

Course Syllabus

1. Course Title: Textile Materials: Fabrics and Trims

2. Course Code: ATR230551

3. Credit Units: 3 (2+1) (2/1/6) (2 units of theory, 1 unit of experiment, 6 units of self-study)
 Duration: 15 weeks (2 hours of theory + 2 hours of practice, 4 hours of self-study per week)

4. Course Instructors

- 1/ Dr. Nguyen Tuan Anh
- 2/ Dr. Nguyen Phuoc Son
- 3/ M.Sc. Ta Vu Thuc Oanh
- 4/ M.Sc. Nguyen Thi Luyen

5. Course Requirements

Prerequisite courses: No
 Previous courses: Textile Materials: Fibers and Yarns

6. Course Descriptions

This course belongs to the fundamental knowledges of garment technology curriculum that provides students the understandings of structure, properties, treatments and end-uses of woven, knitted and non-woven fabrics. In addition, the course introduces the structural properties and the applications of garment accessories and trimmings that are widely used for clothing products.

7. Course Goals

Goals	Goal descriptions	ELOs	Scale
G1	Structure, properties, treatment processes of basic types of textile fabrics and clothing accessories.	ELO-02	3
G2	Properties and the structure of common textile fabrics and accesories Uses of the textile fabrics suitable with the features of garment products and propose the using and caring corresponding to the fact.	ELO-04	3
G3	Communication, teamwork, searching and informational synthetizing skills	ELO-10 ELO-11	3 3
G4	Business and production activities in textile materials	ELO-13 ELO-19	4 3

8. Course Learning Outcomes (CLOs)

CLOs	CLO Descriptions	ELOs	Scale
G1 CLO1	Apply suitable terms and definitions of textile fabrics and accessories in terms of its structure and applications	ELO-02	3
G2 CLO2	Choose appropriate solutions in processing garment products	ELO-04	3
G3 CLO3	Apply English terms of textile and garment accessories	ELO-10	3
G3 CLO4	Organize communication in English related to textile materials	ELO-11	3
G4 CLO5	Analyze the importance of textiles in garment production	ELO-13	4
G4 CLO6	Apply some business ideas in garment industry	ELO-19	3

9. Learning Ethics:

Students must do homework by themselves. If plagiarism is found students will get zero point.

10. Course Contents:

Week	Contents	CLOs	Scale
1	<i>Chapter 1: Overview of textile fabrics</i>		
	A/ Content and pedagogical methods in class: (3)	CLO1	3
	Content	CLO4	3
	1.1. Definition of fabric 1.2. Fabric history and development 1.3. Classification.		

	<p>1.4. Fabric production 1.4. Characteristics of fabrics. 1.5. Highlighted properties Pedagogical methods Presentation, group activities, Q&A</p>		
	<p>B/ Self-study contents: (6) + Find information about textile fabrics in Vietnam and over the world. + Show the reasons and challenges of Vietnam's apparel industry in the shortage of fabrics</p>	CLO2	3
	Chapter 2: Woven fabrics		
2	<p>A/ Content and pedagogical methods in class: (3) Content 2.1. Concepts 2.2. Principles of fabric weaving 2.3. Properties of wovens Pedagogical methods Presentation, group activities, Q&A</p>	CLO1 CLO4	3 4
	<p>B/ Self-study contents: (6) + Do exercises of woven fabric design + Find the commercial names in fabric providing markets</p>	CLO2 CLO3 CLO4	3 3 4
	Chapter 2: Woven fabrics (continued)		
3	<p>A/ Content and pedagogical methods in class: (3) Content 2.3.2.2. Type of common woven fabrics (structure, properties and applications) - Plain weaves - Twill weaves - Satin weaves - Modified/combined weaves 2.3.3. General characteristics (shrinkage, grains, width, weight....) 2.3.4. Defects on woven fabrics Pedagogical methods Presentation, group activities, Q&A</p>	CLO1 CLO4	3 4
	<p>B/ Self-study contents: (6) + Explain the causes of fabric defects</p>	CLO2	3
	Chapter 3: Knitted fabrics		
4	<p>A/ Content and pedagogical methods in class: (3) Content 3.1. Concepts 3.2. Parameters (count, weight, cover factor) 3.3. Structures 3.3.1. Terms: (course, wale, warp, weft) 3.3.2. Usual knitted fabrics - Weft knitting (structure, properties, applications): Single, Rib, Interlook Pedagogical methods Presentation, group activities, Q&A</p>	CLO1	3
	<p>B/ Self-study contents: (6) + Find the commercial names of knitted fabrics.</p>	CLO2 CLO3	3 3
5	Chapter 3: Knitted fabrics (continued)		

