

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E. Semester: II

M.E. TEXTILE ENGINEERING

Subject Name: **Theory Of Textile Structure II (Major Elective-II)**

Sr.No	Course content
1.	Theories of yarn diameter and cloth setting. Cover factor . Determination and its practical applications of Peirce's geometry of plain woven fabrics. Analytical and graphical solutions of basic cloth equations. Later modifications of Peirce's equations. Crimp interchange in woven fabrics. practical applications of simple cloth geometry.
2.	Geometry of rigid elastic threads in fabrics. Crimp balance of elastic threads. Theoretical treatment of fabric deformation in tension, bending and shear. Cloth buckling and recovery from wrinkle. Effect of fabric relaxation and finishing process on its structure and properties. Theoretical strength determination of non-woven fabrics.

Reference Books:

1. Physical Testing of Textiles by B.P. Saville
2. Textile Fibres Yarns and Fabrics – Kaswell E.R. published by Reinhold Publishing Corporation – New York, 1954.
3. Structural Mechanics of fibres, yarns & fabrics by Hearle, Grosberg and Backer.
4. Physical Testing and quality control, Textile progress, Vol.23, No.1/2/3, by K. Slater.
5. Mario Bona – Textile Quality (Euratex Series).
6. Testing & Quality Management by Dr.V.K. Kothari (IIT-Delhi)