

CTE Course Description and Standards Crosswalk

- The information on page 1 must be entered directly into the EED CTE Web Portal (log in at <https://www.eed.state.ak.us/tls/cte/perkins> with your district credentials)
- Then this entire form can be submitted by using the “Click here Provide Supporting Documentation” link on the Web Portal, or by emailing it to ctegrants@alaska.gov.

Basic CTE Course Information

Course Information	
Course Name	Automotive Service Tech 2
Course Number	II972
Number of High School Credits	1
Sequence or CTEPS (You must first have the Sequence or CTEPS name put into the system.)	Power Mechanics 1, Power Mechanics 2, Introduction to Automotive, Auto Service Tech 1
Occupational Standards	
Source of Occupational Standards	National Institute of Automotive Service Excellence. National Automotive Technician Education Foundation,
Names/Numbers of Occupational Standards	ASE and NATEF
Registration Information	
Course Description (brief paragraph – as shown in your student handbook or course list)	Automotive Service Technician 2 covers in depth training of the student in troubleshooting, maintaining, and repair of advanced automotive electrical/electronic and engine performance of automobiles. This course is designed to teach the student advanced skills necessary for future employment in the automotive field. Instruction includes career exploration, SkillsUSA, and industry visits. A student successful in this course will be able to use technical skills learned in this course to help qualify for nationally recognized ASE (Automotive Service Excellence) certification.
Instructional Topic Headings (please separate each heading by a semi-colon)	Personal and Equipment Safety in The Lab; Identification, Use and Care of Tools and Equipment; General Electrical System Diagnosis; Battery Diagnosis and Service; Starting System Diagnosis and Repair; Charging System Diagnosis and Repair;

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	Lighting System Diagnosis and Repair; Ignition Systems Diagnosis and Repair; Fuel Systems Diagnosis and Repair; Engine Cooling System Inspection; Encourage Career and Technical Student Organization (CTSO) Involvement; Investigate Career Opportunities in The Automotive Field;
Summative Assessments and Standards	
Technical Skills Assessment	National Institute for Automotive Service Excellence, National Automotive Technician Education Foundation
Course addresses Alaska GLEs	Y
Course addresses Employability Standards	Y
Course addresses Cultural Standards	Y
Course addresses All Aspects of Industry (AAI)	Y
Career & Technical Student Organization (CTSO)	
CTSO associated with this course	SkillsUSA
Tech Prep	
Current Tech Prep Articulation Agreement? (Y/N)	N
Date of Current Agreement	
Postsecondary Institution Name	
Postsecondary Course Name	
Postsecondary Course Number	
# of Postsecondary Credits	

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Additional CTE Course Information

Author	
Course developed by	Ben Eveland
Course adapted from	MatSu School District-John Egan, Rob Wissler, Jack Simpson, Ed Clausen
Date of last course revision	3-4-2012
Course Delivery Model	
Is the course brokered through another institution or agency? (Y/N)	N
Certificate, Credential, or License	
Industry-recognized skill certificate, credential, or state license that a student is eligible for upon successful completion of the course?	ASE Certs, NATEF
Issuing body/organization/agency	National Institute of Automotive Service Excellence.

Standards Alignment

Student Performance Standards (Learner Outcomes or Knowledge & Skill Statements)	Specific Occupational Skills Standards	Alaska Reading, Writing, Math, & Science Standards	Alaska Employability Standards	Alaska Cultural Standards	All Aspects of Industry	Formative Assessments
Demonstrate safe laboratory techniques and handling of hazardous materials.	V701 C5.12		A6	B1	Hlth/Safety	AK EED Safety Manual, SP2.org
Select and operate appropriate hand tools power tools, and related equipment.	ONET .26		A6	B4	Tech/Prod	AK EED Safety Manual, SP2.org
Exhibit responsibilities of employment standards including exhibiting dependability and meeting organizationally defined expectations.	EIA I.A.01 I.A.04		A1	B3	Wk Habits	SkillsUSA
Check problems in electrical systems using a test light, voltmeter, oscilloscope and wiring schematic.	ASE NATEF	M.Conn M.F; M.G; M.M; M.P; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-6 Electronics

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Check electrical systems for shorts, opens, and grounds.	ASE NATEF	M.Conn M.M; M.P; R;S	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-6 Electronics
Charge and install a battery.	ASE NATEF	M.Conn M.M; S; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-6 Electronics
Diagnose starting systems and determine necessary action.	ASE NATEF	M.M; S.B; W	A		Hlth/Safety Prin Tech	ASE A-6
					Tech/Prod	Electronics
Jump start a vehicle.	ASE NATEF	M.Conn M.M; S; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-6 Electronics
Remove, clean, and inspect alternator and determine necessary action	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-6 Electronics
Repair or replace charging system components.	ASE NATEF	M.Conn M.M; M.P; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-6 Electronics
Remove, clean, and inspect starters, and determine necessary action..	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-6 Electronics
Repair or replace starting system components.	ASE NATEF	M.Conn M.M; M.P; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-6 Electronics
Diagnose and repair lighting systems.	ASE NATEF	M.M; S; W	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-6 Electronics
Repair or replace lights, sockets, wires and switches.	ASE NATEF	M.Conn M.M; M.P; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-6 Electronics
Conduct engine performance tests using engine analyzers and determine necessary action.	ASE NATEF	M.Conn M.F; M.G; M.M; M.P; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Perform on-board computer system diagnosis.	ASE NATEF	M.M; S.B; W	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Inspect, repair, and replace primary ignition components.	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.

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Inspect, repair, and replace secondary ignition components.	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Adjust ignition system to manufacturer's specifications.	ASE NATEF	M.Conn M.M; M.P; R;S	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Inspect, clean, and replace spark timing controllers.	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Test and diagnose engine compression and determine necessary action.	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Diagnose fuel system problems and determine necessary action.	ASE NATEF	M.M; S.B; W	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Inspect, repair or replace faulty fuel supply components.	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Disassemble, clean, and inspect carburetors.	ASE NATEF	M.Conn M.M; M.P; R;S	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Reassemble, and adjust carburetors.	ASE NATEF	M.Conn M.M; M.P; R;S	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Disassemble, clean, and inspect fuel injection system components.	ASE NATEF	M.M; S.B; W	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Repair or replace fuel injection system components.	ASE NATEF	M.Conn M.M; M.P; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Diagnose emission control systems and determine necessary action.	ASE NATEF	M.M; S.B; W	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Diagnose and repair exhaust system problems.	ASE NATEF	M.M; S.B; W	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Inspect, clean, and replace positive crankcase ventilation system components.	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.

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Inspect, clean, and replace air management system components.	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Inspect, clean, and replace inlet air temperature control system components.	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Inspect, clean, and replace intake manifold heat controls.	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Inspect and test service engine cooling system components and determine necessary action.	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.
Drain, flush and pressure test the cooling system.	ASE NATEF	M.Conn M.M; M.P; R;S	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-8 Engine Perf.

Instructional Resources

List the major instructional resources used for this course: (websites, textbooks, essential equipment, reference materials, supplies)

Recommended Text: Modern Automotive Technology, By James E. Duffy, The Goodheart-Willcox Company, Inc. 2000.
Automotive Technology Curriculum Modules, Instructional Materials Laboratory, University of Missouri-Columbia, 1997.

Resources: AK EED Safety Manual: <http://www.eed.state.ak.us/tls/CTE/docs/resources/safetymanual.pdf>
 SkillsUSA: <http://www.skillsusa.org/contests.html>
 ASE - National Institute for Automotive Service Excellence: <http://www.asecert.org>