

Global Logistics and Enterprise Systems II

8422 36 weeks

Table of Contents

Acknowledgments.....	1
Course Description.....	2
Task Essentials Table.....	3
Curriculum Framework.....	6
Managing Materials Handling Processes.....	6
Managing Transportation Issues.....	10
Managing Accounting and Finance Processes.....	16
Managing Production Processes.....	20
Managing Process Integration.....	22
Managing Facility Location Decisions.....	24
Managing International Logistics.....	26
SOL Correlation by Task.....	30
Entrepreneurship Infusion Units.....	32
Appendix: Credentials, Course Sequences, and Career Cluster Information.....	33

Acknowledgments

An industry group, consisting of the following representatives, validated the task/competency lists:

- Dr. Raymond F. Boykin, Research Professor, SAP Fellow, Virginia State University, Petersburg, Va.
- Travis J. James, Supply Chain Management and Logistics Manager, Colonial Heights, Va.
- Michael Williams, Chief Executive Officer, Logistics Management Resources, Inc., Prince George, Va.
- Terry Voltz, Huntington Ingalls Industries, Newport News Shipyard, Newport News, Va.

A curriculum development team, consisting of the following teachers, designed the framework elements:

Michael Dyer, Norfolk Public Schools, Granby High School
Todd Gidley, Suffolk Public Schools, King's Fork High School
Robert Jordan, Culpeper County Public Schools, Floyd T. Binns Middle School
Melinda Mizelle, Chesterfield County Public Schools, Clover Hill High School
Ed Ozols, Bath County Public Schools, Bath County High School
Reid Rawls, Chesapeake Public Schools, Jolliff Middle School

The framework was edited and produced by the CTE Resource Center:

Margaret L. Watson, Administrative Coordinator
Darren E. Morris, Writer/Editor

Edward Sullivan, Specialist, Trade and Industrial Education and Related Clusters
Office of Career and Technical Education Services
Virginia Department of Education

Dr. Lynn Basham, Specialist, Technology Education and Related Clusters
Office of Career and Technical Education Services
Virginia Department of Education

B. Anne Rowe, Coordinator, Curriculum & Instruction
Office of Career and Technical Education Services
Virginia Department of Education

Lolita B. Hall, Director
Office of Career and Technical Education Services
Virginia Department of Education

Copyright © 2014

Course Description

Suggested Grade Level: 11 or 12

Prerequisites: 8419

Logistics is moving the right goods to the right place at the right time for the right price at the right quality.

This course is designed to build a workforce to capitalize on the projections from the Commonwealth Center of Advanced Logistics Systems (CCALS) to meet the rapidly increasing

demand for high-skilled, high-wage supply chain and logistics systems professionals. This course requires students to have completed the Global Logistics and Enterprise Systems I and worked with global logistics processes in a virtual enterprise systems environment. Advanced topics addressed by this course include managing material handling, transportation issues, accounting and finance, production processes, process integration, facility location decisions, and international logistics.

Task Essentials Table

- Tasks/competencies designated by plus icons (⊕) in the left-hand column(s) are essential
- Tasks/competencies designated by empty-circle icons (○) are optional
- Tasks/competencies designated by minus icons (⊖) are omitted
- Tasks marked with an asterisk (*) are sensitive.

Task Number	8422	Tasks/Competencies
Managing Materials Handling Processes		
39	⊕	Identify materials handling principles.
40	⊕	Identify systems or technologies that are used within warehouse operations at the SKU/item level (e.g., RFID).
41	⊕	Describe packaging fundamentals (e.g., packaging functions and labeling).
42	⊕	Evaluate issues that affect materials handling (e.g., product features).
43	⊕	Evaluate issues that affect packaging decisions (e.g., environmental concerns, regulations, packaging inefficiencies, product features, unit loads, unit load platform).
44	⊕	Implement packing and materials handling procedures, based on key production factors.
45	⊕	Describe the data and documents that support the materials planning process.
46	⊕	Demonstrate the materials planning process in an ERP system.
47	⊕	Prepare materials planning process reports in an ERP system.
Managing Transportation Issues		

