



Date of Board Meeting: November 19, 2024

Subject: Texas Workforce Commission (TWC) Automotive Grant

Recommendation: Notify the Board of Trustees that WCJC has been awarded the Texas Workforce Commission (TWC) Automotive Grant

Background/Rationale:

Grant Funding Agency Texas Workforce Commission

Award Period and Amount August 1, 2024 – August 31, 2025; \$331,104

Matching Requirement No matching required

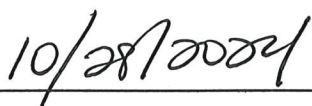
Cost and Budgetary Support: \$331,104 (award amount; no cost to the institution)

Strategic Priority Alignment: ☒ Student Success ☐ Community Impact
☐ Resource Optimization ☒ Institutional Excellence

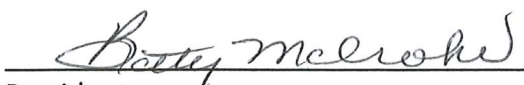
Resource Person(s): Amanda A. Allen, Ed.D.; Executive Vice President

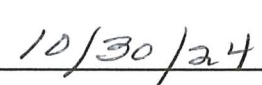
Signatures:


Cabinet-Level Supervisor


Date

President's Approval:


President


Date

WORK PLAN

Request for Applications (RFA)

RFA 32024-00027

Texas Workforce Commission

Wharton County Junior College

All Applicants enter responses in chart.

Table A: EXECUTIVE SUMMARY- All Applicants

Provide a clear and concise summary of the project, including how it will contribute to the job growth for the Eligible Occupation listed in the Application. The summary must also include a description of how the equipment will be used in the CTE Course(s) or CTE Program.

Wharton County Junior College (WCJC) is a public, two-year, comprehensive community college offering postsecondary educational programs that enhance our students' future while directly benefiting our community. A core tenant of the college's mission is to prepare our students for entry-level positions and advancement in various professions, specifically in those areas that meet the needs of business, industry, and the community-at-large while contributing to the economic development of our service region. WCJC is an institution that emphasizes personal attention to students, innovation and flexibility in our credit and non-credit offerings, and responsiveness to the communities we serve.

The certificate and AAS degree programs in Automotive Technology are designed to provide classroom and laboratory experiences on the proper use of hand tools, power tools, diagnostic testing equipment, and technical manuals in all phases of automotive maintenance, repair, and diagnostics, including inspection, engine overhaul, electrical systems, fuel systems and fuel injection, brake systems, transmission and drive train systems (automatic and manual), suspension and steering systems, heating and air-conditioning systems, and engine performance. The program is based on Automotive Service Excellence (ASE) standards and prepares the students for the ASE certification tests. Automotive Technology instructors are ASE Master Certified. The Automotive program is certified by the ASE Education Foundation (formerly ATEF).

The funds requested will be utilized to upgrade equipment and curriculum so that our students enter the workforce competent in current industry standards. Much of the equipment that is currently used in the WCJC program is over twenty-five (25) years old and are no longer used in the industry. The engine trainers slated for purchase through these grant funds will allow up to four teams of students to safely disassemble, test, and rebuild a complete engine system in a classroom setting, while also allowing them to test if their rebuild was done successfully. Additionally, the purchase of an A/C system trainer will ensure that students understand the change of state of the refrigerant in a vehicle's A/C system and will help provide real-world simulations of common complaints of an air conditioning system. Replacement of the lifts within the WCJC automotive lab will ensure that student safety is prioritized while allowing students to receive hands-on training on live vehicles.

Table B: PROGRAM PLAN and INFORMATION - All Applicants must complete this table. No points in this section.

