

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA IN TEXTILE MANUFACTURING TECHNOLOGY
SEMESTER: V

Subject Name: **Modern Weaving Technology**

Sr. No.	Course content
1.	Preparatory processes for shuttleless weaving: Necessary equipments & processing parameters for : 1.1 Winding 1.2 Warping 1.3 Sizing 1.4 Drawing - in
2.	Different types of shuttleless weaving machines: 2.1 Brief study of shedding motion used in shuttleless loom. 2.2 Detail study of weft insertion in projectile machine. 2.3 Detail study of beating - up motion of projectile machine. 2.4 Detail study of weft insertion in Rapier machine. 2.5 Detail study of weft insertion in Air jet machine. 2.6 Detail study of weft insertion in water-jet loom. 2.7 Study of modern technique of Drawing - in & beam gaiting.
3.	Principle of Multiphase & Triaxial Weaving
4.	Recent developments in: 4.1 Winding 4.2 Sectional warping & single end sizing. 4.3 Warping 4.4 Sizing 4.5 Drawing - in 4.6 Dobby 4.7 Jacquard
5.	Use of Information Technology in weaving.

Laboratory Experiences:

1. Weft insertion in Projectile loom.
2. Torsion bar picking mechanism.
3. Beat up mechanism and selvedge formation in projectile loom.
4. Weft insertion in rapier loom.
5. Passage of warp on air jet loom.
6. Pick insertion in air jet loom.
7. Picking mechanism of water jet loom.
8. Shedding mechanism of multi phase weaving machine.

9. Triaxial waving mechanism.
10. Industrial Report.

Reference Books:

1. Principles of weaving, Marks & Robinsons.
2. Shuttleless loom, Vinscent.
3. Weaving Technology & operations, Ormerod. A. & Sondhelm. W.S.
4. Weaving machines, mechanism, Talukdar M.K., Sriramula P.K.management & Ajgaonkar D.B.
5. Modern Developments in weaving, Duxbury & Ray.
6. Weaving 2000, A New Millennium the Textile Institute, Manchesters.
7. Air-jet Weft Insertion, (Textile Progress vol. 29 No.4) the Textile Institute.