48	⊕	Identify the five modes of transportation and their respective characteristics.
49	⊕	Describe intermodal transportation.
50	⊕	Describe types of transportation specialists.
51	⊕	Identify regulations that affect transportation operations.
52	⊕	Identify the legal classification of transportation carriers.
53	⊕	Evaluate the transportation infrastructure of a foreign country.
54	⊕	Describe transportation management systems.
55	⊕	Describe factors that affect transportation rates.
56	⊕	Analyze modal and carrier selection.
57	⊕	Describe the necessity for and variety of transportation documents.
58	⊕	Describe the activities of shipping and receiving operations.
59	⊕	Evaluate transportation quality.
60	⊕	Propose improvements to an existing transportation scenario.
Managing Accounting and Finance Processes		
61	⊕	Identify basic financial terminology for logistics.
62	⊕	Calculate the financial impact of logistics activities.
63	⊕	Describe common financial measures of logistics performance.
64	⊕	Differentiate between financial and management accounting.
65	⊕	Describe the organizational and master data related to financial accounting.
66	⊕	Design an accounting system by applying basic accounting concepts to a business scenario.
67	⊕	Demonstrate the integration of financial accounting with other processes in an ERP system.
68	⊕	Prepare reports in financial accounting in an ERP system.

Managing Production Processes		
69	⊕	Describe production processes (i.e., types) and procedures (i.e., steps).
70	⊕	Differentiate between make-to-stock and make-to-order.
71	⊕	Describe the organizational and master data associated with the production process.
72	⊕	Demonstrate the production process in an ERP system.
73	⊕	Prepare production process reports in an ERP system.
Managing Process Integration		
74	⊕	Describe process integration in relation to modern business operations.
75	⊕	Track a customer order through procurement, IWM processes, and fulfillment for an existing company.
76	⊕	Identify the integration points among the procurement, fulfillment, production, and warehouse management processes.
77	⊕	Calculate the bottom-line effects of integrated processes.
Managing Facility Location Decisions		
78	⊕	Describe the major factors that influence facility location.
79	⊕	Determine the optimum number of distribution facilities for an organization.
80	⊕	Evaluate a distribution facility site's location characteristics.
81	⊕	Justify location decisions, using a simple grid system.
Managing International Logistics		
82	⊕	Describe factors that affect international logistics (e.g., free trade agreements, the harmonized tariff schedule of the U.S., environmental issues).
83	⊕	Identify documentation requirements for international shipments.
84	⊕	Describe the professional responsibilities of international trade specialists.

85	⊕	Analyze transportation and inventory considerations for international distribution operations.
86	⊕	Interpret data from the Logistics Performance Index.
87	⊕	Describe the global transportation system.

Legend: ⊕ Essential ○ Non-essential ⊖ Omitted

Curriculum Framework

Managing Materials Handling Processes

Task Number 001

Identify materials handling principles.

Definition

Identification should include

- standardization
- ergonomics
- space utilization
- automation
- cost.

Task Number 002

Identify systems or technologies that are used within warehouse operations at the SKU/item level (e.g., RFID).

Definition

Identification should include

- bar code
- RFID
- AS/RS
- smart racks.

Common Career Technical Core

TD2

Describe the application and use of new and emerging advanced techniques to provide solutions for transportation, distribution and logistics problems.

Task Number 003

Describe packaging fundamentals (e.g., packaging functions and labeling).

Definition

Description should include

- materials
- labeling
- equipment
- uses.

Common Career Technical Core

TD3

Describe the key operational activities required of successful transportation, distribution and logistics facilities.

Task Number 004

Evaluate issues that affect materials handling (e.g., product features).

Definition

Evaluation should include

- product requirements

- safety
- automation
- facilities layout.

Common Career Technical Core

TD-WAR2

Describe ways to improve the performance of warehouse and distribution operations.