Information Requested	Applicant Response
Based on definitions of New and Expanding CTE Programs, is the program you are proposing in this Application a NEW or Expanding Program?	<input type="checkbox"/> New Program <input checked="" type="checkbox"/> Expanding Program
If expanding, tell us what aspects of the program are expanding and at what estimated percentage. Check all that apply and include estimates for all checked items.	<input type="checkbox"/> Students trained <input type="checkbox"/> Credentials earned <input checked="" type="checkbox"/> Skills earned <input type="checkbox"/> Postsecondary pathways <input type="checkbox"/> POS Pathways
Six (6) digit SOC code:	49-3023
SOC Title:	Automotive Service Technicians and Mechanics
Credentials this CTE Course(s) or CTE Program leads to:	AAS or Level I Certificate – Automotive Technology
Unduplicated student count:	35
Physical address (including zip code) for the primary location of future JET-funded equipment:	911 E Boling Highway Wharton, Texas 77488
County for the primary location of future JET-funded equipment:	Wharton
Partner organization (if applicable; required for ISDs and OECs)	El Campo ISD

Information Requested	Applicant Response
Texas ISD and OEC Applicants only: TEA, CTE Program of Study and whether that POS is regional or statewide.	Not Applicable

All Applicants enter responses in chart.

CTE Program Course Number and Titles - All Applicants

Course Number	Course Title
AUMT 1301	Introduction and Theory of Automotive Technology
AUMT 1407	Automotive Electrical Systems
AUMT 1419	Automotive Engine Repair
AUMT 2417	Automotive Engine Performance Analysis I
AUMT 1310	Automotive Brake Systems
AUMT 2413	Automotive Drive Train and Axles
AUMT 2425	Automatic Transmission and Transaxle
AUMT 2434	Automotive Engine Performance Analysis II
AUMT 1345	Automotive Climate Control Systems
AUMT 1316	Automotive Suspension and Steering Systems
AUMT 2337	Automotive Electronics
AUMT 2301	Automotive Management
AUMT 2380	Cooperative Education – Automobile/Automotive Mechanics Technology/ Technician (Capstone Course)

RFA 32024-00027
Form B, Budget Workbook

Applicant:
Wharton County Junior College

List the equipment that will be purchased, including modifications, attachments, accessories, or auxiliary apparatus necessary to make it usable for the purpose for which it is required. For each item, include the quantity to be purchased and estimated unit cost, and any associated installation or freight cost. List the items in priority order with the highest priority item listed first. List the dollar amounts in whole numbers only. Do not bundle items, list items separately. If multiple pieces of equipment are sold as one unit from the vendor, the applicant is allowed to include them as a single line item but must list all items included in the unit in the Description of Equipment column.

NOTE: Review Attachment 3 Budget Requirements and Instructions, Sections 3.1 and 3.2 for General Allowability Factors and Unallowable Costs. Provide thorough justification for each item.

