Scope & Sequence

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| Course Name: Distribution and Logistics **TSDS PEIMS Code:** 13040300 | | | **Course Credit:** 1.0  **Course Requirements:** Recommended for students in Grades 11-12.  **Prerequisites:** None.  **Recommended Prerequisites:** Principles ofDistribution and Logistics. |
| **Course Description:** Distribution and Logistics is designed to provide training for entry-level employment in distribution and logistics. This course focuses on the business planning and management aspects of distribution and logistics. To prepare for success, students will learn, reinforce, experience, apply, and transfer their knowledge and skills related to distribution and logistics. | | | |
| **NOTE:** This is a suggested scope and sequence for the course content. This content will work with any textbook or instructional materials. If locally adapted, make sure all TEKS are covered. | | | |
| **Total Number of Periods**  **Total Number of Minutes**  **Total Number of Hours** | 175 Periods  7,875 Minutes  131.25 Hours\* | \*Schedule calculations based on 175/180 calendar days. Scope and sequence allows additional time for guest speakers, student presentations, field trips, remediation, extended learning activities, etc. | |
| **Unit Number, Title, and Brief Description** | **# of Class Periods\***  (assumes 45-minute periods)  Total minutes per unit | **TEKS Covered**  **130.462. (c)** **Knowledge and skills** | |
| **Unit 1: Career Exploration**  The Transportation, Distribution, and Logistics Career Cluster focuses on planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. In this unit, students will review and expand their knowledge base and interest in careers and entrepreneurship opportunities in distribution and logistics systems and industries. Students will investigate and present in classroom activities and/or in small groups certification opportunities and requirements and employers’ expectations. Students will continue to identify individual goals and develop plans and strategies for a successful career in distribution and logistics. | 6 periods  270 minutes | (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:  (A) identify career development and entrepreneurship opportunities in distribution and logistics;  (B) identify careers in distribution and logistics;  (C) apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation in distribution and logistics;  (D) investigate certifications required to meet state requirements for selected fields;  (G) identify employers' expectations, appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills; and  (H) develop personal career goals, objectives, and strategies as part of a plan for future career and educational opportunities. | |
| **Unit 2: Research and Development**  Students will define and describe the scientific methods of research they will use for their course activities and in distribution and logistics industries. Students will also use a variety of resources to investigate, discuss, and define major fields of research and development, and to describe how they may affect distribution, logistics, and transportation-related industries in the future. | 6 periods  270 minutes | (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:  (C) apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation in distribution and logistics;  (6) The student applies appropriate research methods for distribution and logistics topics. The student is expected to:  (A) define major fields of research and development;  (B) demonstrate proficiency in using a variety of resources for both research and development; and  (C) describe the scientific method of research. | |
| **Unit 3: History and Significance of Distribution and Logistics Systems**  Students will expand their understanding of the historical impact and significance of distribution and logistics systems and industries by reviewing and/or creating timelines that identify historical events in transportation, distribution, and logistics. Students will explore, discuss, and describe how distribution and logistics affect individuals and societies, and correctly define related terms and vocabulary associated with the field. | 11 periods  495 minutes | (3) The student describes the historical, current, and future significance of the distribution and logistics industries. The student is expected to:  (A) define terms associated with the distribution and logistics industries;  (B) identify the scope of the distribution and logistics industries and the industries' effect on society; and  (C) identify significant historical and current issues in the distribution and logistics industries. | |
| **Unit 4: Current Issues and Events Affecting Distribution and Logistics Systems**  Students will examine and explore how current events, laws, technology, and globalization affect distribution and logistics systems and industries. Students will also examine and explore how distribution and logistics can affect individuals and societies at local, state, national, and international levels. After reading about a variety of transportation-related current events, students will identify issues and evaluate current public policies, regulations, laws, and the political impact(s) of distribution and logistics. Students will continue to learn and appropriately use terms and vocabulary commonly associated with distribution and logistics. | 11 periods  495 minutes | (3) The student describes the historical, current, and future significance of the distribution and logistics industries. The student is expected to:  (A) define terms associated with the distribution and logistics industries;  (B) identify the scope of the distribution and logistics industries and the industries' effect on society;  (C) identify significant historical and current issues in the distribution and logistics industries;  (E) describe how emerging technology and globalization impacts the distribution and logistics industries; and  (F) compare and contrast issues affecting the distribution and logistics industries such as international trade, employment, safety, and environmental issues.  (4) The student explains the distribution and logistics industries at local, state, national, and international levels. The student is expected to:  (B) identify the political impact of distribution and logistics;  (C) review regulations and major laws to evaluate their impact on the distribution and logistics industries;  (D) read appropriate written material to stay abreast of current issues; and  (E) use critical-thinking skills to identify and organize alternatives and evaluate public policy issues. | |