	<p>A/ Content and pedagogical methods in class: (3) Content - Warp knitting (structure, properties, applications): Chainstitch, Tricot, Atlas 3.4. General characteristics (dimension, crimping...) 3.5. Defects of knitted fabrics Pedagogical methods Presentation, group activities, Q&A gặp trên vải dệt kim</p>	CLO1	3
	<p>B/ Self-study contents: (6) + Find the operation principles of fabric knitting machines + Explain the causes of defects of knitted fabrics</p>	CLO2	3
	Chapter 4: Fabric finishes		
	<p>A/ Content and pedagogical methods in class: (3) Content 4.1. Overview 4.1.1. Predule. 4.1.2. Pretreatment. 4.2. Dyeing and printing processes 4.2.1. Dyeing techniques 4.2.2. Printing techniques 4.2.3. Ecological properties.</p>	CLO1	3
6	<p>B/ Self-study contents: (6) + Show why the fabric treatment causes the environmental polutions. + Find the regulation of waste waters in dyeing and finishing processes + Find out the history of dyeing industry and its effects on the color fastness + Find out the advanced printing techniques + Present the reason of functional finishes. Pedagogical methods Presentation, group activities, Q&A</p>	CLO2	3
	Chapter 5: Non-woven fabrics		
	<p>A/ Content and pedagogical methods in class: (3) Content 5.1. Definitions 5.2. Classifications 5.3. Types of mechanical bonding woven fabrics 5.4. Types of heat bonding woven fabrics 5.5. Types of chemical bonding woven fabrics 5.6. Applications.</p>	CLO1	3
7	<p>B/ Self-study contents: (6) + Show the advantages and the disadvantages in nonwoven fabric production + Find out the advanced nonwoven fabric manufacturting Pedagogical methods Presentation, group activities, Q&A</p>	CLO2	3
	Chapter 6: Selection and caring of fabrics		
	<p>A/ Content and pedagogical methods in class: (3) Content 6.1. How to choose the fabrics 6.1.1. Based on gender and age 6.1.2. Based on season 6.1.3. Based on purposes (underwear, casual clothes, outfits, gowns,</p>	CLO2	3
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	<p>uniforms, protective clothes)</p> <p>6.1.4. Based on body shapes.</p> <p>6.1.5. Based on types of clothes</p> <p>6.2. Caring instructions</p> <p>6.2.1. In warehouse (temperature, environment, moisture, folding, insects)</p> <p>6.2.2. In production and uses</p> <p>6.2.6.1. Washing and bleaching methods</p> <p>6.2.2.1. Ironing methods</p>		
	<p>B/ Self-study contents: (6)</p> <p>+ Propose the selection solution for specific clothes such as men's shirt, trousers, coats, childrenwears</p> <p>+ Find the reasons for causing the fabric damaging in uses</p> <p>Pedagogical methods</p> <p>Presentation, group activities, Q&A</p>	CLO2	3
	Chapter 7: Garment Accessories and Trims		
9	<p>A/ Content and pedagogical methods in class: (3)</p> <p>Content</p> <p>7.1. Definitions and terminologies</p> <p>7.2. Classifications</p> <p>7.3. Stitching materials</p> <p>7.4. Interlining materials</p> <p>Pedagogical methods</p> <p>Presentation, group activities, Q&A</p>	CLO1	3
	<p>B/ Self-study contents: (6)</p> <p>+ Collect English terminologies of garment trims and accessories</p> <p>+ Find out the fusible interling materials in Vietnam</p> <p>+ List the parts or pieces of using the interlining materials</p>	CLO3	3
	Chapter 7: Garment Accessories and Trims (continued)		
10	<p>A/ Content and pedagogical methods in class: (3)</p> <p>Content</p> <p>7.5. Fastening materials</p> <p>7.6. Decorating materials (definition, classification, uses)</p> <p>7.7. Lining materials (definition, classification, uses)</p> <p>7.8. Packaging materials (definition, classification, uses)</p> <p>7.9. Mixing materials</p> <p>5.9.1. Mixing interlining materials with fabric.</p> <p>5.9.2. Choosing thread for fabrics</p> <p>5.9.3. Mixing linings with fabrics.</p> <p>Pedagogical methods</p> <p>Presentation, group activities, Q&A</p>	CLO1	3
	<p>B/ Self-study contents: (6)</p> <p>+ Find out the suppliers and their products of trims and accessories</p> <p>+ Find out the quality management of trims and accessories in warehouses</p>	CLO2 CLO3	3 3
	Experiment		
11	<p>A/ Content and pedagogical methods in class: (10)</p> <p>Content</p> <p>1. Inspect to the basic parameters: width, length, weight, yarn density, weave, thickness, grain, selvage)</p> <p>2. Evaluate water absorption</p> <p>Pedagogical methods</p> <p>Teamwork, report</p>	CLO4	3

