

## TRANSPORTATION CLUSTER

### FACILITY & MOBILE EQUIPMENT MAINTENANCE PATHWAY –STRAND TWO

#### COMMON COURSE CODES AND COURSE DESCRIPTIONS:

COMMON COURSE CODE	IDENTIFYING TITLE	COURSE DESCRIPTION	PREREQUISITE(S)	COURSE LEVEL
38001	INTRODUCTION TO INDUSTRIAL TECHNOLOGY (.5 Credit)	(Pathway MUST include this course OR Introduction to Transportation.) An introductory level course designed to instruct students in the basic skills necessary to all occupations in the Construction, Manufacturing & Transportation areas.	Required for Pathway approval (either this course or Introduction to Transportation)	Introductory
40100	INTRODUCTION TO TRANSPORTATION (.5 Credit)	(Pathway MUST include this course OR Introduction to Industrial Technology.) This course gives students an overview of transportation industry skills and career opportunities, as well as the education required to acquire each career.	Required for Pathway approval (either this course or Introduction to Industrial Technology)	Introductory
40050	AUTOMOTIVE INFORMATION (.5 Credit)	Provides students with the opportunity to learn practical car maintenance skills. They will attain basic skills and knowledge needed to own and maintain a vehicle. The students will learn what to consider when buying a car, shopping for car insurance, acquiring a title, etc.	May be offered as a supplemental course in this pathway. Will count toward 3 minimum high school credits required for pathway approval if taught at the high school level. It will not count as the ONLY Introductory course for this pathway.)	Introductory

COMMON COURSE CODE	IDENTIFYING TITLE	COURSE DESCRIPTION	PREREQUISITE(S)	COURSE LEVEL
12050	BUSINESS ESSENTIALS (.5 Credit)	Students will examine current events, acquire knowledge of safe and secure environmental controls to enhance productivity, determine how to manage resources, identify employability and personal skills, and learn about different types of business ownership.	(May be offered as a supplemental course in this pathway. Will count toward 3 minimum high school credits required for pathway approval if taught at the high school level. It will not count as the ONLY Introductory course for this pathway.)	Introductory
40200	FUNDAMENTALS OF ELECTRONICS/ELECTRICAL SYSTEMS (.5 Credit)	A comprehensive, technical level course designed to provide students with the basic theories, equipment, and skills needed to inspect and service electrical systems.		Technical
40204	BRAKES (.5 Credit)	A comprehensive, technical level course designed to provide students with the basic theories, equipment, and skills needed to inspect and service braking systems.		Technical
40208	DRIVE TRAIN TECHNOLOGY (.5 Credit)	A comprehensive, technical level course designed to provide students with the basic theories and skills needed to inspect and service drive train components.		Technical

<b>COMMON COURSE CODE</b>	<b>IDENTIFYING TITLE</b>	<b>COURSE DESCRIPTION</b>	<b>PREREQUISITE(S)</b>	<b>COURSE LEVEL</b>
40212	SMALL GAS ENGINES & POWERTRAINS (1 Credit)	A comprehensive, technical level course designed to instruct students in the knowledge and skills common to all small engine operation and repair.		Technical
12053	ENTREPRENEURSHIP (.5 or 1 Credit)	Entrepreneurship courses acquaint students with the knowledge and skills necessary to own and operate their own businesses. (WILL NOT count as one of the 3 required courses. WILL count as a funded course.)		Technical
40220	ENGINE PERFORMANCE I (.5 Credit)	A comprehensive, technical level course designed to provide students with the basic skills needed to inspect, understand and diagnose engine control systems.		Technical
40224	STEERING /SUSPENSION (.5 Credit)	A comprehensive, technical level course designed to provide students with the basic theories, equipment, and skills needed to inspect and service steering and suspension systems.		Technical
40228	MOBILE HVAC (.5 Credit)	A comprehensive technical level course designed to provide students with the basic and advanced theory of operation, service and repair of the air-conditioning, heating and vehicle cooling system as it relates to the mobile climate control system.		Technical

<b>COMMON COURSE CODE</b>	<b>IDENTIFYING TITLE</b>	<b>COURSE DESCRIPTION</b>	<b>PREREQUISITE(S)</b>	<b>COURSE LEVEL</b>
40210	ALTERNATIVE POWER (.5 Credit)	A technical level course designed to provide students with basic theories and information needed to develop an understanding of alternative power used in transportation.		Technical
40216	ENGINE MECHANICAL REPAIR- Gas &/or Diesel (.5 Credit)	A comprehensive technical level course covering the tools, skills, and techniques required to perform base engine mechanical repair and testing. This includes engine removal, installation, and maintenance.		Technical
40300	AUTO COLLISION I (1 Credit)	A comprehensive, technical level course designed to instruct students in the knowledge and skills common to the Collision Industry.		Technical
40310	AUTO REFINISHING I (.5 Credit)	A comprehensive, technical level course designed to instruct students in the knowledge and skills common to the Auto Refinishing Industry.		Technical
39203	MACHINE TOOL TECHNOLOGY 1a (.5 Credit)	A comprehensive, technical level course designed to provide students with the basic theories, equipment and skills needed to efficiently operate machining equipment.		Technical

<b>COMMON COURSE CODE</b>	<b>IDENTIFYING TITLE</b>	<b>COURSE DESCRIPTION</b>	<b>PREREQUISITE(S)</b>	<b>COURSE LEVEL</b>
40202	ADVANCED ELECTRONICS/ELECTRICAL SYSTEMS (1 Credit)	A comprehensive, application level course designed to provide students with the basic skills needed to inspect, service and repair electrical circuits and devices.	Fundamentals of Electronics/Electrical Systems	Application
40206	ADVANCED BRAKES (.5 Credit)	A comprehensive, application level course designed to provide students with the advanced skills needed to inspect, service and repair braking systems to industry standards.	Brakes	Application
40302	AUTO COLLISION II (1 Credit)	A comprehensive, application level course designed to provide students with the skills needed to perform diagnosis and repair in the Collision Industry.	Auto Collision I	Application
40312	AUTO REFINISHING II (.5 Credit)	A comprehensive, application level course designed to provide students with the skills needed to perform diagnosis and repair in the Refinishing Industry.	Auto Refinishing I	Application
40250 (.5 credit) 40251 (1 credit)	RESEARCH & EMERGING TRENDS IN TRANSPORTATION (.5 or 1 Credit)	An advanced research and application course covering specific topics in transportation. Should include opportunities for IHT, OJT and/ or Internships.		Application
40222	ENGINE PERFORMANCE II (1 Credit)	A comprehensive, application level course designed to provide students with the skills needed to inspect, service and repair	Engine Performance I	Application

		engine control systems.		
40226	ADVANCED STEERING/SUSPENSION (.5 Credit)	A comprehensive, application level course designed to provide students with the advanced skills needed to inspect, service and repair steering and suspension systems.	Steering /Suspension	Application
40214	ADVANCED SMALL ENGINES & POWERTRAINS (1 Credit)	An application level course providing students with advanced knowledge and skills common to all small engine operations and repair.	Small Gas Engines & Powertrains	Application
40314	CUSTOM REFINISHING & APPLICATIONS-A (.5 Credit)	A comprehensive, application level course designed to provide students with the skills needed to perform diagnosis and repair in the Custom Refinishing Industry.	Auto Refinishing I	Application
40315	CUSTOM REFINISHING & APPLICATIONS-B (.5 Credit)	An advanced application level course offering students further opportunities for creative applications in custom refinishing.	Custom Refinishing & Applications-A	Application