

Faculty of Clinical Pharmacy

Republic of Yemen

Ministry of Higher Education & Scientific Research

21 September University of Medicals & Applied Sciences



Pharmacy

Program of Pharm. D.

Course Specification of **Hospital Training: Hospital Pharmacy**

Course No (02.05.255)

2021/2022

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

I. Course Identification and General Information:

1	Course Title:	Hospital Training: Hospital Pharmacy			
2	Course Code & Number:	02.05.255			
3	Credit hours:	C.H			
		Th.	Seminar	Pr	Tr.
					72 contact hours
4	Study level/ semester at which this course is offered:	6 th year /first semester			
5	Pre –requisite (if any):	Students must have successfully completed their basic curriculum of 5th Year.			
6	Co –requisite (if any):	NA			
7	Program (s) in which the course is offered:	Bachelor of Pharm. D.			
8	Language of teaching the course:	English			
9	Study System	Semester based System			
10	Mode of delivery:	Full Time			
11	Location of teaching the course:	Faculty of Clinical Pharmacy			
12	Prepared By:	Dr. Ali Alyahawi			
13	Date of Approval	2022			

II. Course Description:

The course will provide Pharm D students an in-depth understanding of institutional pharmacy practice during a two-week clerkship period. Through the rotation period the students will be exposed to the daily clinical activities of the hospital pharmacy setting, with a focus on inpatient and outpatient pharmacies. Participating in the hospital's medication distribution systems, performing calculations, compounding preparations, and preventing incompatibilities during therapy.

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

III. Course Intended learning outcomes (CILOs):		Referenced PILOs
A. Knowledge and Understanding: Upon successful completion of the course, students will be able to:		
a.1	Describe the different organizations of hospital pharmacy departments, services and procedures	A1, A3, A4, A5
a.2	Define financial and human resources	A1, A5
B. Intellectual Skills: Upon successful completion of the course, students will be able to:		
b.1	Deal properly with drugs, purchase, supplies, storage, and services	B2, B3, B4, B5
b. 2	Calculate the dosages for adults and pediatrics on scientific basis.	B4
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:		
c.1	Apply properly their knowledge to all tasks concerning drugs, purchase, storage, and services.	C4
c.2	Choose rationally the optimal adjuvant used for preventing drug-related problems and incompatibilities in pharmaceutical preparations.	C3, C4, C5
D. Transferable Skills: Upon successful completion of the course, students will be able to:		
d. 1	Search efficiency for medical information from professional medical references.	D3
d.2	Communicate effectively with healthcare team and patients using information technology skills	D1, D2

(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
a1- Describe the different organizations of hospital pharmacy departments, services and procedures	- Self-learning - Interactive Discussion - Use of updated medical references	- Exam - Assignment - Quizzes - Oral Discussion
a2- Define financial and human resources	- Self-learning - Interactive Discussion - Use of updated medical references	- Exam - Assignment - Quizzes - Oral discussion

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

(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
b1- Deal properly with drugs, purchase, supplies, storage, and services	- Self-learning - Interactive Discussion - Use of updated medical references	- Exam - Assignment - Quizzes - Pharmacy services documentation
b2- Calculate the dosages for adults and pediatrics on scientific basis.	- Self-learning - Interactive Discussion - Use of updated medical references	- Exam - Assignment - Quizzes - Pharmacy services documentation

© Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
C1- Apply properly their knowledge to all tasks concerning drugs, purchase, storage, and services.	- Review and monitor patient prescription. - Pharmacy service manual - Use of updated medical references	- Pharmacy service documentation - Assignment - Presentation
C2- Choose rationally the optimal adjuvant used for preventing drug-related problems and incompatibilities in pharmaceutical preparations.	- Review and monitor patient prescription. - Pharmacy service manual - Use of updated medical references	- Pharmacy service documentation - Assignment - Presentation

(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
d1- Search properly and efficiency for medical information from professional medical references .	- Seminar - Interactive Discussion	- Presentation
d 2- Communicate effectively with healthcare team and patients using information technology skills	- Interactive Discussion - Presentation	- Presentation

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

IV. Course Content:

A – Theoretical Aspect:

Order	Units/Topics List	Learning Outcomes	Sub Topics List	Number of Weeks	contact hours
1	NA				
2					
Number of Weeks /and Units Per Semester					

V. Course Content:

- Distribution of Semester Weekly Plan of Course Topics/Items and Activities.

