

TXMI 4140/6140
TEXTILE FINISHING PROCESSES
MWF 10:10 - 11:05

Instructor: Dr. Karen K. Leonas

Office: 317 Dawson Hall

Phone: 548-4898 or 542-4891

Office Hrs: MWF 11:05 - 11:45 or by appointment.

Course Description:

Theory, application, evaluation and identification of textile finishes and textile auxiliary processes. Examination of the role of finishing and types of finishes used in manufacturing fibers, yarns, and fabrics.

Objectives:

1. To gain a better understanding of the chemical treatments in textile finishing technology.
2. To learn how the functional and aesthetic properties of textiles can be improved or altered by finishing techniques.
3. To gain an understanding of the relevant chemical, physical, and mechanical principles involved in textile finishing.
4. To investigate new directions and trends in textile wet processing.

Course Policies

Attendance: Attendance to lecture is **expected** and is **required** when guests will be speaking and other presentation. If you miss a class, you are responsible for getting the missed information.

Requirements and Grading:

The grade in this class will be based on exams, article abstracts, class participation and a written paper and presentation. Details will be discussed in class.

COURSE TOPICS

Introduction:

calculations
basic terms and concepts
common chemicals
equipment

Water Repellent and Soil Repellent

Softeners and Antistatic Finishes

Durable Press Finishes

Heatsetting and other shaping procedures

Antimicrobial Finishes

Enzyme Finishing

Flame Resistant/Retardant Finishes

Plasma Treatments

Mechanical Finishing

UV protective Finishes

Nano Technology and other fiber modifications

EVERYONE IN THIS CLASS IS A RESOURCE!

REFERENCES:

Datnyer, A. Surfactants in Textile Processing. Marcel Dekker, Inc., New York, 1983.

Lewin, M. and Sello, S. Handbook of Fiber Science and Technology: Volume I Chemical Processing of Fibers and Fabrics, Fundamentals and Preparation: Part B. Marcel Dekker, Inc., New York, 1984.

Lewin, M. and Sello S. Handbook of Fiber Science and Technology: Volume II Chemical Processing of Fibers and Fabrics, Functional Finishes: Part B. Marcel Dekker, Inc., New York, 1984.

Lewin, M. and Sello S. Handbook of Fiber Science and Technology: Volume II Chemical Processing of Fibers and Fabrics, Functional Finishes: Part A. Marcel Dekker, Inc., New York, 1984.

Needles, H.L. Handbook of Textile Fibers, Dyes, and Finishes. Garland STPM Press, New York, 1981.

Perkins, W.S. Textile Coloration and Finishing. Carolina Academic Press, Durham, 1996

Smith, B. and Block I. Textiles in Perspective. Prentice Hall, Englewood Cliffs, NJ, 1982

Journals and Periodicals:

Book of Papers, AATCC, International Conference & Exhibition

International Textile Bulletin, Dyeing/Printing/Finishing

Journal of the Society of Dyers and Colourists

Textile Chemist and Colorist, AATCC

Textile Research Journal