

**Transportation, Distribution and Logistics Career Cluster
Logistics Fundamentals
Course Number 47.47010**

Course Description:

The Logistics Fundamentals course is the foundational course for the Distribution and Logistics pathway. Employment opportunities in the transportation, distribution, and logistics fields will be explored. In this course the student will be exposed to all areas of distribution and logistics. Basic skills in all of the above mentioned areas will be taught. Pre-requisite for this course is advisor approval.

Course Standard 1

TDL-LF-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
Matching Verbal and Nonverbal communication		Small Group Communication	Things to Include in a Résumé

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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. Additional Georgia Standards of Excellence ELA/Literacy standards for Speaking and Listening are listed in the foundational course standards below.

Course Standard 2

TDL-LF-2

Identify safety and health procedures utilized in the classroom/lab environment.

- 2.1 Identify location of safety and first aid equipment.
- 2.2 Identify procedures for emergency situations.
- 2.3 Research and identify types of hazardous materials.
- 2.4 Identify procedures for handling hazardous and combustible materials (MSDS and OSHA).
- 2.5 Explain Right to Know.
- 2.6 Describe the Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), Nuclear Regulatory Commission (NRC), U.S. Department of Transportation (DOT), and Federal Aviation Administration (FAA).
- 2.7 Explain the characteristics of a safe, clean, and orderly work environment, including hazard analysis, correcting hazards, environmental inspections, effective reporting of incidents and accidents, and a well-designed workplace environment.
- 2.8 Describe proper personal protective equipment needed in the warehouse environment.
- 2.9 Read and interpret equipment operating instructions.

Support of CTAE Foundation Course Standards and Georgia Standards of Excellence

ELACC9-10SL1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

ELACC9-10SL4: Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

Course Standard 3

TDL-LF-3

Explain the role economics plays in logistics and supply chain management.

- 3.1 Explain the concept and the components of a global economy.
- 3.2 Define wants, needs, exchanges, scarcity, economic costs, competition, price, and non-price competition.
- 3.3 Differentiate between the factors of production.
- 3.4 Define the Law of Supply and the Law of Demand.
- 3.5 Illustrate on a graph how supply and demand determine equilibrium price and quantity.

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Course Standard 4

TDL-LF-4

Acquire an understanding of logistics and supply chain management.

- 4.1 Discuss the history and evolution of logistics and supply chain management.
- 4.2 Define terms related to the logistics and supply chain industry, including logistics, supply chain management, goods, services, e-commerce, customer service, quality control, material handling, and information technology.
- 4.3 Categorize stakeholders in a typical supply chain.
- 4.4 Describe the role of Third Party Logistics (3PL) providers.
- 4.5 Describe the role of freight forwarders.
- 4.6 Understand bar codes and QR codes and their role in the supply chain.
- 4.7 Discuss package damage control and reasons this is important in the supply chain.

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Course Standard 5

TDL-LF-5

Investigate the motor carrier industry relating to logistics and supply chain management.

- 5.1 Chart the history and development of the motor carrier industry.
- 5.2 Differentiate between for hire and private carriers.
- 5.3 Differentiate between truckload (TL) and less-than-truckload (LTL) carriers.
- 5.4 Create an organizational chart of the motor carrier industry by class of carrier.
- 5.5 Discuss the types of equipment used in the motor carrier industry (tractors and trailers).
- 5.6 Research the cost of operating a tractor-trailer.
- 5.7 Explain the advantages and disadvantages of choosing a motor carrier to ship materials.
- 5.8 Relate the role of a third party logistics (3PL) provider to the motor carrier industry.
- 5.9 Discuss how technology is used in the motor carrier industry, including Automatic Vehicle Location, Computer Aided Routing and Dispatch, Onboard Computers, Diagnostic and Maintenance Support Systems, Automatic Vehicle/Equipment Identification, and Collision Warning Systems.
- 5.10 Investigate safety and compliance issues on the Federal Motor Carrier Safety Administration website.
- 5.11 Compare and contrast careers in the motor carrier industry, along with their education, training requirements, salary ranges, and job openings.

Support of CTAE Foundation Course Standards and Georgia Standards of Excellence

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ELACC9-10SL4: Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

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ELACC9-10SL5: Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

Course Standard 6

TDL-LF-6

Investigate the railroad industry relating to logistics and supply chain management.

- 6.1 Chart the history and development of the railroad industry.
- 6.2 Differentiate between Class I and Class II railroads.
- 6.3 Explain the basic unit of measure of freight handling used by railroads.
- 6.4 Discuss the types of equipment (freight cars) used in the railroad industry.
- 6.5 Create a chart of the types of equipment used by the industry.
- 6.6 Explain the advantages and disadvantages of choosing a railroad to ship materials.
- 6.7 Discuss how technology is used in the railroad industry, including Advanced Train Control Systems, Rail Yard Control, Communications and Signaling, Customer Service, and Radio Frequency Identification.
- 6.8 Compare and contrast careers in the railroad industry, along with their education, training requirements, salary ranges, and job openings.

