

**School of Chemical Sciences  
Devi Ahilya Vishwavidyalaya, Indore**

**M.Sc. Chemistry**

**SEMESTER II**

**MCH-204: CHEMISTRY OF DRUGS**

**Credits 3**

<b>Unit -I</b>	Important terminology in medicinal chemistry. Nomenclature of drugs, Route of drug administration and IUPAC nomenclature. Development of new drugs. Concept of lead compound, Prodrugs and soft drugs, Structure- activity relationship. Theories of drug activity.
<b>Unit-II</b>	Pharmacokinetics- Introduction of drug absorption, distribution, disposition and elimination. Pharmacokinetics in drug development process. Pharmacodynamics- Drug metabolism, biotransformation, significance of drug metabolism in medicinal chemistry. Toxicology, Dose and dose response. Toxicity of drug metabolism.
<b>Unit- III</b>	Analgesics and antipyretics- Introduction, Classification, Structure-activity relationship and mode of action. Aspirin, Paracetamol, Diclophenac, Ibuprofen. Antibiotics: Classification, cell wall biosynthesis. Synthesis and SAR of penicillin and chlorophenicol.
<b>Unit -IV</b>	Anti-malarial- Classification, mode of action and structure- activity relationship. 4- aminoquinoline analogues 8-aminoquinoline analogues, quinoline analogues.
	<b>Books Suggested</b> <ol style="list-style-type: none"><li>1. Robert F. Dorge Wilson and Gisvod. Textbook of organic Medicinal and Pharmaceu-tical Chemistry.</li><li>2. M.E. Wolff, John wiley. Berger's Medicinal Chemistry and drug discovery, Vol-I.</li><li>3. J.Fuhprhop and G.Penzillin. Organic synthesis-concept, method and starting material.</li><li>4. Eds.Korolkovas and Burkhattar J.H. John Wiley &amp; sons. Essentials of medicinal Chemistry.</li><li>5. Graham &amp; Patrick, Introduction to Medicinal Chemistry OUP</li><li>6. Goodman and Gilman's Pharmacological Basis of Therapeutics, McGraw-Hill.</li><li>7. R.S. Satoshkar, Nirmala N. Rege and S.D. Bhandarkar, Pharmacology and Pharmacotherapeutics, Popular Prakashan, Mumbai.</li></ol>