# **AUTOMOTIVE MAINTENANCE TECHNICIAN**

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## Program Number 31-404-3 **Technical Diploma • Four Terms**

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ABOUT THE PROGRAM	ABO	UT	THE	PRO	GRAM
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Most of us place great value on owning and operating our own vehicles. Our independence stems from our ability to jump in our cars and trucks and go wherever we want, whenever we want. When our independence is threatened because our vehicles aren't working properly, the first person we seek is a qualified automotive maintenance technician. If you're mechanically talented, like to solve problems, and enjoy working with people, success in the automotive maintenance field may be just down the road for you.

### **PROGRAM OUTCOMES**

· Demonstrate professionalism appropriate for the auto service industry

AKESHORE TECHNICAL COLLEGE

- · Perform maintenance and repair of automotive steering and suspension systems
- · Perform maintenance and repair of automotive brake systems
- · Perform maintenance and repair of automotive electrical and electronic systems
- · Perform maintenance and repair of automotive internal combustion engines
- · Perform maintenance and repair of automotive transmission/transaxle systems
- · Perform maintenance and repair of automotive manual drive train and axle systems
- Perform maintenance and repair of automotive heating and air conditioning systems
- Perform maintenance and repair of engine performance systems

#### CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

Lakeshore credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

#### ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- · Submit online application.
- Complete the online Student Success Questionnaire.
- Complete Student Success Tutorial prior to meeting with your program counselor.
- · Schedule your 1st Time Program Counseling/Registration Session with your
- assigned program counselor to plan your first semester schedule, review your entire plan of study and discuss the results of the Student Success Questionnaire. \*Submit transcripts and test scores (optional, highly recommended): College transcripts, along
- with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.

### **APPROXIMATE COSTS**

\$149.50 per credit tuition (WI resident) plus \$8.97 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

#### **FINANCIAL AID**

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

#### **SPECIAL NOTES**

- The Spring Term 2 is 17 weeks in length.
- This program is certified by ASE (Automotive Service Excellence). Students are well-prepared to take the ASE Exam.

#### CONTACT

Lakeshore Admissions Advisor 920.693.1366 • Admissions@gotoltc.edu

Catalog No.	Class Title Credi	
	Term 1	
31404301	Auto Orientation and Safety	1
31404303	Auto Mechanical Hand & Torque Tools	1
10442100	Safety & Welding Fundamentals	1
31404306	Auto Body Applications for Mechanics	1
31404370	Auto Brakes	3
31404312	Auto Mechanical Measuring & Instruments	1
31404311	Auto Electrical Math 1	1
31404310	Auto Introduction to Electricity 2	1
31404313	Auto Electricity Fundamentals 3	2

#### Term 2

31404372	Auto Suspension and Steering	3
31404376	Auto Engine Repair	4
31404323	Auto Wiring Mechanics 4	2
31404326	Auto Basic Electrical 5	3
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#### Term 3

1404209	Electrical Principles 9: Anti-Theft Systems	1
1404210	Electrical 10: Auto Data Network Systems	1
1404211	Electrical 11: Auto Entertainment Systems	1
1404251	Manual Drivetrain Fluid Service	1
1404252	Manual Clutch and Transmission Systems	1
1404253	Manual, Four-Wheel, and AWD Drivetrains	1
1404254	Axles and Differentials	1
1404255	Auto HVAC Controls	1
1404256	Auto HVAC Systems and Service	1
1404221	Auto Engine Performance 1: Sensors	1
1404222	Auto Engine Performance 2: Ignition	1
	Systems	
1404223	Auto Engine Performance 3: Fuel Systems	1
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#### Term 4

31404224	Auto Engine Performance 4: Controls Systems	1
31404225	Auto Engine Performance 5: Hybrid	1
31404226	Systems 1 Auto Engine Performance 6: Hybrid	1
31404220	Systems 2	I
31404227	Auto Engine Performance 7: Diesel	1
04404000	Operations	4
31404228	Auto Engine Performance 8: Diesel Emissions	.1
31404229	Auto Engine Performance 9: Induction	1
	Systems	
31404230	Auto Engine Performance 10: EVAP and PCV	1
31404231	Auto Engine Performance 11: Emissions	1
31404257	Auto Transmission Service	1
31404258	Auto Transmission Transaxle Diagnoses	1
31404259	Auto Transmission Transaxle Replacement	1
31404260	Auto Transmission Transaxle Rebuild	1
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# **TOTAL 48**

Curriculum and program acceptance requirements are subject to change. Program start dates vary; check with your program counselor for details. The tuition and fees are approximate based on 2024-2025 rates and are subject to change prior to the start of the academic year.

