

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E. Semester: II

M.E. TEXTILE ENGINEERING

Subject Name: **Theory of Yarn Manufacture**

Sr.No	Course content
1.	Fibre characteristics; Fibre characteristics and their effect on spinning physical properties, structural and chemical properties and their significance.
2.	Yarn preparation : Theory of spinning and cleaning purpose of blending, blend evenness, blending delay, blend metering, blending m/cs. Hook formation theory, Drafting theory, irregularities. Wave irregularity, effect of post comber drawing passages on different yarn spinning system.
3.	Yarn formation: Different yarn forming principles OE spinning, self twist spinning, warping process false twist spinning (air jet and friction spinning), Adhesive process Bobtex and twister spinning.
4.	Yarn structure: Basic yarn geometry Mechanism of fibre migration.
5.	Yarn characteristics: Mechanical properties of yarn, Experimental studies of yarn strength, classification of yarn faults, classimat grades. Effect of method of twisting on tensile properties.

Reference Books:

1. The Textile Institute Publication - Manual of Textile Technology – Short Staple Spinning Series
Vol.V – New spinning systems by W. Klein.
New Spinning Systems-NCUTE Publications by R.V.Mahendra Gowda
2. Rotor Spinning by R. Nield
3. Rotor Spinning by C.A.Lawrence and Chen
4. Physical Properties of Textile Fibres – Morton W.E. and Hearle J.W.S. published by The Textile Institute Manchester.
5. Structural Mechanics of fibres, yarns & fabrics by Hearle, Grosberg and Backer.

