC 112
7	1/2	HIS 107	General Histology	2	2	3	PHYSC 111
8	1/2	HPH 109	Human Physiology I	2	2	3	PHYSC 111
9	2/1	PCS 202	Professional Communication Skills	2	-	2	Nil
10	2/1	CEUT 203	Pharmaceutics I	2	2	3	PHYP 105
11	2/1	OCH 204	Pharmaceutical Organic Chemistry II	2	2	3	OCH 106
12	2/1	ACH 205	Pharmaceutical Analytical Chemistry	2	2	3	PHYSC 112, PHYSC 113
13	2/1	BIOC 206	Biochemistry I	2	2	3	OCH 106
14	2/1	COGN 207	General Pharmacognosy	2	2	3	BOT 103
15	2/1	HPH 208	Human Physiology II	2	2	3	HPH 201
16	2/2	INS 209	Instrumental Analysis	2	-	2	OCH 204, ACH 205
17	2/2	MCH 2010	Medicinal and Pharmaceutical Chemistry I	2	2	3	OCH 204
18	2/2	MIC 2011	Microbiology	2	2	3	PHYSC 113
19	2/2	BIOC 2013	Biochemistry II	2	2	3	BIOC 206
20	2/2	PHY 2014	Phytotherapy	2	2	3	COGN207
21	2/2	CEUT 2015	Pharmaceutics II	2	2	3	CEUT 203
22	3/1	SDF 301	Sterile Dosage Forms	2	-	2	CEUT 2015
23	3/1	BIS 303	Biostatistics & Research Methodology	2		2	Nil
24	3/1	MCH 304	Medicinal and Pharmaceutical Chemistry II	2	2	3	MCH 2010
25	3/1	IMM 306	Immunology	2	2	3	HPH 208
26	3/1	CEUT 307	Pharmaceutics III	2	2	3	CEUT 2015
27	3/1	PROFETH308	Professional Pharm. Ethics & Legislations	2	-	2	Nil
28	3/2	CEUTTECH 309	Pharmaceutical Technology	2	-	2	CEUT 307
29	3/2	CLD 3012	Interpretation Clinical Laboratory Data	2	-	2	MIC 2011, IMM 306
30	3/2	PARA3013	Paracology	2	2	3	PHYSC 111
31	3/2	BIODS3014	Bioassay/Drug	1	-	1	PHA 305

			Screening					
32	3/2	HCS 3015	Health Care System and Pharmac. Care	2	-	2		Nil
33	3/2	TOX3016	Toxicology	2	-	2		PHA 305
34	3/2	GPA 3018	General Pathology	2		2		PHA 305
35	4/1	OTC 405	OTC Products and Patient Counseling	2	2	23		PIIA 3016
36	6/2	Code 614	Research project	1		1		
36 Course				70	--	42	91	

13.4. Program requirements credit hours (109)

Compulsory Program requirements Courses (109hrs)

No.	Level-Sem.	Course Code	Course Name	L	T	P	Cr. Hrs.	Prerequisites, Co-requisites
1	2/2	PHA 2012	Pharmacology and Therapeutics I	2		2	3	HPH 201
2	3/1	KENI 302	Biopharmaceutics & Pharmacokinetics I	2		2	3	CEUT 2015
3	3/1	PHA 305	Pharmacology and Therapeutics II	2		2	3	PHA 2012
4	3/2	KENI3010	Bio pharmaceutics & Pharmacokinetics II	2		2	3	KENI 302
5	3/2	ALTM3011	Complementary and Alternative Medicine	2		-	2	PHY 2014
6	3/2	PHA 3017	Pharmacology and Therapeutics III	2		2	3	PHA 305
7	3/ semester	CPT 3018	Community Pharmacy Training- I	-			2	PHA 3016, GPA 3017
8	4/1	CDA 401	Applied Clinical & Diagnostic Analysis	2			2	PHA 3016,
9	4/1	KENIDM 402	Clinical Pharmacokinetics and Therapeutics Drug Monitoring	2		2	3	KENI 302
10	4/1	DISM 403	Dispensing of Medications	2			2	PHA 3016, GPA 3017
11	4/1	PAM 404	Pharmacy Administration & Management	2		-	2	PHA 3016
12	4/1	CLINP 406	Clinical Pharmacy- Disease & Therapeutic Management-I	2		2	3	PHA 3016
13	4/1	DI 407	Drug Information & Literature Evaluation	2		-	2	PHA 3016
14	4/2	PHYAS 408	Physical Assessment	2		-	2	CLD 3011
15	4/2	COMS 409	Communication Skills in Pharmacy Practice	2		-	2	PCS 202

16	4/2	CLPRO 4010	Clinical Problems in Parenteral Nutrition & Intravenous Therapy	2	-	2	SDF 301
17	4/2	DTOX 4011	Drugs of Abuse & Clinical Toxicology	2	-	2	TOX3015
18	4/2	CLINP 4012	Clinical Pharmacy- Disease & Therapeutic Management-II	2	2	3	CLINP 407
19	4/2	PHARMEC 4013	Pharmacoeconomics	2	-	2	PAM 404
20	4/2	MERR 4014	Medication Errors: Causes, Prevention, Current Issues	2	2	3	OTC 405
21	4/ semester	CPT 4016	Community Pharmacy Training- II	-	6	2	CPT 3018
22	5/1	PP 501	Principles of Pathophysiology Module I: Immunology	2		2	CLINP 4013
23	5/1	PP 502	Pharmacotherapy Module II: Cardiology	2		2	CLINP 4013
24	5/1	PP 503	Pharmacotherapy Module III: Psychiatry/Neurology	2		2	CLINP 4013
25	5/1	PP 5404	Pharmacotherapy Module IV :Gastroenterology/Nutrition	2		2	CLINP 4013
26	5/1	PP 505	Pharmacotherapy Module V : Renal Impairments & Drug monitoring	2		2	CLINP 4013
27	5/1	PP 506	Pharmacotherapy Module VI: Endocrinology/Rheumatology/O B/GYN	2		2	CLINP 4013
28	5/1	PP 507	Pharmacotherapy Module VII : Infectious Disease/Hematology	2		2	CLINP 4013
29	5/1	PP 508	Pharmacotherapy Module VIII : Nuclear Pharmacy & Oncology	2		2	CLINP 4013
30	5/2	PP 509	Pharmaceutical care of Internal Medicine	2	3	3	PP501-508
31	5/2	PP 510	Pediatric Pharmaceutical Care	2	3	3	PP501-508
32	5/2	PP 511	Geriatric Pharmaceutical Care	2	3	3	PP501-508
33	5/2	PP 512	Pharmaceutical Care of Community Pharmacy	2	3	3	PP501-508
34	5/2	PP 513	Obstetrics and Gynecology Pharmaceutical Care	2	3	3	PP501-508
35	6/1	CR 601	Internal medicine clerkship (1)			4	5 th level
36	6/1	CR 602	Pediatric clerkship			3	5 th level
37	6/1	CR 603	Geriatric and psychiatric clerkship			4	5 th level
38	6/1	CR 604	Obstetrics and Gynaecology clerkship		--	2	5 th level
39	6/1	CR 605	Hospital Pharmacy			2	5 th level
40	6/2	CR 606	Internal medicine clerkship (2)			4	5 th level
41	6/2	CR 607	Oncology clerkship			3	5 th level

