Fabric Property Development and Characterization

April 12-15, 2016

2.5 CEUs

Course Overview

This course provides an in depth understanding of how the most important nonwoven fabric properties are achieved by processing and how they are measured. Properties such as tensile, basis weight, compressibility, softness, fiber orientation distribution and diameter, moisture and vapor transmission, and flammability are considered. Learn how nonwoven fabric properties are developed, measured, and controlled.

Topics Covered in Course

- Nonwoven testing and test methods
- Microscopy and imaging

Agenda

Tuesday, April 12, 12:00 pm – 5:00 pm

- Introduction to NWI
- Nonwovens process review
- Introduction to testing
- Process failure analysis, using your data
- Basis weight, thickness
- Basis weight, uniformity
- Dinner at 518 West

Wednesday, April 13, 8:30 am – 5:00 pm

- Tensile and tear
- Softness, rigidity, and compression
- Fiber diameter analysis
- Fiber orientation distribution
- Introduction to optics & optical microscopy
- Mechanical Properties Laboratory

Thursday, April 14, 8:30 am – 5:00 pm

- Fluorescent & confocal microscopy
- Digital volumetric imaging
- Interference microscopy
- Scanning electron microscopy
- Optical properties, microscopy, and Scanning Electron Microscopy Laboratory

Friday, April 15, 8:30 am – 4:00 pm

- Moisture and vapor transmission, hydrostatic head
- Synthetic Blood
- Wipes and Wiping Efficiency
- Absorbency, desorbency, and In-plane wicking
- Flammability
- Pore size and pore volume distribution
- MVTR, fluid flow, absorbency, hydrostatic head, pore size, and Pore Volume Distribution Laboratory
- Course review