

**Human Services Career Cluster  
Textile Science  
Course Number: 20.44700**

**Course Description:**

The Textile Science course introduces students to the fascinating world of fabrics, fibers, dyes and fabric construction of the textile industry. Textiles for apparel, interior furnishings, and industrial applications are investigated. The course introduces students to testing methods, labeling laws, trends, applications, and color forecasting. Various career paths will be researched to determine educational levels, salary expectations, and growing industry demands. Projects will involve individual work, team work, verbal presentations, fabric swatches, and computer applications.

**Course Standard 1**

**HUM-TS-1**

The following standard is included in all CTAE courses adopted for the Career Cluster/Pathways. Teachers should incorporate the elements of this standard into lesson plans during the course. The topics listed for each element of the standard may be addressed in differentiated instruction matching the content of each course. These elements may also be addressed with specific lessons from a variety of resources. This content is not to be treated as a unit or separate body of knowledge but rather integrated into class activities as applications of the concept.

**Standard: Demonstrate employability skills required by business and industry.**

The following elements should be integrated throughout the content of this course.

**1.1 Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities.**

Person-to-Person Etiquette	Telephone and Email Etiquette	Cell Phone and Internet Etiquette	Communicating At Work	Listening
Interacting with Your Boss	Telephone Conversations	Using Blogs	Improving Communication Skills	Reasons, Benefits, and Barriers
Interacting with Subordinates	Barriers to Phone conversations	Using Social Media	Effective Oral Communication	Listening Strategies
Interacting with Co-workers	Making and Returning Calls		Effective Written Communication	Ways We Filter What We Hear
Interacting with Suppliers	Making Cold Calls		Effective Nonverbal Skills	Developing a Listening Attitude
	Handling Conference Calls		Effective Word Use	Show You Are Listening
	Handling Unsolicited Calls		Giving and Receiving Feedback	Asking Questions
				Obtaining Feedback
				Getting Others to Listen

Nonverbal Communication	Written Communication	Speaking	Applications and Effective Résumés
Communicating Nonverbally	Writing Documents	Using Language Carefully	Completing a Job Application
Reading Body Language and mixed Messages	Constructive Criticism in Writing	One-on-One Conversations	Writing a Cover Letter

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Matching Verbal and Nonverbal communication		Small Group Communication	Things to Include in a Résumé
Improving Nonverbal Indicators		Large Group Communication	Selling Yourself in a Résumé
Nonverbal Feedback		Making Speeches	Terms to Use in a Résumé
Showing Confidence Nonverbally		Involving the Audience	Describing Your Job Strengths
Showing Assertiveness		Answering Questions	Organizing Your Résumé
		Visual and Media Aids	Writing an Electronic Résumé
		Errors in Presentation	Dressing Up Your Résumé

### 1.2 Demonstrate creativity by asking challenging questions and applying innovative procedures and methods.

Teamwork and Problem Solving	Meeting Etiquette
Thinking Creatively	Preparation and Participation in Meetings
Taking Risks	Conducting Two-Person or Large Group Meetings
Building Team Communication	Inviting and Introducing Speakers
	Facilitating Discussions and Closing
	Preparing Visual Aids
	Virtual Meetings

### 1.3 Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations.

Problem Solving	Customer Service	The Application Process	Interviewing Skills	Finding the Right Job
Transferable Job Skills	Gaining Trust and Interacting with Customers	Providing Information, Accuracy and Double Checking	Preparing for an Interview	Locating Jobs and Networking
Becoming a Problem Solver	Learning and Giving Customers What They Want	Online Application Process	Questions to Ask in an Interview	Job Shopping Online
Identifying a Problem	Keeping Customers Coming Back	Following Up After Submitting an Application	Things to Include in a Career Portfolio	Job Search Websites
Becoming a Critical Thinker	Seeing the Customer's Point	Effective Résumés:	Traits Employers are Seeking	Participation in Job Fairs
Managing	Selling Yourself and the Company	Matching Your Talents to a Job	Considerations Before Taking a Job	Searching the Classified Ads
	Handling Customer Complaints	When a Résumé Should be Used		Using Employment Agencies
	Strategies for Customer Service			Landing an Internship
				Staying Motivated to Search

### 1.4 Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity.

Workplace Ethics	Personal Characteristics	Employer Expectations	Business Etiquette	Communicating at Work
Demonstrating Good Work Ethic	Demonstrating a Good Attitude	Behaviors Employers Expect	Language and Behavior	Handling Anger
Behaving Appropriately	Gaining and Showing Respect	Objectionable Behaviors	Keeping Information Confidential	Dealing with Difficult Coworkers
Maintaining Honesty	Demonstrating Responsibility	Establishing Credibility	Avoiding Gossip	Dealing with a Difficult Boss

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Playing Fair	Showing Dependability	Demonstrating Your Skills	Appropriate Work Email	Dealing with Difficult Customers
Using Ethical Language	Being Courteous	Building Work Relationships	Cell Phone Etiquette	Dealing with Conflict
Showing Responsibility	Gaining Coworkers' Trust		Appropriate Work Texting	
Reducing Harassment	Persevering		Understanding Copyright	
Respecting Diversity	Handling Criticism		Social Networking	
Making Truthfulness a Habit	Showing Professionalism			
Leaving a Job Ethically				

