



## Transportation, Distribution and Logistics

### Foundation

Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC01.01	Academic Foundations	Academic Courses	Demonstrate achievement of cluster-specific academic knowledge and skills required to pursue the full-range of career and post-secondary education opportunities within the career cluster.		
TRC01.02	Academic Foundations	Academic Courses	High school graduation requirements and state standards must be met in addition to these academic knowledge and skills.		



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC02.01	Communications	Language Arts Courses	Comprehend and use reading strategies to learn meaning, technical concepts and vocabulary.	Determine and use reading strategy (skimming, reading for detail, reading for meaning and critical analysis) to determine purpose of text.	Use reading strategy to achieve intended purpose.
					Identify complexity of text.
				Understand content, technical concepts and vocabulary to analyze information and follow directions.	Evaluate and explain relevance, accuracy and appropriateness to purpose.
					Identify issues and questions.
				Interpret, transcribe and communicate information, data, and observations to apply information learned from reading to actual practice.	Analyze information presented in a variety of formats, such as tables, lists, figures, etc.
					Identify key technical concepts and vocabulary.
	Interpret technical materials used.				
	Summarize overall meaning of text.				
	Identify strategies for applying information to task or new situation.				



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC02.02	Communications	Language Arts Courses	Locate, organize and reference written information from various sources to communicate with co-workers and clients/participants.	Locate written information to communicate with co-workers and clients/participants.	Conduct search of information on topic using card catalog, keywords, and/or search engines.
					Locate variety of resources such as books, journals, and electronic forms including the Internet.
					Select the resources that best relate to the topic.
				Organize information to use in written and oral communications.	Read and take notes from selected resources.
					Prepare outline that emphasizes major points with supporting data.
					Present information in organized, easy-to-follow manner.
Document the source and proper reference for written information.	Prepare a bibliography according to MLA, APA, CBE, or Chicago, depending on the warranted language style.				
	Use parenthetical citations, footnotes and endnotes accurately.				
	Follow plagiarism and copyright rules and regulations.				
TRC02.03	Communications	Language Arts Courses	Use correct grammar, punctuation and terminology to write and edit documents.	Compose multi-paragraph writing clearly, succinctly, and accurately to write documents.	Organize and arrange information for effective coherence.
					Report relevant information in order of occurrence.
					Interpret information, data, and observations correctly.
				Use description of audience and purpose to prepare written documents.	Present main ideas and supporting facts.
					Use technical terms and concepts.
					Incorporate and use references effectively and accurately.
Report objective and/or subjective information to achieve the purpose and meet the needs of the audience.					



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			(CONTINUED)	Use correct grammar, spelling, punctuation and capitalization to prepare written documents.	Use correct grammar and sentence structure.
					Use correct spelling.
					Use correct punctuation and capitalization.
TRC02.04	Communications	Language Arts Courses	Develop and deliver formal and informal presentations using appropriate media to engage and inform audiences.	Prepare oral presentation to provide information for intended purpose and audience.	Know subject matter well enough to be independent of written aids.
					Identify characteristics of the audience and adjust to their level of interest and understanding.
					Use technical terms and concepts correctly.
					Make sure information is well-organized in logical sequences that make the major points well-understood by the audience.
				Identify and prepare support materials to accompany oral presentation.	Utilize media and visual aids appropriate to understanding of topic.
					Prepare easy-to-view visual aids and support materials that are without error.
					Operate equipment used with support materials smoothly and efficiently.
					Rehearse presentation.



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			(CONTINUED)	Deliver presentation to sustain listeners' attention and interest.	Deliver presentation without grammatical error. Speak clearly with appropriate volume, rate and gestures while making and maintaining appropriate eye contact with the audience. Use support materials in the presentation that enhance the understanding of the topic and the interest level of the audience. Stay within presentation time parameters. Use verbal and nonverbal feedback strategies to engage discussion and adjust message and delivery. Respond to questions and comments on presentation.
TRC02.05	Communications	Language Arts Courses	Interpret verbal and nonverbal cues/behaviors to enhance communication with co-workers and clients/participants.	Interpret verbal cues/behaviors to enhance communication. Interpret nonverbal cues/behaviors to enhance communication.	Identify verbal cues/behaviors. Observe voice tempo, quality, tone and volume. Explain message conveyed by verbal cues/behaviors. Identify nonverbal cues/behaviors. Observe eye contact, facial expressions, posture, gestures and other body language. Explain message conveyed by nonverbal cues/behaviors.
TRC02.06	Communications	Language Arts Courses	Apply active listening skills to obtain and clarify information.	Interpret message/information given to clarify information. Respond with restatement and clarification techniques to clarify information.	Indicate familiarity of topic being presented. Respond accordingly using appropriate verbal and nonverbal language. Answer questions correctly and be able to provide feedback in own words. Ask questions to seek or confirm understanding. Paraphrase and/or repeat information. Record notes and summarize information from written notes.



