

COLLEGE OF HUMANITIES AND APPLIED SCIENCES
FAMILY AND CONSUMER SCIENCE
FSC 269, INTRODUCTION TO TEXTILES
SPRING 2008
3 Credit Hours

Class Meets in ABII, Room 301 at 11:00 a.m. MWF

INSTRUCTOR: Dr. Harriet Griggs

OFFICE: ABII 213
Office Hours: Monday, Wednesday, Friday:
10:00 a.m. to 11:00 a.m.
(I will be glad to make an appointment with you if
you need to meet with me at a different time.)

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**CONCEPTUAL FRAMEWORK FOR EDUCATOR PREPARATION
PROGRAMS AT SAM HOUSTON STATE UNIVERSITY:**

FCS 269 is a required course for teacher certification in Family and Consumer Science.

COURSE DESCRIPTION:

This course is focused on the study of fibers and their use in textile products. Emphasis is on the relationship of fiber properties, yarn structure and finishes that produces a fabric suitable for specific consumer end uses. Emphasis also given to identification of fibers and fabrics.

TEXT: Kadolph, Sara J. *Textiles, 10th Ed.*, Prentice Hall, Upper Saddle River, New Jersey, 2002.

COURSE OBJECTIVES:

Upon finishing this course, the student is expected to have learned factual knowledge; fundamental principles, generalizations, or theories; how to apply course material; and developed specific skills, competencies, and points of view needed by professionals in the field most closely related to this course.

GAINING FACTUAL KNOWLEDGE

When you finish this course you will be able to:

- Use textile terminology correctly
- Identify careers in the textile industry
- Know current law and labeling requirements
- Describe the characteristics and uses of specific fibers
- Describe various methods of constructing fabrics, such as weaving, knitting, non-woven and other methods
- Describe how finishes are applied to fabric and how they affect fabric appearance, performance, durability, and maintenance
- Describe fabric design and the application of dyes

LEARNING FUNDAMENTAL PRINCIPLES, GENERALIZATIONS, OR THEORIES

When you finish this course you will be able to:

- Develop systems for identifying fibers, yarns, and finishes
- Identify sources of performance standards and standards available for voluntary use
- Care for textile products in a satisfactory manner

LEARNING TO APPLY COURSE MATERIAL (TO IMPROVE THINKING, PROBLEM SOLVING, AND DECISIONS)

When you finish this course you will understand:

- How production processes affect the characteristics and cost of textile products

DEVELOPING SPECIFIC SKILLS, COMPETENCIES, AND POINTS OF VIEW NEEDED BY PROFESSIONALS IN THE FIELD MOST CLOSELY RELATED TO THIS COURSE

When you finish this course you will be able to:

- Value past developments in textile construction and use, and recognize needs for future development
- Predict fabric performance based on knowledge of fibers, yarns, fabric construction, and finishes in conjunction with informative labeling
- Predict good selection of textile products for specific end uses based on knowledge of fibers, yarns, fabric construction and finishes
- Understand the environmental concerns, pollution potential, and safety concerns of fiber and fabric manufacturers

COURSE FORMAT: This course will include a combination of class discussion, lecture and demonstration, and student assignments. Student assignments will include a swatch notebook, three tests and a final examination.

COURSE EVALUATION:

Tests, 3 @ 100 points each	300
Textile swatch notebook	300
Class participation	100
Final Examination	100
Total Points Possible:	800

The Participation grade is based on attendance. Every absence will result in a reduction of the Participation grade of three points unless the absence is excused by the instructor.

Grading Scale:

- A - 720 to 800
- B - 640 to 719
- C - 560 to 639
- D - 320 to 559
- F - any score below 320

All tests and the final examination are in multiple choice format. Any student missing a test may complete that test on the day specified in the course calendar if the absence is excused by the instructor.

POLICY ON ASSIGNMENTS SUBMITTED AFTER THE DUE DATE:

The grade for any assignment submitted after the due date will be reduced by 5 points for each day that it is late.

ATTENDANCE POLICY:

Please see Participation Grade above.

OTHER POLICIES AND PROCEDURES:

1. There will be one class session set aside for make-up exams at the end of the semester at a time to be announced.
2. All work turned in to the professor must be the original work of the student submitting the assignment. Work that has been developed for another course is not acceptable. All assignments are to be considered individual assignments unless it is specified that they are team assignments.
3. All assigned work submitted for credit must be word-processed (10-12 point type and 1 inch margins on all sides with the exception of the Swatch Notebook. Please see the Assignment Sheet for the Swatch Notebook for requirements.
4. All assignments must be completed and turned in to the professor before the final exam will be given to the student (*Undergraduate Catalog, p. 31*). Unless there is an urgent reason, the final exam will only be given at the time and date posted.

