# Nonwovens (Minor)

Nonwovens is a highly interdisciplinary and growing industry. It covers a wide range of products and usages, from filtration systems for purifying air, blood and water, various types of wipes, many medical applications, geotextiles, etc. This program will allow students to take classes that deal with nonwoven processes and products as well as be exposed to all the equipment.

The nine hours of required courses provide a comprehensive overview of nonwoven products and processes, including materials, various manufacturing techniques, and product/process/property interactions. Six elective hours may be chosen from fiber formation, nonwoven characterization methods, nonwoven product development, and research experience in nonwoven science and technology. Upon completing this minor, students will 1) demonstrate competency in the principles and concepts of nonwoven process and product technology and 2) develop skills to analyze and solve real-world problems and build abilities to develop new and innovative structures made from fibers, polymers, and other relevant materials.

#### Admissions

The Minor in the Science of Nonwovens is available to all undergraduate students enrolled in the University as degree candidates. To be admitted to the program, students must have a GPA of at least 2.0. Application for admission to any University minor program is now available via MyPack Portal. Admission will be based upon the student's academic record, and in most cases no longer requires departmental review. To apply to Add a Minor, go to: https://go.ncsu.edu/minor\_coda (https://go.ncsu.edu/ minor\_coda/).

#### Certification

Dr. Eunkyoung Shim will serve as advisor and certify completion of the minor. The minor must be completed no later than the semester in which the student expects to graduate from his or her degree program.

### **Contact Person**

**Eunkyoung Shim** 

Textiles Complex 3316

919-515-4674

eshim@ncsu.edu (regorga@ncsu.edu)

Effective Date: 1/2023

SIS Code: 18NONWOVM

## Plan Requirements

All courses taken to complete this minor must be completed with a grade point average of 2.0 or higher.

Code Hours Counts towards F

Code	TILLE	riours Counts towards
Required Co	ourses	
TE 201	Fiber Science	3-4

TMS 211	Introduction to Fiber Science (TMS211 can substitute TE201)		
TT 404	Introduction to Nonwovens Products and Processes	3	
TT 405	Advanced Nonwovens Processing	3	
Elective Courses			
Select six credit following:	hours of the	6	
TT 407	Characterization Methods in Nonwovens		
TT 408	Nonwoven Product Development		
NW 497	Research Experience in Nonwoven Science and Technology (New course proposed)		

Note: Some of these courses have prerequisites. Permission to waive prerequisites must be obtained from the course instructor after evaluation of student's academic background.

**Total Hours** 

15-16