

GUJARAT TECHNOLOGICAL UNIVERSITY
B.E. SEMESTER : VII
CHEMICAL TECHNOLOGY

Subject Name: New Technologies & Products

Subject Code: 183604

Teaching Scheme				Evaluation Scheme			
Theory	Tutorial	Practical	Total	University Exam(E)	University Exam(P)	Mid Sem Exam(Theory) (M)	Practical (Internal)
3	0	3	6	70	30	30	20

Sr. No	Course contents
1.	New types of pigments & colorants in foods, specialty inks, medicines, securities, displays etc. The newer methods of production & additives
2.	Hydrogenation technology in Dyestuff & Pigment industry
3.	Process Optimizations , Process Selections , Selections , Statistical quality control techniques for dyestuff industries
4.	Design aspects like reactor design & pressure plant vessels ,Scaling up of process from laboratory to pilot plant & vessels

Reference Books:

1. Advances in Color Chemistry Vol I ,Peters A.T., Blackie, 1995
2. Advances in Color Chemistry Vol II,. Peters A.T, Blackie, 1995
3. Advances in Color Chemistry Vol III,. Peters A.T, Blackie, 1995
4. Colorants for Non – Textile Applications ,Freeman, Elseiver, 2000
5. Modern Colorants : Synthesis and Structure ,A T Peters and H S Freeman, Springer, 1995
6. Fundamental Processes of Dye Chemistry ,Fierz, David, Blangey,Interscience Publishers, 1955
7. Industrial Organic Chemistry, Arpe H.J.VCH, Weinheim, Weissermal K.1993
8. Organic Synthesis, Smith M.B., Tata McGraw Hill, New York, 2nd Ed., 2004
9. Chemistry of Synthetic Dyes, Lubs H.A.,Robert E Krieger Publishing Company New York, 1995
10. Chemistry of Synthetic Dyes, Lubs H.A., Robert E Krieger Publishing Company New York, 1st Ed.,1995
11. Chemistry of Synthetic Dyes – Vol I, Venkatraman K., Academic Press, New York, 2009
12. Chemistry of Synthetic Dyes – Vol II, Venkatraman K., Academic Press, New York, 2009
13. Chemistry of Synthetic Dyes – Vol III, Venkatraman K., Academic Press, New York, 2009
14. Chemistry of Synthetic Dyes – Vol IV, Venkatraman K., Academic Press, New York, 2009
15. Chemistry of Synthetic Dyes – Vol V, Venkatraman K., Academic Press, New York, 2009

16. Chemistry of Synthetic Dyes – Vol VI, Venkatraman K., Academic Press, New York, 2009
17. Color Chemistry: Synthesis, Properties and Applications of Organic Dyes and Pigments ,Heinrich Zollinger, Wiley-VCH,2nd Ed, 1991
18. Methods Explained Practical Step to Robust Design , T. P. Bagachi Taguchi, Prentice Hall, 1993