

Republic of Yemen
Ministry of Higher Education & Scientific Research
21 September University for Medicals and Applied Sciences



Faculty of Clinical Pharmacy

Bachelor of Clinical Pharmacy & Pharm. D.

Course Specification of

Hospital Pharmacy

Course Code. (02.01.213)

2022



T4: This Template is Developed and Approved by CAQA-Yemen, 2024

Prepared by:
Dr. Ali Alyahawi

Reviewed by:
Dr. Abdelmalek abudunya
Dr. Hamoud Al-bayley

Head of the Department:
Dr. -----

Vice Dean for Quality affairs
Dr. Abdulelah Thabet

Dean of College:
Dr. Ali Alyahawi

I. General Information:

1.	Course Title:	Hospital Pharmacy			
2.	Course Code:	02.01.213			
3.	Credit Hours:	Credit Hours	Theory Contact Hours		Practical Contact Hours
			Lecture	Tutorial/Seminar	Lab Clinical
		2	2		-- -
4.	Level/ Semester at which this Course is offered:	5 th Level /1 st Semester			
5.	Pre –Requisite (if any):	-			
6.	Co –Requisite (if any):	-			
7.	Program (s) in which the Course is Offered:	Bachelor of Clinical Pharmacy & Pharm. D.			
8.	Language of Teaching the Course:	English			
9.	Location of Teaching the Course:	Faculty of Clinical Pharmacy			
10.	Prepared by:	Mohammed Addoais			
11.	Date and Number of Approval by Council:	2022			

II. Course Description:

This course is designed to provide the student with An introductory course to the practice of pharmacy in a hospital setting. It includes organizational structure of the pharmacy department and its relation to other departments. It covers the different drug distribution systems, bulk compounding methods, parenteral admixtures, practice standards, pharmacy and therapeutics committee and general pharmacy administration.

II. Course Intended Learning Outcomes (CILOs) : Upon successful completion of the course, students will be able to:		Referenced PILOs	
A. Knowledge and Understanding:		I, P or M/A	
a1	Explain hospital organization		A1
a2	list the pharmacy and therapeutic committee functions		A4, A5
B. Intellectual Skills:			
b1	Compare between different drug distribution systems		B3
b2	Recognize the drug relating problems and solve it.		B4, B5
C. Professional and Practical Skills:			
c1	Prepare intravenous admixture		C2
c2	Perform therapeutic drug monitoring		C2, C4, C5
D. Transferable Skills:			
d1	Cooperate with health professionals		D1
d2	communicate effectively and ethically with patients, public, and health care professionals		D1
I= Introduced, P=Practiced or M/A= Mastered/Advanced			

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:		
Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
a1	- Lecture - Instructor – student Interactive - Office hour	- Exam - Assignment - Quiz
a2	- Lecture - Instructor – student Interactive - Office hour	- Exam - Assignment - Quiz
(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:		
Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies



b1	Compare between different drug distribution systems	- Lecture - Instructor – student Interactive - Exercises - Solving Problem Methods	- Problem-Solving Exercises. - Assignment - Quiz
b2	Recognize the drug relating problems and solve it.	- Lecture - Instructor – student Interactive - Exercises - Solving Problem Methods	- Problem-Solving Exercises. - Assignment - Quiz
(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
c1	Prepare intravenous admixture	- Lecture - Instructor – student Interactive - Self-Learning	- Exam - Assignment - Quiz
c2	Perform therapeutic drug monitoring	- Lecture - Instructor – student Interactive - Self-Learning	- Exam - Assignment - Quiz
(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
d1	Cooperate with health professionals	- Self-Learning - Seminar - Exercises	- Presentation - Assignment - Quiz
d2	communicate effectively and ethically with patients, public, and health care professionals	- Seminar - Instructor–student Interactive - Exercises	Presentation



IV. Course Contents:

A. Theoretical Aspect:

Order	Units/Topics List	Learning Outcomes	Sub Topics List	Number of Weeks	Contact Hours
1	Hospital and Its Organization	a1, a2, b1, b2, c1, c2,	- Classification of hospitals - Organization and Structure Organization of hospitals. - Functions of hospitals - Organization and Administration of a hospital	1	2
2	Hospital pharmacy	a1, a2, b1, b2, c1, c2, d1, d2	- Organization and Structure of a hospital pharmacy - Responsibilities of a hospital pharmacist - Functions of a hospital pharmacy - Hospital pharmacy services	1	2
3	Inpatients pharmacy services	a1, a2, b1, b2, c1, c2, d1, d2	- Inpatient critical areas - Drug Distribution Systems in Hospitals - Types of drug distribution systems. - Floor stock DDS - Unit dose DDS - Prescription DDS - Automation in drug distribution - Goals - Automated dispensing systems - Charging policy – labeling - Dispensing of drugs to ambulatory patients. - Dispensing of controlled drugs - Pharmacy satellites	2	4