A – Practical Aspect:

Order	Topics List	Week Due	Contact Hours	CILOS
1	Purchase and storage of Medications - Ordering and Receiving Medication - Drug formulary system and Therapeutic Drug Committee - Policies of drugs storage and distributions - Drug product recalls and handling of expired and defective drugs.	Week 1-2	18 hrs	a 1, a2, b 1, b2, c1, c2, d1, d2
2	In-patients pharmacy: - Hospital Drug Distribution System - Drug Distribution and control - Dispensing of Controlled Substances - Prepacking - Sterile medication doses and I.V nutrition - Process of emergency medication orders, labeling, and proper dispensing to patient	Week 1-2	36 hrs	a 1, a2, b 1, b2, c1, c2, d1, d2
3	Out-patients Pharmacy - Minimum standard for ambulatory-care pharmaceutical services - Types of prescriptions received- - Polices of Medication Dispensing	Week 1-2	18 hrs	a 1, a2, b 1, b2, c1, c2, d1, d2

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

	Total	2 weeks	72 hours	
--	--------------	---------	----------	--

VI. Teaching strategies of the course:

1- Review and monitor patient prescription.
2- Oral Presentation
3- Self-learning
4- Interactive Discussion
5- Use of updated medical references
6- Pharmacy services documentation.

II. Assignments:

No	Assignments	Aligned CILOs(symbols)	Week Due	Mark
1	Assignment 1: Every student will present storage condition of 2 parenteral drugs	b1, b2, d1, d2	Week 1	10 %
2	Assignment 2: Every students group will present seminar on selected course topic	b1, b2, d1, d2	Week 2	10 %
	Total			20

VIII. 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	Course Training Period	20	20 %	a 1, a2, b1, b2, c1, c2, d1, d2
2	Adherence to Professional Attitudes	Course Training Period	10	10 %	d1, d2
3	Skills Acquired during Training	Course Training Period	20	20 %	b1, b2, c1, c2, d1, d2
4	Formal Case Presentation	Last week of Rotation	10	10 %	a 1, a2, b1, b2, c1, c2, d1, d2
5	General Written Examination	Last week of Rotation	40	40 %	a 1, a2, b1, b2, c1, c2, d1
	Total		100	100%	

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

III. Learning Resources:

- Written in the following order: (Author - Year of publication – Title – Edition – Place of publication – Publisher).

1- Required Textbook(s) (maximum two).

- Marie Chisholm-Burns (2016), Pharmacotherapy Principles and Practice, 4th Edition, New York: McGraw-Hill Medical, United States of America.
- DiPiro, J. T. (2017). Pharmacotherapy: Handbook, 10th edition, New York: McGraw-Hill Medical, United States of America.

2- Essential References.

- Lexicomp, (2018). Drug Information Handbook, 27^h edition, Lexi-Comp, U.S.A
- Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America.
- British national formulary (BNF), last edition, Pharmaceutical Press.

3- Electronic Materials and Web Sites etc.

- www.uptodate.com
- www.medscape.com
- www.ncbi.nlm.nih.gov/pubmed
- Disease management guidelines

IX. Course Policies:

1	Class Attendance: Students are allowed to be absent for not more than 10% of rotation period with an excuse. The student will undergo training in the hospital pharmacy for two weeks -daily (Saturday-Wednesday), from (8.00 AM-2:00).
2	Tardy: A student will be considered late if he/she is not in class after 10 minutes of the start time of class.

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

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. - No side talks during training - No mobile phones during training - Before training, it is mandatory to get blood tests for Hepatitis B, C and HIV.

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

Faculty of Clinical Pharmacy

Program of Doctor of Pharmacy (Pharm. D.)

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

Course No 02.05.255

2021/2022

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



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

I. - Information about Faculty Member Responsible for the Course:

Name of Faculty Member	Dr. Ali Alyahawi	Office Hours					
Location & Telephone No.	775957401	SAT	SUN	MON	TUE	WED	THU
E-mail	alyahawipharm@yahoo.com						

II. Course Identification and General Information:

1	Course Title:	Hospital Training: Hospital Pharmacy				
2	Course Code & Number:	02.05.255				
3	Credit hours:	C.H				TOTAL
		Th.	Seminar	Pr	Tr.	
			--		72 contact hrs.	2
4	Study level/ semester at which this course is offered:	6 th year / first semester				
5	Pre –requisite (if any):	Students must have successfully completed their basic curriculum of 5th Year.				
6	Co –requisite (if any):	NA				
7	Program (s) in which the course is offered:	Bachelor of Pharm. D.				
8	Language of teaching the course:	English				
9	Study System	Regular				
10	Mode of delivery:	Semester based System				
11	Location of teaching the course:	Faculty of Clinical Pharmacy				

III. Course Description:

The course will provide Pharm D students an in-depth understanding of institutional pharmacy practice during a two-week clerkship period. Through the rotation period the students will be exposed to the daily clinical activities of the hospital pharmacy setting, with focus on inpatient and outpatient pharmacies. Participating in the hospital's medication distribution systems, performing calculations, compounding preparations, and preventing incompatibilities during therapy.

