

GUJARAT TECHNOLOGICAL UNIVERSITY
BACHELOR OF PHARMACY
SEMESTER: V

Subject Name: **Pharmacognosy – IV**

Sr. No.	Course contents	Proposed No. of Hours of Teaching
1.	Biosynthetic Studies & Basic Metabolic Pathways. Brief Introduction to Biogenesis of Secondary Metabolites of Pharmaceutical Importance.	8
2.	<p>Alkaloids: Sources, Cultivation, Collection, Processing, Commercial Varieties, Chemical Constituents, Substitutes, Adulterants, Uses, Diagnostic Macroscopic & Microscopic Features & Specific Chemical Tests of Following Alkaloid Containing Drugs:</p> <ul style="list-style-type: none"> a. Pyridine – Piperidine: Tobacco, Areca, Lobelia, Hemlock b. Tropane: <u>Datura</u>, Belladonna, Hyocyamus, <u>Withania</u>, Dubosia ,Cocca c. Quinoline & Isoquinoline: <u>Cincona</u>, <u>Ipecac</u>, Opium, Camptotheca d. Indole: Ergot, <u>Rauwolfia</u>, <u>Catharanthus</u>, <u>Nuxvomica</u>, Physostigma e. Imidazole: Pilocarpus f. Steroidal: Veratrum, Kurchi g. Alkaloidal Amine: <u>Ephedra</u>, Colchicum h. Purines: Coffee, Tea, Cola i. Quinazoline: <u>Vasaka</u> j. Diterpene Alkaloids: Aconite 	32
3.	Concept Of Stereoisomerism Taking Examples Of Natural Products.	5

Pharmacology – II – Practical 3 hr/week:

1. Identification of Crude Drugs Containing Alkaloids Mentioned in theory.
2. Histological Study of Underlined Drugs.

References Books:

1. Wallis T.E., Text Book of Pharmacognosy, 5th Edition, Cbs Publishers and Distributors.
2. Qadry J.S., Shah and Qadry's Pharmacognosy, B.S.Shah Publication.
3. Trease E and Evans W.C., Pharmacognosy, Balliere Tindall. Eastbourne, U.K.
4. Tyler V.C., Brady L.R. and Robers W.E., Pharmacognosy, Lea and Febiger, Ph.
5. Ashutosh Kar, Pharmacognosy And Pharmacobiotechnology, New Age International Publication.
6. Jackson B.P., Atlas of Microscopy of Medicinal Plants, Culinary Herbs and Spices, CBS Publication.
7. Kokate C.K, Purohit A.P. and Gokhale S.B. Pharmacognosy (Degree), Nirali Prakashan, Pune.
8. Kokate C.K. Practical Pharmacognosy, Vallabh Prakashan, Delhi.
9. Ansari, Pharmacognosy Textbook of Natural Products, Latest Edition.
10. Iyengar, Text Book of Pharmacognosy, Manipal Power Press.
11. Bhatt, Nagasampagi, Sivakumar, Chemistry of Natural Products, Narosa Publishing House Pvt Ltd, 2005.
12. Agrawal O.P., Natural Products, Vol I & II, Goel Publishing House, Meerut, 2004.