

TXMI 3500L - Textiles Laboratory

Spring Semester 2003

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Office Hours (TAs): Monday and Wednesday 10:00 - 10:30 a.m. and Monday 2:00 – 2:30 p.m. in Dawson 302

Pre-requisites: CHEM 1110 and 1110L or CHEM 1212 and 1212L

Co-requisites: TXMI 3500 Lecture

Credit: 1 hour

Description: Laboratory experiments related to fibers, yarns, fabrics, wet processing, dyeing, and finishing.

Course Objectives:

1. To identify natural and manmade fibers based on results of fiber identification procedures.
2. To recognize the different types and qualities of yarns and their appropriate end uses.
3. To identify and differentiate among the different types of woven, knit, nonwoven, and composite fabrics and understand their production, use, and care.
4. To understand the purpose of wet processing and know the sequence and application of these processes.
5. To understand the stages and procedures of dyeing and know which dye classes are appropriate for which fibers.
6. To understand the different types of printing and differentiate between dyeing and printing.
7. To understand the purpose and types of finishes and know how finishes are applied.
8. To recognize why this class is important to your field of study.

Textbook: Collier, B.J. and Tortora, P.G. *Understanding Textiles*. 6th ed., Prentice-Hall Publishing Company, New Jersey, 2001. This is the same textbook required for TXMI 3500 Lecture. **Save this book, it will be used as a reference in TXMI 3520 Textile Testing.**

Lab Manual: Annis, P.A., Campbell, J.H. and Kanchagar, A.P. *Textile Laboratory Manual*, 5th ed., available at Bel-Jeans after January 20, 2003.

Attendance: *Attendance is mandatory.* Tardiness of more than 5 minutes is unacceptable and grade penalties will be assigned as follows: 1st time = 10% decrease in grade for that lab, 2nd time = 20% decrease in grade, and 3rd time = **no credit**. Students will not be allowed to make up a missed lab unless they are sick or have car trouble and can provide a documented excuse. **Tardiness or absence due to oversleeping or failure of alarm clocks is not excused.** A lab make up will be offered to those who miss lab due to **documented**

illness or emergency. Foreseeable absences (i.e., wedding, etc.) should be brought to the attention of your instructor at the beginning of the semester. Excessive absences, even if excused, will result in an instructor initiated drop. If you have questions about your attendance, you may ask to see our records.

Dress Requirements: Safety considerations dictate what can be worn in a textile laboratory. Do not wear shorts, skirts, tank tops, or open toe shoes. Long hair should be tied back. Avoid loose clothing and jewelry. Goggles, gloves, and lab coats must be worn during labs when eye and skin protection are required. **Failure to dress appropriately will result in inability to participate or receive credit for a lab.** The dress code also applies to our tour of FiberVisions, Inc.

Course Requirements:	<u>Point Distribution</u>	<u>Percentage</u>	Grading Scale:
13 Labs	544	65	A 100 - 90%
13 Pre-labs	95	10	B 89 - 80%
Midterm Exam	80	10	C 79 - 70%
Plant Tour	22	3	D 69 - 60%
Final Exam	100	12	F Below 60%
TOTAL	841	100%	

Weekly Lab Preparation: Read the lab directions *before* class! Not knowing what to do results in frustration for both students and instructors and prevents finishing experiments on time!

Due Dates: Pre-labs are due at the beginning of each lab period and are to be completed before lab time, not during lab. Labs are due at the beginning of each lab period. **No late pre-lab or lab will be accepted unless accompanied by legitimate documentation.**

Midterm and Final Exams: The exams will consist of questions based on 1) information in pre-labs and labs and 2) information discussed during introductions to the labs. Exam questions will be in the form of multiple choice, true/ false, short answer, and identification of important textile components. Midterm exam will cover Labs 1-6. The final exam will cover Labs 7-13.

Academic Honesty: Students are responsible for their own work. The penalty for academic dishonesty is a grade of **F**. Lab reports with identical wording will be penalized. See www.uga.edu/ovpi/academic_honesty/academic_honesty.htm

Student with Disabilities: The University of Georgia is committed to full inclusion of all students. Students who, by nature of a documented disability, require academic accommodations should contact the instructor at the beginning of the semester.

Monday/Wednesday/Friday Lab Schedule

1/13 - 1/15 Lab 1: Syllabus and Lab Safety

1/20 - 1/22 **No Labs – MLK Holiday**

1/27 - 1/29 Lab 2: Natural Fibers
Lab 1 DUE

2/3 - 2/5 Lab 3: Manmade Fibers
Lab 2 DUE

2/10 - 1/12 Lab 4: Yarns
Lab 3 DUE

2/17 - 2/19 Lab 5: Woven Fabrics - 1
Lab 4 DUE

- 2/24 - 2/26 Lab 6: Woven Fabrics - 2
Lab 5 DUE
 Sign up for Make Up Labs 1 - 6 (*documentation of absence absolutely required to make up a lab*)
- 3/3 - 3/5 **Midpoint of Semester**
Lab 6 DUE
Midterm Exam (over Labs 1 - 6)
Make Up Lab Sessions for Labs 1 - 6 (8:45 - 10:30 for Monday & Wednesday morning labs)
(3:15 - 4:00 for Monday afternoon lab)
(documentation of absence required to make up a lab)
- 3/10 - 3/12 Lab 7: Knits
Make Up Labs DUE
- 3/17 - 3/19 **No Labs - Spring Break (wear sun screen!)**
- 3/24 - 3/26 Lab 8: Nonwoven Fabrics
Lab 7 DUE
- 3/25 - 3/27 **Plant Tour - FiberVisions, Inc., Athens, GA.** Dress code enforced. Morning labs: 7:30 - 10:00 a.m. Afternoon lab: 2:00 - 4:30 p.m. Transportation will be provided. **Attendance is mandatory!**
 The instructor will provide a letter to document your absence if the plant tour conflicts with a Tuesday or Thursday class.
- 3/31 - 4/2 Lab 9: Tufted and Other Multicomponent Fabrics
 Bring oils and fragrances for soap making experiment next week
Lab 8 DUE
Plant Tour Lab Report DUE
- 4/7 - 4/9 Lab 10: Fabric Preparation and Wet Processing
Need oils and fragrances for soap making experiment
Lab 9 DUE
- 4/14 - 4/16 Lab 11: Dyeing
Lab 10 DUE
- 4/21 - 4/23 Lab 12: Printing
Lab 11 DUE
- 4/28 - 4/30 Lab 13: Finishing
 Sign up for Make Up Labs 7 - 12 (*documentation of absence absolutely required to make up a lab*)
Lab 12 DUE
- 5/1 Last day of classes (follow Monday's schedule)
Make up Lab Sessions for Labs 7 - 12 (8:00 a.m. and 2:30 p.m.; documentation required).
Lab 13 DUE (all Lab Sections) Pick up Lab 12
 Review for Final Exam in Dawson 302 (10:00 a.m. and 4:30 p.m.)
 Location of final exams will be announced
- 5/2 **Reading Day (Friday)**
- 5/5 **Make Up Labs DUE (Monday)**
 Pick up Lab 13 - will need for final exam Pick up all unretrieved labs - will need for final exam
- 5/6 **Final Exam (covers Labs 7-13): Tuesday, 3:30 - 6:30 p.m. (Dr. Yang's students)**
 Location will be announced. Pick up Make up and unretrieved labs
- 5/7 **Final Exam (covers Labs 7-13): Wednesday, 12:00 - 3:00 p.m. (Dr. Leonas's students)**
 Location will be announced. Pick up Make up and unretrieved labs