



Course Specification

— (Bachelor)

Course Title: **Pharmacology-3**

Course Code: **PHCL 444**

Program: **Pharmaceutical Sciences**

Department: **Pharmacology**

College: **Pharmacy**

Institution: **Najran University**

Version: **Version-4**

Last Revision Date: **21/08/2024**



Table of Contents

A. General information about the course:	3
B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods	4
C. Course Content	5
D. Students Assessment Activities	6
E. Learning Resources and Facilities	7
F. Assessment of Course Quality	7
G. Specification Approval	8



A. General information about the course:

1. Course Identification

1. Credit hours: 3 (2+1)

2. Course type

A. ☐ University ☐ College ☐ Department ☐ Track ☒ Program
B. ☒ Required ☐ Elective

3. Level/year at which this course is offered: (8th level/ 4th year)

4. Course general Description:

This course deals with describing and explaining the theoretical basis and pharmacological principles of chemotherapy including antibacterial, antitubercular, antifungal, antiviral, antiprotozoal and antineoplastic drugs. In addition, the course deals with studying the pharmacological basis of endocrine pharmacology including natural and synthetic hormonal analogues, hormonal physiological effects, hormonal antagonists, hormonal synthesis inhibitors, its therapeutic uses, and adverse effects. The practical part deals with training students on studying and solving of clinical cases and choice of the proper drug therapeutic protocol for topics related to chemotherapy and endocrine pharmacology.

5. Pre-requirements for this course (if any):

Pharmacology-2 (PHCL 443)

6. Co-requisites for this course (if any):

None

7. Course Main Objective(s):

Students after completion of this course will be:

- Aware of the pharmacological basis of antibacterial, antifungal, and antiviral chemotherapy.
- Acquainted with the pharmacological principles of antiprotozoal and antineoplastic chemotherapy.
- Conversant with the pharmacological principles of natural and synthetic hormone analogs and its physiological effects.
- Knowledgeable with the pharmacological basis of hormonal antagonists and hormonal synthesis inhibitors and its clinical uses in treatment of endocrine disorders.

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	60	100%
2	E-learning	-	-
3	Hybrid	-	-
	• Traditional classroom	-	-





No	Mode of Instruction	Contact Hours	Percentage
	• E-learning		
4	Distance learning	-	-

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	30
2.	Laboratory/Studio	30
3.	Field	-
4.	Tutorial	-
5.	Others (specify)	-
Total		60

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Students after completion of this course will be able to: Describe the pharmacological basis of antibacterial, antimycobacterial, antifungal, antiviral, antiprotozoal, and anticancer chemotherapy. Besides the pharmacological basis of natural hormones and its synthetic analogs, antagonists, and hormonal synthesis inhibitors and its use in treatment of endocrine disorders.	K1	Lectures	Written Exams Assignments
2.0	Skills			
2.1	Select, on a clear pharmacological basis, the proper antimicrobial agent(s), its dose, dosage regimen and combination depending on its therapeutic uses and adverse effects for treatment of bacterial, mycobacterial, fungal, viral and parasitic	S1	Lectures Laboratory work Case studies or multimedia instruction	Written Exams Practical Exams





Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
	infections besides the neoplastic diseases.			
2.2	Select, on a clear pharmacological basis, the proper therapeutic protocol used for treatment of different endocrine dysfunctions and hormonal contraceptives.	S2	Lectures Laboratory work Case studies or multimedia instruction	Written Exams Practical Exams
3.0	Values, autonomy, and responsibility			
3.1	Demonstrate leadership, skills, in addition to accountability, confidence, and independent thinking to respond to routine or unanticipated circumstances.	V1	Lectures Practice sessions	Observation card
3.2	Professional use of computer in preparing reports, assignments, and oral presentations and to be skilled in the use of electronic library and internet resources for self-directed learning.	V2	Lectures	Assignments (using rubrics)