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC02.07	Communications	Language Arts Courses	Develop and interpret tables, charts, and figures to support written and oral communications.	Develop tables, charts and figures to support written and oral communication.	Compile facts and arrange in an organized manner for a table, chart or figure.
					Document sources of data.
					Determine most appropriate way to display data for effective coherence.
				Interpret tables, charts and figures used to support written and oral communication.	Prepare table, chart, graph or figure for inclusion in publication or presentation.
					Evaluate reference or source of data for authenticity and reliability.
					Explain information presented in tables, charts and figures.
Prepare written summary of findings expressed in tables, charts and figures.					



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC03.01	Problem Solving and Critical Thinking	Academic Courses #6: Ethics and Legal Issues	Formulate ideas, proposals and solutions to problems.	Clarify the problems or issues to be addressed and the objectives.	
				Identify constraints and parameters.	
				Obtain and analyze available information and statistical data.	
				Generate alternative ideas, proposals, and solutions that would solve the problem.	
				Evaluate alternative solutions.	
				Identify the best solution based on risks, costs, and benefits.	
				Present the solution and the logic and rationale for the solution.	
TRC03.02	Problem Solving and Critical Thinking	Academic Courses #6: Ethics and Legal Issues	Analyze and evaluate ideas, proposals, and solutions to problems.	Confirm definition of problem and objectives.	
				Confirm constraints and parameters.	
				Evaluate the basic assumptions.	
				Evaluate the quality of information used to support solution.	
				Evaluate the analysis of data used to support solution.	
				Evaluate the logic and reasoning used to develop solution.	
				Evaluate the risks, costs, and benefits of testing and implementing the solution.	
				Make recommendations on supporting, changing, or not supporting the solution.	



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC03.03	Problem Solving and Critical Thinking	Academic Courses #6: Ethics and Legal Issues	Develop solutions to performance problems using a structured problem-solving process.	<p>Describe the problem completely and accurately using data and graphs and charts.</p> <p>Develop and present a comprehensive mapping of potential root and indirect causes (e.g., fishbone diagrams).</p> <p>Identify and evaluate alternative solutions.</p> <p>Test, monitor and evaluate best solutions.</p> <p>Develop plans to fully implement solutions to address performance problem.</p>	



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC04.01	Information Technology Applications	#2: Information Technology Applications	Use Personal information Management (PIM)/productivity applications.	Manage personal schedule and contact information.	Create and update a to-do list with due dates, status, category, and priorities.
					Add, delete, and edit schedules. Use features such as recurring events, multiple-day, and reminders.
				Create memos and notes.	Group and categorize contact information. Create notes, informal memos, and reminders.
TRC04.02	Information Technology Applications	#2: Information Technology Applications	Use electronic mail applications.	Use email to share files and documents.	Open (or detach) and save attachments to the intended location.
					Select appropriate strategy (attachment vs. link) for sharing information. Use appropriate email security measures. (E.g., use virus scan to check virus, and do not download attachments from unknown sources.)
				Use email to communicate within and across organizations.	Create email messages in accordance with established business standards (e.g., grammar, word usage, spelling, sentence structure, clarity). Manage mailboxes by deleting and organizing messages. Use email features such as reply requested, return receipt, and out-of-office notices.
TRC04.03	Information Technology Applications	#2: Information Technology Applications	Use Internet applications.	Access and navigate Internet. (E.g., use a web browser.)	Navigate between and within web sites.
					Access and use multiple browser windows.
					Differentiate between secure and non-secure web sites. Download a file from a web site to the desired location.



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			(CONTINUED)	Search for information and resources.	Select search engine(s) appropriate for desired information. Identify and articulate an information search. Use phrase search and simple Boolean logic (AND, OR, NOT, NEAR). Refine search by modifying search terms.
				Evaluate Internet resources.	Prioritize Internet resources against search criteria. Look for corroboration and independent validation of information (do different sites reference each other, is the information consistent). Take action to clarify ambiguous or incomplete information.
TRC04.04	Information Technology Applications	#2: Information Technology Applications	Use writing/publishing applications.	Prepare simple documents and other business communications.	Create documents (letters, memos and reports) both with and without templates. Format text using basic formatting functions (e.g., paragraph spacing, margins, bullets, numbering). Employ word processing utility tools (e.g., track changes or thesaurus).
				Prepare reports and other business communications, integrating graphics and other non-text elements.	Use advanced formatting features (headers, footers, page numbering, styles). Customize tables (add borders and shading, merge rows and columns, adjust row/column sizes). Use insert picture/object function to place graphics in document and adjust text formatting accordingly. Employ document organization tools (e.g., outline, footnotes, and endnotes).