## **REAL EXPERIENCE FOR THE REAL WORLD**

# 2024-25

AUTO BASIC ELECTRICAL 5... prepares the learner to diagnose and repair computercontrolled circuits. Learners will diagnose automotive networks, computerized body controls, and supplemental restraint systems. COREQUISITE: 31404323 Auto Wiring Mechanics 4

AUTO BODY APPLICATIONS FOR MECHANICS...introduces the mechanic student to the common auto collision repair topics experienced in a maintenance shop. Concepts include adhesives, window regulators, panel scratch repair and polishing, plastic repair, and panel alignment.

AUTO BRAKES...provides the learner with a thorough knowledge of automotive mechanical and hydraulic brake systems. The learner will diagnose, service, and repair automotive brake systems, antilock brake systems, and traction control systems. COREQUISITE: 31404301 Auto Orientation & Safety and 31404303 Auto Mech Hand & Torque Tools

AUTO ELECTRICAL MATH 1...provides the learner with the required math skills for automotive electrical troubleshooting. Students will use decimals, symbols, and formulas to quantify electricity.

AUTO ELECTRICITY FUNDAMENTALS 3... prepares the learner to troubleshoot inoperative electrical circuits using various tools and methods. Learners will learn to quantify electrical behavior in simple circuits using a digital volt ohm meter. COREQUISITE: 31404310 Auto Intro to Electricity 2

AUTO ENGINE PERFORMANCE 1: SENSORS ... provides student with the skills and knowledge associated with automotive computer networks, including system construction, operation, and diagnosis skills. This is part of the ASE A6 Certification. PREREQ: 31404211 Auto Electrical Syst 6 or COREQUISITE: 31404211 Electrical 11: Auto Entertainment Syst

AUTO ENGINE PERFORMANCE 10: EVAP AND PCV...provides the student with the skills and knowledge to perform diagnosis and repair of EVAP and PCV systems. This is part of the ASE A8 Certification. PREREQUISITE: 31404333 Auto Engine Performance 2 or COREQUISITE: 31404229 Auto Engine Performance 9: Induction Systems

AUTO ENGINE PERFORMANCE 11: EMISSIONS ... provides the student with the skills and knowledge to perform diagnosis and repair of catalytic converters, AIR, and EGR systems. This is part of the ASE A8 Certification. PREREQUISITE: 31404333 Auto Engine Performance 2 or COREQUISITE: 31404230 Auto Engine Performance 10: EVAP and PCV

AUTO ENGINE PERFORMANCE 2: IGNITION SYSTEMS ... provides the student with the skills and knowledge to perform diagnosis and repair of ignition systems. This is part of the ASE A8 Certification. PREREQUISITE: 31404327 Auto Electrical Systems 6 or . COREQUISITE: 31404221 Auto Engine Performance 1: Sensors

AUTO ENGINE PERFORMANCE 3: FUEL SYSTEMS...provides the student with the skills and knowledge to perform diagnosis and repair of fuel supply and delivery systems. This is part of the ASE A8 Certification. PREREQUISITE: 31404327 Auto Electrical Systems 6 or COREQUISITE: 31404222 Auto EnginePerformance 2: Ignition Systems

AUTO ENGINE PERFORMANCE 4: CONTROLS SYSTEMS...provides the student with the skills and knowledge to perform diagnosis of computerized engine control system. This is part of the ASE A8 Certification. PREREQUISITE: 31404329 Auto Engine Performance 1 or COREQUISITE: 31404223 Auto Engine Performance 3: Fuel Systems

