


Republic of Iraq  
Ministry of Higher Education & Scientific  
Research Supervision and Scientific  
Evaluation Directorate Quality Assurance  
and Academic Accreditation International  
Accreditation Dept.

### Academic Program Specification Form for The Academic

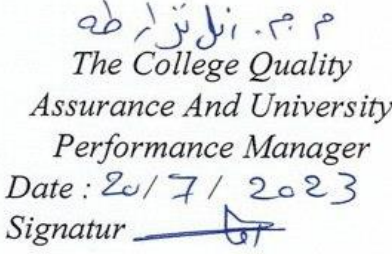
University: Alnahrain university  
College: collage of pharmacy  
Number Of Departments In  
The College: Date of Form  
Completion:



Dean's Name  
Date: / /



Dean's Assistant  
For Scientific  
Affairs  
Date: / /



The College Quality  
Assurance And University  
Performance Manager  
Date : 20/7/ 2023  
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Quality Assurance And University Performance  
Manager Date : / /  
Signature

# TEMPLATE FOR PROGRAMME SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

### PROGRAMME SPECIFICATION

This Program Specification provides a concise summary of the main features of the program and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It is supported by a specification for each course that contributes to the program.

1. Teaching Institution	Ministry of higher education and scientific research \ al-Nahrain university
2. University Department/Centre	Collage of pharmacy \ clinical pharmacy department
3. Program Title	Part of the bachelor's degree in pharmacy
4. Title of Final Award	Bachelor's degree in pharmacy
5. Modes of Attendance offered	Course system
6. Accreditation	Ministry of higher education and scientific research
7. Other external influences	Laboratory training, hospital training, summer training, graduation projects and committee of deans of the college of pharmacy.
8. Date of production/revision of this specification	23\10\2022

#### 9. Aims of the Program

**Clinical Pharmacy is a one branches of pharmacy, it started nearly a quarter of a century ago and produced a new generation of clinical pharmacists interested in direct patient care by providing pharmaceutical care services rather than traditional focusing on medicinal product to co-operate with the medical team in the care of patients in terms of optimizing medication use, health promotion and disease prevention in order to meet the health challenges and raise the efficiency of pharmaceutical care services.**

#### **Vision**

**The department of Clinical Pharmacy is seeking to be the primary education source in terms of providing high quality education to future clinical pharmacists that focuses on patient care**

through pharmaceutical care process in theoretical and practical education and research work in the area of patient care and health assembly.

## **Mission**

**The mission of the department of Clinical Pharmacy is to improve health care through innovation in education, patient care research, and public health. The faculty works closely with the department to deliver a quality program leading to the Bachelor Science in Pharmacy degree (Bsc.Pharmacy).**

## **Objectives:**

- 1. Contribute leadership at the local, national levels to fulfill the mission and visions of the department, faculty, university and profession.**
- 2. Improve the health and well-being of patients by facilitating and providing safe and effective medication use, and by identifying, examining and eliminating barriers to optimal medication use.**
- 3. Advance the role of pharmacy and pharmacists in improving the public health and enhancing the quality of human life through education and training, clinical preventive services, and community-based health promotion and disease prevention activities.**
- 4. Providing education to students in various aspects of pharmacy practice, utilizing the principles of pharmaceutical care, problem-based learning and critical thinking that all together enable them to acquire in-depth expertise in pharmaceutical, social/economic management and in related sciences in order to function as practitioners and scientists.**
- 5. Serving the community by providing pharmaceutical care activities that lead to improvements in healthcare delivery and enhances health outcomes.**
- 6. Contributing to the profession of pharmacy by participation in leadership roles in pharmaceutical organization and community programs**

## 10. Learning Outcomes, Teaching, Learning and Assessment Methods

### A. Cognitive goals

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

### B. The skills goals special to the programme .

- B1 - Communication skills with patients
- B2 - The skill of drug education for patients
- B3- The skill of extracting the required information from its approved sources

### Teaching and Learning Methods

- the blackboard
- PowerPoint slides
- learning (social networking sites: the branch has a special channel that includes video lectures)

### Assessment methods

- C. Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

### C. Affective and value goals

- C1 - Thinking skills through translating analyzing, evaluating and extracting ideas
- C2 - Cultivating ethical values for the correct treatment of patients

### Teaching and Learning Methods

- By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios
- Simulate the work of a pharmacist in pharmacies

### Assessment methods

Reviewing personal thinking skills, presenting results, and using new methods of learning

### D. General and Transferable Skills (other skills relevant to employability and personal development)

- D1- Listening skills
- D2 - Leadership skills
- D3 - Conversational skills
- D4 - Decision-making skills

### Teaching and Learning Methods

- By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios
- Simulate the work of a pharmacist in pharmacies

### Assessment Methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

### 11. Program Structure OF Clinical Pharmacy Course

Level/Year	Course or Module Code	Course or Module Title	Credit rating (Hours)		12. Awards and Credits
			Theory	Lab.	
Third stage (one course)	3211	Pharmacy ethics	One hour weekly		Bachel or Degree Requires ( x ) credits
Fourth stage (one course)	215	Communication skill	Two hours weekly		
Fourth stage (two course)		Clinical pharmacy	Two hours weekly	Two hours for each course	
Fifth stage (two course)		Applied Therapeutic	Three hours first course Two hours second course		

Fifth stage (One course)	529	Therapeutic drug monitoring	Two hours weekly	Two hours weekly
Fifth stage (One course)	527	pharmaceconomy	Two hours weekly	
Fifth stage (One course)	5211	Hospital training	Two hours weekly	Two hours weekly

### 13. Personal Development Planning

There are certain units within the program for personal development, giving students opportunities and encouraging them to engage in Professionally relevant qualifications that allow students to reflect on their own professional development

### 14. Admission criteria.

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

### 15. Key sources of information about the programme

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











# TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

### COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the program specification.

#### **Theory clinical pharmacy I**

Teaching Institution	Ministry of higher education and scientific research \ al-Nahrain university
2. University Department/Centre	Collage of pharmacy \ clinical pharmacy department
3. Course title/code	Theory clinical pharmacy I
4. Modes of Attendance offered	Course system
5. Semester/Year	Semester 1
6. Number of hours tuition (total)	Theory 2
7. Date of production/revision of this specification	Laboratory training, hospital training, summer training, graduation projects and committee of deans of the college of pharmacy.
8. Aims of the Course	
	1- To develop the understanding and acceptance of clinical pharmacy
	2- Understanding pharmaceutical care as concepts and applications that enable the students to ensure safe and effective use of medication in disease state as a part of medical team

## 9. Learning Outcomes, Teaching, Learning and Assessment Methode

### A- Cognitive goals .

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

### B. The skills goals special to the course.

B1- Communication skills with patients

B2 - The skill of drug education for patients

B3- The skill of extracting the required information from its approved sources.

