Automotive Maintenance Technician

31-404-3 Technical Diploma

Financial Aid Eligible

Program Overview

The Automotive Maintenance Technician program will provide training in the eight content areas of the automobile as defined by Automotive Service Excellence (ASE). These areas are engine repair, automatic transmission and transaxles, manual drive train and axles, suspension and steering, brakes, electrical/electronic systems, heating and air conditioning, and engine performance. Students will also take courses in DC electricity, communications, and mathematics.

Campus:

Rice Lake
Superior

WISCONSIN INDIANHEAD TECHNICAL COLLEGE

Special Feature

This program has received certification by the National Automotive Technicians Education Foundation (NATEF) and the National Institute for Automotive Service Excellence (ASE). See their Web sites at **www.natef.org** and **www.ase.com**.

Admission Requirements

Students in this program must:

- Complete application form and submit with fee (fee waiver may apply if previously submitted)
- Complete Accuplacer entrance assessment to determine placement (waiver may apply with acceptable alternative test scores and/or postsecondary degree completion)
- Complete admissions interview with a WITC counselor (above requirements should be completed prior to interview)

Student Profile

Automotive Maintenance Technician students should:

- Have good math and reading skills
- Have good reasoning and logical-thinking skills
- Be able to work directly with customers
- Be able to work with industrial machinery, tools, equipment, and processes
- Enjoy working with both their mind and hands
- Be able to work alone or with people
- Be able to work with computers

Preparation for Admission

Students should strive to reach a comfort level in the following courses or skills:

- Auto service work experiences
- Communications
- General Metals
- Machine Shop
- Small Engines
- Welding
- Basic computer skills
- Basic Math

Program Outcomes

Employers will expect Automotive Maintenance Technician graduates to be able to:

- Use tools and equipment to diagnose and service automobile systems
- Practice safe techniques when servicing automobiles
- Estimate automotive repair and order replacement parts
- Communicate and respond to customers' needs

Collegewide outcomes and indicators will also be addressed to develop personal awareness, career effectiveness, and professionalism. See page 5 for a list of collegewide outcomes and indicators.

Career Outlook

Typical positions available at automobile dealerships or repair shops after graduation include:

- Brake Technician
- Air Conditioning Technician
- Auto Transmission Technician
- Automotive Electrical Technician
- Service Writer
- Drive Train Technician
- Suspension and Alignment Technician
- Drivability Technician
- Automotive Technician

Curriculum

Number	Course Title	Credits
Occupational Specific Courses		
31404361	Suspension and Alignment ▲	3
31404362	Automotive Brake Systems ▲	3
31404363	Automatic Transmissions ▲	4
31404364	Air Conditioning and Heating Systems (WBL) ▲	3
31404366	Automotive Fundamentals	2
31404371	Manual Drive Trains ▲	3
31404375	Engine Repair 1 ▲	2
31404376	Engine Repair 2 ▲	4
31404381	Electrical Systems ▲	4
31404384	Engine Performance 1 ▲	3
31404385	Engine Performance 2 ▲	4
31404386	Body Electrical Systems ▲	3
31414370	DC Automotive Electrical ▲	2
		40
Occupational Supportive/ General Studies Courses ◗		
32801361	Applied Communications 1	2
32804373	Math 373	2
		4
PROGRAM REQUIREMENTS		**44**

▲ Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

◗ See page 40 for General Studies course descriptions.

Course Descriptions

(See page 40 for General Studies course descriptions)

31404361
Suspension and Alignment - Credits: 3
This course introduces steering system types, suspension geometry, troubleshooting procedures, and repair of suspensions including both two- and four-wheel alignments. PREREQUISITE: 31404366 Automotive Fundamentals.

31404362
Automotive Brake Systems - Credits: 3
This course introduces students to automotive braking systems, troubleshooting procedures, and repair of brake systems to include manual, power, and anti-lock types. PREREQUISITE: 31404366 Automotive Fundamentals.

31404363
Automatic Transmissions - Credits: 4
This course includes the principles of construction and operation of automatic transmissions and transaxles. Diagnosis and repair of front-, rear-, and four-wheel drive transmissions will be covered. PREREQUISITE: 31404366 Automotive Fundamentals.

31404364
Air Conditioning and Heating Systems (WBL) - Credits: 3
This course introduces automotive air conditioning and heating systems. Theory of operation, diagnostic techniques, and servicing of heating and air conditioning systems will be covered. PREREQUISITES: 31404366 Automotive Fundamentals and 31414370 DC Automotive Electrical.

31404366
Automotive Fundamentals - Credits: 2
This course is an introduction to the automotive field. Career opportunities together with employer expectations will be discussed. Students will begin to use required safety practices for both general lab activities and when operating equipment. Vehicle maintenance inspections together with light repairs will take place.

31404371
Manual Drive Trains - Credits: 3
This course introduces the operation and repair of manual transmissions, transaxles, drivelines, differential assemblies, and transfer cases. PREREQUISITE: 31404366 Automotive Fundamentals.

31404375
Engine Repair 1 - Credits: 2
This course introduces the principles of engine operation and engine condition diagnosis. COREQUISITES: 31404366 Automotive Fundamentals, 31414370 DC Automotive Electrical, and 32804373 Math 373.

31404376
Engine Repair 2 - Credits: 4
The course introduces the service procedures for engine removal, disassembly, and repair. COREQUISITES: 31404375 Engine Repair 1 and 31404366 Automotive Fundamentals.

31404381
Electrical Systems - Credits: 4
This course introduces battery, starting, and charging systems, lighting systems; theory of operation; diagnostic techniques; and servicing procedures. This course also includes an introduction to hybrid automobiles. COREQUISITES: 31414370 DC Automotive Electrical, 31404366 Automotive Fundamentals and 32804373 Math 373.

31404384
Engine Performance 1 - Credits: 3
This course is an introduction to the diagnosis and repair of engine mechanical, ignition, and fuel-related problems that relate to engine performance. PREREQUISITES: 31404366 Automotive Fundamentals and 31414370 DC Automotive Electrical.

31404385
Engine Performance 2 - Credits: 4
This course is a companion to Engine Performance 1. Computerized automotive controls and emissions will be introduced in this course. Advanced diagnostic procedures will be covered. COREQUISITE: 31404384 Engine Performance 1.

31404386
Body Electrical Systems - Credits: 3
This course is an introduction to automotive body electrical systems. Students will learn about various body electrical components and how to diagnose and repair body electrical systems. PREREQUISITES: 31404366 Automotive Fundamentals and 31414370 DC Automotive Electrical.

31414370
DC Automotive Electrical - Credits: 2
This course will introduce students to Ohm's law, electrical fundamentals, magnetism, and series and parallel circuits. Further studies will include automobile wiring diagrams, electrical test equipment, and basic troubleshooting. COREQUISITES: 32804373 Math 373 and 31404366 Automotive Fundamentals.

Gainful employment information is available at this link: **http://www.witc.edu/pgmpages/autotech/career.htm**. This information is provided as a federal requirement in an effort to help students make informed decisions related to the costs and potential employment in a chosen field.

Graduate Employment Information

(WITC Graduate Survey Responses 2009-2010; for most recent data, go to **witc.edu**)

career vision

Number of graduates	23	Number employed	17	% employed in WITC district	83%
Number of responses	21	Percent employed	100%	Range of yearly salary	$15,469-$27,038
Number available for employment	17	Employed in related field	13	Average yearly salary	$22,693