ACADEMIC POLICY FOR STUDENTS WITH SPECIAL NEEDS:

It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance are expected to visit with the Office of Services for Students with Disabilities located in the Counseling Center. They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired.

Sam Houston State University adheres to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable

accommodations for students with disabilities. If a student has a disability that may affect adversely his/her work in this class, then the student is encouraged to register with the SHSU Counseling Center and to talk with the instructor about how best to deal with the situation. All disclosures of disabilities will be kept strictly confidential. NOTE: no accommodation can be made until the student registers with the Counseling Center.

RELIGIOUS HOLIDAYS:

Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which that student is excused within a reasonable time after the absence. University policy 861001 provides the procedures to be followed by the student and the instructor. A student desiring to absent himself/herself from a scheduled class in order to observe (a) religious holy day(s) shall present to each instructor involved a written statement concerning the religious holy day(s). The instructor will complete a form notifying the student of a reasonable timeframe in which the missed assignments and/or examinations are to be completed.

COURSE OUTLINE:

UNIT I – Introduction to Textiles

1. Basic Definitions
2. Overview of the Textile Industry

UNIT II – Textile Fibers and Their Properties

1. Fiber Properties
 - a. Physical Structure
 - b. Chemical Composition
2. Serviceability
 - a. Aesthetic Properties
 - b. Durability Characteristics
 - c. Comfort
 - d. Care
3. Fiber Identification
 - a. Visual Inspection
 - b. Burn Tests
 - c. Microscopy

- d. Solubility
- 4. Consumer End Use

UNIT III – Natural Fibers

- 1. Cotton
- 2. Flax and Other Natural Cellulosics
 - a. Linen
 - b. Ramie
 - c. Seed Fibers
 - d. Leaf fibers
- 3. Wool and Other Hair Fibers
 - a. Mohair
 - b. Angora
 - c. Camel's Hair
 - d. Llama, Alpaca, Vicuna, Guanaco
 - e. Silk

UNIT IV – Manufactured Fibers

- 1. Rayon
- 2. Acetate
- 3. Nylon
- 4. Polyester
- 5. Olefin
- 6. Acrylic, Modacrylic, Vinal
- 7. Spandex and Other Elastomeric Fibers
- 8. Special Use Fibers
 - a. Aramid
 - b. Glass
 - c. Metal
 - d. Novoloid
 - e. PBI
 - f. Sulfar

UNIT V –Yarns and Blends

- 1. Yarn Classification
 - a. Simple Versus Plied
 - b. Twist
 - c. Size
 - d. Novelty
- 2. Smooth and Bulky Yarns
- 3. Spun Yarns
- 4. Fiber Blended in the Yarn

UNIT VI – Fabric Construction

- 1. Weaving and the Loom

2. Plain Weave Fabrics
3. Twill and Satin Weave Fabrics
4. Pile Fabrics
5. Structural-Design Fabrics
6. Crepe Fabrics
7. Lace, Leno and Narrow Fabrics
8. Weft-Knit Fabrics
9. Warp-Knit Fabrics
10. Bonded and Laminated Fabrics
11. Leather and Fur
12. Web Fabrics

UNIT VII – Finishes

1. Aesthetic Finishes
2. Special Purpose Finishes
3. Flame-Retardant Finishes
4. Dyeing and Printing

UNIT VIII – Care of Textile Products

1. Care Labeling Legislation
2. Laundering
3. Dry Cleaning
4. Storage

SUGGESTED READINGS

Collier, A.M. *A Handbook of Textiles.*

Dan River Mill, Inc. *A Dictionary of Textile Terms.*

Gioello, D.A. *Understanding Fabrics: From Fiber to Finished Cloth.*

Hudson, P.B., Clapp, A.C., and Kness, D. *Joseph's Introductory Textile Science.*

Moss, A.J.E. *Textiles and Fabrics.*

Textile Institute. *Textile Terms and Definitions.*

Tortora, Nelson, Snyder and Sussman. *Understanding Textiles.*

Wingate, Isabel B. *Fairchild's Dictionary of Textiles.*

Wingate and Mohler. *Textile Fabrics and Their Selection.*

Periodicals:

American Dyestuff Reporter

Clothing and Textiles Research Journal

Daily News Record/ Women's Wear Daily

Textile Chemist and Colorist

Textile Research Journal

Textile World

Body Fashion/ Intimate Apparel