GUJARAT TECHNOLOGICAL UNIVERSITY
B. E. SEMESTER: V
TEXTILE PRODUCTION

Subject Name**: Chemistry of Intermediates & Dyes**
Subject Code: **152801**

Teaching Scheme				Evaluation Scheme		
Theory	**Tutorial**	**Practical**	**Total**	**University Exam (Theory) (E)**	**Mid Sem Exam (Theory) (M)**	**Practical (I)**
4	0	0	4	70	30	50

Sr. No.	**Course content**
1.	Color - Definition, Colorimetric terms and Theories.
2.	Brief description of intermediates and primary intermediates.
3.	Orientation rules in benzene series.
4.	**Industrial Synthesis of Intermediates:** Purity of raw materials, Yield of product.
5.	**Description of Individual Unit Processes:** Sulphonation, Nitration, Halogenation, Oxidation, Reduction, Alkali fusion - Definition, Reagents, Bucherer reaction, Alkylation- Definition, Friedel crafts reaction, Diazotization etc.
6.	Classification and chemical constitution dyes. Synthesis of dyes from intermediate compounds to mono & Diaz dyes, Coupling of diazotized amines, etc.
7.	Characteristic properties, synthesis & application of Ionic & non-ionic dyes like Direct, Vat, Acid, Disperse, Azoic, etc.
8.	Characteristic features, Synthesis & uses of dyes like Nitro dyes, Acridine & Azo dyes etc.
9.	**Colourless Dyes:** Concept and classification of fluorescent dyes.
10.	**Non-textile Dyes:** Food, leather, paper, hair dyes, etc.

Practical and Term Work:

Based as per the syllabus prescribed.

Reference Books:

1. Chemistry of dyes & principles of dyeing, SHENAI, V. A.
2. Synthetic dyes, G. R. Chatwal.
3. Colourants and pigments, John Shore.
4. Handbook of synthetic dyes, A. M. Shah.
5. Modern technology of textile dyes and pigments, Panda, H.