

## Academic Program Description Form

University Name: University of Al-Manara

Faculty/Institute: Al-Manara college of medical sciences

Scientific Department: Department of pharmacy

Academic or Professional Program Name: Clinical pharmacy

Final Certificate Name: Bachelor of pharmacy

Academic System: Courses

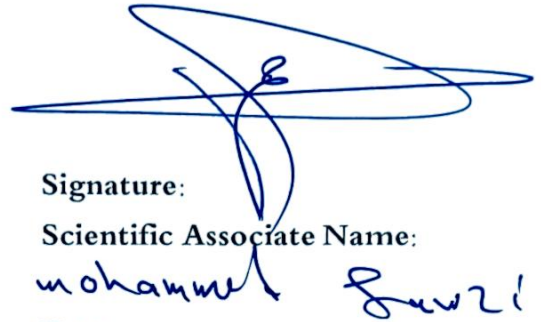
Description Preparation Date:

File Completion Date: 27/2/2024

Signature: 

Head of Department Name:  
Dr. Oussama Mansour

Date:

Signature: 

Scientific Associate Name:

Mohammed Sawzi

Date:

28/2/2024

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 2024/2/24

Signature:   
Asha Abed Hussein



Approval of the Dean



## 1. Program Vision

## 2. Program Mission

1. Study the different types of simple diseases and how to deal with them in the pharmacy.
2. Study of various diseases (causes, symptoms, diagnosis and treatment)
3. Study the communication skills necessary for the work of a pharmacist.
4. Study of pharmacy ethics.
5. Study of the foundations of Pharmacoeconomics.
6. Study of methods of calculating the concentrations of dangerous drugs in the blood and how to deal with them.

## 3. Program Objectives

Subject-specific skills

1. Communication skills with patients
2. Pharmacoeducation skill for patients
3. The skill of extracting the required information from its approved sources

## 4. Program Accreditation

Theoretical and practical exams in addition to classroom activities and scientific seminars

## 5. Other external influences

Students have practical training courses in hospitals, laboratories and pharmacies

Eligibility

## 6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements				
College Requirements				
Department Requirements	8	22	12%	Basic
Summer Training				
Other				

\* This can include notes whether the course is basic or optional.

## 7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical
Third ( one course)	Pharm.3.6.1.1	Pharmaceutical ethics	1 Hour	
Fourth (one course)	Pharm.4.6.2.2	Communication skills	2 hours	
Fourth (two course )	Pharm.4.6.1.3	Clinical Pharmacy I	2 hours	
	Pharm.4.6.2.3	Clinical Pharmacy II	2 hours	
Fifth (two courses)	Pharm.5.6.1.5	Applied therapeutics I	3 hours	
	Pharm.5.6.2.5	Applied therapeutics II	3 hours	
Fifth (one course)	Pharm.5.6.1.7	Hospital training	2 hours	
Fifth (one course )	Pharm.5.6.2.8	Therapeutic drug monitoring	2 hours	
Fifth (one course )	Pharm.5.6.2.9	Pharmacoeconomics	2 hours	

## 8. Expected learning outcomes of the program

### Knowledge

A- Knowledge Objectives	A1- How to dispense medicine in pharmacies for simple cases A2- Causes, symptoms and diagnosis of various diseases A3- How to treat the patient and educate him healthily A4- Educating the student scientifically in his specialization A5- How to make and deliver seminars and lecture
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### Skills

B- Subject-specific skills	B1 - Communication skills with patients B2 - Pharmacoeducation skill for patients B3 - The skill of extracting the required information from its approved sources
C- Thinking skills	C1- Thinking skills through translation, analysis, evaluation and extraction of ideas C2- Creativity skills in the composition of the drug and its various chemical formulas

### Ethics

Learning Outcomes 4	Learning Outcomes Statement 4
Learning Outcomes 5	Learning Outcomes Statement 5

## 9. Teaching and Learning Strategies

Blackboard  
Powerpoint

## 10. Evaluation methods

Theoretical and practical exams and discussions in mini-seminars

## 11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/ Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
PhD	Pharmacy	Clinical Biochemistry Pharmacology			2	
MSc	Pharmacy	Pharmacognosy Clinical pharmacy Pharmacology			3	

### Professional Development

#### Mentoring new faculty members

Briefly describes the process used to mentor new, visiting, full-time, and part-time faculty at the institution and department level.