| **Unit 5: Future Trends in Distribution and Logistics Systems**  Students will explore and identify how emerging technologies, environmental issues, international trade, employment issues, and safety could affect distribution and logistics systems in the future. Potential future scenarios and issues will be discussed, and students will be given opportunities to explain potential future scenarios and issues with a chart, illustration, presentation, classroom activity, and/or small group discussion. | 11 periods  495 minutes | (3) The student describes the historical, current, and future significance of the distribution and logistics industries. The student is expected to:  (A) define terms associated with the distribution and logistics industries;  (B) identify the scope of the distribution and logistics industries and the industries' effect on society;  (D) identify potential future scenarios for the distribution and logistics industries;  (E) describe how emerging technology and globalization impacts the distribution and logistics industries; and  (F) compare and contrast issues affecting the distribution and logistics industries such as international trade, employment, safety, and environmental issues.  (4) The student explains the distribution and logistics industries at local, state, national, and international levels. The student is expected to:  (D) read appropriate written material to stay abreast of current issues; and  (E) use critical-thinking skills to identify and organize alternatives and evaluate public policy issues. | |
| **Unit 6: World Trade, Cultural Diversity, and Globalization**  Students will explore concepts related to cultural diversity, world markets, marketing factors and practices, globalization, and the political impact of distribution and logistics. Students will read information from a variety of sources to identify reasons for world trade and globalization as well as similarities and differences in international cultures. In small groups and/or as whole class activities, students will discuss and describe a variety of world markets and marketing factors, alternatives, and public policy issues related to distribution and logistics. | 11 periods  495 minutes | (2) The student identifies concepts related to cultural diversity. The student is expected to:  (A) identify similarities and differences in international cultures;  (B) explain the variety of world markets; and  (C) describe marketing factors and practices that impact other cultures.  (4) The student explains the distribution and logistics industries at local, state, national, and international levels. The student is expected to:  (A) identify reasons for world trade and globalization;  (B) identify the political impact of distribution and logistics;  (C) review regulations and major laws to evaluate their impact on the distribution and logistics industries;  (D) read appropriate written material to stay abreast of current issues; and  (E) use critical-thinking skills to identify and organize alternatives and evaluate public policy issues. | |
| **Unit 7: Decisions Based on Data**  Students will explore and apply data-based decision-making processes to identify areas that need improvement in real or simulated business operations. Students will use real and/or simulated data to improve and optimize operations, storage space, and distribution routes, scheduling, and routing issues. One or more class periods will be used to examine and discuss various data used for forecasting and cost analysis and scheduling and routing. Students will use data-based decision-making to identify alternative processes and procedures to improve operations. Students will examine and discuss actual or simulated examples of documentation related to interstate and international trade, such as documentation confirmation, packing lists, material safety data sheets, and packaging labels. | 11 periods  495 minutes | (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:  (C) apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation in distribution and logistics;  (9) The student uses data to optimize distribution and logistics business operations such as storage, distribution routes, equipment, and human resources. The student is expected to:  (A) use data to identify areas of operation that need improvement to optimize business operations;  (B) identify alternative processes and procedures to improve and optimize business operations; and  (C) make data-based decisions on optimizing storage space and distribution routes.  (12) The student reviews issues related to interstate and international trade. The student is expected to:  (F) describe transportation issues such as internal processing, product and supply storage, forecasting, scheduling, cost analysis, documentation confirmation, packing lists, material safety data sheets, product seals, packaging types, packaging labels, and routing issues. | |
| **Unit 8: Workplace Ethics and Communication Skills**  Students will explore and discuss workplace ethics, responsibilities, and appropriate personal appearance, habits, and communication skills. Effective communication and proper etiquette and behavior will be demonstrated in small groups, presentations, and/or other classroom activities as students create and/or participate in simulated workplace scenarios that highlight ethical decision-making and conduct, personal and legal responsibilities, and good citizenship. Students will also read and comprehend assigned or self-selected technical information common to the field of distribution and logistics, and prepare and deliver brief summaries and/or presentations of the technical information. Students will read, review, and explain Commercial Drivers’ License (CDL) preparation and testing guidelines in small groups and/or in other classroom activities. | 11 periods  495 minutes | (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:  (G) identify employers' expectations, appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills; and  (5) The student demonstrates appropriate personal and communication skills. The student is expected to:  (A) describe and apply workplace ethical and legal responsibilities;  (B) define the uses of proper etiquette and behavior;  (C) identify appropriate personal appearance and health habits;  (D) practice written and oral communication skills and employ effective listening skills;  (E) comprehend technical reading materials common to the distribution and logistics industries;  (F) employ sound writing and preparation skills for prepared and extemporaneous oral presentations, including presentations of technical information; and  (G) demonstrate speaking skills.  (7) The student applies problem-solving, mathematical, and organizational skills to maintain financial and logistical records. The student is expected to:  (G) review commercial driver license (CDL) preparation guidelines; and  (H) explain CDL guidelines in preparation for testing. | |
