

Republic of Yemen

Ministry of Higher Education & Scientific Research

Emirates International University



**Faculty of Medicine and Health Science**

**Department of Clinical Pharmacy**

**Bachelor of Pharm D**

**Course Specification of Pharmacotherapy Module II: Cardiology**

**Course No. (PP 502)**

Prepared by:

Dr. Mogeheb Al-nahari

Reviewed by:

Dr. Mohammed  
Al-Khawlani

Head of the Department:

Quality Assurance head



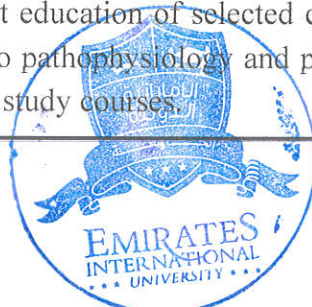
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## I. Course Identification and General Information:

1	Course Title:	Pharmacotherapy Module II: Cardiology			
2	Course Code & Number:	PP 502			
3	Credit Hours:	Credit Hours	Theory Hours		Lab. Hours
			Lecture	Exercise	
		2	2	--	--
4	Study Level/ Semester at which this Course is offered:	5Level / 1 Semester			
5	Pre –Requisite (if any):	Pharmacology III			
6	Co –Requisite (if any):	None			
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 Medical Sciences			
12	Prepared by:	Dr. Mogeab Al-nahari			
13	Date of Approval:				

## II. Course Description:

The course content aims to understand the clinical manifestations, complications, goals of therapy (clinical uses, pharmacokinetics, clinically significant side effects, drug interactions and contraindications to medications) and patient education of selected cardiovascular diseases. The pharmacotherapy course is complementary to pathophysiology and pharmacology courses and is supportive for pharmaceutical care and cases study courses.



<b>III. Course Intended Learning Outcomes (CILOs) : (maximum 8)</b> Upon successful completion of the course, students will be able to:		<b>Referenced PILOs</b> Learning out of program	
<b>A. Knowledge and Understanding:</b>		<b>I, A or E</b>	
a1	Describe the pathophysiology, laboratory tests, physical examination, diagnosis, and prognosis of cardiovascular diseases.	I	A10
a2	List the target goals of treatment for cardiovascular diseases	I	A10
<b>B. Intellectual Skills:</b>			
b1	Construct appropriate drugs regimen and monitoring plan of cardiovascular diseases.	E	B7
<b>C. Professional and Practical Skills:</b>			
c1	Use properly drugs regimen and monitoring parameters to achieve targeted therapeutic outcomes of cardiovascular	A	C5
c2	Provide a correct information to the health care team regarding therapeutic goals and rational drugs selection.	A	C5
<b>D. Transferable Skills:</b>			
d1	Search efficiently for required medical information in professional medical references and sites.	A	D5
d2	Communicate effectively and ethically with a healthcare team and patients	A	D1, D3

**(a) Alignment Course Intended Learning Outcomes of Knowledge and Understanding**

<b>to Teaching Strategies and Assessment Strategies:</b>		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
<b>a1-</b> Describe the pathophysiology, laboratory tests, physical examination, diagnosis, and prognosis of cardiovascular diseases.	- Lectures - Seminar	- Exam - Assignment - Oral presentation
<b>a2-</b> List the target goals of treatment for cardiovascular	- Lectures - Seminar	- Exam - Assignment - Oral presentation

<b>(b) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:</b>		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
<b>b1-</b> Construct appropriate drugs regimen and monitoring plan of cardiovascular diseases.	- Lectures - Seminar	- Exam - Assignment - Oral presentation

<b>(c) Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:</b>		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
<b>C1-</b> Use properly drugs regimen and monitoring parameters to achieve targeted therapeutic outcomes of cardiovascular diseases	- Lectures - Seminar	- Exam - Assignment - Oral presentation
<b>C2-</b> Provide a correct information to the health care team regarding therapeutic goals and rational drugs selection.	- Lectures - Seminar	- Exam - Assignment - Oral presentation

<b>(d) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:</b>		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
<b>d1-</b> Search efficiently for required medical information in professional medical references and sites.	Self-Learning Seminar	Presentation Assignment
<b>d2-</b> Communicate effectively and ethically with a healthcare team and patients	Seminars	Presentation

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## I. Course Content:

### A – Theoretical Aspect:

Order	Units/Topics List	Learning Outcomes	Sub Topics List	Number of Weeks	Contact Hours
1	CVD	a 1, a2, b1, c1,c2, d1, d2	- Introduction to Hypertension (HTN) - Hypertension Management	1	2
		a 1, a2, b1, c1, c2, d1, d2	- Heart Failure (HF)	1	2
		a 1, a2, b1, c1, c2, d1, d2	- Coronary Artery Diseases (CAD)	1	2
		a 1, a2, b1, c1, c2, d1, d2	- Acute Coronary Syndromes (ACS)	1	2
		a 1, a2, b1, c1, c2, d1, d2	- Dyslipidemias	1	2
		a 1, a2, b1, c1,c2, d1, d2	- Venous Thromboembolism (VTE)	1	2
		a 1, a2, b1, c1, c2, d1, d2	- Stroke	1	2
2	Midterm Exam	a 1, a2, b1, c1, c2, d1		1	2
3	CVD	a 1, a2, b1, c1, c2, d1, d2	- Cardiac Arrhythmias	1	2
4	CVD	a 1, a2, b1, c1, c2, d1, d2	- Cardiac Electrophysiology and Device Therapy	1	2
		a 1, a2, b1, c1, c2, d1, d2	- Pediatric Cardiology Pharmacotherapy	2	4
		a 1, a2, b1, c1, c2, d1, d2	- Cardiovascular Emergency Medications	2	4
		a 1, a2, b1, c1, c2, d1, d2	- Cardiovascular Pharmacogenomics	1	2



5	Final Exam	a 1, a2, b1, c1, c2, d1	-	1	2
Number of Weeks /and Units Per Semester				16	32

**B. Case Studies and Practical Aspect:**

No.	Tasks/ Experiments	Week Due	Contact Hours	Learning Outcomes (CILOs)
1	NA			
2				
3	-			
4	-			
5	-			
6	-			
7	-			
8	-			
9				
10	-			
11	-			
12	-			
13	-			
14	-			
15	-			
16				



No.	Tasks/ Experiments	Week Due	Contact Hours	Learning Outcomes (CILOs)
Number of Weeks /and Units Per Semester				

### C. Tutorial Aspect: (ان وجدت)

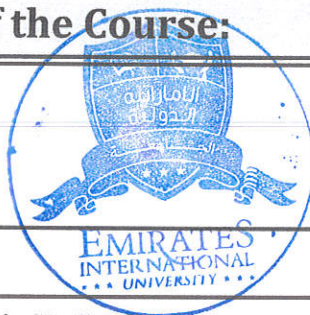
No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
Number of Weeks /and Units Per Semester				

### V. Teaching Strategies of the Course:

Lecture  
Presentation  
Seminar  
Assignment  
Self-Learning

### VI. Assessment Methods of the Course:

Assignments  
Quiz  
Exam



## VII. Assignments:

No	Assignments	Aligned CILOs(symbols)	Week Due	Mark
1	<b>Assignment 1:</b> Each student presents selected case in CVD	a 1, a2, b1, c1, c2, d1, d2	6th	5
Total				5

## 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 and attendance	6th, 12th	5	5%	a 1, a2, b1, c1, c2, d1
2	Quiz 1	6 <sup>th</sup>	5	5%	a 1, a2, b1, c1, c2, d1
3	Midterm Exam (Theory)	Week 7	20	20%	a 1, a2, b1, c1, c2, d1
4	Final Exam (Theory)	Week 16	70	70%	a 1, a2, b1, c1, c2, d1
5					
Total			100	100%	

## IX. Learning Resources:

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

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

- 1- Chisholm-Burns et al, 2015, Pharmacotherapy principles & practice. ed. , 4<sup>th</sup> edition
- 2- Katzung, 2018. Basic & Clinical Pharmacology. ed. 14th edition.

### 2- Essential References.

- 1 -DiPiro et al, 10th edition, 2017. Pharmacotherapy: A Pathophysiological Approach, ed. edition.
2. Walker & Whittlesea, 5th edition, 2011. Clinical Pharmacy and Therapeutics, ed. Wall



	Whittlesea, 6th edition, 2018.
<b>3- Electronic Materials and Web Sites etc.</b>	
	1 -www.accesspharmacy.com 2 -Disease management guidelines (specified in lecture notes)

<b>X. Course Policies: (Based on the Uniform Students' By law (2007))</b>	
<b>1</b>	<b>Class Attendance:</b> 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.
<b>2</b>	<b>Tardiness:</b> A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
<b>3</b>	<b>Exam Attendance/Punctuality:</b> 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.
<b>4</b>	<b>Assignments &amp; Projects:</b> Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
<b>5</b>	<b>Cheating:</b> 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.
<b>6</b>	<b>Forgery and Impersonation:</b> 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.
<b>7</b>	<b>Other policies:</b> 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.