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

B3.

### Teaching and Learning Methods

- the blackboard
- PowerPoint slides
- learning (social networking sites: the branch has a special channel that includes video lectures)

### Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

### C. Affective and value goals

C1 - Thinking skills through translating, analyzing, evaluating and extracting ideas

C2 - Cultivating ethical values for the correct treatment of patients

### Teaching and Learning Methods

- By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios
- Simulate the work of a pharmacist in pharmacies

## Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

D1- Listening skills

D2 - Leadership skills

D3 - Conversational skills

D4 - Decision-making skills

## 10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	Define of clinical and community pharmacy with drug distribution patients education	Introduction to clinical and community pharmacy: drug distribution system, principles of patient education	ppt	Quiz
2	2	Management of pediatric and geriatric	Clinical pharmacy practice in neonate pediatric and geriatric	ppt	Report
3	2	Management of Cough, common cold and allergic rhinitis	Clinical pharmacy in respiratory system care: Cough common cold and allergic rhinitis.	ppt	Quiz
4	2	Management of diarrhea, constipation, GERD and hemorrhoid.	Clinical pharmacy in GIT system care: diarrhea, constipation, GERD and hemorrhoid.		Report
5	2	Oral thrush and head lice treatment	Pediatric care practice: oral thrush and head lice.	Ppt	Quiz
6	2	Pharmaceutical care of a acne, scabies, psoriasis, hair loss and athletes foot.	Pharmacy care in skin conditions: acne, scabies, psoriasis, hair loss and athletes foot.	Ppt	Report
7	2	Management of cystitis and vaginal thrush and emergency contraceptive techniques	Women health care: cystitis and vaginal thrush, primary dysmenorrhea and emergency contraceptive techniques	Ppt	Quiz
8	2	Management of headache, insomnia, and	Pharmacy care in CNS related problems: headache, insomnia, and	Ppt	Report

		motions sickness.	motions sickness.		
9	2	Eye disorders management	Pharmacy care in eye disorders.	Ppt	Quiz
10	2	ENT conditions treatment	Pharmacy care in ENT conditions.	Ppt	Quiz
11	1	mouthulcer and mouth thrush treatment	Pharmacy care in oral hygiene: mouthulcer and mouth thrush.	Ppt	Report
12	2	Controlling of weight and obesity treatment.	Pharmacy care in obesity and body weight control.	Ppt	Quiz
13	1	Management of musculoskeletal disorders.	Pharmacy care in management pain and musculoskeletal disorders	Ppt	Report
14	2	Advice and treatment of smoker persons	Nicotine replacement therapy (NRT).	Ppt	Quiz
15	1	Poisoning management.	Clinical pharmacy practice in poisoning.	Ppt	Report
16	2	Medicines used for eczema and dermatitis; dandruff.	Clinical pharmacy practice in eczema and dermatitis; dandruff.	Ppt	Quiz
17	2	Management of skin infection	Clinical pharmacy in fungal skin infection; cold sore, corns and callus	Ppt	Quiz
					Final exam

11. Infrastructure	
1. Books Required reading:	Roger Walker, Clive Edwards (eds), Clinical Pharmacy & Therapeutics
2. Main references (sources)	Roger Walker, Clive Edwards (eds), Clinical Pharmacy & Therapeutics
A- Recommended books and references (scientific journals, reports...).	Articles
B-Electronic references, Internet sites...	World health organization FDA (U.S. Food and Drug Administration)
12. The development of the curriculum plan	
No	



## Practical clinical pharmacy I

Teaching Institution	Ministry of higher education and scientific research \ al-Nahrain university
2. University Department/Centre	Collage of pharmacy \ clinical pharmacy department
3. Course title/code	Practical clinical pharmacy I
4. Modes of Attendance offered	Course system
5. Semester/Year	Semester 1
6. Number of hours tuition (total)	2 hour
7. Date of production/revision of this specification	Laboratory training, hospital training, summer training, graduation projects and committee of deans of the college of pharmacy.
<b>8. Aims of the Course</b>	
1- To introduce students to the philosophy of pharmaceutical care and the skills and attitudes necessary to develop a pharmaceutical care practice.	
2- To emphasize the active and collaborative learning activities to provide students with problem solving skills, communication skills, ethical standard of conduct and responsible attitude toward patient care as well as a sound scientific knowledge base	

## 9. Learning Outcomes, Teaching, Learning and Assessment Methods

### A- Cognitive goals .

- 1- Studying the different types of simple diseases and how to deal with them in the pharmacy
- 2- Studying different diseases (causes, symptoms, diagnosis and treatment)
- 3- Study the communication skills necessary for the work of the pharmacist
- 4- Studying the ethics of the pharmacy profession
- 5- Studying the foundations of the pharmaceutical economy

6- Studying the methods of calculating the concentrations of dangerous drugs in the blood and how to deal with them

B. The skills goals special to the course.

B1- Communication skills with patients

B2 - The skill of drug education for patients

B 3- The skill of extracting the required information from its approved sources.

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

B3.

### Teaching and Learning Methods

-the blackboard

-PowerPoint slides

-learning (social networking sites: the branch has a special channel that includes video lectures)

### Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

C. Affective and value goals

C1 - Thinking skills through translating, analyzing, evaluating and extracting ideas

C2 - Cultivating ethical values for the correct treatment of patients

### Teaching and Learning Methods

-By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios

-Simulate the work of a pharmacist in pharmacies

### Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

D1- Listening skills

D2 - Leadership skills

D3 - Conversational skills

D4 - Decision-making skills

### 10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	Learning how to communicate with patients	Communication with patients	Ppt	Quiz
2	2	Management of cough	Respiratory system in practice (part II): cough	Ppt	Report
3	2	Management of common cold	Respiratory system in practice (part II): common cold.	Ppt	Quiz
4	2	Constipation management	GIT system practice (part I): constipation.	Ppt	Report
5	2	Diarrhea management	GIT system practice (part II): diarrhea and IBS	Ppt	Quiz
6	2	GERD treatment	GIT system practice (part III): GERD	Ppt	Report
7	2	Management of hair loss, cold sore athlete's foot	Skin conditions in practice (part I): hair loss, cold sore and athlete's foot	Ppt	Quiz
8	2	Dandruff and eczema treatment	Skin conditions in practice (part II): dandruff and eczema.	Ppt	Report
					Med term exam
9	2	Wart and scabies treatment	Skin conditions in practice (part III): warts and scabies.	Ppt	Quiz
10	2	Principles of pharmacy practice part I	Collective practice number I.	Ppt	Quiz
11	1	oral thrush, colic, pin worm and napkin rash. Treatment	Pediatrics in practice: oral thrush, colic, pin worm and napkin rash.	Ppt	Report
12	2	Eye disorder treatment	Minor eye disorder in practice.	Ppt	Quiz
13	2	Women health education	Women health in practice	Ppt	Report
14	2	Management of Insomnia and motion sickness	Insomnia and motion sickness in practice.	Ppt	Quiz
15	2	Principles of pharmacy practice part II	Collective practice number II	Ppt	Report