42	6/2	CR 608	Surgery clerkship	3	5th level
43	6/2	CR 609	Ambulatory care clerkship	2	5th level
			43 Course	65 15 16	109

COURSE PLAN OF PHARMA -D

Total course credits hours:

224

FIRST YEAR

1 ST SEMESTER						
COURSE #	COURSE TITLE		LH	PH	PRE-REQUISITE	CH
UR	English Language I		2	-	Nil	2
UR	Computer Skills		2	2	Nil	3
UR	Islamic Culture		2	-	Nil	2
UR	Arabic language		2	-	Nil	2
PHYSC 111	Biology		2	2	Nil	3
PHYSC 112	General Chemistry		2	2	Nil	3
PHYSC 113	Medical Physics		2	2	Nil	3
PHAR.CAL101	Mathematics and Pharmaceutical Calculations		2	--	Nil	2
PHAR.ORI 102	Pharmacy Orientation		2	-	Nil	2
Total			18	6		22

2 nd SEMESTER						
COURSE #	COURSE TITLE		LH	PH	PRE-REQUISITE	CH
UR	English Language II		2	-	UR	2
UR	Medical Terminology		2	-	Nil	2
BOT 103	Botany		2	2	Nil	3
ANA 104	Principles of Human Anatomy		2	2	PHYSC 111	3
PHYP 105	Physical Pharmacy		2		PHYSC 112, PHYSC 113	2
OCH 106	Pharmaceutical Organic Chemistry I		2	2	PHYSC 112	3
HIS 107	General Histology		2	2	PHYSC 111	3
BHSC 108	Human Behavior and Socialization		2	-	Nil	2
HPH 109	Human Physiology I		2	2	PHYSC 111	3
Total			18	12		23

SECOND YEAR



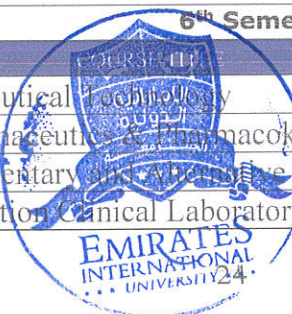
3 rd SEMESTER						
COURSE #	COURSE TITLE		LH	PH	PRE-REQUISITE	CH
PCS 202	Professional Communication Skills		2	-	Nil	2
CEUT 203	Pharmaceutics I		2	2	PHYP 105	3
OCH 204	Pharmaceutical Organic Chemistry II		2	2	OCH 106	3
ACH 205	Pharmaceutical Analytical Chemistry		2	2	PHYSC 112, PHYSC 113	3
BIOC 206	Biochemistry I		2	2	OCH 106	3
COGN 207	General Pharmacognosy		2	2	BOT 103	3
HPH 208	Human Physiology II		2	2	HPH 201	3
Total			14	12		20

4 th SEMESTER						
COURSE #	COURSE TITLE		LH	PH	PRE-REQUISITE	CH
INS 209	Instrumental Analysis		2	-	OCH 204, ACH 205	2
MCH 2010	Medicinal and Pharmaceutical Chemistry I		2	2	OCH 204	3
MIC 2011	Microbiology		2	2	PHYSC 113	3
PHA 2012	Pharmacology and Therapeutics I		2	2	HPH 201	3
BIOC 2013	Biochemistry II		2	2	BIOC 206	3
PHY 2014	Phytotherapy		2	2	COGN207	3
CEUT 2015	Pharmaceutics II		2	2	CEUT 203	3
Total			14	12		20

THIRD YEAR

5 th SEMESTER						
COURSE #	COURSE TITLE		LH	PH	PRE-REQUISITE	CH
SDF 301	Sterile Dosage Forms		2		CEUT 2015	2
KENI 302	Biopharmaceutics & Pharmacokinetics I		2	2	CEUT 2015	3
BIS 303	Biostatistics & Research Methodology		2	-	Nil	2
MCH 304	Medicinal and Pharmaceutical Chemistry II		2	2	MCH 2010	3
PHA 305	Pharmacology and Therapeutics II		2	2	PHA 2012	3
IMM 306	Immunology		2	2	HPH 208	3
CEUT 307	Pharmaceutics III		2	2	CEUT 2015	3
PROFETH308	Professional Pharm. Ethics & Legislations		2	-	Nil	2
Total			16	12		21

6 th Semester						
COURSE #	COURSE TITLE		LH	PH	PRE-REQUISITE	CH
CEUTTECH309	Pharmaceutical Technology		2		CEUT 307	2
KENI3010	Bio pharmaceutics & Pharmacokinetics II		2	2	KENI 302	3
ALTM3011	Complementary & Alternative Medicine		2	-	PHY 2014	2
CLD 3012	Interpretation of Clinical Laboratory Data		2	-	MIC 2011,	2



