



# TEXTILE FINISHING

## PROF. KUSHAL SEN

Department of Textile Engineering  
IIT Delhi

**PRE-REQUISITES :** Should have knowledge of fibres, preferably of preparatory processes and dyeing

**INTENDED AUDIENCE :** Students of first year B.Sc (Physics / Mathematics ) and first year B.E courses.

**INDUSTRIES APPLICABLE TO :** Textile Industry, Particularly Chemical Processing Industry

### COURSE OUTLINE:

This course would cover the Science and Application of various finishing processes based on the need and Chemistry of the Fibres, Cellulose based, Protein based and Synthetics. Fundamentals of the techniques and the Chemistry finishing agents, Mechanisms applicable to various finishing techniques. Some introduction to relevant machines and characterization of finished fabrics would also be covered.

### ABOUT INSTRUCTOR :

Prof. Kushal Sen is currently a Professor in the Department of Textile Technology, IIT Delhi. Areas of specialization include textile chemical processing, texturing, and structure-property correlations.

### COURSE PLAN :

**Week 1:** Introduction , General classification of finishes, Mechanical finishing; Sanforization

**Week 2:** Wrinkle-resist finishing, Need, General approach for obtaining finished product

**Week 3:** Cross-linking agents, Catalysts needed, Process and Evaluation

**Week 4:** Stiffeners and Softeners

**Week 5:** Waterproof, Water repellent, Waterproof breathable finishing

**Week 6:** Flame retardants and Finishing thereof

**Week 7:** Antimicrobial finishing ; Bio-polishing

**Week 8:** Soil repellency and Soil release finishing

**Week 9:** Finishing of wool; Milling, setting, Shrink-resistant finishing, Special finishing of silk

**Week 10:** Energy efficient technology; Low liquor application and foam finishing

**Week 11:** Finishing of synthetics; Heat setting , Antistatic and other special finishing

**Week 12:** Mangles, driers and Stenters