BUDGET DETAIL FORM

Maximum Budget Points: Deduction up to 10 points for errors

Part A. Equipment Details

Item Name or Modification	Quantity to be Purchased	Estimated Unit Cost	Subtotal	Estimated Installation Cost	Shipping or Freight Cost	Total Cost	Description of Equipment or Modification	Justification for Equipment or Modification
Starting Station, Engine & Swivel Stand - 1.8L GM Ecotec Engine w/ Secondary Key and Vinyl Dust Cover	1	\$28,950	\$28,950	\$0	\$0	\$28,950	The Ecotec engine on a swivel stand is designed for student instruction and practice covering engine mechanical inspection, disassembly, measurement and reassembly. The engine is securely mounted to a heavy duty rotating device equipped with an automatic lock to allow full 360 degree rotation. A steel mounting plate is used for engine mounting that allows full access for rear main seal and flywheel service. Each engine comes equipped with a transmission flywheel (manual or automatic). The engine starting station contains all components and systems necessary for the starting and running of the Ecotec engine. All necessary engine systems connections are provided to allow live operation of each swivel engine stand.	The current fleet at WCJC's Automotive Training Center consists primarily of outdated vehicles that lack contemporary automotive features. This limitation prevents our students from gaining hands-on experience in engine disassembly and rebuilding, which are critical skills in today's automotive industry. With the introduction of modern GM engine trainers, we aim to significantly enhance our educational offerings. These trainers will allow four student teams to safely disassemble, test, and rebuild a complete GM engine within a classroom setting. Following the rebuild, each team will have the opportunity to connect their engine to a starting station to verify the quality of their work. This practical
Secondary Swivel Engine & Stand - 1.8L GM Ecotec Engine w/ Vinyl Dust Cover	3	\$9,380	\$28,140	\$0	\$0	\$28,140	The Ecotec engine on a swivel stand is designed for student instruction and practice covering engine mechanical inspection, disassembly, measurement and reassembly. The engine is securely mounted to a heavy duty rotating device equipped with an automatic lock to allow full 360 degree rotation. A steel mounting plate is used for engine mounting that allows full access for rear main seal and flywheel service. Each engine comes equipped with a transmission flywheel (manual or automatic).	These engines serve as enhancements to the existing mechanical diagnostics starting station, enabling four teams to work concurrently. This arrangement increases the training capacity and efficiency, allowing more to be accomplished within a semester.
AC System Trainer w/ TXV and Vinyl Dust Cover	1	\$17,890	\$17,890	\$0	\$0	\$17,890	The TXV Air Conditioning trainer is a complete A/C system with unique features designed to enhance the instruction of air conditioning physics. The trainer uses the TXV Thermal Expansion Valve design of refrigerant flow control. The trainer uses common automotive components and can be used in both classroom and shop environments. The trainer utilizes a hermetically sealed and internally protected compressor.	This trainer is designed to demystify the change of state of R1234A refrigerant within a vehicle's A/C system. It enables us to teach students how the entire system functions by observing the refrigerant's state change through sight glasses. Additionally, it helps identify the flow and components of a TXV A/C system and includes built-in restrictions to demonstrate common air
Disc and Drum Brake Trainer w/ Faults and Vinyl Dust Cover	2	\$11,850	\$23,700	\$0	\$0	\$23,700	The disc & drum brake trainer + faults is used to demonstrate the functionality of a modern automotive hydraulic braking system as it functions on vehicle. The inclusion of four permanent, mechanical, real-world faults captures students attention and proves their learning. The product is built using recycled OEM components for the platform and all wear items are brand new (discs, pads, drums, shoes, etc.).	Most of the Maintenance and Light Repair (MLR) work in our shop is performed on live customer vehicles, limiting the opportunity for students to work individually on various braking systems. This trainer enables us to teach disc and drum brake diagnostics safely within a classroom setting. It is designed for students to perform a complete brake service, mirroring real vehicle conditions. Additionally, it includes "warped and broken" components to facilitate the teaching of common issues with rotors, calipers, and brake pads.