#### Professional development of faculty members

There are specific modules within the programme for personal development and giving opportunities to students and encouraging them to engage in professionally relevant qualifications that allow the student to reflect on their own professional development

### 12. Acceptance Criterion

**The student is accepted in the college within the central admission in the Ministry of Higher Education and Scientific Research**

### 13. The most important sources of information about the program

The World Health Organization and various scientific sources from books and the Internet and the Committee of Deans of Colleges of Pharmacy in Iraq

#### 14. Program Development Plan

There are specific modules within the programme for personal development and giving opportunities to students and encouraging them to engage in professionally relevant qualifications that allow the student to reflect on their own professional development.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Third	Pharm.3.6.1.1	Pharmacy Ethics	Basic	√	√	√	√	√	√	√	√	√	√	√	√
				√	√	√	√	√	√	√	√	√	√	√	√
Fourth	Pharm.4.6.2.2	Communication skills	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Pharm.4.6.1.3	Clinical Pharmacy I	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Pharm.4.6.2.4	Clinical PharmacyII	Basic	√	√	√	√	√	√	√	√	√	√	√	√
Fifth	Pharm.5.6.1.5	Therapeutics I	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Pharm.5.6.2.6	Therapeutics II	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	Pharm.5.6.2.9	Pharmacoeconomics	Basic	√	√	√	√	√	√	√	√	√	√	√	√

- Please tick the boxes corresponding to the individual program learning outcomes under evaluation.

## Course Description Form

<b>1. Course Name:</b>					
Pharmacy ethics					
<b>2. Course Code:</b>					
Pharm.3.6.2.1					
<b>3. Semester / Year:</b>					
Second/third stage					
<b>4. Description Preparation Date:</b>					
2024-1-31					
<b>5. Available Attendance Forms:</b>					
Lectures					
<b>6. Number of Credit Hours (Total) / Number of Units (Total)</b>					
15					
<b>7. Course administrator's name (mention all, if more than one name)</b>					
Name: Amjad Ibrahim Oraibi Email: amjadibrahim@uomanara.edu.iq					
<b>8. Course Objectives</b>					
<b>Course Objectives</b>			<p><b>teach the students doing every thing with respect and ethics</b></p> <p><b>Respect patients and other colleagues in hospitals</b></p> <p><b>Put the patient interest in first</b></p>		
<b>9. Teaching and Learning Strategies</b>					
<b>Strategy</b>		<p>Using the text book</p> <p>Using the computer</p> <p>Using the internet</p>			
<b>10. Course Structure</b>					
<b>Week</b>	<b>Hours</b>	<b>Required Learning Outcomes</b>	<b>Unit or subject name</b>	<b>Learning method</b>	<b>Evaluation method</b>
1 <sup>st</sup>	2		introduction to pharmacy ethics	Lectures	Written
2 <sup>nd</sup>	1		Code of ethics for pharmacist	Lectures	



Third	3		Common Ethical Considerations in Pharmaceutical Care	Lectures	and
4 <sup>th</sup>	2		Practice (Beneficence, Autonomy, Honesty, Informed Consent, Confidentiality, Fidelity)	Lectures	oral exam
5 <sup>th</sup>	1		Interprofessional Relations.	Lectures	
6 <sup>th</sup>	1		Making ethical design	Lectures	
7 <sup>th</sup>	1		Ethical issue related clinical research	Lectures	
8 <sup>th</sup>	1		Ethical problems related to pharmacist clinical practice	Lectures	
9 <sup>th</sup>	1		Preventing misuse of medicine	Lectures	

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**11. Course Evaluation**

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

**12. Learning and Teaching Resources**

Required textbooks (curricular books, if any)	Ruth Rodgers, (ed.); fast track: Law and ethics in pharmacy Practice. Pharmaceutical Press 2010.
Main references (sources)	Wingfield and David Badcott . Pharmacy Ethics Decision Making. Pharmaceutical Press 2007 3- Robert J. Cipolle, Linda M. Strand, Peter Morley. Pharmaceutical Care Practice: The Clinical Guide, 2nd Edition. 4- Robert m. Veatch and Amy Haddad. Case Studies in Pharmacy Ethics. second edition. Copyright © 2007 by Oxford University Press, Inc
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	<b>Internet</b>

## Course Description Form

13. Course Name:	
communication skills	
14. Course Code:	
PHARM.4.6.1.2	
15. Semester / Year:	
The first course / The fourth stage	
16. Description Preparation Date:	
31-1-2024	
17. Available Attendance Forms:	
30 hours	
18. Number of Credit Hours (Total) / Number of Units (Total)	
19. Course administrator's name (mention all, if more than one name)	
Name: MS.C ALAA IBRAHIM Email: ALAAIBRAHIB@UOMANARA.EDU.IQ	
20. Course Objectives	
<b>Course Objectives</b>	<p>Interpersonal communication is the foundation of patient-centered care. Without clear communication, desired patient outcomes cannot be achieved. Unclear messages between pharmacists and other health care providers lead to errors in drug therapy administration. Failures in communication between pharmacists and patients lead to incorrect use of medications. Pharmacists are responsible not only for dispensing appropriate medications but also for ensuring that the patient understands the medications they are using. Pharmacists and their staff must recognize the value of interpersonal communication as an essential element in building trust between patients and the pharmacy community. Interpersonal communication often seems like a simple process at first glance for the first; However, developing personal skills is a complex process that requires a lifelong commitment to improvement and practice.</p>
21. Teaching and Learning Strategies	

