# Scope & Sequence

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| Course Name: Practicum in Transportation Systems/Extended Practicum in Transportation Systems **TSDS PEIMS Code:** 13040455 (First Time Taken)  13040465 (Second Time Taken) | | **Course Credit:** 3.0  **Course Requirements:** Recommended Grade Placement: 11 – 12.  **Prerequisites:** None.  **Corequisites:** Practicum in Transportation Systems. |
| **Course Description:** Extended Practicum in Transportation Systems is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience such as internships, mentorships, independent study, or laboratories. Extended Practicum in Transportation Systems can be either school lab based or worked based. This course must be taken concurrently with Practicum in Transportation Systems and may not be taken as a stand-alone course. | | |
| **NOTE 1:** The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Transportation, Distribution, and Logistics Career Cluster. This is a suggested scope and sequence for the course content. This content will work with any textbook, instructional materials or practicum experience. If locally adapted, make sure all TEKS are covered.  **NOTE 2:** Completion of skill sets may be demonstrated throughout the practicum. Therefore, content based on the TEKS does not have to be delivered sequentially. The major reason students take a practicum is to provide additional time on task for learning specialized skills. In most cases where the Extended Practicum is added to the Practicum, it is because the student is spending more than 15 hours per week at his/her training station (place of employment or internship).  **NOTE 3:** The information in this scope and sequence document does not describe detailed activities, because the activities will vary from student to student and training station to training station. The intent is that students incorporate and use previously learned knowledge and skills related to the career cluster. | | |
| **Practicum Plan** | **TEKS Covered**  **130.463. (c) Knowledge and skills** | |
| **Section 1: Pre-Practicum**  Prior to beginning practicum experiences, students will review and discuss professional standards and employers’ expectations, personal and workplace safety, response plans to emergency situations, effective problem-solving strategies, interpersonal skills, the principles of group participation and teamwork, appropriate work habits, ethical conduct, and good citizenship skills. Students will also explore and discuss career goals, objectives, and strategies as well as how the practicum experience fits into a plan for future career opportunities.  Students, supervising instructors, and practicum experience supervisors will read and review locally created practicum checklist(s). Parent/guardians will also be provided with a copy. Checklist(s) will include all relevant TEKS along with rubrics for supervisor evaluations and student self-evaluations. Students will read, discuss, and demonstrate an understanding of the provided checklist and rubric criteria before beginning their practicum experiences.  Also prior to beginning their practicum experiences, students will agree to adhere to policies and procedures, demonstrate positive work attitudes and behaviors, including punctuality, time management, initiative, and cooperation, accept constructive criticism, make ethical decisions, complete tasks with the highest standards, and model professional appearance, including appropriate dress and grooming as well as using personal protective equipment if/as required. | (1) The student demonstrates professional standards/employability skills as related 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 within transportation;  (E) demonstrate knowledge of personal and occupational health and safety;  (F) discuss response plans to emergency situations;  (G) identify employers' expectations, appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills; and  (H) explore career goals, objectives, and strategies as part of a plan for future career opportunities.  (2) The student demonstrates professional standards as required by business and industry. The student is expected to:  (A) adhere to policies and procedures;  (B) demonstrate positive work attitudes and behaviors, including demonstrating punctuality, time management, initiative, and cooperation;  (C) accept constructive criticism;  (D) apply ethical reasoning to a variety of situations in order to make ethical decisions;  (E) complete tasks with the highest standards to ensure quality products and services;  (F) model professional appearance, including using appropriate dress, grooming, and personal protective equipment; and  (G) comply with safety rules and regulations to maintain safe and healthy working conditions and environments in the practicum setting. | |
| **Section 2: TEKS Checklist Components for Practicum in Transportation Systems**  Students, parents/guardians, and instructional/workplace supervisors will review, understand, and agree to a checklist of practicum objectives. Checklists may be locally adapted/modified, but all corresponding TEKS Checklist Components must be addressed. | (1) The student demonstrates professional standards/employability skills as related 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 within transportation;  (E) demonstrate knowledge of personal and occupational health and safety;  (F) discuss response plans to emergency situations; and  (G) identify employers' expectations, appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills.  (2) The student demonstrates professional standards as required by business and industry. The student is expected to:  (A) adhere to policies and procedures;  (B) demonstrate positive work attitudes and behaviors, including demonstrating punctuality, time management, initiative, and cooperation;  (C) accept constructive criticism;  (D) apply ethical reasoning to a variety of situations in order to make ethical decisions;  (E) complete tasks with the highest standards to ensure quality products and services;  (F) model professional appearance, including using appropriate dress, grooming, and personal protective equipment; and  (G) comply with safety rules and regulations to maintain safe and healthy working conditions and environments in the practicum setting.  (4) The student demonstrates leadership and teamwork skills in collaborating with others to accomplish goals and objectives. The student is expected to:  (A) analyze leadership characteristics related to trusting others, maintaining a positive attitude and integrity, and accepting key responsibilities in a work situation;  (B) demonstrate teamwork skills through working cooperatively with others to achieve tasks;  (C) demonstrate teamwork processes that promote team building, consensus, continuous improvement, respect for the opinions of others, cooperation, adaptability, and conflict resolution;  (D) demonstrate responsibility for group and individual work tasks;  (E) establish and maintain effective working relationships in order to accomplish objectives and tasks;  (F) demonstrate effective working relationships using interpersonal skills;  (G) use positive interpersonal skills to work cooperatively with others;  (H) negotiate effectively to arrive at decisions;  (I) demonstrate respect for individuals, including those from different cultures, genders, and backgrounds; and  (J) demonstrate sensitivity to and value for diversity.  (5) The student demonstrates oral and written communication skills in creating, expressing, and interpreting information and ideas, including technical terminology and information. The student is expected to:  (A) demonstrate the use of content, technical concepts, and vocabulary when analyzing information and following directions;  (B) employ verbal skills when obtaining and conveying information;  (C) use informational texts, Internet websites, and technical materials to review and apply information sources for occupational tasks;  (D) evaluate the reliability of information from informational texts, Internet websites, and technical materials and resources;  (E) interpret verbal and nonverbal cues or behaviors to enhance communication;  (F) apply active listening skills to obtain and clarify information; and  (G) use academic skills to facilitate effective written and oral communication.  (6) The student demonstrates technical knowledge and skills required to pursue a career in the transportation systems. The student is expected to:  (A) develop advanced technical knowledge and skills related to the student's personal career goals;  (B) evaluate technical skill proficiencies; and  (C) accept critical feedback provided by the supervisor. | |
| **Section 3: Critical Thinking and Problem-Solving: Practicum Check-In 1**  Students will discuss and demonstrate their critical thinking and problem-solving skills as they participate in check-in(s) with supervisors throughout their practicum experiences. Students will analyze and evaluate their practicum experiences as they describe how they have applied critical thinking and problem-solving skills, and alternative, creative, and/or innovative solutions to possible problems they have encountered thus far or may still encounter. Students will also be encouraged to conduct technical research independently to gather information necessary for decision making as well as to discuss and predict what other critical thinking and problem-solving skills will be necessary for a successful practicum experience as well as a successful career in the transportation industry. | (3) The student applies concepts of critical thinking and problem solving. The student is expected to:  (A) analyze elements of a problem to develop creative and innovative solutions;  (B) critically analyze information to determine its relevance to the problem-solving task;  (C) compare and contrast alternatives using a variety of problem-solving and critical-thinking skills; and  (D) conduct technical research to gather information necessary for decision making. | |
| **Section 4: Check List Progress and CTSO Activities: Practicum Check-In 2**  Students will research, explore, and discuss examples and benefits of CTSO and/or other extracurricular student activities. Students will then prepare and effectively present a brief oral and/or written report on a CTSO or other extracurricular organization they are willing to join or are already participating in. Students will also discuss and self-evaluate their practicum check list progress as well as any questions or problems they may have encountered. | (3) The student applies concepts of critical thinking and problem solving. The student is expected to:  (C) compare and contrast alternatives using a variety of problem-solving and critical-thinking skills; and  (D) conduct technical research to gather information necessary for decision making. | |
| **Section 5: Careers, Competencies, and Credentialing Requirements**  During their practicum experience, students will use appropriate technology and/or assigned materials toresearch, identify, and discuss careers, career development opportunities, entrepreneurship opportunities, and internships in the field of transportation. Students will review technical skill competencies for meeting transportation-related industry standards, certifications, and licensing requirements. Students will continue to explore their personal career goals, objectives, and strategies as they further develop plans for future career opportunities.  As a culminating project for the practicum, students will successfully prepare and present their professional portfolios to supervising instructors and practicum supervisors. Students’ final projects will have been edited and correctly revised, meet all TEKS-related requirements and criteria, and will be suitable for presentation to an interested stakeholder and/or potential employer. Students will model a professional appearance and demonstrate appropriate professionalism as well as interpersonal skills as they present their portfolios. | (1) The student demonstrates professional standards/employability skills as related by business and industry. The student is expected to:  (A) identify career development and entrepreneurship opportunities related to transportation systems;  (B) identify careers in transportation systems;  (C) apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation within transportation;  (D) discuss certification opportunities;  (G) identify employers' expectations, appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills; and  (H) explore career goals, objectives, and strategies as part of a plan for future career opportunities.  (2) The student demonstrates professional standards as required by business and industry. The student is expected to:  (B) demonstrate positive work attitudes and behaviors, including demonstrating punctuality, time management, initiative, and cooperation;  (E) complete tasks with the highest standards to ensure quality products and services; and  (F) model professional appearance, including using appropriate dress, grooming, and personal protective equipment.  (5) The student demonstrates oral and written communication skills in creating, expressing, and interpreting information and ideas, including technical terminology and information. The student is expected to:  (A) demonstrate the use of content, technical concepts, and vocabulary when analyzing information and following directions;  (B) employ verbal skills when obtaining and conveying information.  (7) The student documents technical knowledge and skills. The student is expected to:  (A) update a professional portfolio to include information such as:  (i) attainment of technical skill competencies, licensures or certifications, recognitions, awards, and scholarships;  (ii) extended learning experiences such as community service and active participation in career and technical student organizations and professional organizations;  (iii) abstract of technical competencies mastered during the practicum;  (iv) resume;  (v) samples of work; and  (vi) evaluation from the practicum supervisor; and  (B) present the portfolio to interested stakeholders. | |
| **Extended Practicum Plan** | **TEKS Covered**  **130.164. (c) Knowledge and skills** | |
| **Section 1: Pre-Practicum**  Prior to beginning practicum experiences, students will review and discuss professional standards and employers’ expectations, personal and workplace safety, response plans to emergency situations, effective problem-solving strategies, interpersonal skills, the principles of group participation and teamwork, appropriate work habits, ethical conduct, and conflict-management skills. Students will also discuss career goals and objectives as well as how the practicum experience fits into a plan for future career opportunities.  Students, supervising instructors, and practicum experience supervisors will read and review locally created practicum checklist(s). Parent/guardians will also be provided with a copy. Checklist(s) will include all relevant TEKS along with rubrics for supervisor evaluations and student self-evaluations. Students will read, discuss, and demonstrate an understanding of the provided checklist and rubric criteria before beginning their practicum experiences.  Prior to beginning their practicum experiences, students will also agree to comply with all applicable rules, laws, and regulations in a consistent manner, consistently follow workplace safety rules and regulations, including Occupational Safety and Health Administration regulations, demonstrate a positive, productive work ethic by performing assigned tasks as directed, apply ethical reasoning to a variety of situations to make ethical decisions, and to demonstrate professional standards and personal qualities needed to be employable such as self-discipline, positive attitude, integrity, leadership, appreciation for diversity, customer service, work ethic, and adaptability. Students will demonstrate their ability to use relevant personal information management, email, Internet, writing and publishing, presentation, and spreadsheet or database applications as appropriate. | (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:  (A) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to transportation systems;  (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;  (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, positive attitude, integrity, leadership, appreciation for diversity, customer service, work ethic, and adaptability with increased fluency;  (D) use personal information management, email, Internet, writing and publishing, presentation, and spreadsheet or database applications with increased fluency;  (E) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and  (F) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.  (2) The student implements advanced professional communications strategies. The student is expected to:  (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;  (B) analyze, interpret, and effectively communicate information, data, and observations;  (C) observe and interpret verbal and nonverbal cues and behaviors to enhance communication; and  (D) apply active listening skills to obtain and clarify information.  (4) The student understands and applies proper safety techniques in the workplace. The student is expected to:  (A) understand and consistently follow workplace safety rules and regulations, including Occupational Safety and Health Administration regulations; and  (B) demonstrate knowledge of procedures for reporting and handling accidents and safety incidents.  (5) The student understands the professional, ethical, and legal responsibilities in transportation systems. The student is expected to:  (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;  (B) apply ethical reasoning to a variety of situations in order to make ethical decisions; and  (C) comply with all applicable rules, laws, and regulations in a consistent manner. | |
| **Section 2: TEKS Checklist Components for Extended Practicum in Transportation Systems**  Students, parents/guardians, and instructional/workplace supervisors will review, understand, and agree to a checklist of practicum objectives. Checklists may be locally adapted/modified, but all corresponding TEKS must be addressed. | (3) The student applies concepts of critical thinking and problem solving. The student is expected to:  (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions;  (B) analyze elements of a problem to develop creative and innovative solutions; and  (C) demonstrate the use of content, technical concepts, and vocabulary when analyzing information and following directions.  (6) The student participates in a transportation systems experience. The student is expected to:  (A) conduct, document, and evaluate learning activities in a supervised transportation systems experience. | |