Fuel Injection and GM Engine Management Trainer	1	\$21,370	\$21,370	\$0	\$0	\$21,370	The Fuel Injection and Engine Management Trainer functions as in a real automobile but uses non-flammable fluid instead of gasoline for safety and educational purposes. The trainer is used to teach and demonstrate engine management systems in a vehicle. The advantage to the trainer comes in the fact that it produces no exhaust, will fit through virtually any doorway, has adjustable inputs and is the actual system used on the vehicle. The VIN on the front faceplate of the trainer contains the actual VIN of the vehicle that all components came from. The adjustable sensor inputs greatly improve the instructor ability to have students understand cause and effect. As the student changes the input, which can be observed using DMM, Scanner or DSO, the result of the change can also be observed. These are beneficial during certain labs which will highlight cause and effect. Students can change the inputs and watch a DMM, scanner or DSO change the output. The EM-330-1 comes with a comprehensive manual with extensive labs that will use a DMM, a scanner or a DSO.	This trainer enables students to visually understand how fuel injection and engine management systems function together in a classroom setting, without the complications of exhaust. Based on the GM platform, it demonstrates how injectors operate and adjust in response to sensors, temperature, and airflow. Additionally, the trainer facilitates the use of oscilloscopes to illustrate the square wave in an electrical current and how it can be adjusted in a vehicle through pulse width modulation. To enhance diagnostic skills, faults can be introduced, allowing students to use oscilloscopes to identify voltage drops.
Double-Sided CAN Bus Multiplex System Trainer w/ Vinyl Dust Cover	1	\$27,050	\$27,050	\$0	\$0	\$27,050	The double-sided CAN Bus Multiplex trainer communicates in J-1939 protocol. Digital and analog inputs and outputs can be activated. Analog signals can be displayed using the J-1939 display. The trainer utilizes the "Modupontent"™ design feature which allows unlimited expansion capabilities. This unit is equipped with an integrated electronic fault box containing 12 faults on each side.	Modern vehicles, including electric vehicles (EVs), utilize CAN Bus systems as communication protocols through sensors connected by a vehicle's hidden wiring harness. This setup enables us to teach students in a classroom setting how a CAN Bus system functions. Students learn to assemble the wiring harness and diagnose communication issues using the same OBD port found on all
Double-Sided Automotive Lighting System Trainer w/ Vinyl Dust Cover	1	\$24,400	\$24,400	\$0	\$0	\$24,400	The trainer has been developed to teach modern automotive lighting systems through student led hands-on learning exercises where reinforcement of circuit understanding is enhanced. All learning exercises are written at three different student competence levels. (Basic, Some Experience and Advanced) with each using different wiring schematics. This product is also used for the teaching of Ohm's Law, basic and advanced circuits, relay controlled circuits, power side and ground side switched circuits. The trainer includes a fault box where up to twelve real-world circuit faults can be inserted. The faults include open circuits, short circuits, high resistance circuits and component failure that will require use of voltage drop and digital multimeter testing to verify circuit problems. The trainer is configured with 4mm wiring sockets and all circuit wiring is completed using 4mm jumper wires. There are also 2mm sockets for use with testing equipment at key points in the circuits.	Similar to the CAN Bus trainer, this lighting system trainer enables us to teach the workings of an entire vehicle's lighting system in a compact classroom setting. Constructed using a modern vehicle equipped with common LEDs, students are required to connect and power an entire wiring harness, reinforcing the Ohm's law theory taught in class. Additionally, the trainer includes a fault box that can disrupt power, enhancing our students' diagnostic skills.
Connector Trainer - Circuit & Signal Acquisition w/ Replacement Pigtail Connectors	2	\$4,475	\$8,950	\$0	\$0	\$8,950	The Connector Trainer - circuit and signal acquisition allows students to learn the proper non-destructive procedures using back-probing techniques to access signals and waveforms. The product includes a simulated ECU, multiple sensors and connectors, and a power supply. Relevant student activities are provided to practice proper signal measurements and the viewing of waveform signals using both digital multimeters and oscilloscopes. Improper techniques used in the acquisition of signals and measurements can often result in damage to electrical connectors and terminals, often requiring expensive repairs and parts replacements. This trainer was designed to significantly reduce using improper repair and testing procedures.	To enhance instruction on modern vehicle operations using CAN Bus communication, this backprobing trainer is specifically designed to teach students how to accurately locate signals using oscilloscopes through wiring harness connections. Backprobing can be damaging if performed incorrectly, and opportunities for our students to practice these techniques on customer vehicles are rare. This trainer will enable us to impart this critical skill in the classroom before students apply it to customer vehicles.
Hybrid Planetary Gearset Trainer	1	\$5,564	\$5,564	\$0	\$0	\$5,564	The Hybrid Planetary Gearset Trainer helps instructors teach and students to understand the somewhat complex operation of a typical hybrid vehicle drivetrain. Based on a typical Toyota Prius hybrid vehicle, the trainer provides easy visualization of driveline component operation including: ICE (Internal Combustion Engine), MG1 (Motor/generator # 1), MG2 (Motor/generator # 2), Drive wheels.	Demonstrating how a hybrid drivetrain operates can be challenging compared to a conventional vehicle. However, with modern vehicle drivetrains becoming increasingly common, even in areas like our town, this classroom trainer provides an effective solution. It allows us to illustrate how electric motors, planetary gears, and the engine work together in harmony, enabling our students to better understand the concepts underlying hybrid vehicles.