				IMM 306	
PARA3013	Parasitology	2	2	PHYSC 111	3
BIODS3014	Bioassay & Drug Screening	1	-	PHA 305	1
HCS 3015	Health Care System and Pharmac. Care	2	-	Nil	2
TOX3016	Toxicology	2	-	PHA 305	2
PHA 3017	Pharmacology and Therapeutics III	2	2	PHA 305	3
GPA 3018	General Pathology	2	-	PHA 305	2
Total		19	8		22

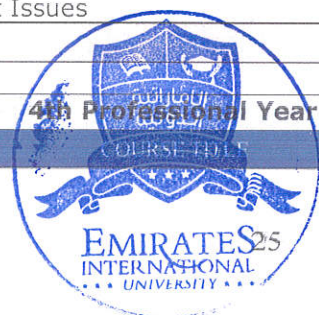
'3rd Professional Year - Summer Semester					
COURSE #	COURSE TITLE	LH	PH	PRE-REQUISITE	CH
CPT 3018	Community Pharmacy Training-I	-	6	PHA 3016, GPA 3017	2
Total		-	6		2

FOURTH YEAR

7 th SEMESTER					
COURSE #	COURSE TITLE	LH	PH	PRE-REQUISITE	CH
CDA 401	Applied Clinical & Diagnostic Analysis	2		PHA 3016,	2
KENIDM402	Clinical Pharmacokinetics and Therapeutics Drug Monitoring	2	2	KENI 302	3
DISM 403	Dispensing of Medications	2		PHA 3016, GPA 3017	2
PAM 404	Pharmacy Administration & Management	2	-	PHA 3016	2
OTC 405	OTC Products and Patient Counseling	2	2	PHA 3016	3
CLINP 406	Clinical Pharmacy- Disease & Therapeutic Management-I	2	2	PHA 3016	3
DI 407	Drug Information & Literature Evaluation	2	-	PHA 3016	2
Total		14	7		17

8 th SEMESTER					
COURSE #	COURSE TITLE	LH	PH	PRE-REQUISITE	CH
PHYAS.408	Physical Assessment	2	-	CLD 3011	2
COMS 409	Communication Skill in Pharmacy Practice	2	-	PCS 202	2
CLPRO 4010	Clinical Problems in Parenteral Nutrition & Intravenous Therapy	2	-	SDF 301	2
DTOX 4011	Drugs of Abuse & Clinical Toxicology	2	-	TOX3015	2
CLINP 4012	Clinical Pharmacy- Disease & Therapeutic Management-II	2	2	CLINP 407	3
PHARMEC4013	Pharmacoeconomics	2	-	PAM 404	2
MERR 4014	Medication Errors: Causes, Prevention, Current Issues	2	2	OTC 405	3
Total		14	4		16

4 th Professional Year - Summer Semester					
COURSE #	COURSE TITLE	LH	PH	PRE-REQUISITE	CR



COURSE #	COURSE TITLE	PRE-REQUISITE	CH
CR 606	Internal medicine clerkship (2)	5th level	4
CR 607	Oncology clerkship	5th level	3
CR 608	Surgery clerkship	5th level	3
CR 609	Ambulatory care clerkship	5th level	2
Code 614	Research project	5th level	1
Total			13

Distribution of Total Credit Hours:

Level	Term	University Requirements		Basic Requirements		Faculty Requirements		Program Requirements		Program Electives		Training		Project		Total Cr. Hrs.		Total Cr. Hrs./Level
		No. of Courses	Credit Hours	No. of Courses	Credit Hours	No. of Courses	Credit Hours	No. of Courses	Credit Hours	No. of Courses	Credit Hours	No. of Courses	Credit Hours	No. of Courses	Credit Hours	No. of Courses	Credit Hours	
First	First	3	6			4	12	2	4							9	22	20.1%
	Second	2	4			1	2	6	17							9	23	
Second	First							7	20							7	20	17.9%
	Second							7	20							7	20	
Third	First							8	21							8	21	20.1%
	Second							10	22			1	2			11	24	
Fourth	First							7	17							7	17	15.6%
	Second							7	16			1	2			8	18	
Fifth	First							8	16							8	16	13.8%
	Second							5	15							5	15	
Sixth	First											5	15			5	15	12.5%
	Second											4	12	1	1	5	13	
Total:		5	10			5	14	67	168			11	31	1	1	89	224	
Percentage:		4.5%				6.25%		75				13.8%		0.45%				

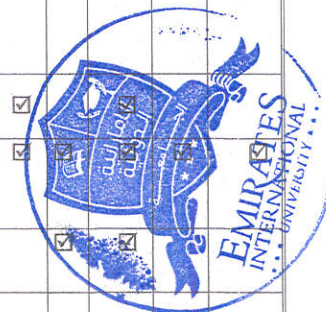
Survey of Course Names per Academic Semesters of Similar Pharma D Programs

University	Emirates Internat University	Alfaisal University	Jordan University	Helwan University	University of Alberta	Cyprus International University	Massachusetts University
No of Courses	89	84	95	81	55	101	76
Total Cr. Hrs.	224	198	216	215	199	245	205
Total Years	6 Years	6 Years	6 Years	6 Years	6 Years	6 Years	6 Years

Program ILOs Curriculum Map																																																
	Courses English Language I	Course Code UR	Program Intended Learning Outcomes (PILOs)																																													
			A. Knowledge and understanding												B. Intellectual Skills						C. Practical & Professional Skills						D. Transferrable Skills																					
			A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	B1	B2	B3	B4	B5	B6	B7	B8	B9	C1	C2	C3	C4	C5	C6	C7	C8	D1	D2	D3	D4	D5												
	Computer Skills	UR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																									<input checked="" type="checkbox"/>																	
	Islamic Culture	UR																													<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
	Arabic language	UR																														<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
	Biology	PHYS C 111	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
	General Chemistry	PHYS C 112	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>															<input checked="" type="checkbox"/>														<input checked="" type="checkbox"/>														
	Medical Physics	PHYS C 113	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
	Mathematics and Pharmaceutical Calculations	PHAR .CAL.I 01								<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>												<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>																	
	Pharmacy Orientation	PHAR .ORI 102	<input checked="" type="checkbox"/>																	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>								
	English Language II	UR																																														