11. Infrastructure	
1. Books Required reading:	Roger Walker, Clive Edwards (eds), Clinical Pharmacy & Therapeutics
2. Main references (sources)	Roger Walker, Clive Edwards (eds), Clinical Pharmacy & Therapeutics
A- Recommended books and references (scientific journals, reports...).	Articles
B-Electronic references, Internet sites...	World health organization FDA (U.S. Food and Drug Administration)
12. The development of the curriculum plan	
No	

## Theory applied therapeutic I

2. University Department/Centre	Collage of pharmacy \ clinical pharmacy department
3. Course title/code	Theory applied therapeutic I
4. Modes of Attendance offered	Course system
5. Semester/Year	Semester 1
6. Number of hours tuition (total)	Theory 3
7. Date of production/revision of this specification	Laboratory training, hospital training, summer training, graduation projects and committee of deans of the college of pharmacy.
8. Aims of the Course	
1- To improve the knowledge and practice of students in the clinical application of drugs to the treatment of diseases and disorders in different organ systems	
2- Help students integrate clinical pharmacy practice with other health care providers in the clinical settings.	

## 9. Learning Outcomes, Teaching, Learning and Assessment Methode

### A- Cognitive goals .

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

B. The skills goals special to the course.  
B1- Communication skills with patients  
B2 - The skill of drug education for patients  
B 3- The skill of extracting the required information from its approved sources.

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

B3.

### Teaching and Learning Methods

-the blackboard  
-PowerPoint slides  
-learning (social networking sites: the branch has a special channel that includes video lectures)

### Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

### C. Affective and value goals

C1 - Thinking skills through translating, analyzing, evaluating and extracting ideas  
C2 - Cultivating ethical values for the correct treatment of patients

### Teaching and Learning Methods

-By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios  
-Simulate the work of a pharmacist in pharmacies

### Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

### D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

D1- Listening skills  
D2 - Leadership skills  
D3 - Conversational skills  
D4 - Decision-making skills

## 10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	Management of hypertension	Pharmacotherapy of Cardiovascular Disorders: Hypertension.	ppt	Quiz
2	2	Management of heart failure	Drug therapy in heart failure.	ppt	Quiz
3	2	Management of a acute coronary syndrome	Drug therapy in ischemic heart diseases and a acute coronary syndrome.	ppt	Report
4	2.	Management of stroke and arrhythmias	Drug therapy in arrhythmias and stroke.	ppt	Quiz
5	2	Management of dyslipidemia	Pharmacotherapy in dyslipidemia and venous thromboembolism.	ppt	Quiz
6	2	Management of hypovolemic shock	Drug therapy in hypovolemic shock, intensive care (DKA).	ppt	Report
7	2	Management of asthma and COPD	Pharmacotherapy of Respiratory disorders: Asthma and COPD.	ppt	Quiz.
8	2	Management of lower respiratory tract infection	Drug therapy in cystic fibrosis and upper and lower respiratory tract infections.	ppt	Quiz
9		Management of GIT disorders	Pharmacotherapy in gastrointestinal disorders: GERD and peptic ulcer diseases.		Report
10	2	Management of IBS and IBD	Drug therapy in inflammatory bowel disease and irritable bowel syndrome.	ppt	Quiz
11		Management of liver cirrhosis and hepatitis	Drug therapy in portal hypertension and liver cirrhosis, viral hepatitis.		Quiz
					Mid term exam
12	1	Treatment of N/V	Drug therapy in nausea and vomiting and pancreatitis.		Quiz
13	2	Management of a acute renal failure	Pharmacotherapy in renal disorders: Acute renal failure.	ppt	Report
14	3	Management of end stage renal disease	Drug therapy in chronic end-stage renal diseases.	ppt	Quiz
15	3	Management of urinary	Drug therapy in fluid and electrolyte disorders and	ppt	Report

		tract infection and electrolyte disorder	acid base disturbances; urinary tract infections.		
16	1	Management of enuresis	Drug therapy in urinary incontinence and pediatric enuresis.	ppt	Quiz
17	1	Treatment of erectile dysfunctions	Drug therapy benign prostatic hyperplasia and erectile dysfunction.	Ppt	Report
18	2	Management of epilepsy and status epilepticus	Pharmacotherapy in neurologic disorders: epilepsy and status epilepticus.	Ppt	Quiz
19	2	Management of MS, Parkinson disease	Drug therapy in multiple sclerosis; Parkinson disease and management of pain.	Ppt	Report
20	2	Treatment of gynecology and obstetrics disorders	Pharmacotherapy in gynecology and obstetrics disorders: Therapeutic considerations in pregnancy and lactation.	Ppt	Quiz
21	3	Management of menstrual disorder	Drug therapy in menstruation related disorders; contraception.	Ppt	Quiz
22	1	Uses of HRT in menopause women	Hormone replacement therapy in menopause	Ppt	Report

11. Infrastructure	
1. Books Required reading:	Roger Walker, Clive Edwards (eds), Clinical Pharmacy & Therapeutics. Barbara G. Wells & Joseph T. Diriro, Pharmacotherapy hand book 7th Edition
2. Main references (sources)	Roger Walker, Clive Edwards (eds), Clinical Pharmacy & Therapeutics. Barbara G. Wells & Joseph T. Diriro, Pharmacotherapy hand book 7th Edition
A- Recommended books and references (scientific journals, reports...).	Articles
B-Electronic references, Internet sites...	World health organization FDA (U.S. Food and Drug Administration)
12. The development of the curriculum plan	
No	



1. Teaching Institution	Ministry of higher education and scientific research \ al-Nahrain university
2. University Department/Centre	Collage of pharmacy \ clinical pharmacy department
3. Course title/code	Practical hospital training
4. Modes of Attendance offered	Course system
5. Semester/Year	Semester 1
6. Number of hours tuition (total)	20 hour
7. Date of production/revision of this specification	Laboratory training, hospital training, summer training, graduation projects and committee of deans of the college of pharmacy.
8. Aims of the Course	
To teach students the application of pharmacy practice to different hospital wards. It includes training on case evaluation and follow-up, evaluation of therapeutic regimens and registration of errors related to drug therapy and presenting ideas to solve the problems.	

9- Learning Outcomes, Teaching, Learning and Assessment Methode

- A- Cognitive goals .
- 1-Studying the different types of simple diseases and how to deal with them in the pharmacy
  - 2- Studying different diseases (causes, symptoms, diagnosis and treatment)
  - 3- Study the communication skills necessary for the work of the pharmacist
  - 4- Studying the ethics of the pharmacy profession
  - 5- Studying the foundations of the pharmaceutical economy
  - 6- Studying the methods of calculating the concentrations of dangerous drugs in

the blood and how to deal with them

B. The skills goals special to the course.

B1- Communication skills with patients

B2 - The skill of drug education for patients

B 3- The skill of extracting the required information from its approved sources.