| **Section 3: Critical Thinking and Problem-Solving: Practicum Check-In 1**  Students will discuss and demonstrate their critical thinking and problem-solving skills as they participate in check-in(s) with supervisors throughout their practicum experiences. Students will analyze and evaluate their practicum experiences as they describe how they have applied critical thinking and problem-solving skills, and alternative, creative, and/or innovative solutions to possible problems they have encountered thus far or may still encounter. Students will also be encouraged to conduct technical research independently to gather information necessary for decision making as well as to discuss and predict what other critical thinking and problem-solving skills will be necessary for a successful practicum experience as well as a successful career in the transportation industry. | (3) The student applies concepts of critical thinking and problem solving. The student is expected to:  (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions;  (B) analyze elements of a problem to develop creative and innovative solutions; and  (C) demonstrate the use of content, technical concepts, and vocabulary when analyzing information and following directions.  (6) The student participates in a transportation systems experience. The student is expected to:  (A) conduct, document, and evaluate learning activities in a supervised transportation systems experience. | |
| **Section 4: Check List Progress and CTSO Activities: Practicum Check-In 2**  Students will research, explore, and discuss examples and benefits of CTSO and/or other extracurricular student activities. Students will then prepare and effectively present a brief oral and/or written report on a CTSO or other extracurricular organization they are willing to join or are already participating in. Students will also discuss and self-evaluate their practicum check list progress as well as any questions or problems they may have encountered. Students will describe how they have applied critical thinking and problem-solving skills, and alternative, creative, and/or innovative solutions to problems they may have encountered or may still encounter. Students will also continue to be encouraged to conduct technical research independently to gather information necessary for decision making, as well as to discuss and predict what other critical thinking and problem-solving skills will be necessary for a successful practicum experience as well as a successful career in the transportation industry | (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:  (A) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to transportation systems;  (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;  (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, positive attitude, integrity, leadership, appreciation for diversity, customer service, work ethic, and adaptability with increased fluency; and  (D) use personal information management, email, Internet, writing and publishing, presentation, and spreadsheet or database applications with increased fluency.  (6) The student participates in a transportation systems experience. The student is expected to:  (A) conduct, document, and evaluate learning activities in a supervised transportation systems experience;  (B) develop advanced technical knowledge and skills related to the student's occupational objective;  (C) demonstrate growth of technical skill competencies;  (D) evaluate strengths and weaknesses in technical skill proficiency; and  (E) collect representative work samples. | |
| **Section 5: Careers, Competencies, and Credentialing Requirements**  Students will use appropriate technology and/or assigned materials to review technical skill competencies, training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment. Students will continue to explore their personal career goals, objectives, and strategies as they further develop career plans. As a culminating project for the practicum, students will successfully prepare and present a self-evaluation of their transportation systems practicum experience. Students’ final projects will meet course standards and requirements as well as all TEKS-related requirements and criteria, and will explain how students developed advanced technical knowledge and technical skill competencies, include a self-evaluation of strengths and weaknesses in technical skill proficiency as well as representative work samples. Students will model a professional appearance and demonstrate appropriate professionalism as well as interpersonal skills as they present their transportation systems practicum experience evaluations. | (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:  (A) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to transportation systems;  (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;  (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, positive attitude, integrity, leadership, appreciation for diversity, customer service, work ethic, and adaptability with increased fluency;  (D) use personal information management, email, Internet, writing and publishing, presentation, and spreadsheet or database applications with increased fluency;  (E) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and  (F) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.  (2) The student implements advanced professional communications strategies. The student is expected to:  (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;  (B) analyze, interpret, and effectively communicate information, data, and observations;  (C) observe and interpret verbal and nonverbal cues and behaviors to enhance communication; and  (D) apply active listening skills to obtain and clarify information.  (4) The student understands and applies proper safety techniques in the workplace. The student is expected to:  (A) understand and consistently follow workplace safety rules and regulations, including Occupational Safety and Health Administration regulations; and  (B) demonstrate knowledge of procedures for reporting and handling accidents and safety incidents.  (5) The student understands the professional, ethical, and legal responsibilities in transportation systems. The student is expected to:  (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;  (B) apply ethical reasoning to a variety of situations in order to make ethical decisions; and  (C) comply with all applicable rules, laws, and regulations in a consistent manner. | |