

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E. Semester: II

M.E. TEXTILE ENGINEERING

Subject Name: **Advance Weaving Technology**
(Inter Disciplinary Elective –II)

Sr.No	Course content
1.	Study of different preparatory processes for weaving like Winding, Warping, Sizing.
2.	Winding: - Objectives and features of winding machines. Development in winding machines by Schlafhorst, Hacoba, Murata, Savio, SSM etc. Requirement of wound packages.
3.	Warping: - Objectives and features of warping machines Developments in direct and indirect warping machines. Needs of warp beams.
4.	Sizing: - Objectives and features of sizing machines. Modern spun and filament sizing machines. Single end sizing machine. Developments in modern sizing machines.
5.	Classification of shuttle and shuttleless looms. With their relative merits and demerits.
6.	Jet Looms: - Features of air jet and water jet looms. Requirement of air and water. Weft insertion system on air jet and water jet loom. advantages & problems of air jet and water jet loom. Modern developments.
7.	Rapier: - Features of rapier looms. Classification of rapier looms. Tip & loop transfer, study of weft velocity on rapier. Weft insertion on both systems. Modern developments.
8.	Projectile: - Sulzer loom introduction, projectile & its movements. Torsion bar picking. Projectile & picker shoe velocity & acceleration & forces. Modern developments.

Reference Books:

1. Weaving: Conversion of Yarn to Fabric - Lord & Mohamad
2. Weaving: Technology & Operations - Ormerod A.
3. Principles of Weaving - Marks & Robinson
4. Series publications of NCUTE Training Programs
5. Modern Preparation & Weaving Machinery by A. Ormerod.
6. Warp Sizing by J.B. Smith.
7. Shuttleless Weaving Machines by – Svaty.
8. Weaving Handbook - Sulzer publication