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

B3.

### Teaching and Learning Methods

-the blackboard

-PowerPoint slides

-learning (social networking sites: the branch has a special channel that includes video lectures)

### Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

C. Affective and value goals

C1 - Thinking skills through translating, analyzing, evaluating and extracting ideas

C2 - Cultivating ethical values for the correct treatment of patients

### Teaching and Learning Methods

-By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios

-Simulate the work of a pharmacist in pharmacies

### Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

D1- Listening skills

D2 - Leadership skills

D3 - Conversational skills

D4 - Decision-making skills

### 10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	20	Clinical practice for internal medicines cases in wards	Clinical Pharmacy Practice in Internal Medicine: Clinical observation of cases; evaluation of the case sheets; case presentation; discussion and evaluation	ppt	Quiz
2	20	Clinical practice for surgery cases in wards	Clinical Pharmacy Practice in Surgery wards; Clinical observation of cases; evaluation of the case sheets; case presentation; discussion and evaluation.	ppt	Quiz
3	20	Clinical practice for gynecology and obstetrics cases in wards	Clinical Pharmacy Practice in Gynecology and Obstetrics Ward: Clinical observation of cases; evaluation of the case sheets; case presentation; discussion and evaluation.	ppt	Quiz

### 11. Infrastructure

1. Books Required reading:	Roger Walker, Clive Edwards (eds), Clinical Pharmacy & Therapeutics. Barbara G. Wells & Joseph T. Diriro, Pharmacotherapy hand book 7th Edition. BNF 70
2. Main references (sources)	Roger Walker, Clive Edwards (eds), Clinical Pharmacy & Therapeutics. Barbara G. Wells & Joseph T. Diriro, Pharmacotherapy hand book 7th Edition. BNF 70

A- Recommended books and references (scientific journals, reports...).	Articles
B-Electronic references, Internet sites...	World health organization FDA (U.S. Food and Drug Administration)
12. The development of the curriculum plan	
No	

## Medical ethics

1. Teaching Institution	Ministry of higher education and scientific research \ al-Nahrain university
2. University Department/Centre	Collage of pharmacy \ clinical pharmacy department
3. Course title/code	Medical ethics
4. Modes of Attendance offered	Course system
5. Semester/Year	Semester 2
6. Number of hours tuition (total)	Theory 1
7. Date of production/revision of this specification	Laboratory training, hospital training, summer training, graduation projects and committee of deans of the college of pharmacy.
<b>8. Aims of the Course</b>	
of	<p>1- The course will provides an overview of ethical issues facing practicing pharmacists in order to enable the student to understand the basic concepts of ethics which formulate the relationship of pharmacist with the patient, colleges, and other health personnel in order to deliver his pharmaceutical services in good way.</p> <p>2- The course will begin with an introduction to ethics in pharmaceutical practice and then proceed to examine in depth specific topics (Beneficence, Autonomy, Confidentiality, Consent...).</p> <p>The course will include lectures, case analysis, and classroom discussion.</p>

### 9. Learning Outcomes, Teaching, Learning and Assessment Methode

- D. General a
- E. nd rehabilitative transferred skills (other skills relevant to employability and personal development)
- D1- Listening skills
- D2 - Leadership skills
- D3 - Conversational skills
- D4 - Decision-making skills

A- Cognitive goals .

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

B. The skills goals special to the course.

B1- Communication skills with patients

B2 - The skill of drug education for patients

B 3- The skill of extracting the required information from its approved sources.

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

B3.

Teaching and Learning Methods

- the blackboard
- PowerPoint slides
- learning (social networking sites: the branch has a special channel that includes video lectures)

Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

C. Affective and value goals

C1 - Thinking skills through translating, analyzing, evaluating and extracting ideas

C2 - Cultivating ethical values for the correct treatment of patients

Teaching and Learning Methods

- By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios
- Simulate the work of a pharmacist in pharmacies

Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

D1- Listening skills

D2 - Leadership skills

D3 - Conversational skills

D4 - Decision-making skills

## 10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	Theory in pharmacy ethics	Introduction to Pharmacy Ethics (Theoretical considerations).	ppt	Quiz
2	1	Learning of pharmacist how dealing with staff and patients	Code of Ethics for Pharmacists	ppt	Report
3	3	Ethical considerations	Common Ethical Considerations in Pharmaceutical Care Practice (Beneficence, Autonomy, Honesty, Informed Consent, Confidentiality, Fidelity)	ppt	Quiz
4	2	Pharmacist relationship with other medical team	Interprofessional Relations		Med term
5	1	Ethical decisions	Making ethical decisions.	ppt	Quiz
					Med term
6	1	Ethical issues in to clinical pharmacy research	Ethical issues related to clinical pharmacy research	ppt	Quiz
7	1	Ethical problems in clinical pharmacy	Ethical problems in the pharmacist's clinical practice.	ppt	Quiz
8	1	Medication errors	Preventing misuse of medicines	ppt	Quiz.

9	3	Case studies in ethics	Case studies in pharmacy ethics	ppt	Quiz
					Final

<b>11. Infrastructure</b>	
1. Books Required reading:	<p>1- Ruth Rodgers, (ed.); fast track: Law and Ethics in Pharmacy Practice. Pharmaceutical Press 2010.</p> <p>2-Joy Wingfield and David Badcott . Pharmacy Ethics and Decision Making. Pharmaceutical Press2007</p> <p>3-Robert J. Cipolle, Linda M. Strand, Peter C. Morley. Pharmaceutical Care Practice: The Clinician's Guide, 2nd Edition.</p> <p>4- Robert m. Veatch and Amy Haddad. Case Studies in Pharmacy Ethics. second edition. Copyright © 2008 by Oxford University Press, Inc.</p>
2. Main references (sources)	<p>1- Ruth Rodgers, (ed.); fast track: Law and Ethics in Pharmacy Practice. Pharmaceutical Press 2010.</p> <p>2-Joy Wingfield and David Badcott . Pharmacy Ethics and Decision Making. Pharmaceutical Press2007</p> <p>3-Robert J. Cipolle, Linda M. Strand, Peter C. Morley. Pharmaceutical Care Practice: The Clinician's Guide, 2nd Edition.</p> <p>4- Robert m. Veatch and Amy Haddad. Case Studies in Pharmacy Ethics. second edition. Copyright © 2008 by Oxford University Press, Inc.</p>
A- Recommended books and references (scientific journals, reports...).	Articles
B-Electronic references, Internet sites...	World health organization
<b>12. The development of the curriculum plan</b>	
No	



## Communication skills

1. Teaching Institution	Ministry of higher education and scientific research\ al-Nahrain university
2. University Department/Centre	Collage of pharmacy \ clinical pharmacy department
3. Course title/code	Communication skills
4. Modes of Attendance offered	Course system
5. Semester/Year	Semester 2
6. Number of hours tuition (total)	Theory 2
7. Date of production/revision of this specification	Laboratory training, hospital training, summer training, graduation projects and committee of deans of the college of pharmacy.
<b>8. Aims of the Course</b>	
1- . Communication skill is one of the missions of pharmacy care practice, a ims to develop a conventional relationship between pharmacist and patients, in which information is exchanged, hold in confidence and used to optimize patient care through a appropriate drug therapy.	
2- This course is intended to pharmacist provide better care to patients, and focus on communication skills necessary	

## 9. Learning Outcomes, Teaching ,Learning and Assessment Method

A- Cognitive goals .