Task Number 005

Evaluate issues that affect packaging decisions (e.g., environmental concerns, regulations, packaging inefficiencies, product features, unit loads, unit load platform).

Definition

Evaluation should include

- product features
- regulations
- reusable packaging
- materials.

Common Career Technical Core

TD-WAR2

Describe ways to improve the performance of warehouse and distribution operations.

Task Number 006

Implement packing and materials handling procedures, based on key production factors.

Definition

Implementation should include

- reviewing the ERP system management structure

- ensuring that standard operating procedures (SOPs) are being followed
- determining shelf life or expiration of the product
- identifying any safety hazards or special handling issues
- identifying delivery deadlines or seasonal or event-based delivery issues (i.e., delivery volume expectations)
- identifying NVOCC/OTIs, CFS, loading, and off-loading concerns and regulations
- analyzing vendor capabilities and the IMC's commitment
- determining the most efficient, cost-effective delivery procedures.

Common Career Technical Core

TD-WAR2

Describe ways to improve the performance of warehouse and distribution operations.

TD-WAR3

Analyze compliance with company policies and government laws and regulations in warehouse and distribution operations.

Task Number 007

Describe the data and documents that support the materials planning process.

Definition

Description should include

- forecasting
 - demand management
 - sales and operations planning
 - production planning.
-

Task Number 008

Demonstrate the materials planning process in an ERP system.

Definition

Demonstration should include

- master data requirements
- demand plan
- production execution.

Common Career Technical Core

TD3

Describe the key operational activities required of successful transportation, distribution and logistics facilities.

Task Number 009

Prepare materials planning process reports in an ERP system.

Definition

Preparation should include

- purchase orders received report
 - purchase orders pending report
 - purchase order forecasting analysis report
 - in-stock inventory analysis report.
-
-

Managing Transportation Issues

Task Number 010

Identify the five modes of transportation and their respective characteristics.

Definition

Identification should include

- trucking
- rail
- water
- pipeline
- air.

Common Career Technical Core

TD1

Describe the nature and scope of the Transportation, Distribution & Logistics Career Cluster and the role of transportation, distribution and logistics in society and the economy.

Task Number 011

Describe intermodal transportation.

Definition

Description should include

- modes
 - containers
 - integration
 - materials handling.
-

Task Number 012

Describe types of transportation specialists.

Definition

Description should include

- job level
- mode
- location of operations (e.g., domestic, global)
- education requirements.

Common Career Technical Core

TD6

Describe career opportunities and means to achieve those opportunities in each of the Transportation, Distribution & Logistics Career Pathways.

Task Number 013

Identify regulations that affect transportation operations.

Definition

Identification should include

- Department of Transportation (DOT)
- Environmental Protection Agency (EPA)
- international regulations (i.e., ISO).

Common Career Technical Core

TD-OPS3

Comply with policies, laws and regulations in order to maintain safety, security and health and mitigate the economic and environmental risk of transportation operations.

TD4

Identify governmental policies and procedures for transportation, distribution and logistics facilities.

Task Number 014

Identify the legal classification of transportation carriers.

Definition

Identification should include

- common
- contract
- requirements.

Common Career Technical Core

TD-OPS3

Comply with policies, laws and regulations in order to maintain safety, security and health and mitigate the economic and environmental risk of transportation operations.

Task Number 015

Evaluate the transportation infrastructure of a foreign country.

Definition

Evaluation should include

- modes
 - regulations
 - costs
 - equipment.
-

Task Number 016

Describe transportation management systems.

Definition

Description should include

- carrier management
- route management
- load management
- integration.

Common Career Technical Core

TD-SYS3

Describe ways to improve the system utilization, flow, safety and environmental performance of transportation systems.

Task Number 017

Describe factors that affect transportation rates.

Definition

Description should include

- load size
 - distance
 - weight
 - time.
-

Task Number 018

Analyze modal and carrier selection.

Definition

Analysis should include

- cost
 - schedule
 - quality
 - equipment.
-

Task Number 019

Describe the necessity for and variety of transportation documents.

