

# TEXTILE ENGINEERING & SCIENCES (PHD)

## 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/phd-textile-engineering-sciences.html>)

## Program Description

- **STEM designated program**

The PhD program in Textile Engineering & Science emphasizes not only depth in fundamental textile engineering and sciences/mechanical engineering disciplines, but also an interdisciplinary approach to understanding technologies in which textile engineers and scientists can and should take a leading role. It is this combined emphasis on fundamentals, the ability to think and work outside one's area of expertise and the ability to frame complex problems that best defines this doctoral program. Students will propose a textile engineering and sciences problem of substance and then develop a solution. Students must demonstrate the ability to apply scientific principles to meet engineering needs with due regard to factors such as environmental, financial, and/or societal, and they must do so within a reasonable time constraint.

## Learning Goals/Outcomes

- Demonstrate knowledge of and proficiency in applying research methodology to textile engineering
- Demonstrate knowledge and proficiency in technical aspects of textile engineering
- Analyze and critique established textile and engineering theories and synthesize new theories based on research
- Apply their acquired skills toward the development of a unique research project
- Perform written and oral technical communications at a competent level.

## Curriculum: 2 Years, 36 Credits

- Beyond Master's Degree in approved field

Course	Title	Credits
<b>First Year</b>		
Select three Graduate Engineering or Textile courses		9
TES 901	Preliminary Examination Prep	3
TES 902	Thesis I	6
<b>Credits</b>		<b>18</b>
<b>Second Year</b>		
TES 903	Dissertation Research I	9
TES 904	Dissertation Research II	3

Course	Title	Credits
TES 906	Thesis II	6
<b>Credits</b>		<b>18</b>
<b>Total Credits</b>		<b>36</b>

- The required three graduate-level courses may be taken at Thomas Jefferson University or at another university after consultation between the student, the dissertation chair, and the director of the program.
- The student's doctoral committee may require additional courses to enhance the student's research.
- Students will then be required to pass a two-part qualifying examination in the field of textile engineering. The first part is a written examination, and the second part is an oral examination