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

B. The skills goals special to the course.

B1- Communication skills with patients

B2 - The skill of drug education for patients

B 3- The skill of extracting the required information from its approved sources.

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

B3.

Teaching and Learning Methods

- the blackboard
- PowerPoint slides
- learning (social networking sites: the branch has a special channel that includes video lectures)

Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

C. Affective and value goals

C1 - Thinking skills through translating, analyzing, evaluating and extracting ideas

C2 - Cultivating ethical values for the correct treatment of patients

Teaching and Learning Methods

- By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios
- Simulate the work of a pharmacist in pharmacies

Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

D1- Listening skills

D2 - Leadership skills

D3 - Conversational skills

D4 - Decision-making skills

## 10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	Elements of Interpersonal Communication	Principles and Elements of Interpersonal Communication	ppt	Quiz
2	2	Nonverbal communication	Nonverbal type of communication	ppt	Quiz
3	2	Types of comm. Barriers	Barriers to communication	ppt	Report
4	2	empathic responding during communication	Listening and empathic responding during communication.	Ppt	Quiz
5	2	pharmacists take an active role in patient care	Assertiveness.	ppt	Quiz
6	2	Determining what patients understand about their medications, how they are taking their medications	Interviewing and assessment.	ppt	Report
7	2	Advices on therapeutic medication regimen	Helping patients to manage therapeutic regimens.	ppt	Quiz.
8	2	Counseling scenario	Patient counseling; counseling check list point-by-point discussion; 2 counseling scenario	ppt	Quiz
					Med term exam
9	2	Medication	Medication safety and	ppt	

		safety	communication skills.		
10		special communication needs (older adults; persons with hearing, sight)	Strategies to meet specific needs	Ppt	
11	2	Understanding the Cognitive Developmental Level of a Child	Communicating with children and elderly about medications	Ppt	
12	2	enhancing relationships between pharmacists and other health care providers	Communication skills and inter-professional collaboration.	Ppt	
13	2	use of electronic means of communication	Electronic communication in healthcare	Ppt	
14	2	how an ethical framework is often needed to guide their behavior when dealing with patients	Ethical behavior when communicating with patients	Ppt	
15	1	Patients review information about their destinations and itinerary and consider potential self-care options	Travel health	Ppt	
16	1	Medical insurance	Health insurance	Ppt	
					Final exam

1. Books Required reading:	1-Robert S. Beardsley, (ed.); Communication Skills in Pharmacy Practice
2. Main references (sources)	1-Robert S. Beardsley, (ed.); Communication Skills in Pharmacy Practice
A- Recommended books and references (scientific journals, reports...).	Articles
B-Electronic references, Internet sites...	World health organization FDA (U.S. Food and Drug Administration)
12. The development of the curriculum plan	
No	



## 9. Learning Outcomes, Teaching, Learning and Assessment Method

### A- Cognitive goals .

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

### B. The skills goals special to the course.

B1- Communication skills with patients

B2 - The skill of drug education for patients

B 3- The skill of extracting the required information from its approved sources.

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

B3.

### Teaching and Learning Methods

-the blackboard

-PowerPoint slides

-learning (social networking sites: the branch has a special channel that includes video lectures)

### Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

C. Affective and value goals

C1 - Thinking skills through translating, analyzing, evaluating and extracting ideas

C2 - Cultivating ethical values for the correct treatment of patients

Teaching and Learning Methods

-By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios

-Simulate the work of a pharmacist in pharmacies

Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

D1- Listening skills

D2 - Leadership skills

D3 - Conversational skills

D4 - Decision-making skills

10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	1	Function of clinical pharmacist as a part of medical team	Introduction to the concept of clinical pharmacy- its activities and professional responsibilities. (Including current state of clinical pharmacy in Iraq).	ppt	Quiz
2	1	Role of pharmacist in patient care process	Overview of pharmaceutical care practice (the patient care process).	ppt	Quiz
3	2	Anemia types and management	Hematologic disorders: Anemia and sickle cell disease.	ppt	Quiz
4	2	Treatment of hypertension	Hypertension.	ppt	



		on			
5	2	Management of IHD	Ischemic heart diseases	ppt	Quiz
6	2	Management of HF	Heart failure.	ppt	Quiz
7	1	Treatment of Peripheral vascular diseases.	Peripheral vascular diseases	ppt	Quiz
8	2	Asthma management	Asthma.	ppt	Quiz
9	1	Management of COPD	Chronic obstructive pulmonary disease	ppt	Quiz
10	2	Management of DKA	Diabetes mellitus & Diabetic ketoacidosis (DKA)	ppt	
					Mid term exam
11	2	Management of peptic ulcer	Peptic ulcer disease	ppt	Quiz
12	1	Treatment of T.B	Tuberculosis	ppt	Report
13	1	Types and treatment of Infective meningitis	Infective meningitis	ppt	Quiz
14	2	Treatment of upper and lower RTI	Respiratory tract infections	ppt	Report
15	1	Management of GIT infection	GIT infections	ppt	Quiz
16	1	Management of hyperuricemia	Gout and hyperuricemia	ppt	Report
17	2	Treatment of RA and OA	Rheumatoid arthritis (RA) and osteoarthritis (OA)	ppt	
18	1	Management of osteoporosis	Osteoporosis and other metabolic bone disease	Ppt	
19	1	Management of endocarditis	Infectious Endocarditis	Ppt	
20	1	Antibiotics used preoperative	Surgical antibiotic prophylaxis	Ppt	

21	1	Management of UTI	Urinary tract infection (UTI)	Ppt	
					Final exam

## 11. Infrastructure

1. Books Required reading:	Roger Walker, Clive Edwards (eds), Clinical Pharmacy & Therapeutics
2. Main references (sources)	Roger Walker, Clive Edwards (eds), Clinical Pharmacy & Therapeutics
A- Recommended books and references (scientific journals, reports...).	Articles
B-Electronic references, Internet sites...	World health organization FDA (U.S. Food and Drug Administration)

