



Subject : WEAVING AND DESIGN (For Senior Instructor)

1. Weaving Preparatory: Principles of winding processes; Classification of winding methods; Patterning mechanism; Yarn clearers and tensioners; Warping objectives and classification; Different types of warping creels; Features of beam and sectional warping machines; Different sizing systems; Sizing of spun and filament yarns; Drawing-in process; Principles of pirn winding.
2. Weaving: Primary and secondary motions of loom; Shedding motion; Positive and negative shedding mechanisms; Type of sheds; Tappet, dobby shedding; Elements of Jacquard shedding, harness and design calculations, construction and development of Jacquard designs; Weft insertion; Mechanics of weft insertion with shuttle; Shuttle picking and checking; Beat-up; Kinematics of sley; Loom timing diagram; Cam designing; Effect of sley setting and cam profile on fabric formation; Take-up and Let-off motions; Warp and weft stop motions; Warp protection; Weft replenishment; Principles of weft insertion systems of shuttle-less weaving machines such as projectile, rapier, water-jet and air-jet; Types of selvages.
3. Fabric Structure: Basic woven fabric constructions and their derivatives; Crepe, honeycomb, Huckaback, rib & cord, terry, gauze, leno, stripe & check weave combinations, and double cloth constructions; Drawing, denting and lifting plans.
4. Colour: Elements of colour, colour measurement, colours in combination, application of colour, simple colour and weave effects.