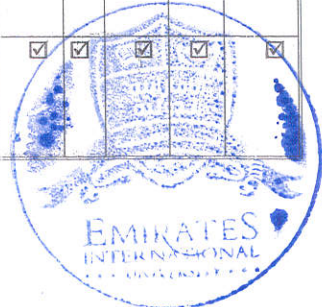
Medical Terminology	UR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Botany	BOT 103	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Principles of Human Anatomy	ANA 104	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	
Physical Pharmacy	PHYP 105	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				
Pharmaceutical Organic Chemistry I	OCH 106	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
General Histology	HIS 107	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Human Behavior and Socialization	BHSC 108	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																	
Human Physiology I	HPH 109	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Professional Communication Skills	PCS 202				<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pharmaceutics I	CEUT 203			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
Pharmaceutical Organic Chemistry II	OCH 204	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Pharmaceutical Analytical Chemistry	ACH 205	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Biochemistry I	BIOC 206	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
General Pharmacognosy	COGN 207		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Human Physiology II	HPH 208	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



Instrumental Analysis	INS 209			<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Medicinal and Pharmaceutical Chemistry I	MCH 2010	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Microbiology	MIC 2011	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pharmacology and Therapeutics I	PHA 2012	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Biochemistry II	BIOC 2013	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Phytotherapy	PHY 2014	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pharmaceutics II	CEUT 2015		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sterile Dosage Forms	SDF 301		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Biopharmaceutics & Pharmacokinetics I	KENI 302		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Biostatistics & Research Methodology	BIS 303	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Medicinal and Pharmaceutical Chemistry II	MCH 304	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pharmacology and Therapeutics II	PHA 305	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Immunology	IMM 306	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pharmaceutics III	CEUT 307		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Professional Pharm.	PROF ETH3					<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>						



Applied Clinical & Diagnostic Analysis	CDA 401	<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Clinical Pharmacokinetics and Therapeutics Drug Monitoring	KENI DM40 2		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dispensing of Medications	DISM 403					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pharmacy Administration & Management	PAM 404	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
OTC Products and Patient Counseling	OTC 405	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Clinical Pharmacy-Disease & Therapeutic Management-I	CLIN P 406	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Drug Information & Literature Evaluation	DI 407				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Physical Assessment	PHYA S 408	<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Communication Skill in Pharmacy Practice	COM S 409			<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



Clinical Problems in Parenteral Nutrition & Intravenous Therapy	CLPR O 4010					<input checked="" type="checkbox"/>																<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Drugs of Abuse & Clinical Toxicology	DTOX 4011						<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Clinical Pharmacy- Disease & Therapeutic Management-II	CLIN P 4012	<input checked="" type="checkbox"/>																					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pharmacoeconomics	PHAR MEC4 013								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Medication Errors: Causes, Prevention, Current Issues	MER R 4014	<input checked="" type="checkbox"/>																					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Community Pharmacy Training-II	CPT 4016									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Principles of Pathophysiology Module I: Immunology	PP 501	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pharmacotherapy Module II: Cardiology	PP 502																						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pharmacotherapy Module III: Psychiatry/Neurology	PP 503	<input checked="" type="checkbox"/>																					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pharmacotherapy Module IV	PP 5404	<input checked="" type="checkbox"/>																					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

مسح أسماء المقررات الدراسية في البرامج المماثلة للبرنامج الحالي

1. Curriculum Map

Write sub Learning Outcomes, attached it with the program specification document, it should be used as a base to write the curriculum map. The curriculum map will be designed in a table containing courses of the program. It should also indicate the relationships or contribution of each course in achieving the program main and sub-learning outcomes.

, Survey of Course Names of Similar Program

Univ ersity	Emirates international University	CH	Alfaisal Univer sity	CH	Jordan University	CH	Helwan University	H	Cyprus International University	CH	University of Alberta	CH	Massachusetts University	CH
Course Name	Course Name	CH	Course Name	CH	Course Name	CH	Course Name	CH	Course Name	CH	Course Name	CH	Course Name	CH
Level/ Semester I/I	Course Name		Course Name		Course Name		Course Name		Course Name		Course Name		Course Name	
1	English Language I	2	English 005	4							English	3		
2	Computer Skills	3			Computer skills for humanities	3	Computer Science	3	Introduction to Computers	4				
3	Islamic Culture	2												
4	Arabic language	2												
5	Biology	3			General biology (1),2	6			Medical biology	3	Cell biology	3	General biology (1),2	6
6	General Chemistry	3	General chemistr y (1),2	6	Chemistry I,2	6	General & Physical chemistry	3	General Chemistry	3	General Chemistry	6	Chemical principle I,2	6
7	Medical Physics	3	Physies for Medicine and Life	3			General & Physical chemistry	3	Physies	3	Physies	3	of Physics I Non Elective	6