## 12. The development of the curriculum plan

No

## Practical Clinical pharmacy II

1. Teaching Institution	Ministry of higher education and scientific research \ al-Nahrain university
2. University Department/Centre	Collage of pharmacy \ clinical pharmacy department
3. Course title/code	Practical Clinical pharmacy II
4. Modes of Attendance offered	Course system
5. Semester/Year	Semester 2
6. Number of hours tuition (total)	
7. Date of production/revision of this specification	Laboratory training, hospital training, summer training, graduation projects and committee of deans of the college of pharmacy.
8. Aims of the Course	
<p>1- The second part progressively build toward more self-directed/ self-managed learning activities</p> <p>2- helping the student to deal with increasingly complex problems and issues in patient care and practice management.</p> <p>3-Various teaching and learning methods are used throughout the series including problem-dispensing, patients counseling, drug administration techniques ) both to enhance interest and to ensure adequate practice to master important concepts and skills</p>	

### 9. Learning Outcomes, Teaching ,Learning and Assessment Method

#### A- Cognitive goals .

- 1-Studying the different types of simple diseases and how to deal with them in the pharmacy
- 2- Studying different diseases (causes, symptoms, diagnosis and treatment)
- 3- Study the communication skills necessary for the work of the pharmacist
- 4- Studying the ethics of the pharmacy profession

5- Studying the foundations of the pharmaceutical economy  
6- Studying the methods of calculating the concentrations of dangerous drugs in the blood and how to deal with them

B. The skills goals special to the course.

B1- Communication skills with patients

B2 - The skill of drug education for patients

B 3- The skill of extracting the required information from its approved sources.

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

B3.

### Teaching and Learning Methods

-the blackboard

-PowerPoint slides

-learning (social networking sites: the branch has a special channel that includes video lectures)

### Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

C. Affective and value goals

C1 - Thinking skills through translating, analyzing, evaluating and extracting ideas

C2 - Cultivating ethical values for the correct treatment of patients

### Teaching and Learning Methods

-By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios

-Simulate the work of a pharmacist in pharmacies

### Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

A- Cognitive goals .

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

B. The skills goals special to the course.

B1- Communication skills with patients

B2 - The skill of drug education for patients

B 3- The skill of extracting the required information from its approved sources.

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

B3.

Teaching and Learning Methods

-the blackboard

-PowerPoint slides

-learning (social networking sites: the branch has a special channel that includes video lectures)

Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

C. Affective and value goals

C1 - Thinking skills through translating, analyzing, evaluating and extracting ideas

C2 - Cultivating ethical values for the correct treatment of patients

## Teaching and Learning Methods

- By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios
- Simulate the work of a pharmacist in pharmacies

## Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

D1- Listening skills

D2 - Leadership skills

D3 - Conversational skills

D4 - Decision-making skills

## 10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	Build up communication skill with medical staff and patient	Communication with physician and patient counseling.	ppt	Quiz
2	2	Management of anemia	Drugs for anemia and related disorders.	ppt	Quiz
3	2	Treatment of cardiovascular disease part I	Cardiovascular drugs in practice part I.	ppt	Report
4	2	Treatment of cardiovascular disease part II	Cardiovascular drugs in practice part II.	ppt	Quiz
5	2	Treatment of cardiovascular disease part III	Cardiovascular drug in practice part III.	ppt	Quiz
6	2	Management of asthma and COPD	Drugs for asthma and COPD in practice.	ppt	Report
7	2	Uses and types of antibiotics part I	Antimicrobial drugs in practice part I.	ppt	Quiz.
					Med term exam
8	2	Uses and types of antibiotics part II	Antimicrobial drugs in practice part II.	Ppt	Quiz
9	2	Uses and types of antibiotics part III	Antimicrobial drugs in practice part III.	ppt	Report

10	2	Pharmacy practice knowledge part I	Collective practice number I.	Ppt	Quiz

11. Infrastructure	
1. Books Required reading:	Roger Walker, Clive Edwards (eds), Clinical Pharmacy & Therapeutics
2. Main references (sources)	: Roger Walker, Clive Edwards (eds), Clinical Pharmacy & Therapeutics
A- Recommended books and references (scientific journals, reports...).	Articles
B-Electronic references, Internet sites...	World health organization FDA (U.S. Food and Drug Administration)
12. The development of the curriculum plan	
No	

## Theory Therapeutic drugs monitoring

1. Teaching Institution	Ministry of higher education and scientific research \ al-Nahrain university
2. University Department/Centre	Collage of pharmacy \ clinical pharmacy department
3. Course title/code	Theory Therapeutic drugs monitoring
4. Modes of Attendance offered	Course system
5. Semester/Year	Semester 2
6. Number of hours tuition (total)	Theory 2
7. Date of production/revision of this specification	Laboratory training, hospital training, summer training, graduation projects and committee of deans of the college of pharmacy.
8. Aims of the Course	
<p>1- The present course enables students to learn how to select the most appropriate drugs for an individual, recommend the dosage regimen that is most likely to achieve the desired therapeutic response with minimum risk of toxic effects</p> <p>2- Monitor the effect of a drug, if appropriate.</p> <p>3- The principles of clinical pharmacokinetics will be applied, which are fundamental to the current practice of clinical pharmacy and may be more significant as pharmacists expand their roles into prescribing</p>	

9. Learning Outcomes, Teaching, Learning and Assessment Method



A- Cognitive goals .

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

B. The skills goals special to the course.

B1- Communication skills with patients

B2 - The skill of drug education for patients

B 3- The skill of extracting the required information from its approved sources.

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

B3.

Teaching and Learning Methods

- the blackboard
- PowerPoint slides
- learning (social networking sites: the branch has a special channel that includes video lectures)

Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

C. Affective and value goals

C1 - Thinking skills through translating, analyzing, evaluating and extracting ideas

C2 - Cultivating ethical values for the correct treatment of patients

Teaching and Learning Methods

- By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios
- Simulate the work of a pharmacist in pharmacies

Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

C. Affective and value goals

C1 - Thinking skills through translating, analyzing, evaluating and extracting ideas

