

## 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](mailto:ctegrants@alaska.gov).

### Basic CTE Course Information

Course Information	
Course Name	Automotive Service Tech 1
Course Number	II971
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 Auto, Automotive Service Tech 2, Automotive Service Tech 3, Automotive Service Tech 4
Occupational Standards	
Source of Occupational Standards	NATEF, NSSB, V-Tecs
Names/Numbers of Occupational Standards	NATEF
Registration Information	
Course Description (brief paragraph – as shown in your student handbook or course list)	Automotive Service Technician 1 covers troubleshooting, maintenance, and light duty repair of the brakes, steering and suspension, and the electrical/electronic systems of automobiles. This course is designed to teach the student 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; Investigate Career Opportunities in The Automotive Field; General Brake System Diagnosis and Repair; General Suspension/ Steering System Diagnosis and Repair; General Electrical System Diagnosis and Repair;

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	General Engine Performance Diagnosis and Repair; Encourage Career and Technical Student Organization (CTSO) Involvement
<b>Summative Assessments and Standards</b>	
Technical Skills Assessment	National Automotive Technician Education Foundation, National Institute for Automotive Service Excellence,
Course addresses Alaska GLEs	Y
Course addresses Employability Standards	Y
Course addresses Cultural Standards	Y
Course addresses All Aspects of Industry (AAI)	Yes, Institute for Workforce Education
<b>Career &amp; Technical Student Organization (CTSO)</b>	
CTSO associated with this course	SkillsUSA
<b>Tech Prep</b>	
Current Tech Prep Articulation Agreement? (Y/N)	Pending
Date of Current Agreement	
Postsecondary Institution Name	UAA, UAA-Kenai
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	Mat-Su School District, Original Authors John Egan, Rob Wissler, Ed Clausen, Jack Simpson (MatSu)
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 Certification
Issuing body/organization/agency	National Institute for Automotive Service Excellence

Standards Alignment
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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
Identify and investigate career opportunities and duties of an automotive technician.	ASE NATEF	LA M.Conn S.B	B	B C	ALL	Skills-USA AKCIS

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<b>Student Performance Standards (Learner Outcomes or Knowledge &amp; Skill Statements)</b>	<b>Specific Occupational Skills Standards</b>	<b>Alaska Reading, Writing, Math, &amp; Science Standards</b>	<b>Alaska Employability Standards</b>	<b>Alaska Cultural Standards</b>	<b>All Aspects of Industry</b>	<b>Formative Assessments</b>
Diagnose hydraulic brake systems and determine necessary action.	ASE NATEF	R; S.B; W	A		Tech/Prod	ASE A-5 Brakes
Inspect master cylinder and hydraulic lines of the system.	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-5 Brakes
Inspect, test and replace switches, valves, and control devices.	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-5 Brakes
Bleed and flush brake cylinders, master cylinder and hydraulic lines.	ASE NATEF	R; S.B; W	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-5 Brakes
Diagnose drum brake systems and determine necessary action.	ASE NATEF	R; S.B; W	A		Tech/Prod	ASE A-5 Brakes
Remove, clean, and inspect drum brake assemblies.	ASE NATEF	M.Conn M.M; M.P; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-5 Brakes
Repair, replace, and adjust drum brake assemblies.	ASE NATEF	M.Conn M.M; M.P; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-5 Brakes
Diagnose disc brake systems and determine necessary action.	ASE NATEF	R; S.B; W	A		Tech/Prod	ASE A-5 Brakes
Remove, clean, and inspect disc brake components.	ASE NATEF	M.Conn M.M; M.P; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-5 Brakes

Diagnose steering systems and determine necessary action.	ASE NATEF	R; S.B; W	A		Tech/Prod	ASE A-4 Susp & Steering
Clean and inspect power and manual steering gear boxes.	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-4 Susp & Steering
Clean, remove, and inspect steering linkage components.	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-4 Susp & Steering
Diagnose front suspension systems and determine necessary action.	ASE NATEF	M.M; S.B; W	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-4 Susp & Steering
Inspect and replace front and rear shock absorbers and stabilizer assemblies.	ASE NATEF	M.M; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-4 Susp & Steering

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Repair, replace, and adjust wheel bearings.	ASE NATEF	M.Conn M.M; M.P; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-4 Susp & Steering
Diagnose steering and tire wear problems, 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-4 Susp & Steering
Dismount, inspect, repair and mount tire and wheel assemblies.	ASE NATEF	M.M; M.P; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-4 Susp & Steering
Rotate and balance wheel assemblies.	ASE NATEF	M.M; M.P; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-4 Susp & Steering
Solve electrical problems using Ohm's Law.	ASE NATEF	M.Conn M.M; M.P; R;S	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-6 Electronics
Identify common electrical circuit components.	ASE NATEF	M.Conn M.M; M.P; R;S	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-6 Electronics
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
Measure resistance in electrical circuits using an ohmmeter.	ASE	M.Conn	A		Hlth/Safety	ASE
	NATEF	M.M; M.P; R;S			Prin Tech Tech/Prod	A-6 Electronics
Measure voltage with a voltmeter or oscilloscope.	ASE NATEF	<a href="#">M.Conn</a> M.M; M.P; R;S	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-6 Electronics
Measure current with an ammeter.	ASE NATEF	M.Conn M.M; M.P; R;S	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-6 Electronics
Clean and inspect battery clamps, cables and connectors and perform battery condition tests.	ASE NATEF	M.M; R	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

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Jump start a vehicle.	ASE NATEF	M.Conn M.M; S; R	A		Hlth/Safety Prin Tech Tech/Prod	ASE A-6 Electronics

### 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>  
AKCIS - Alaska Career Information System Information: [www.akcis.org](http://www.akcis.org)  
ASE - National Institute for Automotive Service Excellence: <http://www.asecert.org>