Nonwovens (NW)

**NW 404/TT 404/T 504/NW 504 Introduction to Nonwovens Products and Processes** (3 credit hours)
This course introduces the fundamentals of nonwoven structures, process, and products. It provides performance criteria, raw materials, manufacturing methods, and market outlooks of major nonwoven application segments including hygiene, wipes, filters, medical, automotive, and geotextile. Emphasis is placed on building basic understandings of process/structure/property relationship in nonwoven product and the economic justification for process and production.

Prerequisite: (MA 131 or 141), PY 205; Corequisite: TT 503
Typically offered in Fall only

**NW 504/NW 404/TT 404/T 504 Introduction to Nonwovens Products and Processes** (3 credit hours)
This course introduces the fundamentals of nonwoven structures, process, and products. It provides performance criteria, raw materials, manufacturing methods, and market outlooks of major nonwoven application segments including hygiene, wipes, filters, medical, automotive, and geotextile. Emphasis is placed on building basic understandings of process/structure/property relationship in nonwoven product and the economic justification for process and production.

Prerequisite: (MA 131 or 141), PY 205; Corequisite: TT 503
Typically offered in Fall only

**NW 505/NW 405/TT 405/T 505 Advanced Nonwovens Processing** (3 credit hours)
Mechanisms used in the production of nonwoven materials. Design and operation of these mechanisms. Process flow, optimization of process parameters, influence of process parameters on product properties.

Prerequisite: MA 231 or MA 241, PY 211 or (PY 205 and PY 206), TT 305 or TT 404
Typically offered in Spring only

**NW 506 Bonding Principles in Nonwovens** (3 credit hours)
Fundamentals of fluid mechanics and heat transfer mechanisms during the bonding nonwovens. Provide engineering and in-depth description of hydroentangling, thermal bonding and needle punching techniques. Modeling methods and laboratory work are assigned.

Prerequisite: MAE 308, MAE 310, TT /NW 505
Typically offered in Fall and Summer

**NW 507/TT 507 Nonwoven Characterization Methods** (3 credit hours)

Prerequisite: ST 361, Corequisite: TT/NW 505
Typically offered in Spring only

**NW 508/NW 408/TT 408/T 508 Nonwoven Product Development** (3 credit hours)

Prerequisite: TT 405 and TT 407
Typically offered in Fall and Spring