TRANSPORTATION TECH. (TRN)

TRN-110 Introduction to Transport Technology 2 (Credits)
This course covers workplace safety, hazardous materials, environmental regulations, hand tools, service information, basic concepts, vehicle systems, and common transportation industry terminology. Topics include familiarization with major vehicle systems, proper use of various hand and power tools, material safety data sheets, and personal protective equipment. Upon completion, students should be able to demonstrate appropriate safety procedures, identify and use basic shop tools, and describe government regulations regarding transportation repair facilities.
Class: 1 Lab: 2 Clinical: 0 Work: 0

TRN-111 Chassis Maintenance and Light Repair 4 (Credits)
This course covers maintenance and light repair of transportation suspension, steering, and brake systems. Topics include general servicing and inspection procedures of steering and suspension systems, wheels and tires, and drum and disc brakes including hydraulic and power-assist units. Upon completion, students should be able to perform maintenance and light repair of transportation suspension, steering, and brake systems.
Class: 2 Lab: 6 Clinical: 0 Work: 0

TRN-120 Basic Transportation Electricity 5 (Credits)
This course covers basic electrical theory, wiring diagrams, test equipment, and diagnosis, repair and replacement of batteries, starters, and alternators. Topics include Ohm's Law, circuit construction, wiring diagrams, circuit testing, and basic troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair basic wiring, battery, starting, charging, and electrical concerns.
Class: 4 Lab: 3 Clinical: 0 Work: 0

TRN-130 Introduction to Sustainable Transportation 3 (Credits)
This course provides an overview of alternative fuels and alternative fuel vehicles. Topics include composition and use of alternative fuels including compressed natural gas, biodiesel, ethanol, hydrogen, and synthetic fuels, hybrid/electric, and vehicles using alternative fuels. Upon completion, students should be able to identify alternative fuel vehicles, explain how each alternative fuel delivery system operates, and perform minor repairs.
Class: 2 Lab: 2 Clinical: 0 Work: 0

TRN-140 Transportation Climate Control 2 (Credits)
This course covers the theory of refrigeration and heating, electrical/electronic/pneumatic controls, and diagnosis and repair of climate control systems. Topics include diagnosis and repair of climate control components and systems, recovery/recycling of refrigerants, and safety and environmental regulations. Upon completion, students should be able to diagnose and repair vehicle climate control systems.
Class: 1 Lab: 2 Clinical: 0 Work: 0

TRN-140A Transportation Climate Control Lab 2 (Credits)
This course provides experiences for enhancing student skills in the diagnosis and repair of transportation climate control systems. Emphasis is placed on reclaiming, recovery, recharging, leak detection, climate control components, diagnosis, air conditioning equipment, tools and safety. Upon completion, students should be able to describe the operation, diagnose, and safely service climate control systems using appropriate tools, equipment, and service information.
Class: 1 Lab: 2 Clinical: 0 Work: 0
State Corequisite(s): TRN-140

TRN-145 Advanced Transportation Electronics 3 (Credits)
This course covers advanced transportation electronic systems including programmable logic controllers, on-board data networks, telematics, high voltage systems, navigation, collision avoidance systems and electronic accessories. Topics include interpretation of wiring schematics, reprogramming PLC's, diagnosing and testing data networks and other electronic concerns. Upon completion, students should be able to reprogram PLC's, diagnose and test data networks and other electronic concerns, and work safely with high voltage systems.
Class: 2 Lab: 3 Clinical: 0 Work: 0
State Prerequisite(s): TRN-120

TRN-170 PC Skills for Transportation 2 (Credits)
This course introduces students to personal computer literacy and Internet literacy with an emphasis on the transportation service industry. Topics include service information systems, management systems, computer-based systems, and PC-based diagnostic equipment. Upon completion, students should be able to access information pertaining to transportation technology and perform word processing.
Class: 1 Lab: 2 Clinical: 0 Work: 0