Automotive Technician
32-404-2 Technical Diploma (two-year)

Program Overview
Automotive Technician is a four-semester program that will provide training in the eight content areas of the automobile. 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.

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.

The Automotive programs at Wisconsin Indianhead Technical College have adopted new certification(s) established by The National Coalition of Certifications (NC3). NC3 was established to address the need for strong industry partnerships with educational institutions in order to develop, implement, and sustain industry-recognized certifications that have strong validation and assessment standards.

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)
• Review and Sign the Functional Ability Statement of Understanding
• Complete admissions meeting with a WITC counselor (above requirements should be completed prior to meeting)

Program Outcomes
Employers will expect Automotive Technician graduates to be able to:
• Provide customer service
• Service automotive electrical/electronic systems
• Service automotive mechanical systems
• Service automotive engine performance systems
• Service automotive steering and suspension systems
• Service automotive brake systems
• Service automotive body electrical systems
• Service automotive transmission/transaxle systems
• Service automotive manual drive train and axle systems
• Service automotive heating and air conditioning systems
• Service automotive hybrid systems
• Service advanced automotive body electrical systems
• Service advanced automotive engine performance systems
• Service advanced automotive engine mechanical systems
• Service advanced automotive engine mechanical systems

Employability essentials and indicators will also be addressed to develop personal awareness, career effectiveness, and professionalism. See page 5 of the college catalog for a list of employability essentials 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

<table>
<thead>
<tr>
<th>Number</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>32404375</td>
<td>Automotive Fundamentals</td>
<td>2</td>
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<tr>
<td>32404376</td>
<td>DC Automotive Electrical</td>
<td>2</td>
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<tr>
<td>32403377</td>
<td>Electrical Systems</td>
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<td>32404378</td>
<td>Engine Repair</td>
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<td>32404379</td>
<td>Suspension and Alignment</td>
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<td>32404380</td>
<td>Automotive Brake Systems</td>
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<td>32404381</td>
<td>Engine Performance</td>
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<td>32404382</td>
<td>Body Electrical Systems</td>
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<td>32404383</td>
<td>Automatic Transmissions</td>
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<td>Manual Drive Trains</td>
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<tr>
<td>32404385</td>
<td>Air Conditioning and Heating Systems (WBL)</td>
<td>3</td>
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<tr>
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Program Requirements

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Career Pathways
Career Pathways connect progressive levels of coursework to allow students to build upon their education. Each step in the pathway connects with employment options and provides the opportunity for advancement to higher levels. The Automotive Technician program includes the following pathway options:
• 31-404-2 Automotive Service Technician Technical Diploma (page 60)
• 30-404-1 Automotive Maintenance and Light Repair Technician Technical Diploma

Career Pathways

<table>
<thead>
<tr>
<th>Technical Diploma (two-year)</th>
<th>Technical Diploma (one-year)</th>
<th>Automotive Technician</th>
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<tr>
<td>Automotive Maintenance and Light Repair Technician</td>
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Programs and Course Descriptions
(See pages 41-43 for General Studies course descriptions)

32404375  
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.  

32404376  
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.  

32404377  
Electrical Systems - Credits: 3
This course introduces battery, starting, and charging systems; theory of operation; diagnostic techniques; and servicing procedures. This course also includes exterior lighting systems; diagnostics and repair procedures. Wiring diagrams will be used and emphasized throughout the course. COREQUISITE: 32404376 DC Automotive Electrical.  

32404378  
Engine Repair - Credits: 4
This course is designed to provide the student with the skills needed to diagnose, service, and repair internal combustion engines found on late model vehicles. Emphasis is placed on in-vehicle systems repairs including: lubrication systems, valve timing, leak diagnosis and repair, engine noise & failure diagnosis, cylinder head replacement, and intake systems. COREQUISITE: 32404375 Automotive Fundamentals.  

32404379  
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: 32404375 Automotive Fundamentals.  

32404380  
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: 32404375 Automotive Fundamentals.  

32404381  
Engine Performance - Credits: 3
This course is designed to develop the skills needed to diagnose, service, and repair powertrain control, fuel and ignition systems. Emphasis is placed on diagnostic procedures and the problem-solving techniques associated with automotive engine performance and drivability. PREREQUISITE: 32404375 Automotive Fundamentals.  

32404382  
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: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical.  

32404383  
Automatic Transmissions - Credits: 4
This course provides students with hands-on practical experience in powertrain diagnosis. This course builds on basic skills and system theory gained in previous courses. PREREQUISITE: 32404375 Engine Repair.  

32404384  
Manual Drive Trains - Credits: 3
This course introduces the operation and repair of manual transmissions, transaxles, drivelines, differential assemblies, and transfer cases. PREREQUISITE: 32404375 Automotive Fundamentals.  

32404385  
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: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical.  

32404386  
Advanced Body Electrical Systems - Credits: 3
Expands on learner's skills in diagnosing and repairing electrical and electronic systems. Emphasizing their knowledge of proper diagnostic routines, learners performs and evaluates testing and repairs on electrical and electronic accessories, controls, and sensors related to body electrical systems. Can and Bus networking systems will also be part of this course. PREREQUISITE: 32404382 Body Electrical Systems.  

32404387  
Advanced Engine Repair - Credits: 4
Focuses on developing the skills needed to diagnose, service, and repair internal combustion engines. Emphasis is placed on out-of-vehicle engine repair including overhaul procedures. Variable valve timing and cylinder deactivation systems will be included in this course. PREREQUISITE: 32404378 Engine Repair.  

32404388  
Intro to Hybrid Vehicles - Credits: 2
This course provides a brief history of hybrid electric vehicles, electric vehicle safety, maintenance, equipment and troubleshooting procedures. Also includes current and future alternative fueled vehicle configurations. PREREQUISITES: 32404376 DC Automotive Electrical and 32404377 Electrical Systems.  

32404389  
Advanced Engine Performance - Credits: 3
This course provides students with hands-on practical experience in powertrain diagnosis. This course builds on basic skills and system theory gained in previous courses. PREREQUISITE: 32404381 Engine Performance.  

32442307  
Welding for Mechanics - Credits: 2
Instruction in safe setup and operation of plasma cutting (PAC), oxy-fuel cutting (OFC), SMAW (Stick), GMAW (Mig), FCAW and/or GTAW (Tig) welding in applications related to general industry practices. Selection of appropriate welding processes with a specific emphasis on typical repair situations including metal identification will be stressed.  

(Revised 6/5/17)

Gainful employment information is available at this link: http://www.witc.edu/pgmpages/autotech/gainful-employment/47.0604-Gedt.html.
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 2014-2015; for most recent data, go to witc.edu)
The information below is based on graduates’ responses from the following technical colleges within the Wisconsin Technical College System (WTCS) for 32-404-2 Automotive Technician and does not include WITC graduates: Blackhawk Technical College, Chippewa Valley Technical College, Fox Valley Technical College, Madison Area Technical College, Mid-State Technical College, Moraine Park Technical College, Nicolet Area Technical College, Northcentral Technical College, Northeast Wisconsin Technical College, Southwest Wisconsin Technical College and Western Technical College.

<table>
<thead>
<tr>
<th>Number of graduates</th>
<th>123</th>
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<tbody>
<tr>
<td>Number of responses</td>
<td>87</td>
</tr>
<tr>
<td>Number available for employment</td>
<td>79</td>
</tr>
</tbody>
</table>

| Number employed | 74%
| Percent employed | 94%
| Employed in related field | 68%

| Range of yearly salary | $14,000-$54,908 |
| Average yearly salary | $30,541 |

800.243.9482  
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