

Program Name	Automotive Technologies
Program CIP Code	47.0600.20
Program Description and Coherent Sequence	<p>The Automotive Technologies program is designed to prepare individuals for jobs as technicians in the automotive fields. The program is comprised of a core curriculum and Automotive Technologies I and II. The occupational standards for each are aligned with National Automotive Technicians Education Foundation (NATEF) and Automotive Service Excellence (ASE) standards. The program is designed and delivered as a coherent sequence of experiences using technical instruction, academic foundations, experiential learning, work-based learning, and leadership and personal development through the Career and Technical Student Organization, SkillsUSA. This program leads towards an ASE Student Certification that assists in meeting requirements for the ASE Auto Maintenance and Light Repair (G1) certification.</p> <p>Transportation Technologies Core Curriculum: This course prepares the student to apply technical knowledge and skills in the safety, adjustment, maintenance, part replacement, and use of tools, equipment and machines. The course includes developing career plans, preparing for employment, demonstrating oral and written communication skills, understanding financial operations of small businesses, identifying characteristics of successful leaders in the work place and participation in leadership development activities.</p> <p>Automotive Technologies I: This course prepares the individual to apply technical knowledge and skills in safety, adjustment, maintenance, and parts replacement to repair automobiles and light trucks. Students are introduced to:</p> <ol style="list-style-type: none"> 1. brake systems; 2. electric/electronic systems; 3. steering and suspension systems; and 4. engine performance diagnosis, repair <p>and participation in leadership development activities.</p> <p>Automotive Technologies II: This course prepares the individual to apply higher levels of technical knowledge and skills to maintain, diagnose and repair automobiles and light trucks. Students will gain in-depth knowledge needed to troubleshoot and identify malfunctioning components and sensors; and correct these problems in four areas:</p> <ol style="list-style-type: none"> 1. brake systems; 2. electrical/electronic systems; 3. steering and suspension systems; and 4. engine performance analysis, diagnosis and repair. <p>Graduates should be able to pass the ASE tests for each of the four areas, and participation in leadership development activities.</p>

	Work-based Learning: Students have the opportunity to participate in either an Automotive Technologies Cooperative Education experience or an Internship.
Industry Validated Standards	http://www.azed.gov/career-technical-education/files/2011/11/technical-standards-automotive-technologies-47060020.pdf
Specialized Equipment	http://www.azed.gov/career-technical-education/files/2011/11/equipment-list-automotive-technologies-47060020.pdf
Industry Recognized Certifications	<p>ASE Student Certifications:</p> <ul style="list-style-type: none"> • Auto Maintenance and Light Repair - G1 • Auto and Light Truck Certification - A1 - Engine Repair • Auto and Light Truck Certification - A2 - Automatic Transmission/Transaxle • Auto and Light Truck Certification - A3 - Manual Drive Train and Axles • Auto and Light Truck Certification - A4 - Suspension and Steering • Auto and Light Truck Certification - A5 - Brakes • Auto and Light Truck Certification - A6 - Electrical/Electronic Systems • Auto and Light Truck Certification - A7 - Heating and Air Conditioning • Auto and Light Truck Certification - A7 - Heating and Air Conditioning • Auto and Light Truck Certification - A8 - Engine Performance • Automotive Services Technology (AST) • Eastern Arizona College <ul style="list-style-type: none"> ◦ Automotive Technician - Certificate of Proficiency
CTE End-Of- Program (EOP) Technical Skill Assessment (TSA) Y/N	Yes
Current EOP TSA Pass Score	60%
Participation in JTED Program Qualifies Students for These Employment Opportunities	Full-time entry-level technician in Automotive repair. Automotive Technician

SB1525 JTED Course and Program Requirements

<p>Requires students obtain passing score of 60% on assessment 15-391(3)(b) Page 1/20-24 & 15-391(5)(b) Page 2/1-6</p>	<p>Passing score varies for each of the 8 ASE student tests and is calculated – according to ASE the one chosen as most appropriate is called a contrasting-groups approach. This method is based on actual performance of real students as opposed to item-level judgments made on test forms.</p>
<p>Not a Course Required under Minimum Course of Study including Honors 15-391(3)(d) Page 1/27-29</p>	<p>No this is not a required course.</p>
<p>Majority of Instructional Time in Lab / Field / Work Based Learning Environment 15-391(3)(e) Page 1/30-32 and</p> <p>Requires CTSO Participation 15-391(5)(d) Page 2/10-13</p>	<p>Yes, this course requires mostly lab time to diagnose and repair automobiles and complete training stations for the various skill attainments.</p> <p>The program requires participation in a CTSO, SkillsUSA and there are competitions aligned with this program area judged by industry.</p>
<p>Demonstrated Need for Extra Funding for a course 15-391 (3)(f) Page 1/33-34</p>	<p>YES, This is a highly technical program requiring specialized equipment for diagnoses and repair of automobiles. There is additional need for special facilities, equipment and supplies.</p>
<p>Specialized Equipment Exceeds Cost of Standard Course 15-391(3)(g) Page 1/35-36 and 15-391(5)(c) Page 2/7-9</p>	<p>Yes, the program requires extensive industry specialized equipment in order to meet the standards including but not limited to:</p> <ul style="list-style-type: none"> • Impact Wrench • Serpentine Belt Tensioner Tools • Snap Ring Pliers Set Brake Pedal Depressor • Bushing Driver Set • Coil Spring Compressor Tool • Constant Velocity Joint (CV) Service Tools: • Boot Installation Tool • Boot Clamp Pliers or Crimping Ring • Chassis Ear • Inner Tie Rod End Tool • Pitman Arm Puller <p>Equipment list can be found at: http://www.azed.gov/career-technical-education/files/2011/11/equipment-list-automotive-technologies-47060020.pdf</p>
<p>Alignment through Curriculum, Instructional Model and Courses Sequence 15-391(5)(e) Page 2/15-18</p>	<p>Yes, State established course sequence for Automotive Technologies Program Consists of 3 Carnegie Units of instruction. The state standards are aligned with the NATEF AUTOMOBILE (2008 NATEF Standards)</p> <ul style="list-style-type: none"> • Suspension and Steering