<b>Strategy</b>	Method of delivering lectures - student groups - The course includes curriculum vocabulary for the subject communication skills, their definition and importance, and the role of the pharmacist in society and health institutions such as hospitals, health centers, and research and consulting centers.
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## 22. Course Structure

<b>Week</b>	<b>Hours</b>	<b>Required Learning Outcomes</b>	<b>Unit or subject name</b>	<b>Learning method</b>	<b>Evaluation method</b>
1.	2hrs. Theoretical	Definition and using	Patient-Centered Communication in Pharmacy Practice	Theoretical lectures	Oral exams discussion
2.	2hrs. Theoretical	Definition and using	Principles and Elements of Interpersonal Communication	Theoretical lectures	Oral exams discussion
3.	2hrs. Theoretical	Definition and using	Nonverbal type communication.	Theoretical lectures	Oral exams discussion
4.	2hrs. Theoretical	Definition and using	Barriers to communication.	Theoretical lectures	Oral exams discussion
5.	2hrs. Theoretical	Definition and using	Listening and empathetic responding communication.	Theoretical lectures	Oral exams discussion
6.	2hrs. Theoretical	Definition and using	Assertiveness.	Theoretical lectures	Oral exams discussion
7.	2hrs. Theoretical	Definition and using	Interviewing assessment.	Theoretical lectures	Oral exams discussion
8.	2hrs. Theoretical	Definition and using	Helping patients to manage their therapeutic regimens.	Theoretical lectures	Oral exams discussion
9.	2hrs. Theoretical	Definition and using	Patient counseling check list; point-by-point discussion of counseling scenario.	Theoretical lectures	Oral exams discussion
10.	2hrs. Theoretical	Definition and using	Medication safety communication skills.	Theoretical lectures	Oral exams discussion
11.	2hrs. Theoretical	Definition and using	Strategies to meet special needs.	Theoretical lectures	Oral exams discussion
12.	2hrs. Theoretical	Definition and using	Communicating with children and elderly about medications.	Theoretical lectures	Oral exams discussion
13.	2hrs. Theoretical	Definition and using	Communication skills for inter-professional collaboration.	Theoretical lectures	Oral exams discussion
14.	2hrs. Theoretical	Definition and using	Electronic communication in healthcare.	Theoretical lectures	Oral exams discussion
15.	2hrs. Theoretical	Definition and using	Ethical behavior when communicating with patients..	Theoretical lectures	Oral exams discussion

## 23. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

#### 24. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Robert S. Beardsley, (ed.); <i>Communication Skills in Pharmacy Practice</i> , 5th edition.
Main references (sources)	Bruce A. Burger (ed.), <i>Communication Skills for Pharmacists</i> ; American Pharmacists Association; 2nd ed
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

## Course Description Form

<b>25. Course Name:</b>	
clinical pharmacy I	
<b>26. Course Code:</b>	
PHARM.4.6.3.1	
<b>27. Semester / Year:</b>	
Fourth year – first semester	
<b>28. Description Preparation Date:</b>	
31-1-2024	
<b>29. Available Attendance Forms:</b>	
<b>30. Number of Credit Hours (Total) / Number of Units (Total)</b>	
30 theoretical hours - 30 practical hours	
<b>31. Course administrator's name (mention all, if more than one name)</b>	
Name: MS.C ALAA IBRAHIM Email: ALAAIBRAHIB@UOMANARA.EDU.IQ	
<b>32. Course Objectives</b>	
<b>Course Objectives</b>	<p><b>The Clinical Pharmacy Laboratory aims to train College of Pharmacy students on the practical and professional side of pharmacy and prepare them to practice the role of an effective pharmacist through:</b></p> <ul style="list-style-type: none"> <li>– Assessing the patient’s health problems and determining whether the prescribed medications optimally meet the patient’s needs.</li> <li>– Evaluating the suitability and effectiveness of medications for the patient.</li> <li>– Identifying untreated health problems that can be dealt with with appropriate treatment.</li> <li>– Follow up on side effects resulting from the use of medications and their impact on the patient’s health.</li> <li>– Communicate with doctors and other health care providers in order to choose the appropriate treatment that best meets the patient’s needs and effectively contributes to the overall treatment goals.</li> <li>– Advising the patient on how to best use the medication.</li> <li>– Supporting the health care team’s efforts to</li> </ul>

educate the patient on other important steps to improve or maintain his health, such as exercise, diet, and preventive steps such as immunization with vaccines. – Referring the patient to his doctor or other health professional to address health or social problems when they arise.