AUTO ENGINE PERFORMANCE 5: HYBRID SYSTEMS 1...provides the student with the knowledge and skills associated with hybrid motor and battery operations and testing. This is part of ASE A8 Certification. PREREQUISITE: 31404329 Auto Engine Performance 1 or COREQUISITE: 31404224 Auto Engine Performance 4: Control Systems

AUTO ENGINE PERFORMANCE 6: HYBRID SYSTEMS 2... provides the student with the skills and knowledge to survey manufacturer-specific hybrid systems. This is part of ASE A8 Certification. PREREQUISITE: 31404329 Auto Engine Performance 1 or COREQUISITE: 31404225 Auto Engine Performance 5: Hybrid Systems

AUTO ENGINE PERFORMANCE 7: DIESEL OPERATION ... provides the student with the knowledge and skills associated with diesel engine and fuel system operation and diagnosis. This is part of ASE A9 Certification. PREREQUISITE: 31404333 Auto Engine Performance 2 or COREQUISITE: 31404226 Auto Engine Performance 6: Hybrid Systems

AUTO ENGINE PERFORMANCE 8: DIESEL EMISSIONS ... provides the student with the skills and knowledge to diagnose diesel emission systems. This is part of ASE A9 Certification. PREREQUISITE: 31404333 Auto Engine Performance 2 or COREQUISITE: 31404227 Auto Engine Performance 7: Diesel Operation

AUTO ENGINE PERFORMANCE 9: INDUCTION SYSTEM...provides the student with the skills and knowledge to perform diagnosis and repair of air induction systems. his is part of the ASE A8 Certification. PREREQUISITE: 31404333 Auto Engine Performance 2 or COREQUISITE: 31404228 Auto Engine Performance8: Diesel Emissions

AUTO ENGINE REPAIR ... provides the learner with a thorough knowledge of automotive engine construction and operation. The learner will disassemble an engine, measure internal clearances, perform engine mechanical diagnostics, and service cooling systems. PREREQUISITE: 31404301 Auto Orientation & Safety and COREQUISITE: 31404303 Auto Mech Hand & Torque Tools

AUTO HVAC CONTROLS... provides the student with the skills and knowledge to perform diagnosis of HVAC control systems. This is part of the ASE A7 Certification. COREQUISITES: 31404301 Auto Orientation & Safety and 31404303 Auto Mech Hand & Torque Tools

AUTO HVAC SYSTEMS AND SERVICE ... provides the student with the skills and knowledge to perform refrigerant recovery, recycling, and handling procedures. Student will perform AC system component replacement and diagnosis. This is part of the ASE A7 Certification. COREQUISITES: 31404301 Auto Orientation & Safety and 31404303 Auto Mech Hand & Torque Tools

AUTO INTRODUCTION TO ELECTRICITY 2 ... introduces the learner to the characteristics and behaviors of electricity and electromagnetism. Prepares the learner to use basic electrical terms, tools, and theory for troubleshooting automotive electrical circuits. COREQUISITE: 31404311 Auto Electrical Math 1

AUTO MECHANICAL HAND AND TORQUE TOOLS...prepares the learner to use automotive hand and torque tools.

AUTO MECHANICAL MEASURING AND INSTRUMENTS ... provides the student with the measuring skills and knowledge for the automotive servicing industry.

AUTO ORIENTATION AND SAFETY ... prepares the learner to work effectively and efficiently in the automotive lab. Shop safety and proper procedures are emphasized

AUTO SUSPENSION AND STEERING ... provides the learner with a thorough knowledge of automotive steering systems, suspension systems, wheel and tire service, and wheel alignment. The learner will diagnose and repair front and rear suspension systems, perform wheel and tire service, diagnose and repair vehicle steering parts and components, and perform front and four-wheel alignments. COREQUISITE: 31404301 Auto Orientation & Safety and 31404303 Auto Mech Hand & Torque Tools

AUTO TRANSMISSION SERVICE ... provides the student with the skills and knowledge to perform basic automatic transmission and transaxle diagnosis and fluid service. This is part of the ASE G1 Certification. COREQUISITES: 31404301 Auto Orientation & Safety and 31404303, Auto Mech Hand & Torque Tools