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			(CONTINUED)	Prepare complex publications.	<p>Make changes to format or layout of an existing complex publication or template (e.g., 8-page, 2-color newsletter with columns, sidebars, photos and graphics, multi-color output).</p> <p>Organize content and standardize format from various sources.</p> <p>Create non-print output for publication (e.g., PDF, postscript).</p>
TRC04.05	Information Technology Applications	#2: Information Technology Applications	Use presentation applications.	<p>Prepare presentations for training, sales and information sharing.</p> <p>Deliver presentations with supporting materials.</p>	<p>Create a new presentation using both text and content layouts.</p> <p>Change color scheme for a slide design.</p> <p>Create/edit external graphic elements (e.g., a scanned photo) and insert into a slide.</p> <p>Edit existing animations and action buttons.</p> <p>Create new slide transitions.</p> <p>Create and distribute presentation handouts or speaker notes.</p> <p>Print either key slides or an entire presentation in handout or notes format.</p> <p>Create an automated slide show.</p>
TRC04.06	Information Technology Applications	#2: Information Technology Applications	Use spreadsheet applications.	Create spreadsheet.	<p>Create new spreadsheet, based on a set of data where you must identify the appropriate structure (e.g., rows and columns) for data display and analysis.</p> <p>Apply cell type formatting (e.g., date, dollar, text and decimal) appropriate to data type.</p> <p>Add document identification (e.g., page numbers, dates, and titles in headers and footers).</p> <p>Print only relevant data so that it is readable (e.g., uses set print area to fit into one or multiple pages).</p>



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			(CONTINUED)	Perform calculations and analysis on data.	Write simple formulas. Use chart wizard to create a chart or graph from adjacent selections, with appropriate chart type and labels. Use filter and comparison criteria to find specific values in rows in a list. Build calculations using the formula wizard.
TRC04.07	Information Technology Applications	#2: Information Technology Applications	Use database applications.	Manipulate data elements.	Enter data using a form. Locate/replace data using search and replace functions. Process data using database functions (e.g., structure, format, attributes, relationships, keys).
				Manage, analyze and report on interrelated data elements.	Search a database table to locate records. Sort data using single- and multiple-field sorts. Perform single- and multiple-table queries (e.g., create, run, save). Print forms, reports, and results of queries. Verify accuracy of output.
TRC04.08	Information Technology Applications	#2: Information Technology Applications	Use collaborative/groupware applications.	Facilitate group work through management of shared schedule and contact information.	Add, delete, and edit group schedule. Use features such as recurring events, multiple-day, and reminders. Create a meeting request or task assignment. Add or delete contacts in a shared address book.
				Facilitate group work through management of shared files and online information.	Organize, store and share files in network directories (e.g., copy and delete files, create new folders, move documents between folders). Organize, store, and share files using a document library or database. Organize, store, and share files using web sites (e.g., post messages and upload/download files).



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			(CONTINUED)	Facilitate group work through instant messaging or virtual meetings.	Participate in virtual group discussions and meetings. Send or respond to an instant message from a group list.
TRC04.09	Information Technology Applications	#2: Information Technology Applications	Use computer operations applications.	<p>Manage computer operations.</p> <p>Manage file storage.</p>	<p>Install/uninstall an application.</p> <p>Connect ports of the computer to peripherals.</p> <p>Interrupt and restart applications or the computer when they freeze.</p> <p>Configure desktop environment and applications for efficient operation (e.g., create shortcuts, customize monitor size, customize menu bars).</p> <p>Apply basic commands of operating system software (e.g., create, rename and delete directories).</p> <p>Employ desktop operating skills (e.g., use mouse buttons and keyboard shortcuts).</p> <p>Differentiate between files and directories.</p> <p>Use folders or directories with meaningful names to store related files.</p> <p>Backup data periodically to a backup media (CD, disk, etc.) or server.</p> <p>Apply appropriate file and disk management techniques (e.g., defragment and rearrange files, reinstall backup data).</p> <p>Determine file organization (e.g., use appropriate directory structures and names).</p>



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			(CONTINUED)	Compress or alter files.	Compress and uncompress files/folders using compression software. Convert file formats (e.g., convert MExcel or MSWord format file to Adobe Acrobat (PDF) format). Convert existing files using utilities provided by the software (e.g., update files from older version of an application to be used in the newer version, convert file created by MSWorks to MSWord).
TRC04.10	Information Technology Applications	#2: Information Technology Applications	Use computer-based equipment (containing embedded computers (or processors) used to control electromechanical devices).	Operate computer-driven equipment and machines.	Operate equipment and machine with assistance. Secure needed supplies and resources. Follow power-up and log-on procedures. Interact with/respond to system messages using console device. Run applications/jobs in accordance with processing procedures. Follow log-off and power-down procedure(s).
			Use geographic information systems software.	Represent data on maps. Locate physical addresses on maps. Estimate distances and travel times between two or more locations. Produce and print maps.	



