



# INTERMEDIATE NONWOVENS

## TRAINING COURSE

### COURSE AGENDA

#### Day 1

#### Tuesday

8:30 am	CONTINENTAL BREAKFAST	INDA
9:00 am	INTRODUCTION	DAVE ROUSSE, INDA
9:10 am	WELCOME	DAVE NELSON, NCSU
9:20 am	PROGRAM PREVIEW	EDWARD THOMAS, INSTRUCTOR
	Video overview, nonwoven markets and product applications, information sources.	
	<i>THE WORLD OF NONWOVENS</i>	EDWARD THOMAS, INSTRUCTOR
	“Hands-on” examination of nonwoven fabric and end-use product samples as a means to illustrate the wide range of nonwoven usage.	
	<i>ESTABLISHMENT OF “ANALYSIS TEAMS AND TASKS.”</i>	
12:00 pm	LUNCH	INDA
1:00 pm	<i>NONWOVENS TECHNOLOGY PRIMER</i>	EDWARD THOMAS, INSTRUCTOR
	Definitions of nonwovens, short history of the technical evolution of the industry.	
	Description of basic nonwoven manufacturing principles and systems.	
	<i>FIBER FUNDAMENTALS</i>	EDWARD THOMAS, INSTRUCTOR
	Generic types and characteristics, property comparisons, raw material-fabric property relationships.	
5:00 pm	<i>RECEPTION AND “ANALYSIS TEAM BONDING”</i>	
6:00 pm	<i>ADJOURNMENT (evening on your own)</i>	



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#### Day 2 Wednesday

- 8:30 am CONTINENTAL BREAKFAST INDA  
Analysis Team Work and Discussion Session
- 9:00 am WEB FORMING TECHNOLOGIES – DRYLAID NONWOVENS  
DAVE NELSON, INSTRUCTOR  
Analysis of carding and staple fiber airlaid systems. Review of background, process technologies and recent developments.  
WEB FORMING TECHNOLOGIES – WETLAID AND SHORT FIBER AIRLAID NONWOVENS  
EDWARD THOMAS, INSTRUCTOR  
Development of wetlaid nonwovens based on paper technology. Unique characteristics of cellulose fibers in wetlaid technology. Development of short fiber airlaid nonwovens and comparison of short fiber airlaid nonwovens technology with wetlaid nonwovens technology.
- 11:00 am Travel to Nonwovens Institute
- 11:30 am NONWOVEN INSTITUTE WELCOME DAVE NELSON, INSTRUCTOR  
11:40 am WEB FORMING AND BONDING TECHNOLOGIES – “POLYMER TO FABRIC” NONWOVENS  
BEHNAM POURDEYHIMI, INSTRUCTOR  
Basic principles associated with spunbond, meltblown and film-based nonwovens and the polymers used in their production.
- 12:30 pm LUNCH NONWOVENS INSTITUTE
- 1:15 pm WEB FORMING AND BONDING TECHNOLOGIES (CONTINUED)  
BEHNAM POURDEYHIMI, INSTRUCTOR  
Systems for Spunlaced/ Hydro-entangled nonwovens.
- 3:00 pm STAPLE AND POLYMER LAB DISCUSSION STEVE SHARP/DAVE NELSON  
3:20 pm STAPLE AND POLYMER LAB TOURS AND DEMONSTRATIONS  
STEVE SHARP/DAVE NELSON
- 5:25 pm ADJOURNMENT (evening on your own)



## INTERMEDIATE NONWOVENS

### TRAINING COURSE

#### Day 3 Thursday

8:30 am	Continental Breakfast	INDA
	Analysis Team Work and Discussion Session	
9:00 am	<i>WEB BONDING TECHNOLOGIES I</i>	EDWARD THOMAS, INSTRUCTOR
	Mechanical bonding principles and systems.	
	<i>WEB BONDING TECHNOLOGIES II</i>	EDWARD THOMAS, INSTRUCTOR
	Chemical and thermal bonding principles and systems.	
	<i>NONWOVEN FABRIC FINISHING &amp; CONVERTING</i>	EDWARD THOMAS, INSTRUCTOR
	Principles, processes, and methods used to treat nonwoven fabrics to obtain enhanced physical and aesthetic properties for specific end-use.	
12:00 pm	Travel to Nonwovens Institute	
12:30 pm	LUNCH	NONWOVENS INSTITUTE
1:15 pm	<i>NONWOVEN FABRIC TEST METHODS AND PROCEDURES</i>	BEHNAME POURDEYHIMI, INSTRUCTOR
	Overview of nonwoven test methods and standardization of test procedures.	
3:00 pm	<i>TEST LAB TOURS AND DEMONSTRATIONS</i>	AMY MINTON
5:25 pm	<i>ADJOURNMENT (evening on your own)</i>	

#### Day 4 Friday

8:00 am	Continental Breakfast	INDA
8:30 am	<i>ANALYSIS TEAM PRESENTATIONS</i>	EDWARD THOMAS, INSTRUCTOR
9:15 am	<i>WORLDWIDE NONWOVEN STATISTICS AND TRENDS</i>	BRAD KALIL, INDA
	Overview of nonwoven fabric trends.	
10:00 am	<i>FUTURE DIRECTIONS</i>	DAVE ROUSSE, INDA DAVE NELSON, INSTRUCTOR
	Projection of future applications and developments in manufacturing materials, processes and products.	
11:30 AM	<i>HOT ITEM UPDATE(S)</i>	JAMES E. LOFTUS, INDA
	Discussion on the Flushability Threat	
12:00 pm	LUNCH	INDA
12:45 pm	Adjournment - Please exchange a complete evaluation form for your certificate.	