C2 - Cultivating ethical values for the correct treatment of patients

Teaching and Learning Methods

-By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios

-Simulate the work of a pharmacist in pharmacies

Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

D1- Listening skills

D2 - Leadership skills

D3 - Conversational skills

D4 - Decision-making skills

10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	study of the absorption, distribution, Metabolism, and excretion of drugs	Review of basic pharmacokinetic (PK) and pharmacodynamics (PD)	ppt	Quiz
2	3	Clinical pharmacokinetic dosage calculations	Clinical PK equations and calculations	ppt	Report

		are conducted using the easiest possible equations and methods.			
3	3	change the pharmacokinetics of the drug and warrant dosage modification	Clinical PK in special population and cases	ppt	Quiz
4	2	Study The conventional method of dosing aminoglycoside antibiotics	Clinical PK/PD for Aminoglycosides	ppt	Report
5	2	Study conc., Distribution steady state of vancomycin	clinical PK/PD for Vancomycin	ppt	Quiz
6	2	Study Digoxin serum concentrations and PK in different dosage form	Clinical PK/PD for Digoxin	ppt	Report
					Med term exam
7	3	Study phenytoin serum concentrations and PK in different dosage form	Clinical PK/PD for Phenytoin	ppt	Quiz
8	3	Study anticonvulsants serum concentrations and PK	Clinical PK/PD for other Anticonvulsants (e.g., Carbamazepine, Valproic Acid, Phenobarbitone/Primidone, Ethosuxsimide)	ppt	Report
9	2	Study conc., Distribution steady state of theophylline	Clinical PK/PD for Theophylline	ppt	Quiz
10	2	Study immunosuppressants	Clinical PK/PD for Immunosuppressants (e.g., Cyclosporine,		Report

		serum concentrations and PK	Tacrolimus		
11	2	Study cardiovascular agents serum concentrations and PK	Clinical PK/PD for other Cardiovascular agents (e.g., Lidocaine, Procainamide/N-Acetyl Procainamide	ppt	Quiz
12	4	Study lithium anticancer and anticoagulants serum concentrations and PK	Clinical PK/PD of other drugs (e.g., Lithium), Anticancer agents, and Anticoagulants	ppt	Report
					Final exam

## 11. Infrastructure

1. Books Required reading:	Applied Clinical Pharmacokinetics, Second Edition, 2008 by Larry A. Bauer. Additional references include but not limited to the following: Clinical Pharmacokinetics Concepts and Applications, Third Edition, 1995 by Malcolm Rowland and Thomas Tozer;
2. Main references (sources)	Applied Clinical Pharmacokinetics, Second Edition, 2008 by Larry A. Bauer. Additional references include but not limited to the following: Clinical Pharmacokinetics Concepts and Applications, Third Edition, 1995 by Malcolm Rowland and Thomas Tozer;
A- Recommended books and references (scientific journals, reports...).	Articles
B-Electronic references, Internet sites...	World health organization FDA (U.S. Food and Drug Administration)

## 12. The development of the curriculum plan

No

## Practical Therapeutic drugs monitoring

1. Teaching Institution	Ministry of higher education and scientific research \ al-Nahrain university
2. University Department/Centre	Collage of pharmacy \ clinical pharmacy department
3. Course title/code	Practical Therapeutic drugs monitoring
4. Modes of Attendance offered	Course system
5. Semester/Year	Semester 2
6. Number of hours tuition (total)	laboratory 1
7. Date of production/revision of this specification	Laboratory training, hospital training, summer training, graduation projects and committee of deans of the college of pharmacy.
8. Aims of the Course	
1- Improve the practice of students in the application of pharmacokinetics in clinical setting	
2- Training in dose individualization in specific patients groups	

### 9. Learning Outcomes, Teaching, Learning and Assessment Methode

#### A- Cognitive goals .

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

B. The skills goals special to the course.  
B1- Communication skills with patients  
B2 - The skill of drug education for patients  
B 3- The skill of extracting the required information from its approved sources.

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

B3.

### Teaching and Learning Methods

-the blackboard  
-PowerPoint slides  
-learning (social networking sites: the branch has a special channel that includes video lectures)

### Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

C. Affective and value goals  
C1 - Thinking skills through translating, analyzing, evaluating and extracting ideas  
C2 - Cultivating ethical values for the correct treatment of patients

### Teaching and Learning Methods

-By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios  
-Simulate the work of a pharmacist in pharmacies

### Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

- C. Affective and value goals  
 C1 - Thinking skills through translating, analyzing, evaluating and extracting ideas  
 C2 - Cultivating ethical values for the correct treatment of patients

### Teaching and Learning Methods

- By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios
- Simulate the work of a pharmacist in pharmacies

### Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

- D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

- D1- Listening skills
- D2 - Leadership skills
- D3 - Conversational skills
- D4 - Decision-making skills

## 10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	Food effect on drug absorption	Effects of food on drug disposition	Ppt	Quiz
2	2	Doses in elderly patients	Dosing of drugs in the elderly	Ppt	Report
3	4	Doses in obese patients	Individualization of the dosage for obese patients	Ppt	Quiz
4	4	Pediatric A,D,M,E	Pediatric pharmacokinetics	Ppt	Report
5	2	Training	Review and tutorial	Ppt	Quiz
6	2	Doses of anticancer chemotherapy	Dose individualization for high dose anti-cancer chemotherapy	Ppt	Report
7	4	Carbamazepine TDM	Therapeutic drug monitoring of carbamazepine	Ppt	Quiz
8	4	Cyclosporine TDM	Therapeutic drug monitoring of cyclosporine	Ppt	Report
9	4	Psychotropic medicines TDM	Therapeutic drug monitoring of psychotropic agents	Ppt	Quiz
10	2	Training	Review and tutorial	Ppt	


<b>11. Infrastructure</b>	
1. Books Required reading:	Applied Clinical Pharmacokinetics, Second Edition, 2008 by Larry A. Bauer. Additional references include but not limited to the following: Clinical Pharmacokinetics Concepts and Applications, Third Edition, 1995 by Malcolm Rowland and Thomas Tozer;
2. Main references (sources)	Applied Clinical Pharmacokinetics, Second Edition, 2008 by Larry A. Bauer. Additional references include but not limited to the following: Clinical Pharmacokinetics Concepts and Applications, Third Edition, 1995 by Malcolm Rowland and Thomas Tozer;
A- Recommended books and references (scientific journals, reports...).	Articles
B-Electronic references, Internet sites...	World health organization FDA (U.S. Food and Drug Administration)
<b>12. The development of the curriculum plan</b>	
No	



## Pharmacoeconomy

1. Teaching Institution	Ministry of higher education and scientific research \ al-Nahrain university
2. University Department/Centre	Collage of pharmacy \ clinical pharmacy department
3. Course title/code	Pharmacoeconomy
4. Modes of Attendance offered	Course system
5. Semester/Year	Semester 2
6. Number of hours tuition (total)	Theory 2
7. Date of production/revision of this specification	Laboratory training, hospital training, summer training, graduation projects and committee of deans of the college of pharmacy.
8. Aims of the Course	
1- The present course will give students the basic understanding of the tools needed to asses the costs and outcomes of medications and pharmaceutical care services.	
2- It will enable participants to evaluate the pharmacoeconomic and quality of life literature for the purpose of rational decision-making.	
3- Students will be exposed to the drug-focused approaches to pharmacoeconomic research and the fundamentals of quality of life research.	

## 9. Learning Outcomes, Teaching, Learning and Assessment Method

A- Cognitive goals .