### 33. Teaching and Learning Strategies

<b>Strategy</b>	Identifying the basic principles of clinical pharmacy 2- Identifying the role of the clinical pharmacist in hospitals and health centers 3- Identifying the medical uses of medications 4- Identifying warnings for medications, contraindications to their use, and drug interactions 5- Identifying diseases and an overview of their diagnosis 6- Identifying the role of the pharmacist In the community in treating common and simple cases -7. Method of delivering lectures 8- Student groups 9- Visiting hospitals and pharmacies to view pharmacy applications therein 10- E-learning on campus (using the Internet)
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### 34. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	hrs. Theoretical 2hr practical	Definition and usin	Communication with patie	Theoretical practical lectures	Oral exams discussion
2-3	2hrs. Theoretical 2hr practical	Definition and usin	Respiratory system in prac	Theoretical practical lectures	Oral exams discussion
4-6	2hrs. Theoretical 2hr practical	Definition and usin	G.I.T system in practice	Theoretical practical lectures	Oral exams discussion
7-9	2hrs. Theoretical 2hr practical	Definition and usin	Skin conditions in practice	Theoretical practical lectures	Oral exams discussion
10	2hrs. Theoretical 2hr practical	Definition and usin	Pediatrics in practice	Theoretical practical lectures	Oral exams discussion
11	2hrs. Theoretical 2hr practical	Definition and usin	Minor eye disorders practice	Theoretical practical lectures	Oral exams discussion
12	2hrs. Theoretical 2hr practical	Definition and usin	Women health in practice	Theoretical practical lectures	Oral exams discussion
13	2hrs. Theoretical 2hr practical	Definition and usin	Insomnia and motion sick in practice	Theoretical practical lectures	Oral exams discussion

### 35. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

### 36. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Pharmacotherapy: A Pathophysiologic Approach, 10e. Joseph T. DiPiro. ♣ Clinical pharmacy and therapeutics. Author(S) Roger Walker (ed.) Cate Whittlesea ♣ Koda-Kimble and Young's. Applied Therapeutics: The clinical use of drugs, 11th ed., 2018
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	by Lippincott Williams & Wilkins ♣ Practical manual, college of pharmacy / University Baghdad
Main references (sources)	
Recommended books and references (scientific journals, reports...)	Clinical Pharmacy and therapeutics , by Walker Applied Therapeutics, the clinical use of drugs, by Koda Kimble British National Formulary Symptoms in the pharmacy, by Alison Community Pharmacy; symptoms, diagnosis and treatment Applied Clinical Pharmacokinetics, by Larry
Electronic References, Websites	



## Course Description Form

37. Course Name:	
clinical pharmacy II	
38. Course Code:	
PHARM.4.6.4.2	
39. Semester / Year:	
Fourth year – second semester Fourth year – second semester	
40. Description Preparation Date:	
31-1-2024	
41. Available Attendance Forms:	
42. Number of Credit Hours (Total) / Number of Units (Total)	
30 theoretical hours - 30 practical hours	
43. Course administrator's name (mention all, if more than one name)	
Name: MS.C ALAA IBRAHIM Email: :ALAAIBRAHIB@UOMANARA.EDU.IQ	
44. Course Objectives	
<b>Course Objectives</b>	<p>The Clinical Pharmacy Laboratory aims to train College of Pharmacy students on the practical and professional side of pharmacy and prepare them to practice the role of an effective pharmacist through:</p> <ul style="list-style-type: none"> <li>– Assessing the patient’s health problems and determining whether the prescribed medications optimally meet the patient’s needs.</li> <li>– Evaluating the suitability and effectiveness of medications for the patient.</li> <li>– Identifying untreated health problems that can be dealt with with appropriate treatment.</li> <li>– Follow up on side effects resulting from the use of medications and their impact on the patient’s health.</li> <li>– Communicate with doctors and other health care providers in order to choose the appropriate treatment that best meets the patient’s needs and effectively contributes to the overall treatment goals.</li> <li>– Advising the patient on how to best use the medication.</li> <li>– Supporting the health care team’s efforts to educate the patient on other important steps to improve or maintain his health, such as exercise, diet, and preventive steps such as immunization with vaccines.</li> <li>– Referring the patient to his doctor or other health professional to address health or social problems when they arise.</li> </ul>