4	Outpatient pharmacy services	a1, a2, b1, b2, c1, c2, d1, d2	- Pharmacy layout - Pharmacy location - Outpatient pharmacy services	1	2
5	Drug Store Management and Inventory Control:	a1, a2, b1, b2, c1, c2, d1, d2	- Organization of a drug store - Types of materials stocked - Storage conditions. - Purchase and Inventory Control - Receiving of pharmaceuticals - purchase procedures - Purchase order - Procurement and stocking	2	4
6	Mid-term Exam			1	2
7	Drug and therapeutic committee	a1, a2, b1, b2, c1, c2, d1, d2	- Function of DTC - Important benefits of a DTC - Organization and structure of DTC - DTC responsibilities - DTC subcommittees	2	4
8	Hospital formulary	a1, a2, b1, b2, c1, c2, d1, d2	- Definition - Formulary Management - Publishing the Formulary - Formulary Maintenance - Benefits of an Effective Formulary System - Formulary Management Process - Process- Selection & Formulary Changes - Criteria for Evaluating and Selecting Medicines for Formulary	2	4
9	Intravenous admixture		- Types - Components - Indication - IV admixture incompatibilities	1	2



			Complications of IV admixture		
10	Total Parenteral Nutrition (TPN)	a1, a2, b1, b2, c1, c2, d1, d2	- Definitions - Indication - Components - Nutritional content - Nutritional assessment - Total Daily Expenditure(TDE) - TPN calculation - TPN compatibility - TPN monitoring	2	4
11	Final exam	a1, a2, b1, b2, c1, c2		1	2
Number of Weeks /and Units Per Semester				16	32

V. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	Assignment 1	6 th	5	a1, a2, b1, b2, c1, c2, d1
Total				5

VI. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Assignments	6 th	5	5%	a1, a2, b1, b2, c1, c2, d1
3	Midterm Exam	Week 7	20	20%	a1, a2, b1, b2, c1, c2
4	Quiz 2	12 th	5	5%	a1, a2, b1, b2, c1, c2
5	Final Exam (Theory)	Week 16	70	70%	a1, a2, b1, b2, c1, c2
Total			100	100%	

VII. Learning Resources:

1- Required Textbook(s):

- 1- M. C. Allwood and J. T. Fell "Textbook of Hospital Pharmacy" Blackwell Scientific Publications, Oxford 1980.

2- Essential References.

- 1- W.E. Hassan "Hospital Pharmacy" 3rd ed. Lea and Febiger, Philadelphia, 1974.

3- Electronic Materials and Web Sites etc.

1. <http://www.pharmatutor.org>
2. <http://www.uspbpep.com>
3. <http://www.usp.org>

VIII. Course Policies: (Based on the Uniform Students' By law (2007))

Class Attendance:

- 1 Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.

Tardiness:

- 2 A student will be considered late if he/she is not in class after 10 minutes of the start time of class.

Exam Attendance/Punctuality:

- 3 No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.

Assignments & Projects:

- 4 Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.

Cheating:

- 5 Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.

Forgery and Impersonation:

- 6 Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.

Other policies:

- 7 The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.



Republic of Yemen
Ministry of Higher Education & Scientific Research
21 SEPTEMBER UMAS
Faculty of Faculty of Clinical Pharmacy
Department of
Unit of Development & Quality assurance

الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة 21 سبتمبر للعلوم الطبية والتطبيقية
كلية الصيدلة السريرية
قسم
وحدة التطوير وضمان الجودة

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality affairs	Dean of College:
Dr. Ali Alyahawi	Dr. Abdelmalek abudunya	Dr. -----	Dr. Abdulelah Thabet	Dr. Ali Alyahawi
	Dr. Hamoud Al-bayley			

Faculty of Clinical Pharmacy

Bachelor of Clinical Pharmacy & Pharm. D.

Course Plan (Syllabus) of **Hospital Pharmacy**

Course Code. 02.01.213

I. Information about Faculty Member Responsible for the Course:							
Name of Faculty Member:	Dr. Ali Alyahawi	Office Hours					
Location& Telephone No.:							
E-mail:		SAT	SUN	MON	TUE	WED	THU

2016- 2017

II. Course Identification and General Information:

1.	Course Title:	Hospital Pharmacy				
2.	Course Code:	02.01.213				
3.	Credit Hours:	Credit Hours	Theory Contact Hours		Practical Contact Hours	
			Lecture	Tutorial/ Seminar	Lab	Clinical
		2	2		--	--
4.	Level/ Semester at which this Course is offered:	5 th Level / First Semester				
5.	Pre –Requisite (if any):	None				
6.	Co –Requisite (if any):	None				
7.	Program (s) in which the Course is Offered:	Bachelor of Clinical Pharmacy & Pharm. D.				
8.	Language of Teaching the Course:	English				
9.	Location of Teaching the Course:	Faculty of Clinical Pharmacy				
10.	Prepared by:	Dr. Ali Alyahawi				
11.	Date and Number of Approval by Council:	2022				

III. Course Description:

This course is designed to provide the student with an introductory course to the practice of pharmacy in a hospital setting. It includes organizational structure of the pharmacy department and its relation to other departments. It covers the different drug distribution systems, bulk compounding methods, parenteral admixtures, practice standards, pharmacy and therapeutics committee and general pharmacy administration.