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

B. The skills goals special to the course.

B1- Communication skills with patients

B2 - The skill of drug education for patients

B 3- The skill of extracting the required information from its approved sources.

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

B3.

Teaching and Learning Methods

- the blackboard
- PowerPoint slides
- learning (social networking sites: the branch has a special channel that includes video lectures)

Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

C. Affective and value goals

C1 - Thinking skills through translating, analyzing, evaluating and extracting ideas

C2 - Cultivating ethical values for the correct treatment of patients

Teaching and Learning Methods

- By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios
- Simulate the work of a pharmacist in pharmacies

Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

C. Affective and value goals

C1 - Thinking skills through translating, analyzing, evaluating and extracting ideas

C2 - Cultivating ethical values for the correct treatment of patients

Teaching and Learning Methods

-By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios

-Simulate the work of a pharmacist in pharmacies

Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

D1- Listening skills

D2 - Leadership skills

D3 - Conversational skills

D4 - Decision-making skills

10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	assessment of economic evaluation of drug used in care plane and other medical services	Course overview & basic principle of pharmacoeconomics	ppt	Quiz
2	6	Evaluation of cost analysis	Cost analysis	ppt	Report

3	2	Evaluation of Cost effectiveness analyses (CEA)	Cost effectiveness analyses (CEA).	ppt	Quiz
4	2	Evaluation of Cost utility analyses (CUA).	Cost utility analyses (CUA).	ppt	Report
5	2	E Cost-benefit analysis (CBA)valuation of	Cost-benefit analysis (CBA)	ppt	Quiz
					Med term exam
6	2	Evaluation of Critical assessment of economic evaluation	Critical assessment of economic evaluation	Ppt	Report
7	2	Evaluation of Drug-focused versus disease-focused frame work for Conducting pharmacoec onomic analyses.	Drug-focused versus disease-focused frame work for Conducting pharmacoec onomic analyses.	ppt	Quiz
8	2	Evaluation of epidemiolog y	Introduction to epidemiology.	ppt	Quiz
9	2		Project presentation.	ppt	Report
10	2		Project presentation.		Report
					Final exam

## 11. Infrastructure

### 1. Books Required reading:

: Bootman JL, Townsend RJ, McGhan WF, (Eds.), Principles of Pharmacoconomics, 2nd ed., Harvey Whitney Books Company, Cincinnati, Oh, latest edition

2. Main references (sources)	: Bootman JL, Townsend RJ, McGhan WF, (Eds.), Principles of Pharmacoeconomics, 2nd ed., Harvey Whitney Books Company, Cincinnati, Oh, latest edition
A- Recommended books and references (scientific journals, reports...).	Articles
B-Electronic references, Internet sites...	World health organization FDA (U.S. Food and Drug Administration)
12. The development of the curriculum plan	
No	

## Therapeutics II

1. Teaching Institution	Ministry of higher education and scientific research \ al-Nahrain university
2. University Department/Centre	Collage of pharmacy \ clinical pharmacy department
3. Course title/code	Therapeutics II
4. Modes of Attendance offered	Course system
5. Semester/Year	Semester 2
6. Number of hours tuition (total)	Theory 2
7. Date of production/revision of this specification	Laboratory training, hospital training, summer training, graduation projects and committee of deans of the college of pharmacy.
8. Aims of the Course	
1- To improve the knowledge and practice of students in the clinical application of drugs in the treatment of diseases and disorders in different organ systems 2- Enable students to integrate clinical pharmacy practice with other health care providers in the clinical setting.	

### 9. Learning Outcomes, Teaching, Learning and Assessment Methode

#### A- Cognitive goals .

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

the blood and how to deal with them

B. The skills goals special to the course.

B1- Communication skills with patients

B2 - The skill of drug education for patients

B 3- The skill of extracting the required information from its approved sources.

#### Teaching and Learning Methods

-the blackboard

-PowerPoint slides

-learning (social networking sites: the branch has a special channel that includes video lectures)

#### Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

C. Affective and value goals

C1 - Thinking skills through translating, analyzing, evaluating and extracting ideas

C2 - Cultivating ethical values for the correct treatment of patients

#### Teaching and Learning Methods

-By giving theoretical, practical and practical lectures and assigning small groups to create educational scenarios

-Simulate the work of a pharmacist in pharmacies

#### Assessment methods

Theoretical and practical exams (simulating the work of a pharmacist in a pharmacy)

D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

D1- Listening skills

D2 - Leadership skills

D3 - Conversational skills

D4 - Decision-making skills

10. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	Disorders of thyroid and parathyroid glands	Thyroid and parathyroid disorders	ppt	Quiz
2	1	Types and uses of contraceptives	Contraception	ppt	Report
3	1	Endometriosis management	Endometriosis	ppt	Quiz
4	1	Menstrual disorders	Menstruation related disorders	ppt	Report
5	2	HRT in women	Hormonal replacement therapy (HRT)	ppt	Quiz
6	2	CA treatment and evaluation	Cancer treatment and chemotherapy	ppt	Report
7	2	Leukemias types and management	Leukemias	ppt	Quiz.
8	2	Lymphoma management	Lymphomas and Multiple myeloma	Ppt	quiz
9	2	Management of breast CA	Breast and prostate cancers	Ppt	Report
10	1	Chemotherapy adverse effect	Adverse effects of chemotherapy	Ppt	Quiz
					Med term exam
11	2	HIV management	Human immunodeficiency virus	Ppt	Quiz
12	1	Disorders of adrenal glands	Adrenal gland disorders	Ppt	Report
13	1	Disorders of pituitary glands	Pituitary gland disorders	Ppt	Quiz
14	1	Treatment of Alzheimer disease	Alzheimer's disease	Ppt	Report
15	2	Schizophrenia management	Schizophrenia	Ppt	Quiz
16	2	Depressive disorders treatments	Depressive disorders	Ppt	Report



17	1	Anxiety disorders management	Anxiety disorders	Ppt	Quiz
18	1	Sleep disorders management	Sleep disorders	Ppt	Report
19	2	Bipolar disorders management	Bipolar disorders	Ppt	Quiz
20	1	colorectal cancer management	colorectal cancer	Ppt	Report
					Final exam

11. Infrastructure	
1. Books Required reading:	Roger Walker, Clive Edwards (eds), Clinical Pharmacy & Therapeutics. Barbara G.Wells & Joseph T. Diriro, Pharmacotherapy hand book 7th Edition
2. Main references (sources)	Roger Walker, Clive Edwards (eds), Clinical Pharmacy & Therapeutics. Barbara G.Wells & Joseph T. Diriro, Pharmacotherapy hand book 7th Edition
A- Recommended books and references (scientific journals, reports...).	Articles
B-Electronic references, Internet sites...	World health organization FDA (U.S. Food and Drug Administration)
12. The development of the curriculum plan	
No	