C. Course Content

No	List of Topics (Theory)	Contact Hours
1.	Autacoids; Histamine and antihistaminic drugs	1
2.	Serotonin and anti-serotonin drugs	1
3.	Angiotensin and kinins; and drug affecting it	1
4.	Eicosanoids and drugs affecting it	1
5.	Drug treatment of asthma	2
6.	Antitussive and expectorant drugs	1
7.	Drug treatment of peptic ulcer	2
8.	Laxatives, antidiarrheal drug and antiemetics	2
9.	Introduction to CNS	1
10.	General anesthetics	2
11.	Skeletal muscle relaxants	1
12.	Local anesthetics	1





13.	Opioid analgesic and opioid antagonists	2
14.	Non-steroidal anti-inflammatory drugs	2
15.	Drug treatment of Gout	1
16.	Sedative and hypnotic Drugs	1
17.	Antiepileptic drugs	2
18.	Drug treatment of neurodegenerative diseases: Parkinsonism	1
19.	Drug treatment of neurodegenerative diseases: Alzheimer's Disease	1
20.	Antipsychotic drugs and lithium	2
21.	Antidepressant drugs	2
Total		30

No	List of Topics (Practical)	Contact Hours
1.	Practical pharmacology of Autacoids	2
2.	Practical pharmacology of Bronchial Asthma-1	2
3.	Practical pharmacology of Peptic Ulcer.	2
4.	Practical pharmacology of drugs acting on GIT	2
5.	Practical pharmacology of General anesthesia	2
6.	Practical pharmacology of Neuromuscular blockers	2
7.	Practical pharmacology of Analgesics	2
8.	Practical pharmacology of Gout	2
9.	Practical pharmacology of sedative hypnotics	2
10.	Small group discussion	2
11.	Practical pharmacology of Antiepileptic Drugs.	2
12.	Practical pharmacology of Antiparkinsonian Drugs	2
13.	Practical pharmacology of Antipsychotic Drugs	2
14.	Practical pharmacology of Antidepressant Drugs	2
15.	Revision	2
Total		30

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quiz	5 th week	10%
2.	Midterm Exam	8 th week	20 %
3.	Practical Quiz	9 th week	5%
4.	Assignment	14th Week	10%





No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
5.	Students Observation card	Per semester	5%
6.	Final Practical Exam	16 th week	10%
8.	Final Theoretical Exam	17 th week	40%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	B. Katzung. Basic & Clinical Pharmacology. 15th Edition by B.G. Katzung.
Supportive References	1. Goodman& Gilman: Pharmacological Basis of Therapeutics. 14 th Edition. 2. Katzung-Trevor. Basic & Clinical Pharmacology. 4th Edition. 3. Rang & Dale's: Pharmacology. 9 th Edition.
Electronic Materials	1. Pub Med 2. Science direct. 3. Medscape. 4. www.dlaf.nu.edu.sa
Other Learning Materials	1. Ex-pharm. 2. Drug metabolism Model. 3. Pharmacodynamics and drug receptor Model. 4. Microsoft word software.

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	1. Suitable lecture room equipped with data show and internet and sufficient number of seats. 2. Suitable laboratories equipped with health and safety tools, internet, and enough seats. 3. Blackboard collaborative system for e-learning in NU.
Technology equipment (projector, smart board, software)	1. Data show. 2. Computer software listed above. 3. Internet and Wifi- access
Other equipment (depending on the nature of the specialty)	1. Expharm 2. Pharmacal software 3. Different drug dosage forms. 4. Drug samples demonstration lab

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Program Leaders Students	Direct Indirect
Effectiveness of Students assessment	Faculty Department council Peer Reviewer	Direct Direct Direct
Quality of learning resources	Students Faculty	Indirect Direct



Assessment Areas/Issues	Assessor	Assessment Methods
The extent to which CLOs have been achieved	Faculty	Direct

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	PHARMACOLOGY DEPARTMENT COUNCIL
REFERENCE NO.	14460217-1071-00001
DATE	21/08/2024

