

# ENGINEERING: TEXTILE CONCENTRATION (MS)

## Contacts

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Program Website (<https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/engineering/specializations.html>)

## Program Description

- STEM designated program

This program is intended to develop the graduate student's knowledge in the advanced fields of textile science and engineering. Students with undergraduate education in the fields of textile engineering, textile chemistry and textile sciences, and those with undergraduate experience in engineering or materials technology are welcome to pursue this program. The wide range of textile engineering courses will prepare the student to make significant contributions in either advanced textile manufacturing technology or textiles material science. The carefully integrated educational offerings at the University enable the student to be exposed to a wide range of professional education possibilities. A capstone experience is provided during the final semester.

## Learning Goals/Outcomes

- Demonstrate knowledge & proficiency in technical aspects of textile engineering
- Analyze and criticize established textile theories and synthesize new theories.
- Understand and evaluate engineering theory
- Apply their acquired skills toward the development of a unique research project
- Demonstrate a competent knowledge and proficiency in the field of textile engineering
- Perform written and oral technical communications at a competent level

## Curriculum: 2 Years, 30 Credits

- For students matriculating in the MS Textile Engineering program with no undergraduate background in textiles, a group of foundation courses may be required. The foundation courses will be determined at the time of admission by the program director.
- Students select 8 courses from TEXT or ENGR options
- TEXT 603, TEXT 721, TEXT 940, ENGR 624, (Required)

Code	Title	Credits
<b>Core Curriculum</b>		
Select nine of the following:		27
TEXT 601	Fiber and Yarn Studies	3
TEXT 602	Textile Sustainability	3
TEXT 603	Adv Integ Engg Product Develop	3
TEXT 613	Characterization Fibrous Mtrls	3

Code	Title	Credits
TEXT 621	Mechanics of Materials	3
TEXT 622	Mechanics of Textiles	3
TEXT 624	Advanced Textile Composites	3
TEXT 625	Biomaterials Technology	3
TEXT 713	Coloration & Finishing Studies	3
TEXT 721	Analytical Methods	3
TEXT 751	Adv Woven Structures Prod Dev	3
TEXT 752	Advanced Knitted Structures	3
TEXT 753	Adv Nonwoven Structur Prod Dev	3
TEXT 754	Indstrl, Specialty Fab Prod Dev	3
TEXT 759	Product Evaluation	3
TEXT 762	Tex, Appr Operatns Mgt	3
TEXT 783	Chem of Fibrous Matrls	3
TEXT 790	Quality Management	3
TEXT 797	Selected Topics	3
TEXT 798	Independent Study	3
TEXT 940	Research Thesis	6
ENGR 500	Intro to Polymer Material Sci	3
ENGR 623	Intro to Life Cycle Analysis	3
ENGR 624	Lean Manufacturing	3