

# GUJARAT TECHNOLOGICAL UNIVERSITY

B. E. SEMESTER: VI

Chemical Engineering

Subject Name: **Chemical Process Industries – II**

Subject Code: **160502**

Teaching Scheme				Evaluation Scheme		
Theory	Tutorial	Practical	Total	University Exam (Theory) (E)	Mid Sem Exam (Theory) (M)	Practical (I)
3	0	3	6	70	30	50

Sr. No	Course Content	Total Hrs.
1.	<b>Dyes and Intermediates:</b> Classification of dyes according to constitution and application, various dyes such as Azo dyes, Anthroquinone dyes, Triamyl dyes, dispersed dyes, Misc. Dyes such as azine, oxazines, thiazines, thiazoles, nitro dyes etc. Various dye intermediates based on unit processes ,Manufacturing Processes of Crome blue black,H-acid,Koch acid,Vinyl sulphone,Wet dyes,Nitro benzene,Aniline,etc.	14
2.	<b>Drugs and Pharmaceuticals:</b> Classification of various drugs and pharmaceuticals, Introduction of Antibiotics such as penicillin, streptomycin,erithromycin ,Introduction of vitamins,Manufacturing processes of Aspirine,Vitamin-C,Insulin,Ascorbic acid,Barbital & Pheno Barbital	14
3.	<b>Sugar, Paints, Pigments:</b> Manufacturing of Sugar, Paints, different types of pigments such as white, blue, red, yellow, green, brown, etc , Varnishes, Indsrial Coatings, printing inks, Polishes etc	14
4.	<b>Fermentation industries :</b> Industrial alcohol, absolute alcohol, beers wines and liquors, Manufacturing of Butyl alcohol & Citric acid by Fermentation	12

## Practical and Term-work:

Experiments based on the above topics for the testing, identification, analysis and preparations etc. should be given to the students.

**Text Book:**

1. Shreve's chemical process industries- George Austin.
2. DRYDENS outlines of chemical technology for the 21<sup>st</sup> century, third edition by M Gopalarao & Marsal Sitting, pub East-West Press

**Reference Books:**

1. Biotechnology, Chemical feedstock and Energy utilization-D. F. Gibbs.