

**SEMESTER I & II**  
**LSM3211 FUNDAMENTAL PHARMACOLOGY**

**Prerequisite: LSM2101 or LSM2103**

**Workload: 24 lecture hours + 6 tutorial hours + 12 laboratory hours**

This module aims to provide basic principles of pharmacological science and pharmacokinetics with emphasis on drug action from the molecular and cellular levels to tissue, organ and whole animal including humans using lectures, tutorials and practicals. The lectures will start with the classical drug receptor theory followed by pharmacokinetics and molecular pharmacology of drug receptors and their regulation including receptor-mediated signal transduction and membrane ion channel function. Autonomic pharmacology (sympathetic and parasympathetic) will be introduced. The module also focuses on the pharmacodynamics of autacoids, non-steroidal anti-inflammatory agents, corticosteroids and other immunosuppressants, anti-asthma drugs, anti-thrombotic agents and anti-arthritis drugs.

S/N	Topics	Lecture hours	
		Semester I	Semester II
1	<b>Introduction to Pharmacology</b>	1 – FW	1 – FW
2	<b>Fundamental Pharmacokinetics</b>	3 – SKY	3 – SKY
3	<b>Mechanism of Drug Action:</b> Principles of drug actions Structure-Activity Relationship G Protein-Coupled Receptor Nuclear Receptor Transmembrane Receptor Enzyme Cytokine receptor Ligand-gated Ion Channels Voltage-gated Ion Channels Receptor Regulation Receptor Classification	4 – FW 3 – PW	4 – FW 3 – PW
4	<b>Autonomic Pharmacology:</b> Adrenergic & Cholinergic	4-IRI	4 - IRI
5	<b>Inflammation Pharmacology:</b> Autacoids Vasoactive Peptides Corticosteroids Immunosuppressants Anti-asthma Drugs Non-steroidal Anti-inflammatory Drugs Anti-Rheumatoid Arthritis Drugs Anti-Coagulation Drugs Anti-Ulcer Drugs	2– PW 7 – FW	2– PW 7– FW
		<b>Total Lectures : 24h</b> <b>Tutorials: 6h</b> <b>Practicals: 3X6= 12h</b>	
<b>Total hours:</b>		42h	

**TEXTBOOK: Pharmacology** by HP Rang, MM Dale, JM Ritter & RJ Flower, Churchill Livingstone, 8<sup>th</sup> Edition, 2016

**MODE OF ASSESSMENT:** MCQ/Long Essay (25% CA, 75% Final Examination)

**MODULE CO-ORDINATORS AND LECTURERS:**

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**LECTURERS:**

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Updated in June 2017