# Filter Media Training Course

**Instructor: Behnam Pourdeyhimi, Ph.D., Executive Director**
**The Nonwovens Institute**

## COURSE AGENDA

### Tuesday, October 2, 2018

**8:00am** **Breakfast**

**8:30am** **Principles of Air and Aerosol Filtration**

- Filtration basics
- Primary filtration mechanisms
- Ranking of filters
- Segments

**9:30am** **Structure of a nonwoven**

- What controls structure?
- How do we measure the structure?
- How can we use the information?

**10:30am** **Break**

**10:50am** **Overview of Process Technologies**

- Meltblown, Spunbond, Wetlay, Needlepunched, Electrospinning

**12:00pm** **Lunch**

**1:30pm** **Process Technologies – Continued**

- Charging technologies
  - How
  - Why
  - Trends

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**2:00pm** **Product Evaluation & Testing**

- Standards and methods
  - ASHRAE, EN, ISO
  - Recent Developments/Issues

**3:00pm** **Break**

**3:20pm** **Liquid Filtration Basics**

- Liquid filtration segments
- Mechanisms of filtration
  - Particle
  - Other
- Standards & methods
- Nonwovens designed for liquid filtration

## Wednesday, October 3, 2018

**8:00am** **Breakfast**

**8:30am** **Emerging (Old, New) Technologies**

- Market trends driving innovation
- Co-form reinvented
- Micro and nano fibers used in filtration
  - Why
  - When
  - How
- Other developments
- Future opportunities

Behnam Pourdeyhimi, Ph.D., is The William A. Klopman Distinguished Chaired Professor of Materials in the College of Textiles at North Carolina State University. He is also a Professor in Chemical and Biomolecular Engineering. Pourdeyhimi is currently serving as the Associate Dean for Industry Research and Extension in the College of Textiles and is also the Founding Executive Director of The Nonwovens Institute.

His research interests are in the area of nonwovens, responsive fibrous systems, filtration, computational modeling, materials, failure mechanisms, software algorithms, optics, and image analysis. He has published several books and monographs, has authored or co-authored over 200 refereed publications, has more than 30 patents and has made over 200 presentations in his areas of interest.

Association of the Nonwoven Fabrics Industry
Advancing Engineered Material Solutions

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