Univ ersity	Emirates international University		Alfaisal Universi ty		Jordan University		Helwan University	H	Cyprus International University		University of Alberta	CH	Massachusetts University	
			Sciences											
8	Mathematics and Pharmaceutical Calculations	2	Pharmac y calculati ons	1	Pharmaceutical calculations and compounding	2	Mathematics	2	<i>Basic Mathematics</i>	3	Mathematics	3	Precalculus OR Calculus I	3
9	Pharmacy Orientation	2					Pharmacy Orientation & Basic Pharmaceutics	1	Introduction to Pharmacy	2			Introduction to Pharmacy	1
	Level/ Semester 1/2		Course Name	C H	Course Name	CH	Course Name	CH	Course Name	C H	Course Name	CH	Course Name	CH
10	English Language II	2	English 006	4	Medical terminology	1					English	6		
11	Medical Terminology	2	Medical terminol ogy	2	Medical terminology	1			<i>Pharmaceutical and Medical Terminology</i>	2				
12	Botany	3			Pharmacognosy	3	Pharmacognos y-1	3	<i>Pharmaceutical Botany</i>	4				
13	Principles of Human Anatomy	3	Anatomy and histology	4	Anatomy and histology for Pharmacy	2	Anatomy	2	Anatomy and Physiology I	4	Anatomy and Physiology for Pharmacy	3	Anatomy and Physiology for Pharmacy	3
14	Physical Pharmacy	2			Physical pharmacy	2	Physical pharmacy	3	<i>Pharmaceutical Technology I</i>	4				
15	Pharmaceutical Organic Chemistry I	3	Chemistr y II	3	Pharmaceutical organic chemistry (1)	3	Organic Chemistry I	3	Organic Chemistry	6	Organic Chemistry	6	Organic Chemistry I	3
16	General Histology	3	Anatomy and histology	4	Anatomy and histology for Pharmacy	2	Histology	2	Histology	1				
17	Human Behavior and Socialization	2			Principles of psychology	3	Psychology	1	<i>Behavioral Sciences</i>	2			Introduction Psychology American University	3

Univ ersity	Emirates international University		Alfaisal Universi ty		Jordan University		Helwan University	H	Cyprus International University		University of Alberta	CH	Massachusetts University	
													Identity & Public Life	
18	Human Physiology I	3	Physiolo gy	3	Physiology for pharmacy (1)	2	Physiology I	2	Anatomy and Physiology I	4	Human Physiology	6	Physiology/Pathophysiol ogy I	4
	Level/ Semester 2/1		Course Name	C H	Course Name		Course Name	CH	Course Name	C H	Course Name	CH	Course Name	CH
19	Professional Communication Skills	2			English Communication skills	3	Communicatio n skills	1			<i>Reading And Writing Skills-I</i>	3	Introduction to Interpersonal Communication for Health Professionals	3
20	Pharmaceutics I	3	Pharmac eutics I: Dosage forms and stability	3	Physicochemical principles of pharmacy	2	Pharmaceutics I	3	<i>Pharmaceutical Technology-I</i>	4	Pharmaceutics I	3	Introduction to Pharmaceutical Sciences	2
21	Pharmaceutical Organic Chemistry II	3	Organic chemistr y	4	Pharmaceutical organic chemistry (2)	3	Organic Chemistry II	3	Organic Chemistry	6	Organic Chemistry	6	Organic Chemistry II	3
22	Pharmaceutical Analytical Chemistry	3			Pharmaceutical chemical Analysis	2	Analytical Chemistry I,II	6	Analytical Chemistry II	3			Chemical Principles I,II	3
23	Biochemistry I	3	Principle s of biochemi stry	3	Biochemistry I	3	Biochemistry I	2	Biochemistry	3	Biochemistry	3	Medical Biochemistry I	3
24	General Pharmacognosy	3			Pharmacognosy	2	Pharmacognos y 1&2	6	Pharmaceutical Botany	3				
25	Human Physiology II	3	Human Structure and Function II	4	Physiology for pharmacy	2	Physiology II	2	Anatomy and Physiology I	4	Human Physiology	6	Physiology/Pathophysiol	4
	Level/ Semester 2/2		Course Name	C H	Course Name	CH	Course Name	CH	Course Name	C H	Course Name	CH	Course Name	CH



Univ ersity	Emirates international University		Alfaisal Universi ty		Jordan University		Helwan University	H	Cyprus International University		University of Alberta	CH	Massachusetts University	
26	Instrumental Analysis	2			Pharmaceutical instrumental analysis	2	Advanced Instrumental Analysis	2	<i>Drug Analysis I&II</i>	4				
27	Medicinal and Pharmaceutical Chemistry I	3	Medicina I chemistr y	4	Medicinal chemistry I	3	Pharmaceutical Chemistry I	3	Pharmaceutical Chemistry I	4	Principles of Medicinal Chemistry	3	Medicinal Chemistry I	3
28	Microbiology	3	Microbio logy	3	Pharmaceutical microbiology (1),(2)	6	Pharmaceutical Microbiology	3	Pharmaceutical Microbiology	4	Microbiology	3	Medical Microbiology	3
29	Pharmacology and Therapeutics I	3	Basic pharmac otherapy	3	Pharmacology (1)	3	Pharmacology I	3	Pharmacology I	4	Introduction to Pharmacology I	3	Pharmacology I	4
30	Biochemistry II	3	biochemi stry	4	Biochemistry II	3	Biochemistry II	3	Biochemistry	3	Biochemistry	3	Medical Biochemistry II	3
31	Phytotherapy	3					Phytochemistry	3	Phytotherapy	2				
32	Pharmaceutics II	3	Pharmac eutics II: Drug delivery	2	Pharmaceutical technology (2)	2	Pharmaceutics II	3	<i>Pharmaceutical Technology-II</i>	4	Pharmaceutics 2	3	Dosage Forms and Drug Delivery Systems	3
Level/ Semester 3/I			Course Name	C H	Course Name	CH	Course Name	CH	Course Name		Course Name	CH	Course Name	CH
33	Sterile Dosage Forms	2					Pharmaceutics III	3	<i>Pharmaceutical Technology-III</i>	4	Pharmaceutics III	3	Dosage Forms Pharmaceutics I	2
34	Biopharmaceutics & Pharmacokinetics I	3	Pharmac okinetics	3	Pharmacokinetic s	3	Applied Pharmacokineti cs	2	<i>Biopharmaceutics Pharmacokinetics</i>	2	Essentials of Pharmacokinetic s	3		3