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC05.01	Systems	#4: Transportation, Distribution and Logistics Systems	Explain the role and major functions of a TDL organization.	Describe and explain the mission of TDL organizations.	
				Explain the role of TDL organizations within the industry.	
				Define and explain the critical customers, suppliers, and stakeholders for the organization.	
				Explain the major competitive challenges faced by the organization in the industry.	
				Describe and explain the major internal functions and structure of the organization.	
TRC05.02	Systems	#4: Transportation, Distribution and Logistics Systems	Define and explain the major measures used by a TDL organization to manage and improve performance.	Define and explain the measures for financial performance (e.g. profitability, cost reduction, asset utilization).	
				Define and explain the measures for market performance (e.g., customer and sales/service growth).	
				Define and explain the measures for service and internal operations performance (e.g., customer satisfaction, service quality, cycle time).	
				Define and explain the measures for organizational compliance and health, safety and environmental performance (e.g., audit findings, emissions, lost time accidents).	



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC05.03	Systems	#4: Transportation, Distribution and Logistics Systems	Explain the impact of economic, social, and technological changes on a TDL organization and its role in the TDL industry.	Explain the impact of economic changes including economic growth/decline, income growth, consumer confidence, interest rates, fuel and material costs).	
				Explain the impact of social changes including consumer attitudes and preferences, demographics, population shifts).	
				Explain the impact of technological changes including transportation and information technology.	
TRC05.04	Systems	#4: Transportation, Distribution and Logistics Systems	Explain the role of risk management in reducing risks and improving performance in TDL organizations.	Explain the objectives of risk management programs.	
				Describe the major types of loss exposures for a TDL organization including property, liability, personnel, and net income.	
				Describe the approaches for managing organizational risks.	
TRC05.05	Systems	#4: Transportation, Distribution and Logistics Systems	Explain the roles and functions of government in regulating and supporting TDL organizations within the industry.	Explain roles in regulating domestic transportation operations.	
				Explain roles in regulating international transportation operations.	
				Explain roles in public transportation infrastructure management.	
				Explain the roles in health, safety and environmental management.	



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC05.06	Systems	#4: Transportation, Distribution and Logistics Systems	Manage customer relationships (internal and/or external customers).	Determine customer needs and requirements.	
				Determine customer satisfaction and fulfillment of customer requirements.	
				Respond to customer problems and complaints.	
TRC05.07	Systems	#4: Transportation, Distribution and Logistics Systems	Develop and manage plans and budgets to accomplish organizational goals and objectives.	Develop work plans and budgets that allocate people and resources.	
				Develop reports on performance and resource utilization.	
				Modify plans and budgets to meet goals and objectives.	
TRC05.08	Systems	#4: Transportation, Distribution and Logistics Systems	Develop plans to improve organizational performance including customer satisfaction and service/operations performance.	Identify and describe most critical performance problems.	
				Identify opportunities for improvement.	
				Use structured problem-solving process to develop improvement plans.	
TRC05.09	Systems	#4: Transportation, Distribution and Logistics Systems	Maintain compliance with organizational policies and government laws and regulations.	Identify and explain relevant organizational policies and government laws and regulations for specific functions within TDL organizations.	
				Determine compliance with policies and regulations.	
				Make recommendations on improving compliance.	



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC06.01	Safety, Health, and Environmental	#3: Health, Safety and Security in the Transportation Industry	Describe the major regulatory areas (e.g. personal protective equipment) and government laws and regulations.	Describe the major areas addressed in health and safety laws and regulations.	
				Describe the major areas addressed in environmental management laws and regulations.	
TRC06.02	Safety, Health, and Environmental	#3: Health, Safety and Security in the Transportation Industry	Explain the major components and benefits of health, safety and environmental management systems in TDL organizations.	Describe the major components.	
				Explain the role and benefits of each component.	
TRC06.03	Safety, Health, and Environmental	#3: Health, Safety and Security in the Transportation Industry	Explain how government agencies promote compliance and improved health, safety and environmental performances in TDL organizations.	Describe the major measures and types of data used by government agencies to measure and monitor health, safety, and environmental risks and performance.	
				Explain how government can ensure compliance and promote improved performance in TDL organizations.	
TRC06.04	Safety, Health, and Environmental	#3: Health, Safety and Security in the Transportation Industry	Explain how TDL organizations promote improved health, safety, and environmental performance in logistics, distribution, and transportation organizations.	Describe the major measures and types of data used by organizations to measure and monitor health, safety, and environmental risks and performance.	
				Explain how organizations can improve their performance.	



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC06.05	Safety, Health, and Environmental	#3: Health, Safety and Security in the Transportation Industry	Demonstrate personal commitment to safety, health and environment policies and procedures.	Maintain knowledge of organizational safety, health, and environmental management policies and procedures.	
				Follow organizational policies and procedures.	
				Educate and orient other workers.	
				Maintain a safe work area.	
				Identify and describe workplace hazards.	
				Perform regular audits and inspections to maintain compliance.	
				Maintain documentation on compliance.	
				Identify and report health, safety, and environmental problems.	
Participate in accident/incident investigations.					
TRC06.06	Safety, Health, and Environmental	#3: Health, Safety and Security in the Transportation Industry	Develop plans to improve health, safety, and environmental performance.	Identify and describe most critical performance problems.	
				Identify opportunities for improvement.	
				Use structured problem-solving process to develop improvement plans.	