Definition

Description should include

- waybill
- bill of lading
- ownership
- carrier's certificate.

Common Career Technical Core

TD-OPS3

Comply with policies, laws and regulations in order to maintain safety, security and health and mitigate the economic and environmental risk of transportation operations.

Task Number 020

Describe the activities of shipping and receiving operations.

Definition

Description should include

- goods issue and goods receipt
- internal controls
- materials handling
- transportation mode selection.

Common Career Technical Core

TD3

Describe the key operational activities required of successful transportation, distribution and logistics facilities.

Task Number 021

Evaluate transportation quality.

Definition

Evaluation should be based upon

- on-time deliveries
- product demand
- packaging damage.

Common Career Technical Core

TD-OPS2

Analyze performance of transportation operations in order to improve quality and service levels and increase efficiency.

Task Number 022

Propose improvements to an existing transportation scenario.

Definition

Evaluation should include

- mobility
- congestion
- safety issues
- capacity/number of lanes variations
- bypasses
- traffic routes
- intersections
- peak hours
- fuel consumption
- miles and hours traveled
- property constraints
- choke points.

Common Career Technical Core

TD-OPS2

Analyze performance of transportation operations in order to improve quality and service levels and increase efficiency.

TD-SYS3

Describe ways to improve the system utilization, flow, safety and environmental performance of transportation systems.

Managing Accounting and Finance Processes

Task Number 023

Identify basic financial terminology for logistics.

Definition

Identification of the strategic profit model, which can demonstrate the financial impact of logistics activities, should include

- assets/asset turnover
- balanced scorecard
- balance sheet
- cost leadership strategy
- differentiation strategy
- expenses (costs)
- focus strategy
- income statement
- liabilities
- net profit margin
- owner's equity
- return on assets
- revenues (sales)
- strategic profit model.

Task Number 024

Calculate the financial impact of logistics activities.

Definition

Calculation should include

- determining the return on investment (ROI)
- effects on economic upturns and downturns
- determining materials strength and responses
- value-added roles of logistics.

Common Career Technical Core

BM-BIM2

Plan, monitor, manage and maintain the use of financial resources to ensure a business's financial wellbeing.

Task Number 025

Describe common financial measures of logistics performance.

Definition

Description should include

- supply chain performance measurement
- measurement of the performance of various internal and external logistics functions
- critical success factors
- the three dimensions of customer service—time, cost, and quality.

Common Career Technical Core

BM-BIM2

Plan, monitor, manage and maintain the use of financial resources to ensure a business's financial wellbeing.

Task Number 026

Differentiate between financial and management accounting.

Definition

Differentiation should include comparing the process and rationale (e.g., focus, information, user) for financial and management accounting.

Task Number 027

Describe the organizational and master data related to financial accounting.

Definition

Description should include

- master data
 - organizational data
 - the relationship of organizational and master data to financial accounting
 - the rationale of using organizational and master data in the financial accounting process.
-

Task Number 028

Design an accounting system by applying basic accounting concepts to a business scenario.

Definition

Design should include

- specifying the accounting system objectives and key processes
 - justifying the selected accounting system
 - providing examples of system processes
 - validating that the system provides accurate results.
-

Task Number 029

Demonstrate the integration of financial accounting with other processes in an ERP system.

Definition

Demonstration should include

- integrating financial accounting and other processes in an enterprise resource planning (ERP) system
 - validating that the system provides accurate results.
-

Task Number 030

Prepare reports in financial accounting in an ERP system.

Definition

Preparation should include

- using software to create financial accounting reports in an ERP system
- validating that the system provides accurate results.

Common Career Technical Core

ST2

Use technology to acquire, manipulate, analyze and report data.

Managing Production Processes

Task Number 031

Describe production processes (i.e., types) and procedures (i.e., steps).

Definition

Description should include the mechanical or chemical steps used to create an object, usually repeated to create multiple units of the same item. This process generally involves the use of raw materials, machinery and manpower to create a product.

