

Course Overview

Pharmacology

Course code :	AMT 304
Course title:	Pharmacology
Level/semester:	Third Semester
Preceding Courses & Main Subjects	- Biology , Chemistry I - Human Anatomy & Physiology
Credit hours: 4	Theoretical: 2
	Practical: 2

Course content:

Course Titles	Content	Hrs
Introduction to pharmacology:	<ol style="list-style-type: none"> History . Definition, scope and branches of pharmacology. Sources of drugs Routes of administration of drugs. 	4
General pharmacology	<p>Pharmacokinetics:</p> <ol style="list-style-type: none"> Absorption of drugs. Distribution of drugs Biotransformation of drugs Excretion of drugs <p>Pharmacodynamics:</p> <ol style="list-style-type: none"> Mechanisms of drug action, Factors modifying the drug action Receptors and types of ligands : agonist, antagonist and partial agonist. Drug receptors interactions. Drug-response relationship. 	6
Drugs acting on autonomic nervous system	<ol style="list-style-type: none"> Cholinergic drugs (parasympathomimetics, cholinomimetics, anticholinesterases). Anticholinergic drugs. Drugs action on autonomic ganglia (ganglionic stimulants, ganglion blocking agents). Neuromuscular blocking agents and centrally acting muscle relaxants. Adrenergic drugs: Sympathomimetics, adrenoceptors blockers. 	8
Drugs affecting central nervous system:	<ul style="list-style-type: none"> Introduction Sedatives, hypnotics and anxiolytics Neurodegenerative disorders 	3
Anesthetics	<p>General :</p> <ul style="list-style-type: none"> Introduction: stages of anesthesia, pharmacokinetics of anesthetics, classification of anesthetics, Main of anesthetics: general features, side effects, advantages disadvantages 	4

	Local : mechanism of action, classification and uses.	
Analgesics	<ul style="list-style-type: none"> • Opioids: mechanism of action, uses, side effects and contraindications • Non-opioid: classification , mechanism of action, uses, side effects and contraindications 	2
Total		27

Practical

1. Introduction to experimental pharmacology and Lab safety (1hour).
2. Sources of drugs.....(1hour)
3. Routes of drug administration.....(1hour)
4. Dose response curve of carbachol (2hours)
5. Effects of drugs on isolated animal tissues (2hours)
6. Effects of CNS drugs on animals..... (2hours)