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC07.01	Leadership and Teamwork	#1: Introduction to the Transportation, Distribution and Logistics Industry	Provide group leadership.	Work with others to develop and gain commitment to team goals.	
				Motivate team members to achieve goals.	
				Promote the full involvement and utilization of team members.	
				Distribute responsibility and work load fairly.	
TRC07.02	Leadership and Teamwork	#1: Introduction to the Transportation, Distribution and Logistics Industry	Collaborate with others.	Demonstrate commitment to and a positive attitude toward team goals.	
				Take responsibility for shared group and individual work tasks.	
				Complete your share of the work.	
				Assist team members in completing their work.	
				Adapt effectively to changes in projects and work activities.	
				Negotiate effectively to arrive at decisions.	
				Treat people with respect.	
				Provide constructive praise and criticism.	
				Demonstrate sensitivity to and value for diversity.	
				Resolve conflicts.	
				Manage stress and control emotions.	



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC07.03	Leadership and Teamwork	#1: Introduction to the Transportation, Distribution and Logistics Industry	Conduct and participate in meetings.	Develop meeting objectives, goals and agenda. Assign responsibilities for preparing materials and leading discussions. Prepare materials for leading discussion. Assemble and distribute meeting materials. Attend scheduled meetings on time. Conduct meeting to achieve objectives within scheduled time. Demonstrate effective communication skills in meetings. Produce and distribute meeting minutes including decisions and next steps.	



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC08.01	Ethics and Legal Responsibilities	#6: Ethics and Legal Issues	Demonstrate awareness of legal responsibilities for different roles and functions within organizations.	Explain legal responsibilities of employees to comply with government laws and regulations.	
				Explain the major government laws and regulations that define legal responsibilities for different roles and functions including commercial, consumer, health, safety, and environmental, and employment laws and regulations.	
TRC08.02	Ethics and Legal Responsibilities	#6: Ethics and Legal Issues	Recognize differences in ethical and legal responsibilities.	Explain differences between ethical and legal responsibilities for different roles and functions.	
				Explain employer expectations on ethical workplace behavior, personal responsibility and how they are expressed.	
				Explain workplace differences in personal or professional ethics.	
TRC08.03	Ethics and Legal Responsibilities	#6: Ethics and Legal Issues	Apply ethical reasoning to different workplace situations.	Evaluate alternative responses to workplace situations based on legal responsibilities and employer policies.	
				Evaluate alternative responses to workplace situations based on personal or professional ethical responsibilities.	
				Identify and explain personal and long term workplace consequences of unethical or illegal behaviors.	
				Determine and explain most appropriate response based on legal and ethical considerations.	
TRC08.04	Ethics and Legal Responsibilities	#6: Ethics and Legal Issues	Identify strategies for responding to unethical or illegal actions of individuals and organizations.	Identify and explain alternative strategies for responding to unethical or illegal actions.	
				Identify and explain best strategy.	



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC09.01	Employability and Career Development	#1: Introduction to the Transportation, Distribution and Logistics Industry	Explain written organizational policies, rules and procedures to help employees perform their jobs.	Locate appropriate information on organizational policies in handbooks and manuals.	Identify the contents of various organizational publications.
					Select the appropriate document(s) as reference for the situation.
				Discuss how specific organizational policies and rules influence a specific work situation.	Locate and identify specific organizational policy, rule or procedure to assist with a given situation.
					Explain specific organizational policy, rule or procedure to improve a given situation.
TRC09.02	Employability and Career Development	#1: Introduction to the Transportation, Distribution and Logistics Industry	Identify and demonstrate positive work behaviors and personal qualities.	Demonstrate self-discipline, self-worth, positive attitude, and integrity in a work situation.	Identify the value of maintaining regular attendance.
					Identify and follow company dress and appearance standards.
					Explain ways to exhibit pride in work.
				Demonstrate flexibility and willingness to learn new knowledge and skills.	Exhibit ability to handle stress in a given situation.
					Display initiative and open-mindedness in accomplishing a work challenge.
					Participate in company orientation and training programs with enthusiasm.
					Complete all tasks thoroughly and identify strategies for accomplishing job.
				Exhibit commitment to the organization.	Follow established rules, regulations and policies to handle situation.
					Compare the role of the employer or manager and the role of the employee in the flow of work.
					Describe examples of practicing cost effectiveness.
	Demonstrate time management by prioritizing work to meet deadlines.				