	B/ Self-study contents: (20) + Collect and process the date of experiment and describe in the report	CLO4	3
12	Experiment		
	A/ Content and pedagogical methods in class: (10) Content 1. Investigate the color fastness to washing and ironing, color immigration 2. Check the dimensional change with washing and ironing Pedagogical methods Teamwork, report	CLO4	3
	B/ Self-study contents: (20) + Collect and process the date of experiment and describe in the report	CLO4	3
13	Experiment		
	A/ Content and pedagogical methods in class: (10) Content 1. Identify the textile materials and its parameters 2. Evaluate the properties of textile materials and garment accessories during the 3 weeks of experiments 3. Collect and write the report through diagrams or excel Pedagogical methods Teamwork, report	CLO4	3
	B/ Self-study contents: (20) + Collect and process the date of experiment and describe in the report	CLO4	3
	+ Finalize the report		

11. Student Assessment:

- Grading scale: **10**

- Assessment plan:

Type	Content	Time	CLOs	Scale	Assessment method	Assessment tool	Rate (%)
Formative Assessment							50
Problem #1	Select the textile materials for a specific type of clothes with the following requirements: 1. What are idea, application? 2. What's kind of fibers? How are properties, why uses this fabric? 3. Analyze structure of fabric (weave, repeat) 4. Prepare for specimens (fabric size 10cmx10cm, fiber length: 7cmx10 yarns)	Week 5	CLO2 CLO3 CLO4	3 3 4	Paper A ₃	Rubrics	20
Problem #2	Choose the fabrics for clothes with two samples (proposed by lecturer and student) in term of human body, reasons: structure, compositions, properties	Week 9	CLO1 CLO2 CLO3 CLO4 CLO5 CLO6	3 3 3 4 4 3	Paper A ₃	Rubrics	20
Problem #3	Translate and explain the BOM (bill of materials)		CLO1 CLO2 CLO3 CLO4	3 3 3 4	LMS	Rubrics	10

Summative Assessment							50
Problem #4	Report the results of experiments	Week 10	CLO1 CLO2 CLO3	2 3 3	LMS	Rubrics	20
Report #1	Collect and identify the fabrics and garment accessories with specific requirements: 1. Samples a) Textile material (woven, knitted, nonwoven fabric) b) Garment accessories and trim (fastening, stitching; interlining, interlining; packaging); 2. Requirements a) Scientific and commercial names b) Structural definition (weave name, repeat, compositions) c) Technical parameters (width, length, weight, thickness, density, shrinkage)	Week 1-14	CLO2 CLO3 CLO5	3 3 4	Collection and report	Rubrics	30

CLOs	Assessment Types				
	Problem #1	Problem #2	Problem #3	Problem #4	Report #1
CLO1		X	X	X	
CLO2	X	X	X	X	X
CLO3	X	X	X	X	X
CLO4	X	X	X		
CLO5		X			X
CLO6		X			

12. LEARNING RESOURCES

- Textbooks:

1. **Nguyen Tuan Anh** - Textile Materials - National Publisher in HCMC - 2012.
2. **Nguyen Tuan Anh** - Fabric Finishing Processes - National Publisher in HCMC - 2012.

- References:

1. Nguyen Van Lan, Textile Materials, HCMUT, 1999
2. Nguyễn Trung Thu, Textile Materials, HUST, 1999
3. Tran Thuy Binh, Le Thi Hoa Mai - Textbook of Textile Materials, Education Publisher, 2005
4. Nguyen Cong Toan, Dyeing and Finishing Technology, National Publisher in HCMC, 2005
5. Kathryn L. Hatch, Textile Science - USA, 1993

13. Date of first approval: June 15, 2018

14. Approved by:

Dean



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15. Date and up-to-date content

1 st time: Date	Instructor
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