# Textile Technology Management (PhD)

## Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards Qualifying Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTM 710</td>
<td>Textile Technology Management</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>TTM 785</td>
<td>Doctoral Research Methods</td>
<td></td>
<td></td>
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<tr>
<td>TTM 750</td>
<td>Advances in Fabric Formation, Structure, and Properties</td>
<td></td>
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</tr>
<tr>
<td>TTM 731</td>
<td>Decision Models and Applications in Textile and Apparel Management</td>
<td></td>
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</tbody>
</table>

**Seminar Courses**

| TTM 801 | Seminar | 2   |

**Additional Courses**

2 "Additional Courses" are approved in conjunction with the academic committee.

**Elective Courses**

52 "Elective Courses" that will be applied to reach 72 credit hours will be determined in conjunction with the academic committee.

**Total Hours**

72

1 All students must complete two (2) semesters of TTM 801 Seminar (which may be waived for students who have taken TC 601 Seminar, TE 601 Seminar, or TT 601 Seminar during their master’s program at NC State).

2 Additionally, all students need to take a minimum of two (2) additional courses, which should be selected with input from the advisory committee and can be part of an "official minor", which will require approval from the Minor Director of Graduate Programs, or can be courses chosen to provide a better foundation for the research work.

### Additional Requirements

- A minimum of 72 credit hours is required of students entering the program with a B.S. degree, or a minimum of 54 credit hours beyond the M.S. degree is required. (Students, who enter the Ph.D. program directly upon completion of an M.S. at NC State, may be allowed credit for up to 30 hours of their M.S. and thus would require 42 additional credit hours to complete the Ph.D.) Most of these credit hours are expected to be research credits (TTM 893 Doctoral Supervised Research or TTM 895 Doctoral Dissertation Research).

- Following successful course completion, the student needs to pass the defense of a research proposal to obtain the candidacy for the Ph.D degree.

- The final examination is an oral exam where the student presents and defends her/his research procedures, results and conclusions. The presentation will be made to an examining committee consisting of the student’s advisory committee and is open to interested faculty, staff and students. After the presentation the student will be orally examined by the examining committee. The final oral examination can be scheduled once all coursework requirements have been fulfilled and the committee is satisfied that the dissertation is complete, but not earlier than one semester after admission to candidacy.

- The anticipated time for completion of the Ph.D. program is four years for a student entering from a B.S. degree and three years for entry from an M.S. degree. The minimum time required (in exceptional cases) is two years beyond entry if the student obtained an M.S. degree from NC State.

Roger Barker
Keith Beck
Timothy Clapp
Ahmed Mohamed El-Shafei
Shu-Cherng Fang
Harold Freeman
Tushar Ghosh
A. Blanton Godfrey
Russell Gorga
Maureen Grasso
Robert Handfield
Peter Hauser
David Hinks
Cynthia Istook
Warren Jasper
Byoungho Jin
Jeffrey Joines
Martin King
Russell King
Traci Lamar
Karen Leonas
Trevor Little
Marquerite Moore
Melissa Pasquinelli
Behnam Pourdeyhimi
Michael Rappa
Jon Rust
Abdel-fattah Mohamed Seyam
Renzo Shamey
Yingjiao Xu
Katherine Emma Annett-Hitchcock
Pamela Banks-Lee
Kristin Barletta
Philip Bradford
Emiel DenHartog
Wei Gao
Helmut Hergeth
George Hodge
Richard Kotek
Wendy Krause
Jerome Lavelle
Lisa Parrillo-Chapman
Lori Rothenberg
Sonja Salmon
Minyoung Suh
Andre West
Xiaomeng Fang
Ericka Ford
Jessica Gluck
Chan Mi Hwang
Delisia Matthews
Robert Ormond
Jane Porterfield
Elizabeth Powell
Eunkyoung Shim
Januka Budhathoki Uprety
Jamie Woodbridge
Rong Yin
Mengmeng Zhu
Nagendra Anantharamaiah
Genevieve Garland
Hechmi Hamouda
Cassandra Kwon
Benoit Maze
Henry Nuttle
Robert Barnhardt
Subhash Batra
Stephen Chapman
Robert Donaldson
Aly El-Shiekh
Perry Grady
Bhupender Gupta
Thom Hodgson
Stephen Margolis
John McCreery
Stephen Michielsen
Gary Mock
Mansour Mohamed
William Oxenham
Nancy Powell
Carl Smith
Gary Smith
Moon Won Suh
Charles Tomasino
James Wilson
Samuel Winchester
Genevieve Garland
Abhay Sham Joijode
Mohamad Samir Midani
Samuel Moore
Behnam Pourdeyhimi
Antony J. Williams
Julie Ann Willoughby
Bong-Yeol Yeom

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Nagendra Anantharamaiah
Assistant Professor

Amanda Mills