Support of CTAE Foundation Course Standards and Georgia Standards of Excellence

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ELACC9-10SL4: Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

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Course Standard 7

TDL-LF-7

Investigate the airline industry relating to logistics and supply chain management.

- 7.1 Chart the history and development of the airline industry as it relates to logistics and supply chain management.
- 7.2 Differentiate between types of carriers, including freight carriers, combination carriers, and integrators.
- 7.3 Describe the Unit Load Device as it relates to the airline industry.
- 7.4 Compare and contrast cargo aircraft specifications.
- 7.5 Create a chart of the types of aircraft used in the airline industry.
- 7.6 Explain the advantages and disadvantages of choosing an airline to ship materials.
- 7.7 Compare and contrast careers in the airline industry, along with their education, training requirements, salary ranges, and job openings.

Support of CTAE Foundation Course Standards and Georgia Standards of Excellence

ELACC9-10SL5: Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

Course Standard 8

TDL-LF-8

Investigate the ocean carrier industry relating to logistics and supply chain management.

- 8.1 Chart the history and development of the ocean carrier industry and the history of containerization as it relates to logistics and supply chain management.
- 8.2 Define terms related to the ocean carrier industry including place of receipt, port of load, port of discharge, place of final destination, bill of lading, letter of credit, terms of sale, tariff, stow plan, bay plan, stevedore, manifest, dock receipt.
- 8.3 Understand the difference between inland waterways and oceans and the importance of each to logistics and supply chain management.
- 8.4 Explain units of measure employed in the ocean carrier industry, including break bulk, wet bulk, dry bulk, rolling stock, containerized cargo, and less than container load.
- 8.5 Create a chart of the types of vessels used in the industry.
- 8.6 Explain the advantages and disadvantages of choosing ocean careers to ship materials.
- 8.7 Compare and contrast careers in the ocean carrier industry, along with their education, training requirements, salary ranges, and job openings.

Support of CTAE Foundation Course Standards and Georgia Standards of Excellence

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Course Standard 9

TDL-LF-9

Acquire an understanding of the importance of deep water ports to logistics and supply chain management.

- 9.1 Understand the geography of the world by identifying the continents and mapping the various key ports of the world.
- 9.2 Chart the history of deep water ports in the United States.
- 9.3 Define the characteristics required to be a deep water port.
- 9.4 Compare and contrast the top four deep water ports in the United States.
- 9.5 Explain the TEU, FEU unit of measure.
- 9.6 Describe the different types of cranes used at deep water port terminals.
- 9.7 Describe the different types of ocean freight containers including open top containers, high cube containers, reefers, dry cargo containers, flat containers, and tank containers.
- 9.8 Create a diagram of a United States deep water port.

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Course Standard 10

TDL-LF-10

Explore types of equipment used in warehousing to move, store, and control and protect products.

- 10.1 Identify the primary types of hand-operated warehouse equipment.
- 10.2 Differentiate various industrial fork trucks and automated guided vehicles used in a warehouse.
- 10.3 Investigate requirements for fork truck certification.
- 10.4 Identify the various types of loading dock equipment.
- 10.5 Compare and contrast the various types of conveyors and conveyor systems used in a warehouse.
- 10.6 Diagram the parts of overhead handling equipment including hoist, bridge cranes, job cranes, and gantry cranes.
- 10.7 Analyze various types of storage rack and their ability to subject materials to a FIFO or LIFO method of handling.

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Course Standard 11

TDL-LF-11

Acquire an understanding of the concept of warehousing and material handling logistics.

- 11.1 Understand the role warehousing and distribution plays in the supply chain.
- 11.2 Identify receiving as the first functional area of all warehousing and distribution facilities.
- 11.3 Analyze storage activities as the second functional area of all warehousing and distribution facilities.
- 11.4 Examine order picking as the third functional area of all warehousing and distribution facilities.
- 11.5 Understand that inventory management is an essential component of all the functional areas of warehousing and distribution facilities.
- 11.6 Identify shipping as the fourth functional area of all warehousing and distribution facilities.
- 11.7 Examine ergonomics as a process to minimize the chance of injury on the job and improve productivity.
- 11.8 Understand the need for sustainability in all warehousing and distribution facilities.

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ELACC9-10SL4: Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

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Course Standard 12

TDL-LF-12

Examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events.

- 12.1 Explain the purpose, mission, objectives, motto, colors, official dress and other distinguishing characteristics of SkillsUSA.
- 12.2 Explain how participation in SkillsUSA can promote lifelong responsibility for community service, growth and development.
- 12.3 Explore the impact and opportunities that SkillsUSA can develop to bring business and industry together with education in a positive working relationship through innovative leadership and career development programs.
- 12.4 Explore the local, state, and national opportunities available to students through participation in SkillsUSA including but not limited to conferences, competitions, community service, philanthropy, and other SkillsUSA activities.

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