Common Career Technical Core

MN-PPD2

Research, design and implement alternative manufacturing processes to manage production of new and/or improved products.

MN-PPD5

Develop procedures to create products that meet customer needs.

Task Number 032

Differentiate between make-to-stock and make-to-order.

Definition

Differentiation should include the following descriptions:

- **Make-to-stock**—A production process that matches production with consumer demand forecasts; the MTS method forecasts demand to determine how much stock should be produced.

- Make-to-order—A production process that is triggered from a sales order (i.e., the production process will start only after receiving the sales order from the customer).
-

Task Number 033

Describe the organizational and master data associated with the production process.

Definition

Description should include how the recent emphasis on regulatory compliance, service oriented architecture, and acquisitions has made creating and maintaining accurate and complete master data into a business imperative.

Task Number 034

Demonstrate the production process in an ERP system.

Definition

Demonstration should identify and integrate the following system elements:

- Stakeholder, client, or customer
- Product in need or want
- Product delivery location/destination
- Delivery means of transportation
- Delivery arrival time
- Materials to purchase
- Quantities to purchase
- Production tools and equipment
- Labor force demand

Common Career Technical Core

MN-PPD5

Develop procedures to create products that meet customer needs.

Task Number 035

Prepare production process reports in an ERP system.

Definition

Preparation should include

- manufacturing process
- planning and execution
- inventory management
- quality assurance
- financials
- sales.

Common Career Technical Core

ST2

Use technology to acquire, manipulate, analyze and report data.

Managing Process Integration

Task Number 036

Describe process integration in relation to modern business operations.

Definition

Description should include examples of how the following work together rather than separately:

- Coordinating the department
- Workflow
- Management
- Productivity
- Real-time communication
- Cost control

Common Career Technical Core

BM6

Implement, monitor and evaluate business processes to ensure efficiency and quality results.

Task Number 037

Track a customer order through procurement, IWM processes, and fulfillment for an existing company.

Definition

Tracking an order should follow

- order verification
 - order entry
 - inventory management
 - warehouse and storage
 - order selection and checking
 - staging and shipping.
-

Task Number 038

Identify the integration points among the procurement, fulfillment, production, and warehouse management processes.

Definition

Identification should include the following integration points:

- Customer service
 - Order entry
 - Product identification
 - Inventory availability
 - Production scheduling
 - Quality control
 - Shipping and receiving
-

Task Number 039

Calculate the bottom-line effects of integrated processes.

Definition

Calculation should include savings from

- economies of scale
 - consolidation of shipping and billing processes
 - streamlining documentation
 - optimum labor utilization
 - efficient plant and equipment usage
 - energy consumption
 - environmental impact.
-
-

Managing Facility Location Decisions

Task Number 040

Describe the major factors that influence facility location.

Definition

Description should include

- layout
- cost
- logistics
- labor
- political stability
- regulations
- community
- customer proximity
- business area
- availability of skilled labor
- suppliers

- environmental concerns.

Common Career Technical Core

TD-WAR1

Demonstrate efficient and effective warehouse and distribution center operations.

Task Number 041

Determine the optimum number of distribution facilities for an organization.

Definition

Determination should be based on

- projected service area
- availability of skilled labor
- infrastructure requirements
- natural obstacles (e.g., rivers, bridges, mountains, urban congestion)
- product shelf life
- future market growth potential
- short-term and long-term operational goals
- future product line expansion
- back haul potential
- other industry specific considerations.

Common Career Technical Core

TD-WAR2

Describe ways to improve the performance of warehouse and distribution operations.

Task Number 042

Evaluate a distribution facility site's location characteristics.

Definition

Evaluation should include

- site location, based on efficiency principles (e.g., location near delivery points cuts transportation costs)
 - geographic accessibility
 - proximity to multiple modes of transportation.
-

Task Number 043

Justify location decisions, using a simple grid system.