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

IV. Course Intended learning outcomes (CILOs)

Upon completion of this Course, student will be able to:

a.1	Describe the different organizations of hospital pharmacy departments, services and procedures
a.2	Define financial and human resources
b.1	Deal properly with drugs, purchase, supplies, storage, and services
b. 2	Calculate the dosages for adults and pediatrics on scientific basis.
c.1	Apply properly their knowledge to all tasks concerning drugs, purchase, storage, and services.
c.2	Choose rationally the optimal adjuvant used for preventing drug-related problems and incompatibilities in pharmaceutical preparations.
d. 1	Search efficiency for medical information from professional medical references.
d.2	Communicate effectively with healthcare team and patients using information technology skills

V. Course Content:

A – Theoretical Aspect:

Order	Units/Topics List	Sub Topics List	Week Due	Contact Hours
1	NA			
2				
Number of Weeks /and Units Per Semester				32

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

I. Course Content:

- Distribution of Semester Weekly Plan of Course Topics/Items and Activities.

A – Practical Aspect:

Order	Topics List	Week Due	Contact Hours
1	Purchase and storage of Medications - Ordering and Receiving Medication - Drug formulary system and Therapeutic Drug Committee - Policies of drugs storage and distributions - Drug product recalls and handling of expired and defective drugs.	Week 1-2	18 hrs
2	In-patients pharmacy: - Hospital Drug Distribution System - Drug Distribution and control - Dispensing of Controlled Substances - Prepacking - Sterile medication doses and I.V nutrition - Process of emergency medication orders, labeling, and proper dispensing to patient	Week 1-2	36 hrs
3	Out-patients Pharmacy - Minimum standard for ambulatory-care pharmaceutical services - Types of prescriptions received- - Policies of Medication Dispensing	Week 1-2	18 hrs
Total		2 weeks	72 hours

X. Teaching strategies of the course:

- Review and monitor patient prescription.
- Oral Presentation
- Self-learning
- Interactive Discussion
- Use of updated medical references
- Pharmacy services documentation.

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

XI. Assignments:

No	Assignments	Week Due	Mark
1	Assignment 1: Every student will present storage condition of 3 parenteral drugs	Week 1	10 %
2	Assignment 2: Every students group will present seminar on selected course topic	Week 2	10 %
Total			20

VIII. 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	Course Training Period	20	20 %	a 1, a2, b1, b2, c1, c2, d1, d2
2	Adherence to Professional Attitudes	Course Training Period	10	10 %	d1, d2
3	Skills Acquired during Training	Course Training Period	20	20 %	b1, b2, c1, c2, d1, d2
4	Formal Case Presentation	Last week of Rotation	10	10 %	a 1, a2, b1, b2, c1, c2, d1, d2
5	General Written Examination	Last week of Rotation	40	40 %	a 1, a2, b1, b2, c1, c2, d1
Total			100	100%	

XII. Learning Resources:

- Written in the following order: (Author - Year of publication – Title – Edition – Place of publication – Publisher).

1- Required Textbook(s) (maximum two).

- Marie Chisholm-Burns (2016), Pharmacotherapy Principles and Practice, 4th Edition, New York: McGraw-Hill Medical, United States of America.
- DiPiro, J. T. (2017). Pharmacotherapy: Handbook, 10th edition, New York: McGraw-Hill Medical, United States of America.

2- Essential References.

- Lexicomp, (2018). Drug Information Handbook, 27^h edition, Lexi-Comp, U.S.A

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

	5. Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America. 6. British national formulary (BNF), last edition, Pharmaceutical Press.
3- Electronic Materials and Web Sites etc.	
	1. www.uptodate.com 2. www.medscape.com 3. www.ncbi.nlm.nih.gov/pubmed 4. Disease management guidelines

III. Course Policies:	
1	Class Attendance: Students are allowed to be absent for not more than 10% of rotation period with an excuse. The student will undergo training in the hospital pharmacy for two weeks -daily (Saturday-Wednesday), from (8.00 AM-2:00).
2	Tardy: 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. - No side talks during training - No mobile phones during training - Before training, it is mandatory to get blood tests for Hepatitis B, C and HIV.

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