| **Unit 9: Material Handling, Storage, and Shipping**  Students will be given multiple opportunities for “hands-on” discussions and analysis of packages, package handling, storing and shipping methods, labels, product seals, and size, weight, and shape requirements. Students will determine risks or damage possible from normal rigors such as compression, shock, drop, moisture, corrosion, vibration, temperature, and motion during transportation and handling, and discuss the transporting and handling of hazardous materials. Students will also identify, research, draw, and/or present several types of layout plans for processing incoming and outgoing materials, cross-docking, and storage of products as well as have an opportunity to evaluate material handling and storage equipment. | 11 periods  495 minutes | (11) The student examines the planning, preparation, processing, handling, and storing of goods and materials in warehouses and distribution centers. The student is expected to:  (A) determine risks or damage from normal rigors such as compression, shock, drop, moisture, corrosion, vibration, temperature, and motion during transportation and handling;  (B) discuss the transporting and handling of hazardous materials;  (C) explain size, weight, and shape requirements for packaging;  (D) discuss handling, storage, and shipping methods for various types of packaging and warehouse and shipping providers;  (E) assess requirements for various packaging types;  (F) analyze visual design and appearance requirements, including displaying required documentation, handling information, and warnings;  (G) create layout plans for processing incoming and outgoing, cross-docking, and storage of products; and  (H) evaluate material handling and storage equipment.  (12) The student reviews issues related to interstate and international trade. The student is expected to:  (F) describe transportation issues such as internal processing, product and supply storage, forecasting, scheduling, cost analysis, documentation confirmation, packing lists, material safety data sheets, product seals, packaging types, packaging labels, and routing issues. | |
| **Unit 10: Safety and Health**  Students will explore and identify personal and occupational safety, health, first aid, emergency situations, response plans, and workplace policies, procedures, rules, and laws designed to promote safety and health in distribution and logistics environments. Students will also review and demonstrate first aid and CPR procedures and proper use of safety equipment. Students will demonstrate effective speaking skills in classroom activities and/or in small groups as they model, present, and discuss health and safety workplace scenarios to identify, assess, and control hazards as well as response plans to potential emergency situations. Students will be given opportunities to perform and discuss tool, equipment, and facility audits and inspections and to demonstrate their knowledge of health and safety in a distribution and logistics environment. Students will explain the roles and benefits of health, safety, and environmental management systems with a chart, illustration, presentation, classroom activity, and/or small group discussion. | 20 periods  900 minutes | (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:  (E) demonstrate knowledge of personal and occupational safety, health, and first-aid policy in the workplace; and  (F) develop response plans to emergency situations.  (10) The student assesses and implements methods to reduce sources of workplace hazards common in the industry in order to promote a safe and accident-free work environment. The student is expected to:  (A) identify, assess, and control hazards to maintain safe and healthy working conditions;  (B) state the role and summarize the benefits of each component in a health, safety, and environmental management system;  (C) demonstrate emergency procedures to reduce and mitigate workplace accidents;  (D) perform tool, equipment, facility, and personal protective equipment audits and inspections;  (E) identify rules and laws designed to promote safety and health in the workplace; and  (F) demonstrate knowledge of first aid and cardiopulmonary resuscitation procedures and proper use of safety equipment. | |
| **Unit 11: Terms, Laws, and Regulations**  Students will be given multiple opportunities to examine, discuss, describe, and evaluate various documents and documentation used in distribution and logistics. Students will also define and appropriately use terms commonly used in sales contracts, and summarize laws and regulations concerning interstate and international trade. | 12 periods  540 minutes | (12) The student reviews issues related to interstate and international trade. The student is expected to:  (A) define terms commonly used in sales contracts as published by the International Chamber of Commerce;  (B) summarize laws and regulations concerning interstate and international trade;  (E) evaluate documentation and other requirements for interstate and international transportation and logistics; and  (F) describe transportation issues such as internal processing, product and supply storage, forecasting, scheduling, cost analysis, documentation confirmation, packing lists, material safety data sheets, product seals, packaging types, packaging labels, and routing issues. | |
