



EVALUATION OF TEXTILES MATERIALS

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PRE-REQUISITES : Suitable of 2nd year/3rd Year UG Textile Physics and Mathematics of 10+2 level and basic statistics

INTENDED AUDIENCE : UG and PG Students of Textile, Clothing and fashion technology, Material Science etc.

COURSE OUTLINE :

Evaluation of textile materials is an extremely important activity for textile production, product and process development, research, distribution and consumption. During selection of raw materials, intermediate materials and finished products the evaluation of characteristics of textiles is necessary. To meet up the customer requirement, specification is very useful. In this concept, testing plays a vital role. In research and development field the evaluation of textile materials helps us to decide the next route. Research Institute, pilot plants can achieve process development through testing or exact investigation into better, cheaper and quicker methods. Certain standard level should be maintained to control the production process. By evaluation of textile materials one can easily detect the faults of machinery and materials. Continuous test of the textiles results an enhanced and efficient output of the production.

ABOUT INSTRUCTOR :

Prof. Apurba Das is Professor in the Department of Textile Technology, Indian Institute of Technology, Delhi. He has completed his Ph. D. from the same department in the year 1994. He has joined Indian Institute of Technology, Delhi in 2002 as a faculty after serving in the textile industries and in research organization for about 11 years. He has guided many Ph.D., M. Tech., B. Tech. students and presently guiding several Ph.D., M. Tech. and B. Tech. students. He has published more than 260 research papers in journals and conferences, authored and edited 05 books and written chapters in 18 books. He has successfully completed many research and consultancy projects from industries and government funding agencies. He has filed several patent applications. He has developed several instruments for characterization of textile materials. His main areas of teaching and research interest are clothing comfort, sports textiles, nonwovens and technical textiles, filter fabrics, geotextiles, medical bandage, textile composites, and instrumentation. He has international research collaborations with universities from different countries like, Germany, Poland, Hungary, Slovenia, Italy, Portugal, China, South Korea, Australia, UK, Hong Kong, Croatia etc.

COURSE PLAN :

Week 1: Objectives of Testing, Selection of Samples for Testing & Numerical on Elements of Statistics

Week 2: Selection of Samples for Testing & Numerical on Elements of Statistics, Fibre Length

Week 3: Selection of Samples for Testing & Numerical on Elements of Statistics, Fibre Length, cont'd

Week 4: Fibre Fineness and Maturity

Week 5: Fibre Fineness and Maturity, cont'd

Week 6: Evenness Testing of Laps, Slivers, Rovings and Yarns & Numerical on Evenness of Textile Materials

Week 7: Evenness Testing of Laps, Slivers, Rovings and Yarns & Numerical on Evenness of Textile Materials

Week 8: Tensile Testing of Fibres, Yarns and Fabrics

Week 9: Tensile Testing of Fibres, Yarns and Fabrics, cont'd

Week 10: Tensile Testing of Fibres, Yarns and Fabrics, cont'd

Week 11: Tear Strength of Fabrics, Bursting Strength of Fabrics, Abrasion and Pilling Test of Fabrics

Week 12: Fabric Bending, Shear and Drape, Moisture in Textile