## 45. Teaching and Learning Strategies

<b>Strategy</b>	Identifying the basic principles of clinical pharmacy 2- Identifying the role of the clinical pharmacist in hospitals and health centers 3- Identifying the medical uses of medications 4- Identifying warnings for medications, contraindications to their use, and drug interactions 5- Identifying diseases and an overview of their diagnosis 6- Identifying the role of the pharmacist In the community in treating common and simple cases -7. Method of delivering lectures 8- Student groups 9- Visiting hospitals and pharmacies to view pharmacy applications therein 10- E-learning on campus (using the Internet)
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## 46. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1.	2hrs. Theoretical 2hr practical	Definition and using		Theoretical practical lecture	Oral exams discussion
2.	2hrs. Theoretical 2hr practical	Definition and using		Theoretical practical lecture	Oral exams discussion
3.	2hrs. Theoretical 2hr practical	Definition and using		Theoretical practical lecture	Oral exams discussion
4.	2hrs. Theoretical 2hr practical	Definition and using		Theoretical practical lecture	Oral exams discussion
5.	2hrs. Theoretical 2hr practical	Definition and using		Theoretical practical lecture	Oral exams discussion
6.	2hrs. Theoretical 2hr practical	Definition and using		Theoretical practical lecture	Oral exams discussion
7.	2hrs. Theoretical 2hr practical	Definition and using		Theoretical practical lecture	Oral exams discussion
8.	2hrs. Theoretical 2hr practical	Definition and using		Theoretical practical lecture	Oral exams discussion
9.	2hrs. Theoretical 2hr practical	Definition and using		Theoretical practical lecture	Oral exams discussion
10.	2hrs. Theoretical 2hr practical	Definition and using		Theoretical practical lecture	Oral exams discussion
11.	2hrs. Theoretical 2hr practical	Definition and using		Theoretical practical lecture	Oral exams discussion
12.	2hrs. Theoretical 2hr practical	Definition and using		Theoretical practical lecture	Oral exams discussion
13.	2hrs. Theoretical 2hr practical	Definition and using		Theoretical practical lecture	Oral exams discussion
14.	2hrs. Theoretical 2hr practical	Definition and using		Theoretical practical lecture	Oral exams discussion
15.	2hrs. Theoretical 2hr practical	Definition and using		Theoretical practical lecture	Oral exams discussion

#### 47. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

#### 48. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Pharmacotherapy: A Pathophysiologic Approach, 10e. Joseph T. DiPiro. ♣ Clinical pharmacy and therapeutics. Author(S) Roger Walker (ed.) Cate Whittlesea ♣ Koda-Kimble and Young's. Applied Therapeutics: The clinical use of drugs, 11th ed., 2018 by Lippincott Williams & Wilkins ♣ Practical manual, college of pharmacy / University Baghdad
Main references (sources)	
Recommended books and references (scientific journals, reports...)	Clinical Pharmacy and therapeutics , by Walker Applied Therapeutics, the clinical use of drugs, by Koda Kimble British National Formulary Symptoms in the pharmacy, by Alison Community Pharmacy; symptoms, diagnosis and treatment Applied Clinical Pharmacokinetics, by Larry
Electronic References, Websites	

## Course Description Form

<b>49. Course Name:</b>	
Applied therapeutics I	
<b>50. Course Code:</b>	
Pharm 5.6.1.5	
<b>51. Semester / Year:</b>	
5 <sup>th</sup> year/1 <sup>st</sup> semester	
<b>52. Description Preparation Date:</b>	
20/1/2024	
<b>53. Available Attendance Forms:</b>	
Theoretical	
<b>54. Number of Credit Hours (Total) / Number of Units (Total)</b>	
45 hours	
<b>55. Course administrator's name (mention all, if more than one name)</b>	
Name: Tahssin Ali mohemmed Email: TAHSSEINALI@UOMANARA.EDU.IQ	
<b>56. Course Objectives</b>	
<b>Course Objectives</b>	<ul style="list-style-type: none"> <li>• The student focuses through the branch of clinical pharmacy on studying most of the pathological cases and how to deal with them in private pharmacies. Or the most difficult referrals and how to deal with them diagnostically by the medical team... In addition to developing communication skills with patients and doctors. In addition to practical training in hospitals to monitor medical cases... With the study of the ruling moral system And study the economic foundations to calculate the cost of disease and treatment... In addition to studying ways and how to deal with the concentrations of dangerous drugs in the blood.....</li> </ul>
<b>57. Teaching and Learning Strategies</b>	
<b>Strategy</b>	-Study of simple diseases and how to deal with them in pharmacy - Study of various diseases (causes of symptoms diagnosis and treatment) - Study of the basics of pharmacological control Practical applications that simulate pharmacies (virtual pharmacy)

- 1 – Applied courses in private and governmental pharmacies
- 2 – Applied courses in hospitals