| **Unit 12: Risk Factors and the Role of Homeland Security**  Students will examine and explore how current events, risks, social and economic trends, and safety issues affect transportation, distribution, and logistics systems and industries. Students will also examine and explore how to evaluate risk factors and social and economic trends related to risk mitigation, policy issues, security, and culture, and the role of homeland security in interstate and international trade. After reading about a transportation-related current event or events, students will discuss, present, and/or predict how the event(s) may affect the current and/or future role of homeland security in interstate and international trade | 11 periods  495 minutes | (11) The student examines the planning, preparation, processing, handling, and storing of goods and materials in warehouses and distribution centers. The student is expected to:  (A) determine risks or damage from normal rigors such as compression, shock, drop, moisture, corrosion, vibration, temperature, and motion during transportation and handling; and  (B) discuss the transporting and handling of hazardous materials.  (12) The student reviews issues related to interstate and international trade. The student is expected to:  (C) explain the role of homeland security in interstate and international trade; and  (D) evaluate risk factors and social and economic trends such as factors and trends related to risk mitigation, policy change, security, and culture. | |
| **Unit 13: Applying Problem-Solving, Mathematical, and Organization Skills**  Students will explore applying their problem-solving, mathematical, and organizational skills to develop proposals and maintain records appropriate to distribution and logistics systems. Students will complete a unit project where they will conduct formative, summative, and financial analyses of simulated or real project learning objectives and records, and problem-solve for the future. The project must include data from a graph, table, chart, and/or plot. | 11 periods  495 minutes | (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:  (C) apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation in distribution and logistics;  (7) The student applies problem-solving, mathematical, and organizational skills to maintain financial and logistical records. The student is expected to:  (A) discuss project proposals;  (B) develop and maintain records;  (C) collect and organize data in graphs, tables, charts, and plots;  (D) analyze and interpret data from graphs, tables, charts, and plots;  (E) maintain appropriate financial records such as journals, inventories, income and expense logs, and financial statements and balance sheets; and  (F) conduct formative, summative, and financial analyses of project learning objectives and records in order to problem-solve for the future. | |
| **Unit 14: Technology Tools**  Students will successfully use technology tools such as word processing, spreadsheet, and/or presentation software to complete their course culmination project presentation. Students will also use and explain technology tools specific to distribution and logistics industries, such as GIS and GPS. In addition, students will discuss and use other computer-based tools and technology used in this and other industries. | 16 periods  720 minutes | (8) The student uses information technology tools to access, manage, and create information. The student is expected to:  (A) use personal management software, email applications, and Internet applications;  (B) use word-processing, database, spreadsheet, and presentation software;  (C) use collaborative or virtual meeting software;  (D) use and explain the benefits of Geographic Information Systems (GIS) and Global Positioning Systems (GPS) hardware and applications;  (E) use computer-based equipment to manage human resources and physical assets;  (F) use technology applications such as barcode systems to identify and track goods and shipments; and  (G) use mobile applications such as GPS to track goods and shipments. | |
| **Unit 15: Distribution and Logistics Project**  Students will participate in project-based culminating activities which include an actual distribution and logistics workplace and/or workplace representation activity for students to examine and evaluate. Students will assess the processing of incoming goods using standard industry protocols and procedures, examine equipment and staffing requirements, traffic management plans, and work schedules, and discuss how to evaluate the performance and contract compliance of contractors and service providers.  Students will present descriptions of their assessments and evaluations, which will include data from a graph, table, chart, and/or plot, and their ideas for improving and/or optimizing the equipment, operations, procedures, and/or processes they observed. Students should use a technology tool in at least one aspect of their presentation. | 16 periods  720 minutes | (5) The student demonstrates appropriate personal and communication skills. The student is expected to:  (D) practice written and oral communication skills and employ effective listening skills;  (F) employ sound writing and preparation skills for prepared and extemporaneous oral presentations, including presentations of technical information; and  (G) demonstrate speaking skills.  (4) The student explains the distribution and logistics industries at local, state, national, and international levels. The student is expected to:  (F) evaluate performance and contract compliance of contractors and service providers.  (9) The student uses data to optimize distribution and logistics business operations such as storage, distribution routes, equipment, and human resources. The student is expected to:  (A) use data to identify areas of operation that need improvement to optimize business operations; and  (B) identify alternative processes and procedures to improve and optimize business operations.  (11) The student examines the planning, preparation, processing, handling, and storing of goods and materials in warehouses and distribution centers. The student is expected to:  (H) evaluate material handling and storage equipment;  (I) assess the processing of incoming goods and materials using standard industry protocols and procedures; and  (J) examine equipment and staffing requirements and develop traffic management plans and work schedules. | |