## Faculty of Medicine and Health Science

### Department of Clinical Pharmacy

### Program of Pharm D

## Course Plan (Syllabus) of Pharmacotherapy Module II: Cardiology

**Course No.** ( PP 502)



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

<b>Name of Faculty Member:</b>		<b>Office Hours</b>					
<b>Location &amp; Telephone No.:</b>							
<b>E-mail:</b>		SAT	SUN	MON	TUE	WED	THU

### II. Course Identification and General Information:

1	<b>Course Title:</b>	Pharmacotherapy Module II: Cardiology			
2	<b>Course Code &amp; Number:</b>	PP 502			
3	<b>Credit Hours:</b>	<b>Credit Hours</b>	<b>Theory Hours</b>		<b>Lab. Hours</b>
			<b>Lecture</b>	<b>Exercise</b>	
		2	2	--	--
4	<b>Study Level/ Semester at which this Course is offered:</b>	5Level / 1 Semester			
5	<b>Pre –Requisite (if any):</b>	Pharmacology III			
6	<b>Co –Requisite (if any):</b>	None			
7	<b>Program (s) in which the Course is Offered:</b>	Bachelor of Pharm D			
8	<b>Language of Teaching the Course:</b>	English			
9	<b>Study System:</b>	Semester based System			
10	<b>Mode of Delivery:</b>	Full Time			
11	<b>Location of Teaching the Course:</b>	Faculty of Medical Sciences			
12	<b>Prepared by:</b>	Dr. Mogeab Al-nahari			
13	<b>Date of Approval:</b>				

### III. Course Description:

The course content aims to understand the clinical manifestations, complications, goals of therapy

(clinical uses, pharmacokinetics, clinically significant side effects, drug interactions and contraindications to medications) and patient education of selected cardiovascular diseases. The pharmacotherapy course is complementary to pathophysiology and pharmacology courses and is supportive for pharmaceutical care and cases study courses.

#### IV. Course Intended Learning Outcomes (CILOs) :

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

	<b>A. Knowledge and Understanding:</b>
a1	Describe the pathophysiology, laboratory tests, physical examination, diagnosis, and prognosis of cardiovascular diseases.
a2	List the target goals of treatment for cardiovascular diseases
	<b>B. Intellectual Skills:</b>
b1	Construct appropriate drugs regimen and monitoring plan of cardiovascular diseases.
	<b>C. Professional and Practical Skills:</b>
c1	Use properly drugs regimen and monitoring parameters to achieve targeted therapeutic outcomes of cardiovascular
c2	Provide a correct information to the health care team regarding therapeutic goals and rational drugs selection.
	<b>D. Transferable Skills:</b>
d1	Search efficiently for required medical information in professional medical references and sites.
d2	Communicate effectively and ethically with a healthcare team and patients

#### V. Course Contents:

##### A. Theoretical Aspect:

#### II. Course Content:

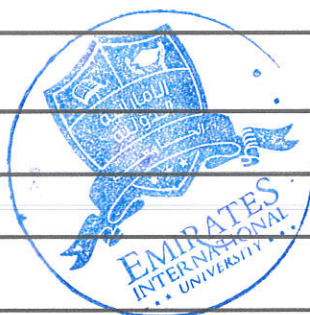
##### A – Theoretical Aspect:

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		- Heart Failure (HF)	1	2
		- Coronary Artery Diseases (CAD)	1	2
		- Acute Coronary Syndromes (ACS)	1	2
		- Dyslipidemias	1	2
		- Venous Thromboembolism (VTE)	1	2
		- Stroke	1	2
2	Midterm Exam		1	2
3	CVD	- Cardiac Arrhythmias	1	2
4	CVD	- Cardiac Electrophysiology and Device Therapy	1	2
		- Pediatric Cardiology Pharmacotherapy	2	4
		- Cardiovascular Emergency Medications	2	4
		- Cardiovascular Pharmacogenomics	1	2
5	Final Exam	-	1	2
Number of Weeks /and Units Per Semester			16	32

### B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Week Due	Contact Hours
1	NA		
2			
3			
4			
5			



No.	Tasks/ Experiments	Week Due	Contact Hours
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
<b>Number of Weeks /and Units Per Semester</b>			

No.	Tasks/ Experiments	Week Due	Contact Hours
1	NA		
2			
3	-		
4	-		
5	-		
6	-		
7	-		
8	-		
9			



No.	Tasks/ Experiments	Week Due	Contact Hours
10	-		
11	-		
12	-		
13	-		
14	-		
15	-		
16			
<b>Number of Weeks /and Units Per Semester</b>			

**C. Tutorial Aspect:**

No.	Tutorial	Number of Weeks	Contact Hours
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
<b>Number of Weeks /and Units Per Semester</b>			

**VI. Teaching Strategies of the Course**

Lecture

Presentation  
Seminar  
Assignment  
Self-Learning

## VII. Assessment Methods of the Course:

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Exam

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Total			100	100%

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