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC09.03	Employability and Career Development	#1: Introduction to the Transportation, Distribution and Logistics Industry	Identify and explore career opportunities in one or more career pathways.	Locate and identify career opportunities that appeal to personal career goals.	Locate and interpret career information for at least one career cluster.
					Identify job requirements for career pathways.
				Identify educational and credentialing requirements for career cluster and pathways.	
				Match personal interests and aptitudes to selected careers.	Identify personal interests and aptitudes.
					Identify job requirements and characteristics of selected careers.
					Compare personal interests and aptitudes with job requirements and characteristics of career selected.
					Modify career goals based on results of personal interests and aptitudes with career requirements and characteristics.
TRC09.04	Employability and Career Development	#1: Introduction to the Transportation, Distribution and Logistics Industry	Develop a personal career plan to meet career goals and objectives.	Develop career goal and objectives to plan future career direction.	Identify career that matches individual interests and aptitudes.
					Develop realistic career goal with an appropriate time frame.
					Identify realistic objectives for reaching and advancing in career within the estimated timeline.
				Develop strategies to reach career objectives.	Develop a list of strategies for achieving educational requirements for selected career.
					Identify multiple strategies for obtaining employment experiences.
					Identify alternative career goals and objectives and make adjustments in plan to achieve alternate goal.
					Develop and maintain a personal educational and career portfolio.



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC09.05	Employability and Career Development	#1: Introduction to the Transportation, Distribution and Logistics Industry	Demonstrate ability to seek and apply for employment.	Use multiple resources to locate job opportunities.	Identify resources for finding employment.
					Analyze resources to determine those that are most appropriate for desired career.
					Compare job requirements with personal qualifications, interests, and aptitudes.
					Select job that matches personal qualifications, interests, and aptitudes.
				Prepare a resume and letter of application to apply.	Identify prospective employer's submission requirements.
					Gather information and prepare resume in correct format.
					Write letter of application for specific job opening in correct format without error.
				Complete an employment application to obtain employment.	Gather information for application.
					Complete all questions on application with appropriate and honest answers.
					Sign and date application.
					Attach any supporting material required or requested.
				Interview to obtain employment.	Dress appropriately for interview.
					Exhibit professional conduct before, during and after interview.
Explain your qualifications and interests clearly and concisely.					
Answer all questions honestly and concisely.					
Write follow-up letter after the interview.					



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			Demonstrate ability to evaluate and compare employment opportunities and accept employment.	Evaluate and compare employment opportunity to individual needs and career plan.	Identify job advantages and disadvantages.
					Compare job benefits to individual needs.
			Accept or reject employment.		Compare job opportunities and responsibilities to career plan.
					Make decision to accept or reject employment based on facts.
					Write acceptance or rejection letter without error.
					Complete employment forms upon acceptance without error.



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC10.01	Technical Skills	#5: Technological Systems	Identify and explain the role and function of necessary transportation-related technological systems.	Identify and explain systems for transporting people and freight.	
				Identify and explain systems for transportation support operations.	
				Identify and explain information technology applications.	
TRC10.02	Technical Skills	#5: Technological Systems	Explain the importance of measuring and managing the reliability and performance of technological systems.	Define and explain the concept of reliability.	
				Explain how reliability and overall system performance is measured and monitored.	
				Describe the importance of the reliability and performance of technological systems in improving the performance of TDL organizations.	
				Describe the results of poor reliability and performance of technological systems in improving the performance of TDL organizations.	
				Explain how employees can contribute to improved reliability and performance (e.g., design, selection, maintenance, operation/utilization).	



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRC10.03	Technical Skills	#5: Technological Systems	Explain major health, safety and environmental risks and potential impacts of technological systems.	Explain the major health, safety and environmental risks and potential impacts of technological systems.	
				Explain how these risks and impacts can be managed in TDL organizations.	
TRC10.04	Technical Skills	#5: Technological Systems	Participate in the evaluation and selection of technological systems.	Identify and explain the organizational requirements and selection criteria for technological systems.	
				Use the requirements and selection criteria to evaluate alternatives.	
				Recommend the best technological systems.	
TRC10.05	Technical Skills	#5: Technological Systems	Participate in efforts to improve the utilization and performance of technological systems.	Identify and prioritize reliability and performance problems.	
				Identify opportunities for improvement.	
				Use structured problem-solving process to develop improvement plans.	



## Transportation, Distribution and Logistics

Pathway: Health, Safety and Environmental Management

Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRPF01.01	Health, Safety and Environmental Management	#7: Environmental Compliance and Hazardous Materials Management #8: Procedures for Environmental Emergencies	Develop and maintain safety, health and environmental management systems.	Develop/revise safety, health, and environmental management systems including policies, procedures and documentation.	Compile and review current systems including policies, procedures and documentation.
					Review current compliance problems (e.g., audit/inspection findings, documentation systems).
					Review health/safety and environmental hazard analyses and incidence reports.
					Identify changing government laws and regulations.
					Determine need for revising company policies, procedures and systems.
					Develop report with recommended revisions.
					Present and explain recommended revisions (e.g., business meetings).
				Conduct audits and inspections and evaluate compliance with company policies and government laws and regulations.	Develop compliance checklist for conducting audits and inspections.
					Develop audit/inspection process/procedures and schedule.
					Conduct audits and inspections.
					Document audit/inspection findings and make recommendations (e.g., report, memo).
					Present and explain findings and recommendations (e.g., business meetings).

Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			(CONTINUED)	Communicate, promote, and support the full implementation of health, safety and environmental policies, procedures, and documentation systems.	<p>Prepare information and materials to promote awareness and advocate safe and healthy work environment.</p> <p>Develop workplace materials and documentation tools to support system implementation and management.</p> <p>Prepare training materials for providing new employee orientation and recurrent training and support (including required employee training).</p> <p>Conduct employee training.</p> <p>Evaluate the effectiveness of promotional and support materials and employee training.</p> <p>Document communication, support, and training activities and recommend improvements.</p> <p>Present and explain report and recommendations (e.g., business meeting).</p>
				Prepare for health, safety, and environmental emergencies.	<p>Review current policies and procedures for emergency response.</p> <p>Review reports/documentation on emergency responses and emergency response drills.</p> <p>Review government laws and regulations.</p> <p>Revise/update current policies and procedures for emergency response.</p> <p>Develop communication, training, and support materials.</p> <p>Conduct training and emergency response drills.</p> <p>Develop report on updated policies, procedures, documentation, training, and drills and recommend next steps.</p> <p>Present and explain report and recommendations (e.g., business meeting).</p>

Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRPF01.02	Health, Safety and Environmental Management	#9: Health, Safety and Environmental System Management	Improve Safety, Health, and Environmental System performance.	Conduct health, safety and environmental incident investigations and recommend corrective action.	Develop comprehensive description/documentation of incident(s) and notify relevant authorities.
					Conduct root cause analysis and identify causes of incident.
					Identify and evaluate potential solutions.
					Develop recommendations for corrective action.
					Develop report on incident findings and recommended corrective actions.
				Conduct safety, health, and environmental analyses to evaluate and manage risks of equipment and material utilization and work processes and recommend corrective actions.	Present and explain report and recommendations (e.g., business meeting).
					Develop comprehensive description/documentation of hazards in the workplace.
					Conduct hazard analysis and review of potential hazard reduction/elimination strategies.
					Develop recommendations for hazard reduction or elimination.
					Develop report on hazard analysis findings and recommended corrective actions.
Present and explain report and recommendations (e.g., business meeting).					

Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			(CONTINUED)	Develop strategies to improve safety, health, and environmental system performance.	Compile and analyze data on safety, health, and environmental performance. Identify most critical improvement opportunities. Identify and evaluate alternative improvement strategies/solutions. Recommend improvement strategies. Develop report on performance and improvement strategies. Present and explain report and recommendations (e.g., business meetings).



## Transportation, Distribution and Logistics

Pathway: Transportation Systems/Infrastructure Planning, Management and Regulations

Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRPE01.01	Transportation Systems/Infrastructure Planning, Management and Regulations	#8: Transportation Infrastructure	Plan and maintain public transportation infrastructure.	Develop plans for new, improved or discontinued public transportation infrastructure (e.g., highways, airports, train terminals, ports, intermodal facilities).	Analyze changing customer/market needs and requirements.
					Explain local, state and federal political influences and impact on requirements.
					Determine the key features and capabilities of public infrastructure to meet these requirements.
					Develop projections of the demand for and utilization of infrastructure.
					Evaluate the costs and benefits of public transportation infrastructure including environmental, economic, and social impacts.
					Develop plans for transportation infrastructure including reports and land and infrastructure maps and drawings and related design documents.
					Present and explain plans (e.g., public meeting).
				Develop plans to maintain transportation infrastructure.	Review and analyze maintenance requirements of infrastructure.
					Monitor and analyze the usage and conditions of transportation infrastructure.
					Develop maintenance plans including schedules, material and labor requirements and budgets.
Present and explain plans (e.g., business meeting).					



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRPE01.02	Transportation Systems/Infrastructure Planning, Management and Regulations	#7: Transportation Services	Plan and manage public transportation services.	Develop plans for new, improved or discontinued transportation services including public transportation services.	Analyze changing customer/market needs and requirements.
					Determine the key features and capabilities of services to meet requirements.
					Develop projections of the demand for and utilization of services.
					Evaluate the costs and benefits of public transportation services (including economic, social, environmental).
					Develop plans for public transportation services including projected routes and schedules and related infrastructure and equipment requirements.
					Present and explain plans (e.g., public meeting).
					Monitor and report on the performance of public transportation operations.
				Develop performance measures and determine data requirements for monitoring performance.	
				Collect and organize performance data in database.	
				Establish performance targets/standards for monitoring performance.	
				Analyze performance relative to targets/standards and identify performance problems.	
				Document and report system performance trends and problems using graphs/charts (e.g. reports, memos).	
				Present and explain information on performance (e.g., business meetings).	

Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			(CONTINUED)	Develop strategies to improve service levels and quality and reduce costs.	Determine performance gaps and improvement opportunities (e.g., on schedule, ridership, capacity utilization, costs). Identify and evaluate causes of performance gaps. Identify and evaluate potential solutions (e.g. routing, scheduling, equipment upgrades, operator training). Determine most appropriate solutions. Document causes and recommended solutions in written reports. Present and explain proposed solutions (e.g., business meetings).
TRPE01.03	Transportation Systems/Infrastructure Planning, Management and Regulations	#9: Transportation Systems Management	Transportation system management.	Develop plans to improve system utilization and traffic flow.	Collect and analyze system utilization and traffic flow data. Determine major problem areas (e.g., delays, travel times, congestion). Identify and evaluate alternative solutions. Develop plans to improve system performance. Present and explain plans (e.g., public meetings).



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			(CONTINUED)	Develop plans to improve safety and environmental performance of carriers and safety conditions in transportation systems.	Analyze the safety and environmental performance of carriers and safety conditions in transportation systems. Determine major problem areas (e.g., hazardous materials, accident rates). Identify and evaluate alternative solutions. Develop plans to improve safety and environmental performance. Present and explain plans (e.g., public meetings).



# Transportation, Distribution and Logistics

Pathway: Transportation Operations

Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRPA01.01	Transportation Operations	#7: Planning Transportation Operations #9: Personnel Management	Develop and manage transportation plans to move people and/or goods to meet customer requirements.	Develop transportation plans including routes and schedules for transporting people and goods.	Determine origin and destination points for routing.
					Determine load levels and transportation requirements for goods and/or people.
					Determine availability of qualified operators and required transportation equipment.
					Develop routes to meet service and time requirements at lowest cost.
					Develop plans and schedules (including times, operators, equipment, and related resources) that meet service/time requirements at lowest costs.
					Develop transportation plans (e.g., report, memo, tables) including routing and scheduling.
					Present transportation plans (e.g. business meeting).
				Monitor and adjust transportation plans to meet customer requirements.	Review current plans, routes, and schedules.
					Analyze information on the movement of people/goods according to plans and schedules.
					Determine need to adjust/review plans, routes, and schedules in response to changing conditions and customer requirements.
					Revise transportation plans (e.g., report, memo, tables/charts) including routing and scheduling.
					Present revised plans (e.g. business meetings).



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			(CONTINUED)	Manage traffic flow at transportation hubs, facilities, and staging areas.	Develop/review plans and schedules for arrival, loading/staging, and departure at transportation facility. Analyze current status of scheduled arrivals and departures relative to plans. Determine need to adjust/review staging/loading arrangements at the facility. Revise traffic flow and staging plans and schedules (e.g., report, memo, charts/tables). Present revised plans (e.g. team meeting).
				Negotiate contracts for transportation operations services.	Determine transportation services to be bid and contracted. Develop proposal and review/selection criteria. Identify possible service providers. Develop bid specifications for providers. Request bids from providers. Evaluate bids and select provider(s). Document (e.g., report, memo, tables) evaluation process and selection decision. Present and explain information on process and decisions (e.g., business meetings).



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRPA01.02	Transportation Operations	#8: Transportation Operations Performance	Improve the performance of transportation operations to meet customer and business requirements.	Monitor and report on the performance of transportation operations.	Develop performance measures and determine data requirements for monitoring performance.
					Collect and organize performance data in data base.
					Establish performance targets/standards for monitoring performance.
					Analyze performance relative to targets/standards and identify performance problems.
					Document and report system performance trends and problems using graphs/charts (e.g. reports, memos).
					Present and explain information on performance (e.g., business meetings).
				Develop strategies to improve service levels and quality and reduce costs.	Determine performance gaps and improvement opportunities (e.g., on-time delivery, yields, capacity utilization, costs).
					Identify and evaluate causes of performance gaps.
					Identify and evaluate potential solutions (e.g. routing, scheduling, equipment upgrades, operator training).
					Determine most appropriate solutions.
					Document causes and recommended solutions in written reports.
					Present and explain proposed solutions (e.g., business meetings).



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
TRPA01.03	Transportation Operations	#10: Compliance and Regulations	Maintain and improve compliance with company policies and government laws and regulations.	Monitor and evaluate compliance with company policies and government laws and regulations.	Develop compliance checklist for conducting review.
					Develop compliance review process.
					Conduct compliance review.
					Document compliance findings and make recommendations (e.g., report, memo).
				Revise company policies, procedures, and information/documentation systems to improve compliance with changing customer/business requirements (e.g., quality systems) and government laws and regulations (e.g., health, safety, environment).	Present and explain compliance findings and recommendations (e.g., business meetings).
					Review current compliance problems (e.g., compliance review findings).
					Identify changing customer/business requirements and government laws and regulations.
					Determine need for revising company policies, procedures and systems.
					Develop report with recommended revisions.
					Present and explain recommended revisions (e.g., business meetings).