Fiber & Polymer Science

This multidisciplinary program brings together the disciplines of mathematics, chemistry, physics, and engineering for the development of the independent scholars versed in the fields of polymer, fiber, and textile science. The program is coordinated by the Wilson College of Textiles and leads to the degree of Doctor of Philosophy.

The polymer, fiber, and textile sciences are concerned with polymeric materials and fibers produced from them; textile assemblies in one, two, and three-dimensional forms; and the chemistry of dyeing, finishing, and other wet processes. This broad field of study permits a wide range of useful concentrations. The candidate is expected to concentrate in one area and to acquire a reasonable perspective in other relevant areas. Generally, a student specializes in the areas of (1) polymer chemistry and synthesis, (2) fiber and polymer physics and physical chemistry, (3) the production, processing, and properties of fibrous materials, or (4) chemistry of dyes, finishes, and their processes. The student’s research is usually based within one of these areas or another suitable one.

Scholarships and Assistantships

Competitive scholarships and assistantships from the program as well as the University are available to incoming new students. All incoming students will be considered for the funding opportunities. No separate application for assistantships/scholarships is needed.

More Information

Fiber and Polymer Science Program Website (https://textiles.ncsu.edu/academics/graduate/fiber-and-polymer-science/)

Admission Requirements

Students with a Master of Science (M.S.) degree in a related field may apply to the Fiber and Polymer Science program. Typically the minimum acceptable overall grade point average (GPA) is a 3.0 out of 4.0, based on most current U.S. universities. Students without a master’s degree may also apply if met the following conditions:

- the undergraduate degree from a well-known and robust research active program with a cumulative GPA of 3.5 or above;
- strong recommendation letters from faculty adviser(s) indicating research experience or suggesting research potential; and
- strong publication record/experience or extensive industry experience in related industry/profession.

Applicants should plan to take the GRE or GMAT examination, which is required for all applicants. The GRE/GMAT scores should be sent to NC State University electronically and be available online.

For International students, TOEFL or IELTS is required for the application. Students must rank in a competitive percentile in order to be considered for acceptance into NC State University.

- TOEFL: A total score of 80+ on IBT. Minimum scores of 18 points for each section; or
- IELTS: An overall band score of 6.5+. Minimum scores of 6.5 points for each section

Applicant Information

- Delivery Method: On-Campus
- Entrance Exam: GRE
- Interview Required: None

Application Deadlines

- Fall: June 25 (US); March 1 (Intl)
- Spring: November 25 (US); July 15 (Intl)

Degrees

- Fiber and Polymer Science (PhD) (http://catalog.ncsu.edu/graduate/textiles/fiber-polymer-science/fiber-polymer-science-phd/)
- Fiber and Polymer Sciences (Minor) (http://catalog.ncsu.edu/graduate/textiles/fiber-polymer-science/fiber-polymer-science-minor/)

Faculty

Full Professors

Harald Ade
Charles M. Balik
Roger L. Barker
Keith R. Beck
Carl L. Bumgardner
Timothy Clapp
Ahmed Mohamed El-Shafei
Peter Fedkiw
Harold S. Freeman
Jan Genzer
A. Blanton Godfrey
Maureen Grasso
David Hinks
Cynthia L. Istook
Saad A. Khan
Tushar K. Ghosh
Russell E. Gorga
Christopher B. Gorman
Peter J. Hauser
Samuel Mack Hudson
Warren J. Jasper
Jeffrey Allen Joines
Martin William King
Traci Ann May Lamar
Karen Leonas
Trevor J. Little
Lucian Lucia
Marian G. McCord
Roger Narayan
Melissa Pasquinelli
Behnam Pourdeyhimi
Jon Paul Rust
Abdel-fattah Mohamed Seyam
Renzo Shamey
Richard Spontak
Alan E. Tonelli
Richard A. Venditti
Yingjiao Xu
Xiangwu Zhang

Associate Professors
Katherine Emma Annett-Hitchcock
Pamela Banks-Lee
Kristin Anne Barletta
Philip Bradford
Emiel DenHartog
Wei Gao
Helmut H. Hergeth
George Lawrence Hodge
Jesse Stephen Jur
Richard Kotek
Wendy E. Krause
Jerome Lavelle
Shuang Lim
Kavita Mathur
Lokendra Pal
Lisa Parrillo-Chapman
Sonja Salmon

Minyoung Suh
Nelson Vinueza

Assistant Professors
Xiaomeng Fang
Ericka Ford
Amanda Mills
Robert Ormond
Eunkyoung Shim
Januka Budhathoki Uprety
Rong Yin
Mengmeng Zhu

Practice/Research/Teaching Professors
Nagendra Anantharamaiah
Raymond Earl Fornes
Genevieve Garland
Dieter Griffis
Hechmi Hamouda
Benoit Maze
Jialong Shen

Emeritus Faculty
Subhash K. Batra
Robert Alan Donaldson
Aly H El-Shiekh
Raymond Earl Fornes
Perry L. Grady
Bhupender S. Gupta
Harold B. Hopfenberg
Samuel Clyde Winchester Jr
Stephen Michielsen
Gary N. Mock
Mansour H. Mohamed
William Oxenham
Adjunct Faculty
Genevieve Garland
Abhay Sham Joijode
Mohamad Samir Midani
Behnam Pourdeyhimi
Orlando Jose Rojas
Gisela de Aragao Umbuzeiro
Antony Williams
Julie Ann Willoughby
Bong-Yeol Yeom