### 58. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1 Theoretical hours	Knowledge of diseases and its treatment	Stroke	Theoretical	Theoretical examination
2	2 Theoretical hours	Knowledge of diseases and its treatment	Shock	Theoretical	Theoretical examination
3	3 Theoretical hours	Knowledge of diseases and its treatment	Liver cirrhosis & Viral hepatitis	Theoretical	Theoretical examination
4	2 Theoretical hours	Knowledge of diseases and its treatment	Inflammatory bowel diseases	Theoretical	Theoretical examination
5	2 Theoretical hours	Knowledge of diseases and its treatment	Enteral nutrition	Theoretical	Theoretical examination
6	2 Theoretical hours	Knowledge of diseases and its treatment	Parenteral nutrition	Theoretical	Theoretical examination
7	2 Theoretical hours	Knowledge of diseases and its treatment	Glaucoma	Theoretical	Theoretical examination
8	2 Theoretical hours	Knowledge of diseases and its treatment	Acid – base disorders	Theoretical	Theoretical examination
9	2 Theoretical hours	Knowledge of diseases and its treatment	Disorders of fluid and electrolytes	Theoretical	Theoretical examination
10	4 Theoretical hours	Knowledge of diseases and its treatment	Acute renal failure (ARF) , Chronic renal failure (CRF) & Hemodialysis and peritoneal dialysis	Theoretical	Theoretical examination
11	1 Theoretical hours	Knowledge of diseases and its treatment	Systemic lupus erythematosus (SLE)	Theoretical	Theoretical examination
12	2 Theoretical hours	Knowledge of diseases and its treatment	Epilepsy and status epilepticus	Theoretical	Theoretical examination
13	1 Theoretical hours	Knowledge of diseases and its treatment	multiple sclerosis	Theoretical	Theoretical examination

14	2Theoretical hours	Knowledge of diseases and its treatment	Parkinson's disease	Theoretical	Theoretical examination
15	Theoretical 3hours	Knowledge of diseases and its treatment	Pain management & Headache disorders	Theoretical	Theoretical examination

### 59. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

### 60. Learning and Teaching Resources

Required textbooks (curricular books any)	Applied Clinical Pharmacokinetics, Second Edition, 2008 by Larry A. Bauer. Pharmacotherapy: A Pathophysiologic Approach, 10e. Joseph T. DiPiro. □ Clinical pharmacy and therapeutics. Author(S) Roger Walker (ed.) Cate Whittlesea □ Koda-Kimble and Young's. Applied Therapeutics: The clinical use of drugs, 11th ed., 2018 by Lippincott Williams & Wilkins □ Practical manual, college of pharmacy / University Baghdad
Main references (sources)	Clinical Pharmacy and therapeutics , by Walker Applied Therapeutics, the clinical use of drugs, by Koda Kimble British National Formulary Symptoms in the pharmacy, by Alison Community Pharmacy; symptoms, diagnosis and treatment Applied Clinical Pharmacokinetics, by Larry
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

## Course Description Form

<b>61. Course Name:</b>					
Applied therapeutics II					
<b>62. Course Code:</b>					
Pharm 5.6.2.5					
<b>63. Semester / Year:</b>					
2 <sup>nd</sup> semester / 5 <sup>th</sup> stage					
<b>64. Description Preparation Date:</b>					
3/2/2024					
<b>65. Available Attendance Forms:</b>					
Theoretical					
<b>66. Number of Credit Hours (Total) / Number of Units (Total)</b>					
45 h					
<b>67. Course administrator's name (mention all, if more than one name)</b>					
Name: Mohammed Radhi Email:					
<b>68. Course Objectives</b>					
<b>Course Objectives:</b> Analytical Chemistry			The student focuses through the branch of clinical pharmacy on studying most of the pathological cases and how to deal with them in private pharmacies. Or the most difficult referrals and how to deal with them diagnostically by the medical team... In addition to developing communication skills with patients and doctors. In addition to practical training in hospitals to monitor medical cases... With the study of the ruling moral system And study the economic foundations to calculate the cost of disease and treatment... In addition to studying ways and how to deal with the concentrations of dangerous drugs in the blood		
<b>69. Teaching and Learning Strategies</b>					
<b>Strategy</b>		Study of simple diseases and how to deal with them in pharmacy - Study of various diseases (causes of symptoms diagnosis and treatment) - Study of the basics of pharmacological control Practical applications that simulate pharmacies (virtual pharmacy)			
<b>70. Course Structure</b>					
<b>Week</b>	<b>Hours</b>	<b>Required Learning Outcomes</b>	<b>Unit or subject name</b>	<b>Learning method</b>	<b>Evaluation method</b>