	<ul style="list-style-type: none"> • Brakes • Electrical/Electronic Systems • Engine Performance • Engine Repair • Automatic Transmission/Transaxle • Manual Drive Train and Axles • Heating and Air conditioning • Maintenance and Light Repair • Automobile service technology
<p>Defined Pathway to Career and Postsecondary Ed in Specific Vocation or Industry 15-391(5)(f) Page 2/19-21</p>	<p>Yes, leads to entry level careers in Automotive repair or higher education technical training programs as well as specific industry OEM training programs.</p>
<p>Fills High Need Vocation or Industry as Determined by CTE/ADE 15-391(5)(j) Page 2/30-31</p>	<p>Yes The Automotive Technologies program is ranked 11 on the 2016 CTE Program List. Ranking is based on “high demand, high wage, high skill” occupations as determined by Arizona Labor Market Data from the AZ Office of Employment and Population Statistics.</p>
<p>Requires a Single or Stackable Credential or a Skill that allows a student to obtain work 15-391(5)(k) Page 2/32-35</p>	<p>Yes, the ASE student certification is portable, stackable and can provide the student with their first industry-recognized certification through the National Institute for Automotive Service Excellence.</p> <p>Programs must offer one of more of the following ASE Student Certifications:</p> <ul style="list-style-type: none"> • Auto Maintenance and Light Repair - G1 • Auto and Light Truck Certification - A1 - Engine Repair • Auto and Light Truck Certification - A2 - Automatic Transmission/Transaxle • Auto and Light Truck Certification - A3 - Manual Drive Train and Axles • Auto and Light Truck Certification - A4 - Suspension and Steering • Auto and Light Truck Certification - A5 - Brakes • Auto and Light Truck Certification - A6 - Electrical/Electronic Systems • Auto and Light Truck Certification - A7 - Heating and Air Conditioning • Auto and Light Truck Certification - A7 - Heating and Air Conditioning • Auto and Light Truck Certification - A8 - Engine Performance • Automotive Services Technology (AST) • Eastern Arizona College <ul style="list-style-type: none"> ○ Automotive Technician - Certificate of Proficiency

<p>Leads to certification or licensure verified by that vocation or industry that qualifies student for employment which the student would not otherwise qualify. 15-391(5)(l) Page 2/36-39</p>	<p>Yes, student industry-recognized certification intended for students completing two-year secondary or post-secondary automotive technician training program, through the National Institute for Automotive Service Excellence, good for two years.</p> <p>Yes, the ASE student certification is portable, stackable and can provide the student with their first industry-recognized certification through the National Institute for Automotive Service Excellence.</p> <p>Programs must offer one of more of the following ASE Student Certifications:</p> <ul style="list-style-type: none"> • Auto Maintenance and Light Repair - G1 • Auto and Light Truck Certification - A1 - Engine Repair • Auto and Light Truck Certification - A2 - Automatic Transmission/Transaxle • Auto and Light Truck Certification - A3 - Manual Drive Train and Axles • Auto and Light Truck Certification - A4 - Suspension and Steering • Auto and Light Truck Certification - A5 - Brakes • Auto and Light Truck Certification - A6 - Electrical/Electronic Systems • Auto and Light Truck Certification - A7 - Heating and Air Conditioning • Auto and Light Truck Certification - A7 - Heating and Air Conditioning • Auto and Light Truck Certification - A8 - Engine Performance • Automotive Services Technology (AST) • Eastern Arizona College <ul style="list-style-type: none"> ◦ Automotive Technician - Certificate of Proficiency
<p>If no certification or licensure is accepted by vocation or industry, completion of program must qualify student for employment for which student would not otherwise qualify without completing JTED program. 15-391(5)(l) Page 2/39-43</p>	<p>N/A</p>
<p>Requires instruction and instructional materials substantially different from and exceed scope of standard instruction and include skills, competencies and knowledge to be successful in JTED program vocation or industry. 15-391(5)(m) Page 2/44-45 and 3/1-3</p>	<p>Yes, to meet the state standards the instruction must align to the industry recognized standards and specialized training in the automotive repair industry covering the components of a vehicle and service:</p> <ul style="list-style-type: none"> • Suspension and Steering • Brakes • Electrical/Electronic Systems • Engine Performance • Engine Repair • Automatic Transmission/Transaxle • Manual Drive Train and Axles

	<ul style="list-style-type: none"> • Heating and Air Conditioning • Maintenance and Light Repair • Automobile Service Technology
Industry provided financial or technical support. 15-391(5)(n) Page 3/4-8	YES, Industry representatives are on local advisory councils through the state, Auto dealers provide internships to students completing a NATEF/ASE certified program, industry supplies cars/engines to NATEF certified programs and to some local non-NATEF programs.
Demonstrated need for extra funding in order to provide JTED program 15-391(5)(o) Page 3/9-11	Yes, the Automotive Technologies program needs the extra JTED funding for equipment, supplies and the facility. The program requires additional hours because of the 3 Carnegie units of instruction needed to complete the program.

Eligibility		Yes	No
JTED	The Automotive Technologies program meets the requirements for JTED compliance and eligibility	x	
CTE Federal Perkins and State Priority	The Automotive Technologies program meets the requirements for Perkins and is eligible to generate CTE State Priority funding .	x	