



Molecular Pharmacology	
Title: Molecular Pharmacology	
Subject Code: 532 PHL	
Semester: Tenth Semester (Fifth year).	
Duration: 2 + 1 Units (5 contact hours) per week.	
Aims: To provide knowledge of molecular pharmacology.	
Objectives: Upon successful completion of the course student shall be able to know the molecular pharmacology.	
Contents:	
Lectures:	
	Molecular pharmacology deals with the biochemical and physical characteristics of interaction between drug molecules and those of the cell. The methods of molecular pharmacology include precise chemical and molecular biology techniques to understand how cell response to hormones of pharmacologic agents and how chemical structures correlates with biological activity such as drug receptor-effector coupling and its regulation (e.g., receptor structure and function, G-protein, kinases, phosphatases and second messenger synthesis and degradation, ion channels, steroid and growth factor receptors, gene regulation and identification of molecular targets for drugs
Practical:	Techniques of molecular pharmacology, GPCR receptors, Cell signaling, Serein and tyrosine phosphorylation, infection and transfection of genes to their targets.
Minimum course requirements:	30 (2 x 15) Unit lectures and 45 practical hours (3 x



15) per level.

Evaluation methods:

-Quizzes	10%
- Mid term examination	25%
- Practical examinations	25%
- Final examination (written)	40%

Text Books (latest edition):

1. Molecular Pharmacology: by Terry Kenakin & Terrence P. Kenakin.
2. G-Protein-coupled Receptors: Molecular Pharmacology: by Bengt von Mentzer & Bengt von Mentzer.
3. Text book of receptor Pharmacology: by John C. Foreman & Torben Johansen