Cutaway Differential with Adjustment Capabilities Trainer	1	\$4,365	\$4,365	\$0	\$0	\$4,365	The trainer is a working system of actual components, so students can visualize the mechanical operation of an open differential. The trainer provides an easy method of demonstrating differential operation and the common adjustments made during common service procedures.	Traditionally, gaining insight into a differential's inner workings requires complete disassembly. However, this trainer features cutaway sections that reveal the internal gears and components, enabling students to observe while adjustments are made. This hands-on approach demonstrates proper servicing techniques for addressing common issues effectively.
Cutaway Hydraulic Clutch System Trainer	1	\$7,985	\$7,985	\$0	\$0	\$7,985	The cutaway hydraulic clutch system trainer is a working system of actual, all new components so that students can visualize the actual operation. Total visibility of all clutch components without the limitations of working under a vehicle. All new Honda clutch components are used.	Demonstrating the internal operations of a drivetrain system to an entire classroom can be challenging. However, this trainer provides a solution by allowing students to visualize the inner workings of a clutch system for transmissions in a clear format. This visual representation offers insights that wouldn't be visible in a working car, thus enhancing understanding of how these drivetrains operate.
Advanced Electronics Moduponent Kit	2	\$5,455	\$10,910	\$0	\$0	\$10,910	The advanced electronics kit is a versatile and adaptable driveability electronics training series that allows students to build electronic circuits. Includes a multilevel self paced training course that identifies and illustrates the operation of the most engine performance related sensors and allows for hands on discovery.	These trainers play a crucial role in enhancing our students' skills within the classroom. They enable us to instruct on the components utilized in vehicles, establish connections through wiring, and demonstrate the proper functions associated with sensors in a vehicle's electronic system.
Drivability Electronics Moduponent Kit	2	\$7,535	\$15,070	\$0	\$0	\$15,070	The drivability electronics moduponent kit is a versatile and adaptable driveability electronics training series that allows students to build electronic circuits. Includes a multilevel self paced training course that identifies and illustrates the operation of the most engine performance related sensors and allows for hands on discovery.	These trainers play a crucial role in enhancing our students' skills within the classroom. They enable us to instruct on the components utilized in vehicles, establish connections through wiring, and demonstrate the proper functions associated with sensors in a vehicle's electronic system.
SmartWeight Elite Tire Balancer w/ Truck Cone Kit & BullsEye Collet Kit	1	\$17,050	\$17,050	\$0	\$0	\$17,050	The SmartWeight Elite replaces typical dataset arms with diagnostic lasers that automatically scan the entire inner rim, providing precise locations for weight placement, including anywhere along the wheel, rather than only the left or right planes. The balancer's automatic functions include measurement and dimension entry; inside rim runout to identify bent wheels; spoke locations to conceal weights; and CenteringCheck to ensure the wheel is properly centered on the shaft. SmartWeight offers single-weight solutions more often than any other balancer, reducing weight usage and increasing ride quality.	Our current tire balancer is outdated, having been in use for 28 years, and is no longer utilized by local shops or service centers. Acquiring this modern tire balancer will provide students with access to vehicle service equipment commonly found in their local repair shops and dealership service centers.
Professional Tire Changer w/ AR46 Expander/Reducer Kit	1	\$10,400	\$10,400	\$0	\$0	\$10,400	The Tire Changer includes the topside blast inflation system The inflation system is designed to inflate even the most challenging truck and SUV tires. The technician simply sets the position, selects the inflation mode, and presses the inflation pedal for an immediate blast from the large, 6.5-gallon air tank. The inflation system allows for easy, handsfree inflation by a single technician. Other featured benefits include a heavyweight chassis, 10" to 26" external clamping, PowerOut bead breaker, and 220V two-speed power.	Our current tire changer requires an update to align with the equipment used at local repair shops, service centers, and tire shops. By teaching students on modern equipment reflective of real world scenarios, we can better prepare them for the workforce and address the needs of the local industry.
Rotary 12,000 LB Lift	1	\$12,765	\$12,765	\$1,892	\$0	\$14,657	You can't find a better designed and better engineered 12,000-pound two post lift. Due to its size, the SPO12 gives techs a feeling of even greater safety when they're under a vehicle, while also giving them a little more space between the columns. Its size and its larger footprint make it optimal for shops that have larger bays and work on taller, heavier vehicles. And that's why it's chosen by more dealers and independent repair shops than any other lift in its category. True symmetrical, single-piece "Double S" columns Standard front & rear three-stage arms Truck adapters with stackable inserts for added reach Available in alternate height configurations to fit your shop's needs Available with Shockwave™ ALI Gold Certified	Similar to our tire equipment, our lifts are also 28 years old and pose maintenance challenges. Parts are scarce, and many lifts break during teaching hours, reducing hands-on time with live vehicles until repairs are completed. Acquiring a 12,000-pound lift dedicated to large trucks and commercial fleet vehicles will enable us to attract new local clients and provide students with opportunities to work on larger vehicles they currently lack experience with. Moreover, prioritizing our students' safety necessitates the acquisition of new lifts.