Definition

Justification should include

- expected inventory profile
 - geographic distribution strategy
 - proximity to a logistic carrier (e.g., UPS World Hub)
 - pool of local talent available
 - inbound and outbound transportation costs
 - access to transportation infrastructure
 - state and local tax structure
 - building construction codes and zoning restrictions
 - weather considerations
 - environmental regulations.
-
-

Managing International Logistics

Task Number 044

Describe factors that affect international logistics (e.g., free trade agreements, the harmonized tariff schedule of the U.S., environmental issues).

Definition

Description should include

- market potential
- geographic diversification
- excess production capacity
- source of new product and ideas
- foreign competition in the domestic market
- tariffs
- less control over pricing, promotion or product distribution
- difficulty competing in foreign markets.

Common Career Technical Core

TD4

Identify governmental policies and procedures for transportation, distribution and logistics facilities.

Task Number 045

Identify documentation requirements for international shipments.

Definition

Identification should include

- accurate and complete documentation (note: Governments worldwide require documentation with every international shipment to monitor and regulate the movement of goods across borders. Missing or inaccurate information can lead to delay or prevent a shipment from arriving to its destination.)
- commercial invoice
- country regulations
- U.S. certificate of origin (CO)
- NAFTA CO
- U.S. shipper's export declaration (SED).

Common Career Technical Core

TD-OPS3

Comply with policies, laws and regulations in order to maintain safety, security and health and mitigate the economic and environmental risk of transportation operations.

TD-WAR3

Analyze compliance with company policies and government laws and regulations in warehouse and distribution operations.

TD4

Identify governmental policies and procedures for transportation, distribution and logistics facilities.

Task Number 046

Describe the professional responsibilities of international trade specialists.

Definition

Description should include

- coordinating credit and financial activities and obtaining payments for import/export operations
- acting as advisor on matters of tariffs, markets, and federal and foreign regulations
- ensuring paperwork and letters of credit are completed accurately, in a timely manner, and according to trade laws
- negotiating letters of credit.

Common Career Technical Core

TD6

Describe career opportunities and means to achieve those opportunities in each of the Transportation, Distribution & Logistics Career Pathways.

Task Number 047

Analyze transportation and inventory considerations for international distribution operations.

Definition

Analysis should include

- balance of payments
- cargo preference
- certificate of origin
- commercial invoice

- embargoes
 - export management company
 - export packers
 - import quota
 - incoterms
 - international freight forwarders
 - letter of credit
 - load centers
 - logistics performance index.
-

Task Number 048

Interpret data from the Logistics Performance Index.

Definition

Interpretation should include the weighted average of the country scores on the following six key dimensions:

- Efficiency of the clearance process
- Quality of trade and transport-related infrastructure
- Ease of arranging competitively priced shipments
- Ability to track and trace consignments
- Timeliness of shipments reaching destination

Common Career Technical Core

ST2

Use technology to acquire, manipulate, analyze and report data.

Task Number 049

Describe the global transportation system.

Definition

Description should include

- the automated support necessary to enable U.S. transportation and its components to provide globalization management
- in-transit visibility

- cargo status.

Common Career Technical Core

TD5

Describe transportation, distribution and logistics employee rights and responsibilities and employers' obligations concerning occupational safety and health.

SOL Correlation by Task

39	Identify materials handling principles.	
40	Identify systems or technologies that are used within warehouse operations at the SKU/item level (e.g., RFID).	
41	Describe packaging fundamentals (e.g., packaging functions and labeling).	
42	Evaluate issues that affect materials handling (e.g., product features).	
43	Evaluate issues that affect packaging decisions (e.g., environmental concerns, regulations, packaging inefficiencies, product features, unit loads, unit load platform).	
44	Implement packing and materials handling procedures, based on key production factors.	
45	Describe the data and documents that support the materials planning process.	
46	Demonstrate the materials planning process in an ERP system.	
47	Prepare materials planning process reports in an ERP system.	
48	Identify the five modes of transportation and their respective characteristics.	
49	Describe intermodal transportation.	
50	Describe types of transportation specialists.	
51	Identify regulations that affect transportation operations.	History and Social Science: GOVT.15
52	Identify the legal classification of transportation carriers.	History and Social Science: GOVT.15
53	Evaluate the transportation infrastructure of a foreign country.	
54	Describe transportation management systems.	
55	Describe factors that affect transportation rates.	
56	Analyze modal and carrier selection.	
57	Describe the necessity for and variety of transportation documents.	
58	Describe the activities of shipping and receiving operations.	
59	Evaluate transportation quality.	
60	Propose improvements to an existing transportation scenario.	

