

Textiles

TXMI 3500

3 credit hours

Spring 2010

Class Meetings: Mondays, Wednesdays and Fridays, 11:15 to 12:05 PM, Dawson 308

University Honor Code And Academic Honest Policy: "I will be academically honest in all of my academic work and will not tolerate academic dishonesty of other." All academic work must meet the standards contained in *A Culture of Honesty* found at <http://www.uga.edu/ovpi>. All students are responsible to inform themselves about those standards before performing any academic work.

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Office Hours: M, W, F 12:30-1:30, T, R 10:00-11:00, and by appointment.

Course Prerequisites: CHEM 1110 or CHEM 1211

Required Text/Materials:

Both of these are required and are available at the UGA bookstore

1. Collier, B. J., Bide, M., and Tortora, P. G., *Understanding Textiles* (2009), 7th Edition, Pearson Prentice-Hall Inc., New Jersey. This book will be of value to you in your other TMI classes and in your professional career. It is recommended that you keep this book for future reference.
2. Brown, P. K., *Textile Kit* (2005), ISIS Edition, ATEXINC, Wildwood, Missouri.

**Additional Readings will be required and will be made available by the professor.

Technology Required: Students must be able to access e-mail and eLC, and access internet web sites.

Attendance Policy: Attendance is expected and students are expected to be in class and ready to begin on time. Attendance will be taken at the beginning of the class period on regular basis. Students who miss class are responsible for all material included in the class. The instructor will not be able to provide missed handouts or information that was presented in class. Five missed class sessions will result in a drop by a letter grade. Extenuating circumstances will be handled individually and are at the discretion of the professor.

Course Description: TXMI 3500 introduces undergraduate students to the principles of textiles. Attention is directed to the production and properties of fibers, yarns, fabrics and to the preparation, dyeing, and finishing of textile substrates. The course is required for all students majoring in fashion merchandising, and furnishings & interiors.

Course Objectives:

- Understand how natural and manufactured fibers are produced and what companies and trademarks are associated with each.
- Describe the origins, chemical nature, physical and chemical properties, use, and care of textile fibers.
- Describe how yarns, fabrics are produced and treated physically and chemically to modify and enhance their properties.
- Identify various yarn and fabric types and how they might be used in consumer products.
- Know the laws and regulations that govern the consumer use of textile fibers and fabrics.

Evaluation/Course Requirements: Class attendance is mandatory in order to earn all points. Exams will include information from the text, class lectures, and any assigned readings or in class assignments. The final exam will be comprehensive and contributes to 20% of the total grade. The exams may include multiple choice, definition, matching, and short answer questions.

1. Complete successfully three in-class exams	150 points (30%)
2. Complete successfully final exam	100 points (20%)
3. Complete textile kit and worksheets	175 points (35%)
4. Participation/Assignments	75 points (15%)

Total 500 points

Participation/Assignments:

A student's willingness to *participate* in class discussion will be reflected in this component of the grade. Students who bring in interesting facts or contributions to the class, or use eLC discussion board, will be given credit in this component of the grade. Students who are disruptive, or detract from the positive learning environment of the class, will not receive maximum credit for this component.

Assignments appropriate to course content may be made in class throughout the semester (i.e., store visits, internet searches, reading of current related issues...).

Textile Swatch Kit:

Students should purchase The Textile Kit (available at the UGA Bookstore). Students will be responsible for putting the Kit together and completing the study sheets corresponding to the samples in the Textile Kit. Worksheets related to the fabric samples will be provided during each unit of study. The study sheets and worksheets are due during class on the tentative course calendar.

Grading Policy: There are 500 possible points in this course. Final grade assignments will be consistent with the official grading system approved by the Board of Regents.

93-100 (A)	90-92.9 (A-)	88-89.9 (B+)
83-87.9 (B)	80-82.9 (B-)	78-79.9 (C+)
73-77.9 (C)	70-72.9 (C-)	60-69.9 (D)
<60 (F)		

Class Expectations and Reminders:

1. Please be present and punctual.
2. You must read the assigned chapters and materials before the class lecture. You should derive a study/preparation strategy that gives you adequate time to read the material. Think about the concepts, and develop questions. You are responsible for all text and supplemental lecture material unless directed otherwise.
3. There will be no make-up exams unless there is an emergency, and the instructor is notified in advance. Documentation is required. The missed exam will count as the exam to be dropped. Please note that make-up exams may receive a reduced grade.
4. Students with learning disabilities must notify me at the beginning of the semester. It is the student's responsibility for making arrangements and completing all paperwork for each exam.
5. Assignments will be due at the beginning of class on the due date.

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

Course Calendar

Note: Students should read text chapters and assigned readings prior to class meetings

	<u>Date</u>	<u>Topic</u>	<u>Readings & Assignments</u>
Jan.	8	Introduction	Chapter 1
	11/13	Textile fibers	Chapter 2
	15	Fiber Properties	Chapter 3 Textile Swatch Kit Due; read instructions Start compiling
	18	MLK Day	
	20	Fiber Properties	Chapter 3
	22/25	Natural Cellulosic fibers	Chapter 4 Bring samples, # 1-12 Worksheet #1 Natural Fibers
	27/29	Protein fibers	Chapter 5 Bring samples, # 12-20
Feb.	1/3	Manufactured Cellulosics	Chapter 6 Bring samples, # 21-23 Worksheet #2, Manmade fibers
	5	Exam 1	Textile Kit Unit I & worksheet due; Natural Fibers

	8/10	Nylon & Aramid	Chapter 7 Bring samples, # 24-29
	12/15	Polyester	Chapter 8 Bring samples, # 24-29
	17/19	Acrylic and Modacrylic	Chapter 9 Bring samples, # 30-37
	22/24	Olefin and elastomeric	Chapter 10,11 Bring samples, # 30-37
Mar.	26/1	Fibers into yarn	Chapter 13, 14 Bring samples # 39-48 Worksheet # 3, Yarns
	3	Exam 2	Textile Kit Unit II & worksheet due; MMF
	5	Fibers into yarns	Chapter 13, 14
	8-12	Spring break	
	15	Woven Fabrics	Chapter 15 Worksheet # 4, Weaving I Textile Kit Unit III & worksheet due; Yarns
	17/19	Woven fabrics	Chapter 16,17 Bring samples # 49-107 Worksheet # 5, Weaving II
	22	Knits	Chapter 18 Bring samples # 115-132 Worksheet # 6, Knitting Textile Kit Unit IV & worksheet due; Weaving
	24/26	American Chemical Society's Conference	
	29	Knits	Chapter 18 Bring samples # 115-132
	31	Nonwovens	Chapter 19 Bring samples # 140-143 Worksheet # 7, Nonwovens Textile Kit Unit V & worksheet due; Knitting
Apr.	2/5	Other Fabric Construction	Chapter 20 Textile Kit Unit VI & worksheet due; Nonwovens

	7	Wet Processing & Preparation	Chapter 21 Worksheet # 8, wet processing/coloration
	9	Exam 3	
	12/14	Dyeing	Chapter 22 Bring samples # 160-172
	16/19	Printing	Chapter 23 Bring samples # 160-172
	21/23	Finishing-mechanical	Chapter 24 Bring samples # 154-158 Worksheet # 8, Finishing Textile Kit Unit VII & worksheet due; Wet processing/ Coloration
	26/28	Finishing-chemical	Chapter 25
	29	Last day of class	Textile Kit Unit VIII & worksheet due; Finishing
	30	Reading day	
May	7	Final Exam: 12:00-3:00	