AUTO TRANSMISSION TRANSAXLE DIAGNOSES...provides the student with the skills and knowledge to perform advanced automatic transmission/transaxle diagnosis. This is part of the ASE A2 Certification. COREQUISITES: 31404301 Auto Orientation & Safety and 31404303m, Auto Mech Hand & Torque Tools

AUTO TRANSMISSION TRANSAXLE REBUILD ... provides the student with the skills and knowledge to perform transmission/transaxle rebuilding procedures. This is part of the ASE A2 Certification. COREQUISITES: 31404301 Auto Orientation & Safety and 31404303 Auto Mech Hand & Torque Tools

AUTO TRANSMISSION TRANSAXLE REPLACEMENT ... provides the student with the skills and knowledge to remove and reinstall an automatic transmission/transaxle. This is part of the ASE A2 Certification. COREQUISITES: 31404301 Auto Orientation & Safety and 31404303, Auto Mech Hand & Torque Tools

AUTO WIRING MECHANICS 4... prepares the learner to interpret automotive wiring diagrams and troubleshoot automotive circuits. Learners will utilize wiring diagrams to diagnose inoperative lighting, starting, and charging systems. COREQUISITE: 31404313 Auto Electricity Fundamentals 3

AXLES AND DIFFERENTIALS... provides the student with the skills and knowledge to perform diagnosis and repair of differential assemblies and drive axles. This is part of ASE A3 Certification. COREQUISITES: 31404301 Auto Orientation & Safety and 31404303 Auto Mech Hand & Torque Tools

ELECTRICAL 10: AUTO DATA NETWORK SYSTEMS...provides the student with the skills and knowledge related to computer networks. Students will learn system construction, operation, and diagnosis skills. This is part of the ASE A6 Certification. PREREQUISITE: 31404326 Auto Basic Electrical 5 or COREQUISITE: 31404209 Electrical Principles 9: Anti-Theft Systems

ELECTRICAL 11: AUTO ENTERTAINMENT SYSTEMS ... provides the student with the skills and knowledge to perform diagnosis and repair of automotive entertainment systems. This is part of the ASE A6 Certification. PREREQUISITE: 31404326 Auto Basic Electrical 5 or COREQUISITE: 31404210 Electrical 10:Auto Data Network Systems

ELECTRICAL PRINCIPLES 9: ANTI-THEFT SYSTEMS ... provides the student with the skills and knowledge to perform diagnosis of anti-theft and security systems. Student will perform module reprogramming procedures. This is part of the ASE A6 Certification. PREREQUISITE: 31404323 Auto Wiring Mechanics 4 or COREQUISITE: 31404208 Electrical Principles 8: Relav Circuits

MANUAL CLUTCH AND TRANSMISSION SYSTEMS...provides the student with the skills and knowledge to perform diagnosis and repair clutch and manual transmission systems. This is part of the ASE A3 Certification. COREQUISITES: 31404301 Auto Orientation & Safety and 31404303 Auto Mech Hand & Torgue Tools

MANUAL DRIVETRAIN FLUID SERVICE ... provides the student with the skills and knowledge to perform fluid service, diagnosis and repair. This is part of the Maintenance and Light Repair ASE G1 Certification. COREQUISITES: 31404301 Auto Orientation & Safety and 31404303 Auto Mech Hand & Torgue Tools

MANUAL, FOUR-WHEEL, AND AWD DRIVETRAINS ... provides the student with the skills and knowledge to perform diagnosis and repair of manual transmissions, transaxles, as well as four-wheel and all-wheel drive systems. This is part of the ASE A3 Certification. COREQUISITES: 31404301 Auto Orientation & Safety and 31404303 Auto Mech Hand & **Torque Tools** 

SAFETY AND WELDING FUNDAMENTALS ... introduces the learner to the world of welding, weld shop safety practices, welding terminology, and welding machine setup to industry standards. Learners will be introduced to the three major welding processes: SMAW, GMAW, and GTAW and will build skills welding with each process in the flat and horizontal positions while using the common welding joints found in industry. The learner will process material using the two major handheld cutting processes - Oxyfuel and PAC.

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