IV. Course Intended Learning Outcomes (CILOs) :

Upon successful completion of the Course, student will be able to:

A. Knowledge and Understanding:

- | | |
|----|---|
| a1 | Explain hospital organization |
| a2 | list the pharmacy and therapeutic committee functions |

B. Intellectual Skills:

- | | |
|----|---|
| b1 | Compare between different drug distribution systems |
| b2 | Recognize the drug relating problems and solve it. |

C. Professional and Practical Skills:

- | | |
|----|-------------------------------------|
| c1 | Prepare intravenous admixture |
| c2 | Perform therapeutic drug monitoring |

D. Transferable Skills:

- | | |
|----|--|
| d1 | Cooperate with health professionals |
| d2 | communicate effectively and ethically with patients, public, and health care professionals |

V. Course Contents:

A. Theoretical Aspect:

Order	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
1	Hospital and Its Organization	- Classification of hospitals - Organization and Structure - Organization of hospitals. - Functions of hospitals - Organization and Administration of a hospital	1	2
2	Hospital pharmacy	- Organization and Structure of a hospital pharmacy - Responsibilities of a hospital pharmacist - Functions of a hospital pharmacy	2	4



		Hospital pharmacy services		
3	Inpatient pharmacy services	- Inpatient critical areas - Drug Distribution Systems in Hospitals - Types of drug distribution systems. - Floor stock DDS - Unit dose DDS - Prescription DDS - Automation in drug distribution - Goals - Automated dispensing systems - Charging policy – labeling - Dispensing of drugs to ambulatory patients. - Dispensing of controlled drugs - Pharmacy satellites	2	4
4	Outpatient pharmacy services	- Pharmacy layout - Pharmacy location - Outpatient pharmacy services	2	4
5	Drug Store Management and Inventory Control	- Organization of a drug store - Types of materials stocked - Storage conditions. - Purchase and Inventory Control - Receiving of pharmaceuticals - purchase procedures - Purchase order - Procurement and stocking	2	4
6	Mid-term Exam		1	2
7	Drug and therapeutic committee (DTC)	- Function of DTC - Important benefits of a DTC - Organization and structure of DTC - DTC responsibilities - DTC subcommittees	2	4



8	Hospital formulary	- Definition - Formulary Management - Publishing the Formulary - Formulary Maintenance - Benefits of an Effective Formulary System - Formulary Management Process - Process- Selection & Formulary Changes - Criteria for Evaluating and Selecting Medicines for Formulary	2	4
9	Intravenous Admixture	- Types - Components - Indication - IV admixture incompatibilities - Complications of IV admixture	1	2
10	Total Parenteral Nutrition (TPN)	- Definitions - Indication - Components - Nutritional content - Nutritional assessment - Total Daily Expenditure(TDE) - TPN calculation - TPN compatibility - TPN monitoring	2	4
11	Final exam		1	2
Number of Weeks /and Units Per Semester			16	32

VI. Teaching Strategies of the Course:

- Lecture
- Instructor – student Interactive
- Exercises
- Presentation
- Office hours
- Seminar
- Assignment
- Self-Learning

VII. Assessment Methods of the Course:

- Assignments
- Quiz
- Exam
- Oral Presentation

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	Assignment 1	6 th	5	a1, a2, b1, b2, c1, c2, d1
Total				5

VI. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Assignments	6 th	5	5%	a1, a2, b1, b2, c1, c2, d1
3	Midterm Exam	Week 7	20	20%	a1, a2, b1, b2, c1, c2
4	Quiz 2	12 th	5	5%	a1, a2, b1, b2, c1, c2, d1
5	Final Exam (Theory)	Week 16	70	70%	a1, a2, b1, b2, c1, c2
Total			100	100%	

VII. Learning Resources:

1- Required Textbook(s):

- 2- M. C. Allwood and J. T. Fell "Textbook of Hospital Pharmacy" Blackwell Scientific Publications, Oxford 1980.

2- Essential References.

- 2- W.E. Hassan "Hospital Pharmacy" 3rd ed. Lea and Febiger, Philadelphia, 1974.

3- Electronic Materials and Web Sites etc.

4. <http://www.pharmatutor.org>
5. <http://www.uspbep.com>
6. <http://www.usp.org>

XI. Course Policies: (Based on the Uniform Students' Bylaw (2007))	
1	Class Attendance: Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	Tardiness: A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	Exam Attendance/Punctuality: No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	Assignments & Projects: Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	Cheating: Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	Forgery and Impersonation: Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
7	Other policies: The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.