1	2	Knowledge of diseases and its treatment	Thyroid and parathyroid disorders	Lectures	Oral Exam Written Exam
2	1	Knowledge of disease and its treatment	Contraception	Lectures	Written Exam
3	1	Knowledge of disease and its treatment	Endometriosis	Lectures	Written Exam
4	1	Knowledge of disease and its treatment	Menstruation related disorders	Lectures	Written Exam
5	2	Knowledge of disease and its treatment	Hormonal replacement therapy (HRT)	Lectures	Written Exam
6	2	Knowledge of disease and its treatment	Cancer treatment and chemotherapy	Lectures	Written Exam
7	2	Knowledge of disease and its treatment	Leukemias	Lectures	Written Exam
8	2	Knowledge of disease and its treatment	Lymphomas and Multiple myeloma	Lectures	Written Exam
9	2	Knowledge of diseases and its treatment	Breast and prostate cancers	Lectures	Written Exam
10	2	Knowledge of diseases and its treatment	Adverse effects of chemotherapy	Lectures	Written Exam
11	1	Knowledge of diseases and its treatment	Human immunodeficiency virus	Lectures	Written Exam
12	2	Knowledge of diseases and its treatment	Adrenal gland disorders	Lectures	Written Exam
13	1	Knowledge of diseases and its treatment	Pituitary gland disorders I	Lectures	Written Exam
14	1	Knowledge of diseases and its treatment	Alzheimer's disease	Lectures	Written Exam
15	1	Knowledge of diseases and its treatment	Schizophrenia	Lectures	Written Exam
16	2	Knowledge of disease and its treatment	Depressive disorders	Lectures	Written Exam
17	1	Knowledge of disease and its treatment	Anxiety disorders	Lectures	Written Exam
18	1	Knowledge of disease and its treatment	Sleep disorders	Lectures	Written Exam
19	2	Knowledge of disease and its treatment	Bipolar disorders	Lectures	Written Exam

## 71. Course Evaluation



## 72. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Roger Walker, Clive Edwards (eds), Clinical Pharmacy & Therapeutics. Barbara G.Wells & Joseph T. Diriro, Pharmacotherapy hand book 7th Edition
Main references (sources)	Clinical Pharmacy and therapeutics , by Walker Applied Therapeutics, the clinical use of drugs, by Koda Kimble British National Formulary Symptoms in the pharmacy, by Alison Community Pharmacy; symptoms, diagnosis and treatment Applied Clinical Pharmacokinetics, by Larry
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

## Course Description Form

73. Course Name:	
Therapeutic drug monitoring	
74. Course Code:	
Pharm 5.6.2.8	
75. Semester / Year:	
second/ Fifth	
76. Description Preparation Date:	
24/2/2024	
77. Available Attendance Forms:	
Weekly	
78. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours theoretical + 30 hours practical	
79. Course administrator's name (mention all, if more than one name)	
Name: Dr. Haitham Sachet Humadi Email: haithemhma@gmail.com	
80. Course Objectives	
<b>Course Objectives</b>	<ul style="list-style-type: none"> <li>• A knowledge and understanding –</li> <li>• A1 Recognize the basic principles in – TDM</li> <li>• A2 Identify the role of the pharmacist in drug control and their effects –</li> <li>• A3 Learn ways to solve problems related to some medicines –</li> <li>• A4 Identify the warnings of drugs, contraindications and drug interactio</li> </ul>
81. Teaching and Learning Strategies	
<b>Strategy</b>	<ul style="list-style-type: none"> <li>• How to give lectures</li> <li>• Student Groups</li> <li>• Weekly trips to the teaching hospital and taking lessons in laboratories exclusively with</li> <li>• Seminars inside the hospital</li> <li>• On-campus e-learning (use of the Internet)</li> </ul>
82. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 hr. theoretical	Definition and use	Course Overview	Lectures	Quizzes and Discussion
2	2 hr. theoretical	Definition and use	Review of basic pharmacokinetic (PK)-	Lectures	Quizzes Discussion
3	2 hr. theoretical	Definition and use	Review of basic pharmacodynamic (PD)	Lectures	Quizzes Discussion
4	2 hr. theoretical	Definition and use	Clinical PK equations and calculations	Lectures	Quizzes Discussion
5	2 hr. theoretical	Definition and use	Clinical PK in special population and cases	Lectures	Quizzes Discussion
6	2 hr. theoretical	Definition and use	Clinical PK/PD for antibiotics (e.g., Aminoglycosides, Vancomycin)	Lectures	Quizzes Discussion
7	2 hr. theoretical	Definition and use	Clinical PK/PD for antibiotics (e.g., Aminoglycosides, Vancomycin)	Lectures	Quizzes Discussion
8	2 hr. theoretical	Definition and use	Clinical PK/PD for Cardiovascular agents (e.g., Digoxin, Lidocaine, Procainamide/N-Acetyl Procainamide)	Lectures	Quizzes Discussion
9	2 hr. theoretical	Definition and use	Clinical PK/PD for Cardiovascular agents (e.g., Digoxin, Lidocaine, Procainamide/N-Acetyl Procainamide)	Lectures	Quizzes Discussion
10	2 hr. theoretical	Definition and use	Clinical PK/PD for Anticonvulsants (e.g., Phenytoin, Carbamazepine, Valproic Acid, Phenobarbitone/Primidone, Ethosuxsimide)	Lectures	Quizzes Discussion
11	2 hr. theoretical	Definition and use	Clinical PK/PD for Anticonvulsants (e.g., Phenytoin, Carbamazepine, Valproic Acid, Phenobarbitone/Primidone, Ethosuxsimide)	Lectures	Quizzes Discussion
12	2 hr. theoretical	Definition and use	Clinical PK/PD for Immunosuppressants (e.g., Cyclosporine, Tacrolimus)	Lectures	Quizzes Discussion
13	2 hr. theoretical	Definition and use	Clinical PK/PD for Immunosuppressants (e.g., Cyclosporine, Tacrolimus)	Lectures	Quizzes Discussion
14	2 hr. theoretical	Definition and use	Clinical PK/PD for Immunosuppressants (e.g., Cyclosporine, Tacrolimus)	Lectures	Quizzes Discussion
15	2 hr. theoretical	Definition and use	Clinical PK/PD of other drugs (e.g., Lithium,	Lectures	