### 1.5 Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply team work skills.

Expected Work Traits	Teamwork	Time Management
Demonstrating Responsibility	Teamwork Skills	Managing Time
Dealing with Information Overload	Reasons Companies Use Teams	Putting First Things First
Transferable Job Skills	Decisions Teams Make	Juggling Many Priorities
Managing Change	Team Responsibilities	Overcoming Procrastination
Adopting a New Technology	Problems That Affect Teams	Organizing Workspace and Tasks
	Expressing Yourself on a Team	Staying Organized
	Giving and Receiving Constructive Criticism	Finding More Time
		Managing Projects
		Prioritizing Personal and Work Life

### 1.6 Present a professional image through appearance, behavior and language.

On-the-Job Etiquette	Person-to-Person Etiquette	Communication Etiquette	Presenting Yourself
Using Professional Manners	Meeting Business Acquaintances	Creating a Good Impression	Looking Professional
Introducing People	Meeting People for the First Time	Keeping Phone Calls Professional	Dressing for Success
Appropriate Dress	Showing Politeness	Proper Use of Work Email	Showing a Professional Attitude
Business Meal Functions		Proper Use of Cell Phone	Using Good Posture
Behavior at Work Parties		Proper Use in Texting	Presenting Yourself to Associates
Behavior at Conventions			Accepting Criticism
International Etiquette			Demonstrating Leadership
Cross-Cultural Etiquette			
Working in a Cubicle			

### Support of CTAE Foundation Course Standards and Georgia Standards of Excellence L9-10RST 1-10 and L9-10WHST 1-10:

Georgia Standards of Excellence ELA/Literacy standards have been written specifically for technical subjects and have been adopted as part of the official standards for all CTAE courses.

## Course Standard 2

### HUM-TS-2

#### Examine the various career opportunities within the textile industry.

- 2.1 Research and evaluate careers where knowledge of textile sciences is required or valuable.
- 2.2 Analyze the future employment outlook in the textile industry.
- 2.3 Describe levels of employment and entrepreneurial opportunities in the textile industry and local sources of employment information.
- 2.4 Determine continuing-education opportunities that enhance career advancement.

## Course Standard 3

### HUM-TS-3

#### Develop a general knowledge of textiles from a historical perspective to current applications.

- 3.1 Examine the construction and use of textiles from antiquity to the industrial revolution.
- 3.2 Examine the construction and use of textiles from the industrial revolution through the 21<sup>st</sup> century.

## Course Standard 4

### HUM-TS-4

#### Investigate, describe and recognize fiber characteristics and properties.

- 4.1 Analyze and identify natural and man-made fibers.
- 4.2 Investigate aesthetic features, mechanical properties, and chemical properties of all fibers.
- 4.3 Demonstrate fiber identification by burning.

## Course Standard 5

### HUM-TS-5

#### Examine and identify the fabrication and properties of yarns.

- 5.1 Analyze and identify simple and complex yarns.
- 5.2 Investigate aesthetic features, mechanical properties, and chemical properties of all yarn constructions.
- 5.3 Identify textured yarns and describe the effect on fabrics.
- 5.4 Differentiate yarns within fabric structures.

## Course Standard 6

### HUM-TS-6

#### Identify textiles according to construction methods.

- 6.1 Identify woven fabrics and determine use for apparel and/or interiors.
- 6.2 Identify non-woven fabrics and the most appropriate use for apparel and/or interiors.
- 6.3 Identify knitted fabrics and the most appropriate use for apparel and/or interiors.
- 6.4 Identify the origin of all fabrics, including Animal (Sheep) wool, and Insects (Worms) silks.

## Course Standard 7

### HUM-TS-7

#### **Demonstrate an understanding of textile finishes and methods.**

- 7.1 Compare and contrast mechanical, chemical, and functional finishes.
- 7.2 Demonstrate and identify fiber finishes through swatch tests, and the importance, if fabrics are not tested correctly, can create huge problems with the end product.
- 7.3 Compare and contrast printing and dyeing methods.
- 7.4 Demonstrate and identify printing and dyeing method.
- 7.5 Identify the different results you can achieve printing and dyeing natural and synthetic fibers.

## Course Standard 8

### HUM-TS-8

#### **Analyze the characteristics and maintenance concepts of textile products.**

- 8.1 Research various testing methods for textiles.
- 8.2 Read and interpret textile labels used for interiors and apparel.
- 8.3 Discuss current environmental issues relevant to the textile industry.

## Course Standard 9

### HUM-TS-9

#### **Distinguish the characteristics and identify the appropriate use of textiles for apparel and/or interiors.**

- 9.1 Evaluate common textiles used for interiors.
- 9.2 Evaluate common textiles used for apparel.
- 9.3 Evaluate common textiles used for industrial applications.

## Course Standard 10

### HUM-TS-10

#### **Investigate how trends and color forecasting are used in the development of new products.**

- 10.1 Investigate textile for interiors.
- 10.2 Investigate textiles for apparel.
- 10.3 Investigate textiles for industrial applications.

## Course Standard 11

### HUM-TS-11

#### **Examine the continuing use of technology in advancing textile products using innovative skills and tests.**

- 11.1 Discuss the role textiles play in sports equipment, (e.g., sweat absorbent finishes (wicking), antibacterial finishes).
- 11.2 Identify how textiles are being used in the medical field.
- 11.3 Discuss the careers that rely on wearing textiles, including uniforms to body armor.

## Course Standard 12

### HUM-TS-12

**Research legislation on the federal, state and local levels that regulate the textile industry.**

- 12.1 Analyze legislation, regulations, and public policy affecting the textile industry, including labeling laws.
- 12.2 Analyze personal and employer responsibilities and liabilities regarding industry related safety, security, and environmental factors.
- 12.3 Discuss the reason why most companies are manufacturing products overseas, and the affect that has on the United States.