

Computer Requirements

The Textiles Fundamentals eLearning system is a web-based delivery system with the following requirements:

- High speed internet to properly access the eLearning products
- Monitor/screen resolution of 1024 x 768



Textile Fundamentals eLearning modules



- fibers
- texturing
- spun yarn manufacturing
- warp preparation
- warp knitting
- weft knitting
- weaving
- nonwovens
- fabric preparation
- color and color properties
- dyestuffs and applications
- printing
- chemical finishing
- mechanical finishing

sponsored by:



TEXTILE FUNDAMENTALS provides a comprehensive, in-depth study of textile processing, from fiber to finishing. The series provides the participant with insight into all areas of textile processing, and an understanding of how these processes interact with each other to produce a quality product.

AATCC and the TexEd department of the College of Textiles at North Carolina State University have partnered to offer online “eLearning” instruction to individuals involved in all facets of the textile supply chain. View and pay for only the modules you need. This state-of-the-art online course series makes learning immediately accessible, engaging, and affordable. Visit our website, www.aatcc.org, to view an online demo of the Textile Fundamentals modules.

FEATURES

- State-of-the-art visual experience including graphic animations and simulation videos
- Comprehensive, in-depth study of the entire textile process from fiber formation to coloration and finishing
- Tests in each module
- Text of each module narration
- Detailed index of topics covered in each module

CREDENTIALS

- Curriculum designers with prior textile industry careers and/or work experience
- Curriculum designers have 95 years combined teaching experience

THE SERIES

- Fourteen eLearning modules to choose from
- Price discount for AATCC members
- Two months access



BENEFITS

- Textile knowledge you can take to the workplace and beyond
- Acquire technical knowledge to make informed management decisions
- Develop an understanding of the entire textile formation chain
- Learn on your own terms—from the comfort of your own office, home or anywhere internet access is available
- Learn at your own pace—when the timing is right for you
- No travel expense; zero nights away from home
- Assessment testing
- Certificate of Achievement

AUDIENCE

- Newcomers or experienced professionals who want to expand their knowledge of the textile process
- Those who wish to improve their understanding of the technology of the textile industry

PRICING

- US\$105 per module for nonmembers
- US\$75 per module for AATCC individual and corporate members

Inquiries please contact

Kim Nicholson
AATCC
+1.919.549.3535
nicholk@aatcc.org

Textile Fundamentals eLearning Series:

Fibers

- The Textile Fibers module presents basic information and terminology related to fiber identification, classification, production, and properties. It introduces the concept of polymerization and explains how the chemical composition and physical structure of a fiber influence its physical, chemical, and comfort properties. You will learn the generic names for fiber classification as defined by the Federal Trade Commission and be able to differentiate between natural and synthetic fibers. Physical, chemical, and thermal properties of many of the natural and synthetic fibers in use today are reported and described, as well as typical production procedures for synthetic fibers. The module will also enable you to be able to relate fiber properties to the resulting fabric properties in the end-use product.

Texturing

- The Texturing module will give you an insight into the fundamentals of texturing. Content includes descriptions of the technology of the process, historical developments in technology, and types of texturing currently used are all discussed in detail. Important yarn property considerations, key processing steps and other key parameters for process control are included as well.

Spun Yarn Manufacturing

- The Spun Yarn Manufacturing module covers all the processing steps in the production of a short staple spun yarn, beginning with opening, cleaning, and blending and concluding with spinning and winding. The viewer will learn the key objectives of each process and gain knowledge of the many variables affecting yarn quality and production. All major types of short staple spun yarns are included along with their specific properties. Plyed yarns and novelty yarns are also presented along with the major yarn numbering systems.

Warp Preparation

- The Warp Preparation module discusses the importance of warp preparation as it relates to efficiency and quality in

weaving and warp knitting. The types and applications of warping and slashing equipment are discussed, and the important variables of each are highlighted.

Warp Knitting

- The Warp Knitting Module begins with some key information on warp beam formation and its relevance to the warp knitting machine. The key elements of tricot and raschel warp knitting machines will be presented along with the different types of fabrics that can be produced from these types of machines. Two bar fabrics, open-work fabrics, laying-in three and four bar fabrics, and two needle bar fabrics will be addressed. Examples of knit design notation for different warp knit fabrics will also be presented. Actual fabric swatches are viewed in normal and close-up range for many different knit designs. Videos and animations will enhance your understanding and concept of warp knitting.

Weft Knitting

- The Weft Knitting module begins by introducing weft knitting and warp knitting and then proceeds to elaborate on weft knitting. Key machine elements are presented along with important knitting terms and definitions. Single knit machinery and fabrics, double knit machinery and fabrics, and flat-bed knitting are discussed. Different types of knit loops and their influence on the fabric properties are also covered. Actual fabric swatches are viewed in normal and close-up range for many different knit designs.

Weaving

- The Weaving module presents the basic motions of weaving, types of shedding, methods of filling insertion, woven fabric production calculations, and basic woven design. Derivatives of the basic weave designs are covered along with the different types of pile fabrics.

Nonwovens

- The Nonwovens module discusses the major web forming technologies with an overview of the processes involved. The technologies used for bonding with representative product types and advantages are explored.

Fabric Preparation

- The Fabric Preparation module is an overview of major technical processes used on fiber, yarn, or fabric to prepare them for subsequent processes such as dyeing, finishing, printing, and other apparel and non-apparel processes. Chemical and mechanical processes are discussed as related to function and technical procedures.

Color and Color Properties

- The Color and Color Properties module covers information that will help you gain a better understanding of the variables that influence color perception. Current methods of shade matching and color measurement are presented. The relationship between perceived and acceptable color differences is discussed.

Dyestuffs and Applications

- The Dyestuffs and Dyestuff Applications module presents the objectives of dyeing and the keys to good quality dyeing. Dyestuff properties and methods of dyeing blends are discussed. Different types of dyeing equipment are reviewed along with advantages and disadvantages of each type.

Printing

- The Printing module presents methods of textile printing and describes the equipment employed with each method. Advantages and disadvantages of each method are also explained. An overview of digital ink jet printing is given with the current systems available.

Chemical Finishing

- The Chemical Finishing module is a review of techniques used to apply chemical finishes to textile products. The more frequently used chemical finishes for textiles are discussed as related to function and chemistry involved.

Mechanical Finishing

- The Mechanical Finishing module is a review of mechanical processes applied to fabrics that add special surface effects and appearance value. The machines used for modifying textile fabric surfaces are explained.



Interested in Learning More? Visit us online www.aatcc.org.