Subject Code : ACSY24C

FIRST ALLIED COURSE III – TEXTILE SCIENCE

Unit I: - Fiber and Yam manufacturing.

Fiber – Definition, Classification of Fiber and a brief explanation of fibers.
Yarn – Definition, Conventional ring spinning method- Passage of material through carding, doubling, combing, drawing, roving, and spinning. Yarn twist, yarn count. Types and characteristics of yarns – ply yarns, cables yarns, doubles yarns and novelty yarns and it types.

Unit II: - Yarn manufacturing.

Modern spinning methods – Passage of material through open end spinning, Friction spinning, Electrostatic spinning, Airjet spinning, Twistless spinning. Filament yarn spinning methods wet spinning, dry spinning, melt spinning, Bicomponent spinning, film splitting.
Sewing thread – construction of threads, thread sizes, thread selection

Unit III: - Weaving

Preparation for weaving (warping, sizing, looming) Basic loom structure. Weaving- Definition, Primary motion – shedding – Definition and a brief explanation, picking (shuttle and shuttless looms), beating up. Secondary motion – Definition and Ancillary motion.

Types of selvedges. Construction of cloth designs - Design, draft and pegplan. Classification of weaves – plain weare, twill, Satin, Crepe, Pile, double cloth, dobby and Jacquard, Identification of woven fabric defects.

Unit IV: - Knitting.

Knitting – Definition, Comparison between woven fabrics and knitted fabric. Classification of knitted fabrics weft knitting – plan knit stitch, Rib stitch, Warp knitting -
Tricot knit, Raschel Knit, Milanese Knit, Jacquard knit, pile knit, Terry knit, velour knit. Identification of knitted fabric defects.

Unit V: - (Felted and Non woven fabrics)

Felted fabrics – Felting process. Types of felt, properties and uses of felt. Non woven – Definition, classification of non-woven fabrics, web forming techniques, bonding techniques, and finishing techniques. Characteristics of non-woven, uses of non-woven fabrics.

Reference:

1. Textile – fiber to fabric – Bernard P.Corbman. Mc.Graw Hill book company, New Delhi.
2. The motivate Series – A.Wynne. Mac Milan Publishers , London
3. Textile Science – E.P.J. Gohl.
4. Textiles- Hollen & Saddler.