61	Identify basic financial terminology for logistics.	English: 10.5, 11.5, 12.5
62	Calculate the financial impact of logistics activities.	
63	Describe common financial measures of logistics performance.	
64	Differentiate between financial and management accounting.	
65	Describe the organizational and master data related to financial accounting.	
66	Design an accounting system by applying basic accounting concepts to a business scenario.	
67	Demonstrate the integration of financial accounting with other processes in an ERP system.	
68	Prepare reports in financial accounting in an ERP system.	
69	Describe production processes (i.e., types) and procedures (i.e., steps).	
70	Differentiate between make-to-stock and make-to-order.	
71	Describe the organizational and master data associated with the production process.	
72	Demonstrate the production process in an ERP system.	
73	Prepare production process reports in an ERP system.	
74	Describe process integration in relation to modern business operations.	
75	Track a customer order through procurement, IWM processes, and fulfillment for an existing company.	
76	Identify the integration points among the procurement, fulfillment, production, and warehouse management processes.	
77	Calculate the bottom-line effects of integrated processes.	
78	Describe the major factors that influence facility location.	
79	Determine the optimum number of distribution facilities for an organization.	
80	Evaluate a distribution facility site's location characteristics.	
81	Justify location decisions, using a simple grid system.	
82	Describe factors that affect international logistics (e.g., free trade agreements, the harmonized tariff schedule of the U.S., environmental issues).	History and Social Science: GOVT.12, GOVT.15
83	Identify documentation requirements for international shipments.	History and Social Science: GOVT.12, GOVT.15
84	Describe the professional responsibilities of international trade specialists.	
85	Analyze transportation and inventory considerations for international distribution operations.	
86	Interpret data from the Logistics Performance Index.	
87	Describe the global transportation system.	History and Social Science: GOVT.12, GOVT.15

Entrepreneurship Infusion Units

Entrepreneurship Infusion Units may be used to help students achieve additional, focused competencies and enhance the validated tasks/competencies related to identifying and starting a new business venture. Because the unit is a complement to certain designated courses and is not mandatory, all tasks/competencies are marked “optional.”

Appendix: Credentials, Course Sequences, and Career Cluster Information

Industry Credentials: Only apply to 36-week courses

- Certified Logistics Associate (CLA) Examination
- Certified Logistics Technician (CLT) Associate Examination
- College and Work Readiness Assessment (CWRA+)
- Logistics Technology/Distribution Center Services Assessment
- National Career Readiness Certificate Assessment
- Workplace Readiness Skills for the Commonwealth Examination

Concentration sequences: *A combination of this course and those below, equivalent to two 36-week courses, is a concentration sequence. Students wishing to complete a specialization may take additional courses based on their career pathways. A program completer is a student who has met the requirements for a CTE concentration sequence and all other requirements for high school graduation or an approved alternative education program.*

- Global Logistics and Enterprise Systems I (8419/36 weeks)

Career Cluster: Transportation, Distribution and Logistics	
Pathway	Occupations
Logistics Planning and Management Services	Logistics Analyst Logistics Engineer Logistics Manager
Transportation Operations	Transportation Manager
Transportation Systems/Infrastructure Planning, Management and Regulation	Civil Engineer Traffic Engineer Transportation Manager Urban, Regional Planner
Warehousing and Distribution Center Operations	Traffic Engineer Transportation Manager