Univ ersity	Emirates international University		Alfaisal Universi ty		Jordan University		Helwan University	H	Cyprus International University		University of Alberta	CH	Massachusetts University	
35	Biostatistics & Research Methodology	2	Biostatistics and basic research methods	3	Pharmaceutical statistics	2	Bioassay and Biostatistics	2	Biostatistics	3		2	Statistics	3
36	Medicinal and Pharmaceutical Chemistry II	3	Medicinal chemistry	4	Medicinal chemistry 2,3	6	Pharmaceutical Chemistry II	3	Pharmaceutical Chemistry II,III	6		3	Medicinal Chemistry II	3
37	Pharmacology and Therapeutics II	3	Basic pharmacotherapy;	2	Pharmacology (2)	3	Pharmacology II	3	Pharmacology II	2	Introduction to Pharmacology 2	3	Pharmacology II	4
38	Immunology	3	Immunology	2	Immunology and genetics	3	Immunology	2	Immunology	2	Immunology and Biotechnology	1	Biology I:II Cellular and Molecular Biology	3
39	Pharmaceutics III	3					Pharmaceutics III,IV	3	Pharmaceutical Technology-III	4			Dosage Forms and Drug Delivery Systems	3
40	Professional Pharm. Ethics & Legislations	2	Pharmacy regulations and health ethics	2	Pharmacy regulations and ethics	2	Ethics in Pharmacy and Legislation	1	Pharmacy Legislations	2	Behavioural, Administrative, Social and Evidence-based Pharmacy	2	Pharmacy Law	3
Level/ Semester 3/2			Course Name	CH	Course Name	CH	Course Name	CH	Course Name		Course Name	CH		CH
41	Pharmaceutical Technology	2			Pharmaceutical biotechnology	2	Industrial Pharmacy	2	Pharmaceutical Technology-Iv +Industrial Pharmacy	6				

Univ ersity	Emirates international University		Alfaisal Universi ty		Jordan University		Helwan University	H	Cyprus International University		University of Alberta	CH	Massachusetts University	
									Clerkship					
42	Bio pharmaceutics & Pharmacokinetics II	3	Pharmacokinetics	3	Pharmacokinetics	3	Applied Pharmacokinetics	2	Biopharmaceutics Pharmacokinetics	2	Essentials of Pharmacokinetics	3	Pharmacokinetics II	3
43	Complementary and Alternative Medicine	2	Complementary and Alternative Medicine	2	Complementary and Alternative Medicine	3	Herbal alternative and Complementary Medicine	1			Pharmacotherapy 2	3		
44	Interpretation Clinical Laboratory Data	2	Advanced microbiology	3	Clinical biochemistry (1)	2	Clinical Biochemistry	3	Clinical Biochemistry	3	Pharmacotherapy 2			
45	Parasitology	3					Parasitology	2						
46	Bioassay & Drug Screening	1	Clinical immunology	2			Bioassay and Biostatistics	2	Pharmacotherapy 2	3				
47	Health Care System and Pharmac. Care	2	Pharmacy practice and health care systems	3			Pharmacoepidemiology and public health	1					Research Methods in Pharmacoepidemiology	2
48	Toxicology	2	Medical Toxicology	2			Basic and Clinical Toxicology	2	Pharmaceutical Toxicology-I	3				
49	Pharmacology and Therapeutics III	3	Pharmacotherapy of	3	Pharmacology III	2	Pharmacology III	2	Pharmacology III	2				4

Univ ersity	Emirates international University		Alfaisal Universi ty		Jordan University		Helwan University	H	Cyprus International University		University of Alberta	CH	Massachusetts University	
			antimicrobials											
50	General Pathology	2			Pathology for pharmacy	2	Pharmacotherapy I,II: Patient-Centered Pathophysiologic Approach	2					Physiology/Pathophysiology I,II	8
51	Community Pharmacy Training-I	2	Introductory Pharmacy practice experience (IPPE) I (out-patient pharmacy)	2	Pharmaceutical field Training 1	2	Introductory Pharmacy Practice Experience I	3	Training I	7	Introductory Pharmacy Practice Experience Part 1	4	Introductory Pharmacy Practice Experience I	2
	Level/ Semester 4/1			CH	Course Name	CH	Course Name	CH	Course Name	CH	Course Name	CH	Course Name	
52	Applied Clinical & Diagnostic Analysis	2	Clinical immunology	2	Clinical biochemistry (2)	2	Clinical Biochemistry	3	Clinical Biochemistry	3	Pharmacotherapy 2	3		
53	Clinical Pharmacokinetics and Therapeutics Drug Monitoring	3	Clinical Pharmacokinetics	3	Clinical Pharmacokinetics	2	Clinical Pharmacokinetics	2					Clinical Pharmacokinetics	3
54	Dispensing of Medications	2							Behavioural, Administrative, Social and Evidence-based	15	Patient Care Skills 1	3		2



Univ ersity	Emirates international University		Alfaisal Universi ty		Jordan University		Helwan University	H	Cyprus International University Pharmacy 1-5		University of Alberta	CH	Massachusetts University	
55	Pharmacy Administration & Management	2	Medicati on therapy manage ment	2			Pharmacy Practice Management	2	Behavioural, Administrative, Social and Evidence-based Pharmacy 1-5	1 5	Patient Care Skills 2	3	Introduction to Practice Management I	3
56	OTC Products and Patient Counseling	3	Self-care and nonpres cription drugs	1	Over the counter drugs (OTC)	2	Community Pharmacy and OTC Therapeutics	3	<i>Non-Precription Drug (Otc)</i>	2			OTC Drugs / Self-Care	3
57	Clinical Pharmacy- Disease & Therapeutic Management-I	3	Integrate d pharmac otherapy II		Therapeutics I		Pharmacothera py I-VII	3	Therapeutics I	3	Pharmacotherap y 4			
58	Drug Information & Literature Evaluation	2	Drug informati on and evidence -based practice	3			Pharmacy information system & Evidene Based Practice	2	Pharmaceutical literature evaluation	2			Drug Literature Evaluation	2
	Level/ Semester 4/2		Course Name	CH	Course Name		Course Name	CH	Course Name	CH	Course Name	CH	Course Name	CH
59	Physical Assessment	2			Basic nursing skills	2	Patient Assessment	1	<i>First Aid</i>	2	Patient Care Skills 1	3		
60	Communication Skill in Pharmacy Practice	2	Pharmac y practice and health	3	Pharmacy practice 1.2	2	Pharmaceutical Care. II	4			Frameworks for Teams, Collaboration and Education in Pharmacy	2	Introduction to Professional Communication for Health Professionals EMIRATES INTERNATIONAL UNIVERSITY	3