							Introducing the ONE LIFT to service them all! The next evolution in vehicle lift technology has arrived. Accommodate all vehicle types under 10,000 lbs. with the industry's original and best-selling asymmetrical lift, now featuring Rotary's NEW All-Vehicle (AV) Lift Arms. These revolutionary, patent-pending arms provide technicians the ability to lift and service practically all roadgoing vehicles on ONE LIFT (within the lift's rated capacity), including: Battery Electric Exotic Low Profile Truck Frame Unibody Cars & SUVs	Similar to our tire equipment, our lifts, which are 28 years old, present ongoing maintenance challenges. Parts are difficult to source, and many of our lifts break down during teaching hours, diminishing hands-on time with live vehicles until repairs are completed. Upgrading the other five lifts with modern models will not only enhance safety but also enable us to accommodate a wider range of modern vehicles. Our current lifts are not rated for vehicles such as EVs, unibodies, or low-profile cars, so these modern lifts will expand our capabilities and improve our overall efficiency.
Rotary 10,000 LB Lift	5	\$8,870	\$44,350	\$10,085	\$0	\$54,435		
Liftmaster H Style commercial Garage Door Opener with Gear Kit	9	\$1,715	\$15,435	\$265	\$0	\$15,700	Hoist (H) style commercial door operators are optimal for industrial applications. H-style operators include a floor level chain hoist to ease manual operation in an emergency or power outage. The operators are typically mounted to the wall when used with larger sectional overhead doors with vertical or high lift and mounted to the wall or the front of the hood when used with rolling doors and grilles. H operators are attached to the door jackshaft to indirectly drive the door.	Our garage doors, like our lifts and tire equipment, are also 28 years old and pose significant challenges. They are difficult to manually open and close, despite numerous repair attempts. It's clear that they require replacement of the gear systems and installation of commercial garage motors for efficient operation.
Texton Tool Bundle w/ 13 Ton Puller Set	1	\$11,945	\$11,945			\$11,945	This bundle consists of a comprehensive mechanic's tool set and tool cabinet. The selection of tools—including hand drive and impact drive sockets with no skipped sizes, wrenches, screwdrivers, and pliers—is designed to fit the drawers of the corresponding cabinet and includes all organization products. BDL99942, LSQ96504, PNC99001, PLK99909, & OTC1675	Our students currently share two mobile tool benches and one stationary tool room to service six sets of vehicle lifts. Acquiring an additional complete automotive set will allow us to assign a mobile bench for each set of lifts, enhancing hands-on service time, organization, and instructional efficiency when working with students on live customer vehicles. Furthermore, our puller set is broken, which hinders our ability to remove and install bearings and
			\$0			\$0		
Total	NA	NA	\$336,289	\$12,242	\$0	\$348,531	NA	NA

Part B. Total Project Cost

Cost Descriptions	Amount
Total equipment (including modifications, attachments, accessories, or auxiliary apparatus) to be purchased	\$336,289
Total installation	\$12,242
Total shipping or freight cost	\$0
Total Project Cost	\$348,531

Part C. Match Details

Calculated Minimum Match:	\$17,427	Minimum Match of 5% Required
Match Source	Match Amount	
Wharton County Junior School	\$17,427	
Match Commitment	\$17,427	
Match %	5%	Commitment Meets Match Minimum

Part D. Recap of Funding Request

Make no entries in Part D. Values in this table populate from the amounts entered in Parts B-C.

Category	Amount	
Total Project Cost	\$348,531	This is the total proposed equipment purchase.
Match Commitment	\$17,427	This must be at least 5% of the Total Project Cost.
Total Requested Amount	\$331,104	This is the official total Award requested from TWC. Must not exceed 95% of the Total Project Cost. Min \$40,000 - Max \$350,000.

Part E. Award Summary

Make no entries in Part E. For Agency Use Only.

Total TWC Award Amount		This is the official total awarded amount from TWC. Min \$40,000 - Max \$350,000.
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End of Worksheet.