			Theophylline, Anticancer agents, Anticoagulats		
<b>83. Course Evaluation</b>					
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc					
<b>84. Learning and Teaching Resources</b>					
Required textbooks (curricular books, if any)		<ul style="list-style-type: none"> <li>• Applied Clinical Pharmacokinetics, Second Edition, 2008 by Larry A. Bauer.</li> <li>• Clinical Pharmacokinetics Concepts and Applications, Third Edition, 1995 by Malcolm Rowland and Thomas Tozer;</li> </ul>			
Main references (sources)					
Recommended books and references (scientific journals, reports...)					
Electronic References, Websites					

## Course Description Form

85. Course Name:	
Pharmacoeconomics	
86. Course Code:	
Pharm 5.6.2.9	
87. Semester / Year:	
second/ Fifth	
88. Description Preparation Date:	
24/2/2024	
89. Available Attendance Forms:	
Weekly	
90. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
91. Course administrator's name (mention all, if more than one name)	
Name: Dr. Haitham Sachet Humadi Email: haithemhma@gmail.com	
92. Course Objectives	
<b>Course Objectives</b>	<ul style="list-style-type: none"> <li>• A knowledge and understanding –</li> <li>• A1 Identify the basic principles of pharmacoeconomics –</li> <li>• A2 Identify the importance of the pharmaceutical economy and its impact on medical and pharmaceutical decisions –</li> <li>• A3 Expanding the pharmacist's perception in the field of decision-making related to financial aspects</li> <li>• and economic</li> </ul>
93. Teaching and Learning Strategies	
<b>Strategy</b>	<ul style="list-style-type: none"> <li>• Theoretical lectures in the classroom</li> <li>• On-campus e-learning (use of the Internet)</li> </ul>
94. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Definition and use	Course overview, Changes in health care delivery, overview of Pharmacoeconomics	Lectures	Quizzes and Discussion
2	2	Definition and use	Cost determination	Lectures	Quizzes Discussion
3	2	Definition and use	Evaluation of outcomes and effectiveness, types of pharmacoeconomic analyses: Cost effectiveness analyses (CEA), cost minimization analyses (CMA).	Lectures	Quizzes Discussion
4	2	Definition and use	Methods of data collection and analyses, modeling (decision analyses).	Lectures	Quizzes Discussion
5	2	Definition and use	Incremental analyses; case studies.	Lectures	Quizzes Discussion
6	2	Definition and use	Evaluation outcomes: Utility and quality of life; types of pharmacoeconomic analyses, cost utility analyses (CUA).	Lectures	Quizzes Discussion
7	2	Definition and use	Evaluation outcomes: Net benefit, cost utility analyses (CBA), compare and contrast CEA, CUA and CBA	Lectures	Quizzes Discussion
8	2	Definition and use	Methods of data collection and analyses: Statistical/Econometric modeling	Lectures	Quizzes Discussion
9	2	Definition and use	Drug-focused versus disease-focused framework for conducting pharmacoeconomic analyses	Lectures	Quizzes Discussion
10	2	Definition and use	Critical review of pharmacoeconomic and quality of life literature.	Lectures	Quizzes Discussion
11	2	Definition and use	Introduction to epidemiology	Lectures	Quizzes Discussion
12	2	Definition and use	Project presentation	Lectures	Quizzes Discussion
13	2	Definition and use	Project presentation	Lectures	Quizzes Discussion
14	2	Definition and use	Project presentation	Lectures	Quizzes Discussion

15	2	Definition and use	Project presentation	Lectures	
<b>95. Course Evaluation</b>					
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc					
<b>96. Learning and Teaching Resources</b>					
Required textbooks (curricular books, if any)		Bootman JL, Townsend RJ, McGhan WF, (Eds.), Principles of Pharmacoeconomics, 2nd ed., Harvey Whitney Books Company, Cincinnati, Oh			
Main references (sources)					
Recommended books and references (scientific journals, reports...)					
Electronic References, Websi					