Univ ersity	Emirates international University		Alfaisal Universi ty care systems		Jordan University		Helwan University	H	Cyprus International University		University of Alberta	CH	Massachusetts University	
											Practice			
61	Clinical Problems in Parenteral Nutrition & Intravenous Therapy	2	Parenteral therapy	2	Pharmaceutical nutrition and diet therapy	3	Clinical Nutrition	2			Pharmacotherapy 4	3		
62	Drugs of Abuse & Clinical Toxicology	2			Selected topics in clinical toxicology	2	Basic and Clinical Toxicology	2	Pharmaceutical Toxicology-II	3				
63	Clinical Pharmacy- Disease & Therapeutic Management-II	3	Integrated pharmacotherapy II		Therapeutics I		Pharmacotherapy I-VII	3	Therapeutics II	3	Pharmacotherapy 5			
64	Pharmacoeconomics	2	Pharmacoeconomics and health outcomes	3	Pharmacoeconomics	2	Pharmacy Practice Management	2	Pharmacoeconomics	2	Patient Care Skills 1-5	3		
65	Medication Errors: Causes, Prevention, Current Issues	3	Medication safety and health informatics	3					Drug Safety And Risk Assessment In Drug Use	2	Patient Care Skills 1-5			
66	Community Pharmacy Training-II	2	Introductory Pharmacy practice experience (IPPE) II (out-	2	Pharmaceutical field Training 2	2	Introductory Pharmacy Practice Experience II	3	Training II	7	Introductory Pharmacy Practice Experience Part 2	4		2

Univ ersity	Emirates international University		Alfaisal Universi ty		Jordan University		Helwan University	H	Cyprus International University		University of Alberta	CH	Massachusetts University	
			patient pharmac y)											
	Level/ Semester 5/I		Course Name	C H	Course Name	CH	Course Name	CH	Course Name	C H	Course Name	CH	Course Name	CH
67	Principles of Pathophysiology Module I: Immunology	2	Immuno logy and Genetics'	2					<i>Protein Production By Recombinant DNA Technology</i>	2	Immunology and Biotechnology	1	Advanced Therapeutics I&Advanced Seminas	5
68	Pharmacotherapy Module II: Cardiology	2	Integrate d pharmac otherapy I	3	Therapeutics 2-3	4	Pharmacothera py I-VII	3			Pharmacothera py 3	3	Advanced Therapeutics I&Advanced Seminas	5
69	Pharmacotherapy Module III: Psychiatry/Neurology	2	Integrate d pharmac otherapy III,	3	Therapeutics 2-3	4	Pharmacothera py I-VII	3	NEUROPHYSIOL OGY	2	Pharmacothera py 8	3	Advanced Therapeutics I&Advanced Seminas	5
70	Pharmacotherapy Module IV :Gastroenterology/Nu trition	2			Therapeutics 2-3	4	Pharmacothera py I-VII	3	Pharmacotherapy 4	3			Advanced Therapeutics I&Advanced Seminas	5
71	Pharmacotherapy Module V : Renal Impairments & Drug monitoring	2	Integrate d pharmac otherapy I	3	Therapeutics 2-3	4	Pharmacothera py I-VII	3			Pharmacotherap y 2	3	Advanced Therapeutics I&Advanced Seminas	5
72	Pharmacotherapy Module VI: Endocrinology/Rheu matology/OB/GYN	2	Integrate d pharmac otherapy IV, Endocrin e and	3	Therapeutics 2-3	4	Pharmacothera py I-VII	3			Pharmacothera py 7	3	Advanced Therapeutics I&Advanced Seminas	5



Univ ersity	Emirates international University		Alfaisal Universi ty		Jordan University		Helwan University	H	Cyprus International University		University of Alberta	CH	Massachusetts University	
			based seminars											
78	Pharmaceutical Care of Community Pharmacy	3	Introduct ory Pharm acy practice experien ce (IPPE) III	2	Pharmacy practice 1-2	2	Pharmaceutical Care	2	PRINCIPLES OF PHARMACEUTIC AL CARE	2	COMMUNITY PHARMACY PRACTICE	4	Advanced Pharmacy Experience	36
79	Obstetrics and Gynecology Pharmaceutical Care	3	Integrate d pharmac otherapy IV. Endocrin e and Women`s Health	3	Pharmacy practice 1-2	2	Pharmaceutical Care	2	PRINCIPLES OF PHARMACEUTIC AL CARE	2	Pharmacothera py 7		Advanced Pharmacy Experience	36
	Level/ Semester 6/I		Course Name	C H	Course Name	CH	Course Name	CH	Course Name	C H	Course Name	CH	Course Name	CH
80	Internal medicine clerkship (1)	4	5 core *rotations are mandator y for all Ambulat ory care		Internal medicine clerkship (1)	7	In-patient medicine experiences	10	INTERNSHIP-I	3	Advanced Pharmacy Practice Experience Part 1-4 @Experiential Learning Part 1- 5	34	internal medicine, institutional pharmacy practice, ambulatory care, and community pharmacy practice. Additionally, students complete elective rotations in areas such as administration, cardiology, community practice, emergency information, emergency medicine	
81	Pediatric clerkship	3			Pediatric clerkship	4	In-patient medicine experiences	10	INTERNSHIP-I-IV		Advanced Pharmacy Practice Experience Part 1-4 @Experiential	34		



