ADVANCED TEXTILE PRINTING TECHNOLOGY

COURSE OUTLINE:
This course would cover the fundamentals of conventional printing, the complexities and limitations; introduce the concept of transfer printing and mainly cover the sublimation transfer printing which is commercially being used. The next logical development in textile printing has been the direct digital printing of textiles. The concept, the advantage, principles of ink-jet technology, complexities involved, general machinery, the inks and requirements of pre- and post treatments would also be covered.

ABOUT INSTRUCTOR:
Currently a Professor in the Department of Textile Technology, IIT Delhi. Areas of specialization include textile chemical processing, texturing, and structure-property correlation.

COURSE PLAN:
- **Week 01**: Recall conventional printing, colourants: dyes and pigments
- **Week 02**: Thickeners, viscosity, rheology, discharge – resist style
- **Week 03**: Transfer printing, transfer paper printing, dyes and inks
- **Week 04**: Mechanism of sublimation transfer, Free path length, general machinery
- **Week 05**: Introduction to digital printing, ink-jet printing principles: continuous jetting
- **Week 06**: Drop-on-demand principle, general machinery
- **Week 07**: Pre-treatment, ink-types and substrate, pigment inks
- **Week 08**: Disperse inks, acid inks, reactive inks

INDUSTRIES APPLICABLE TO:
All textile processing industries would value