Course Description Form

1. Cours	e Name:			<u>-</u>							
Pharmacology		er and									
Pharmacology			u .								
2. Cours											
PHRphr-31											
-	DI ID., L., 22										
PHRphr-32											
3. Semester / Year:											
Semester cour											
	iption Pre	para	tion Date:								
2023-2024	11 4										
	able Atten										
Theoretical lec					(T) 1)						
		dit H	lours (Total) /	Number of Units	(Total)						
75 hrs. per 1st											
75 hrs. per 2nd	Semester										
7. Cours	e adminis	trato	or's name (mer	ntion all, if more t	than one nam	e)					
Name: Ahmed			· · · · · · · · · · · · · · · · · · ·	,		,					
Email: ar_arn	nat1967@na	ahrai	nuniv.edu.iq								
			_								
8. Cours	e Objectiv	ves									
Course Obj	ectives	• Me	echanism of acti	on of the drug.							
		• Study of side effects and drug interactions.									
		• The effect of the drug on the human body.									
		• pharmacokinetics and absorption.									
		Physiology and functioning of human body Systems									
		Nature of bodily functions									
9 Teach	ing and L	earn	ing Strategies								
Strategy	ing and D				Lusing laborato	ry animals					
Strategy		 Conducting practical experiments and using laboratory animals The use of explanatory videos as means to explain scientific 									
			naterials								
		3. Use of modern display devices									
		4. Measuring the work of body functions according to different									
		devices									
		5.Identification of the toxic substance causing the disease from the									
		CIII	nical symptoms								
10-Cours	se Structur	æ									
Week	Hours		Required	Unit or	Learning	Evaluation					
	-		Learning	subject name	method	method					

		Outcomes			
Week 15 Weeks per 1st Semester and 15 weeks per 2nd Semester	and 2 hours	The action of medicines in the body's organs	Pharmacology theory and practical Exam	Lectures	theory and practical Exam

11-Course Evaluation

Oral Discussions.

Writing exams.

Correspondence.

. Formative assessments.

Summative assessments.

Seminar.

7-Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Lipincott Pharmacology latest Edition
Main references (sources)	Bertram G. Katzung, Todd W.,Basic & Clinical Pharmacology, 15th ed. (2020)Britishpharmacopeia -Clinical pharmacology Rang and Dales pharmacology
Recommended books and references (scientific journals, reports)	Goodman and Gilman's, The Pharmacological Basis of Therapeutics, 14th ed. (2022). Current opinion in pharmacology - american journal of pharmacology
Electronic References, Websites	Pubmed. BNF; BP; USP www.sciencedirect.com www.scholar.google.com

Al-Nahrain University College of Medicine

Department of Pharmacology Annual Theoretical curriculum for undergraduate students 3^{rd} grade / 1^{st} Semester (2023 – 2024)

Week	Topic Topic						
1 st	Introduction to pharmacology						
	Pharmacokinetics part 1						
2 nd	Pharmacokinetics part 2						
	Pharmacokinetics part 3						
	Pharmacodynamic part 1						
3 rd	Pharmacodynamics part 2						
	Pharmacodynamics part 3						
	Autonomic Pharmacology Part 1						
4 th	Autonomic Pharmacology Part 2						
	Autonomic Pharmacology / Cholinergic Part 1						
	Autonomic Pharmacology / Cholinergic Part 2						
5 th	Autonomic Pharmacology / Cholinergic Part 3						
	Autonomic Pharmacology / Adrenergic Part 1						
	Autonomic Pharmacology / Adrenergic Part 2						
6 th	Diuretic Agents						
	Drugs used in hypertension part 1						
	Drugs used in hypertension part 2						
7 th	Drugs used in coronary heart disease part 1						
	Drugs used in coronary heart disease part 2						
	Drugs used in heart failure part 1						
8 th	Drugs used in heart failure part 2						
	Drugs used in cardiac arrhythmias part 1						
	Drugs used in cardiac arrhythmias part 2						
9 th	Antipsychotic Drugs Part 1						
	Antipsychotic Drugs Part 2						
	Anti-epileptics part 1						

10 th	Anti-epileptics part 2
	Anxiolytics, sedatives and hypnotic drugs
	Antidepressant Drugs Part 1
11 th	Antidepressant Drugs Part 2
	Anti-Parkinson's drugs
	Opioid analgesics & antagonists part 1
12 th	Opioid analgesics & antagonists part 2
	Skeletal muscle relaxants
	General Anesthetics part 1
13 th	General anesthetics part 2
	Serotonin agonists and antagonists
	Local anesthetics
14 th	Histamine & anti-histamine drugs
	Prostaglandins
15 th	Alcohols
	NSAIDs & disease-modifying anti-rheumatic agents
	Drugs used for Gout