Univ ersity	Emirates international University		Alfaisal Universi ty		Jordan University		Helwan University	H	Cyprus International University		University of Alberta	CH	Massachusetts University	
											Learning Part 1-5		gastroenterology, infectious diseases, nephrology, oncology/hematology, obstetrics/gynecology, pediatrics, poison information, and psychiatry.	
82	Geriatric and psychiatric clerkship	4	General internal medicine Institutional pharmacy practice Community pharmacy practice Pharmacy administration and management		Psychiatric and Geriatric clerkship	2	In-patient medicine experiences @ Elective Rotations	20	INTERNSHIP-I-IV		Advanced Pharmacy Practice Experience Part 1-4 @Experiential Learning Part 1-5	34		
83	Obstetrics and Gynaecology clerkship	2			Gynecology and Obstetrics clerkship	2	In-patient medicine experiences @ Elective Rotations	20	INTERNSHIP-I-IV		Advanced Pharmacy Practice Experience Part 1-4 @Experiential Learning Part 1-5	34		
84	Hospital Pharmacy	2						Advanced Institutional (hospital) Practice	5	Hospital Pharmacy Clerkship	4	Advanced Pharmacy Practice Experience Part 1-4 @Experiential Learning Part 1-5	34	
	Level/ Semester 6/2	CH	Course Name	CH	Course Name	CH	Course Name		Course Name	CH	Course Name	CH		CH
85	Internal medicine clerkship (2)	4	Cardiology		Internal medicine clerkship (2)	7	In-patient medicine experiences @ Elective Rotations	20	INTERNSHIP-I-IV		Advanced Pharmacy Practice Experience Part 1-4 @Experiential Learning Part 1-5	34		
86	Oncology clerkship	3	Adult				In-patient	20	INTERNSHIP-I-IV		Advanced	34		

Univ ersity	Emirates international University		Alfaisal Universi ty		Jordan University		Helwan University	H	Cyprus International University		University of Alberta	CH	Massachusetts University
			haematol ogy/Onc ology				medicine experiences @ Elective Rotations				Pharmacy Practice Experience Part 1-4 @Experiential Learning Part 1- 5		
87	Surgery clerkship	3	Surgery		Surgery clerkship	2	In-patient medicine experiences @ Elective Rotations	20	INTERNSHIP-1-IV		Advanced Pharmacy Practice Experience Part 1-4 @Experiential Learning Part 1- 5	34	
88	Ambulatory care clerkship	2	Ambulat ory care		Ambulatory care clerkship	3	In-patient medicine experiences @ Elective Rotations	20	INTERNSHIP-1-IV		Advanced Pharmacy Practice Experience Part 1-4 @Experiential Learning Part 1- 5	34	
89	Research project	1	Research project	3	Research project	1	a graduation project	3	THESIS PROJECT	3			

2. Program Study System

- Time required to complete the program
- Number of hours and percentage of total program hours distributed as a whole

Credit hours	No. Of Credit hours	Percentage of total program hours
University Requirement	13	5.8%
Faculty Requirement	11	4.9%
Department Requirement	91	40.6%
Program Requirement	109	48.7%
Total	224	100%

1. Study Plan based on benchmarking (224 Credit hours):

3. Admission Requirements

Specify the criteria of admission in the program process, such as percentage of secondary school, audition, placement tests, or interview.

- Student must be got Secondary science certificate (at least 80%).
- Original documents and going throw admission process.
- Pass the assessment and testing of the admission or personal interview committee under the applicable regulations.
- Completing university admission application form
- Payment of the tuition fees specified in the Financial Regulations at the beginning of the academic year.
- The applicant has not been dismissed from any other university due disciplinary reasons.
- No admission allowed in two program at the same time.

4. Program Policies:

Based on University Regulations

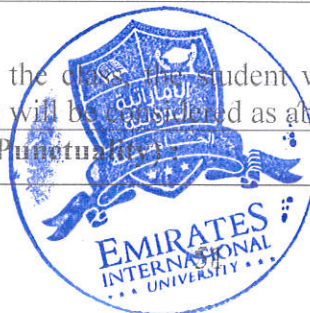
1. (Class Attendance) :

A student should attend not less than 75 % of total hours of the subject; otherwise he/she will not be able to take the exam and will be considered as exam failure. If the student is absent due to illness, he/she should bring a proof statement from university Clinic. If the absent is more than 25% of a course total contact hours, student will be required to retake the entire course again.

2. (Tardy) :

For late in attending the class the student will be initially notified. If he repeated lateness in attending class he/she will be considered as absent.

3. (Exam Attendance/Punctuality)



	A student should attend the exam on time. He/she is permitted to attend an exam half one hour from exam beginning, after that he/she will not be permitted to take the exam and he/she will be considered as absent in exam.
4.	(Assignments & Projects) : Assignments and projects are given as per course specification; the student has to submit all the assignments for checking on time, mostly one week after given the assignment.
5.	(Cheating) : For cheating in exam, a student will be considered as fail. In case the cheating is repeated three times during his/her study the student will be disengaged from the Faculty.
6.	(Plagiarism) : Plagiarism is the attending of a student the exam of a course instead of another student. If the examination committee proofed a plagiarism of a student, he/she will be disengaged from the Faculty. The final disengagement of the student from the Faculty should be confirmed from the Student Council Affair of the university or according to the university roles.
7.	(Other policies) : <ul style="list-style-type: none">- Mobile phones are not allowed to use during a class lecture. It must be closed; otherwise the student will be asked to leave the lecture room.- Mobile phones are not allowed in class during the examination.- Lecture notes and assignments might be given directly to students using soft or hard copy.

5. Graduation Requirements

Clarifying the rules and regulations which specify conditions of the graduation from the program

- Must pass all courses with total credit hours 224 hours
- Minimal limit of marks to pass in each of the program courses:50 Marks

6. Facilities required to implement the program

a. Learning Resources:

- Books and textbooks
- Journals and periodicals
- Thesis (Master + PhD)
- Articles and research in the web.
- Electronic library.

b. Equipment, tools and educational materials

- Projectors
- Classrooms
- Wi-Fi internet
- Computer labs equipped
- Training Hall
- All Medical Education Labs



- 1) Pharmaceutics Lab
- 2) Pharmaceutical Analysis Lab
- 3) Pharmacology Lab
- 4) Pharmacognosy Lab
- 5) Medicinal Chemistry Lab
- 6) , Pharmacy skills labs
- 7) Microbiology Lab
- 8) Anatomy and Histology Lab
- 9) Physiology Lab

