

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.E. SEMESTER : VI**  
**CHEMICAL TECHNOLOGY**

**Subject Name: Medicinal Chemistry – I**  
**Subject Code: 163601**

Teaching Scheme				Evaluation Scheme			
Theory	Tutorial	Practical	Total	University Exam(E)	University Exam(P)	Mid Sem Exam(Theory) (M)	Practical (Internal)
4	0	3	7	70	0	30	50

Sr.No	Course contents
	<b>ANS, CNS, &amp; CVS – Drugs</b>
1.	Study of the chemistry of the following classes of drugs including nomenclature, classification, SAR
2.	Synthesis: Drugs affecting neurotransmission-cholinergic. Serotonergics & their antagonists
3.	General Anesthetics, Hypnotics, Anti-Seizure drugs, Antipsychotic & Antianxiety agents, analgesics, anti-Parkinson drugs
	<b>Drug Design &amp; Discovery</b>
4.	Concept of drug action, receptor theory with relevant examples, enzymes & enzyme inhibitors, Modern methods of drug design & discovery
5.	Introduction to combinatorial chemistry & CADD, Antihistaminic including anti ulcer drugs ,Cardiovascular drugs Diuretics, Anticoagulants, Thrombolytic & Antithrombotic, Cardiac agents, Antihypertensive, Antihyperlipidemics, Local anesthetics,

**Reference Books:**

1. Strategies for Organic Drug Synthesis & Design, & Daniel Led nicer, John Willey & Sons Inc. New York., 2<sup>nd</sup> Ed, 1998.
2. Organic Chemistry of Drug Synthesis: Vol.1 to 6, Daniel Lednicer, John Wiley & Sons Inc.
3. Burger's Medicinal Chemistry & Drug Discovery: Vol. 1 to 6, A. Burger & M.E.Wolff, John Wiley & Sons – New Jersey,6<sup>th</sup> Ed, 2003
4. Foye's Principles of Medicinal Chemistry, W.O. Foye, Lippincott Williams & Wilkins- Philadelphia, Oxford, 6<sup>th</sup> Ed, 2008.
5. Text book of Medicinal & Pharmaceutical Chemistry, Charles Owens Wilson Lippincott Williams & Wilkins – Philadelphia. 1962
6. Organic Synthesis – The Disconnection Approach, Warren S., John Wiley & Sons – Chichester.,1<sup>st</sup> Ed., 2005
7. Pharmaceutical Substances: Synthesis, Patents, Applications (N-Z), A. Kleemann, Georg Thieme Verlag,Stuttgart.4<sup>th</sup> Ed, 2001
8. Textbook of Medicinal & pharmaceuticals Chemistry, Wilson & Gisvold ., Williams & Wilkins,1<sup>st</sup> Ed, 2004

9. Principles of Biochemistry, Lehninger, Freeman & Company, 5<sup>th</sup> Ed, 2008
10. Biochemistry, J.M.Berg, J.L.Tymoczko & L. Stryer, 5<sup>th</sup> Ed, 2002