Al-Nahrain University
College of Medicine
Department of Pharmacology

Annual Practical curriculum for undergraduate students 3^{rd} grade / 1^{st} Semester (2023 – 2024)

Week	Lab Topic
1 st	Assessment of lab animals' general health, animal handling, and
	how to write a report
2 nd	Methods of blood collection and animal dissection
3 rd	Routes of administration
4 th	Types of dosage forms
5 th	Problems solving in pharmacokinetics and pharmacodynamics.
6 th	Nicotine pharmacology and toxicity
7 th	Effects of parasympathomimetic on glandular secretions
8 th	Drugs acting on the eye
9 th	Digitalis toxicity
10 th	Evaluation of the analgesic activity of NSAIDs
11 th	Evaluation of the analgesic activity of opioids
12 th	Determination of the anti-inflammatory effect of NSAIDs
13 th	Evaluation of anticonvulsants
14 th	Evaluation of antiepileptics
15 th	Evaluation of general anesthetics

Al-Nahrain University
College of Medicine
Department of Pharmacology

Annual Theoretical curriculum for undergraduate students $3^{rd}\ grade\ /\ 2^{nd}\ Semester$

Week	Topic						
	ANXIOLYTICS, SEDATIVES AND HYPNOTIC DRUGS						
1 st	ANTI-EPILEPTICS						
	GENERAL ANESTHETICS						
	INSULIN & ORAL ANTI-DIABETICS-1						
$2^{\rm nd}$	INSULIN & ORAL ANTI-DIABETICS-2						
	INSULIN & ORAL ANTI-DIABETICS-3						
	CORTICOSTEROIDS						
3 rd	THYROID & ANTI-THYROID DRUGS						
	SEX HORMONES & CONTRACEPTIVES						
	DRUGS ACTING ON THE UTERUS						
4 th	HYPOTHALMIC & PITUITARY HORMONES						
	ANTI-BACTERIAL DRUGS [INTRODUCTION & PENICILLINS]						
	ANTI-BACTERIAL DRUGS [CELL WALL INHIBITITORS]						
5 th	ANTI-BACTERIAL DRUGS [PROTEIN SYNTHESIS INHIBITORS]						
	ANTI-BACTERIAL DRUGS [AMINOGLYCOSIDES]						
	ANTI-BACTERIAL DRUGS-5[SULFONAMIDES,						
6 th	FLUOROQUINOLONES]						
	ANTI-FUNGAL DRUGS						
	ANTI-VIRAL DRUGS						
	ANTI-TUBERCULOSIS & ANTI-LEPROSY DRUGS-1						
7^{th}	DRUGS ACTING ON GIT						
	ANTI-PROTOZOAL & ANTI-PARASITICS DRUGS						
	SEROTONIN AGONISTS AND ANTAGONISTS						
8 th	HISTAMINE & ANTI-HISTAMINE DRUGS						
	PROSTAGLANDINS						
9 th	ALCOHOLS						
	NSAIDS & DISEASE-MODIFYING ANTI-RHEUMATIC AGENTS						

	DRUGS USED FOR GOUT
	DRUGS AFFECTING ON HEMATOPOIETIC SYSTEM
10 th	DRUGS ACTING ON BRONCHIAL MUSCLES
	CANCER CHEMOTHERAPY-1
	CANCER CHEMOTHERAPY-2
11 th	DRUGS AFFECTING BONE MINERALS
	IMMUNOMODULATORS
	INTRODUCTION OF TOXICOLOGY-1
12 th	INTRODUCTION OF TOXICOLOGY-2
	PHYTOTHERAPY-1
	PHYTOTHERAPY-2
13 th	PHYTOTHERAPY-3
	PHYTOTHERAPY-4
14 th	
15 th	

Al-Nahrain University
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14 th	Evaluation of antiepileptics
15 th	Evaluation of general anesthetics

Program Description/ Pharmacology Department

Program Description										
Year/Level	Course Code	Course Name	Credit Hours							
			theoretical	practical						
2023/2024	NM03-PHRphr-31	Pharmacology1st	3	2						
3ed level		Semester								
2023/2024	NM03-PHRphr-32	Pharmacology2st	3	2						
3ed level		Semester								

Program Skills Outline															
	Required program Learning outcomes														
Year/Level	Course Code	Course Name	Basic or optional	Knowledge			Skills			Ethics					
				A 1	A2	A 3	A 4	B 1	B 2	B 3	B4	C1	C2	C3	C4
3 rd Stage		Pharma cology 1 st Semeste r	Basic	1	V	V	V	V	V	V	V	V	V	V	V
		Pharma cology 2 st Semeste r	Basic	1	V	V	V	V	V	1	V	V	V	V	V