

**2020/2021 Student Competency Record**  
**Automotive Technology I**  
**8506 - 36 weeks, 280 hours**

<hr/> <b>Student</b>	<hr/> <b>School Year</b>
<hr/> <b>School</b>	<hr/> <b>Teacher Signature</b>

Traditional letter or numerical grades do not provide adequate documentation of student achievement in competency-based education; therefore, the Virginia Standards for CBE require a recording system to provide information about competencies achieved to employer, student-employee, and teacher. The Student Competency Record provides a means for keeping track of student progress. Ratings are assigned by the teacher for classroom competency achievement and by the teacher-coordinator in conjunction with the training sponsor when competence is evaluated on the job.

Tasks/competencies designated "Required" are considered essential statewide and are required of all students. In some courses, all tasks/competencies have been identified as required. Tasks/competencies marked "Optional" are considered optional; they and/or additional tasks/competencies may be taught at the discretion of the school division. Tasks/competencies marked with an asterisk (\*) are considered sensitive, and teachers should obtain approval by the school division before teaching them. Student competency records should be kept as long as the student is enrolled in the school and for five years after the student graduates/leaves the school.

**Note: Students with an Individualized Education Program (IEP) or an Individualized Student Alternative Education Plan (ISAEP) will be rated, using the following scale, only on the competencies identified in their IEP or ISAEP.**

Students will be expected to achieve a **satisfactory rating** (one of the three highest marks) on the Student Competency Record (SCR) rating scale on at least 80% of the required (essential) competencies in a CTE course.

**...RATING SCALE...**

- 1 - Can teach others**
- 2 - Can perform without supervision**
- 3 - Can perform with limited supervision**
- 4 - Can perform with supervision**
- 5 - Cannot perform**

8506 36 weeks, 280 hours	<b>Automotive Technology I TASKS/COMPETENCIES</b>		Date	Rating
<b>Demonstrating Personal Qualities and Abilities</b>				
Required	1	Demonstrate creativity and innovation.		
Required	2	Demonstrate critical thinking and problem solving.		
Required	3	Demonstrate initiative and self-direction.		
Required	4	Demonstrate integrity.		
Required	5	Demonstrate work ethic.		
<b>Demonstrating Interpersonal Skills</b>				
Required	6	Demonstrate conflict-resolution skills.		
Required	7	Demonstrate listening and speaking skills.		
Required	8	Demonstrate respect for diversity.		
Required	9	Demonstrate customer service skills.		
Required	10	Collaborate with team members.		
<b>Demonstrating Professional Competencies</b>				
Required	11	Demonstrate big-picture thinking.		
Required	12	Demonstrate career- and life-management skills.		
Required	13	Demonstrate continuous learning and adaptability.		
Required	14	Manage time and resources.		
Required	15	Demonstrate information-literacy skills.		
Required	16	Demonstrate an understanding of information security.		
Required	17	Maintain working knowledge of current information-technology (IT) systems.		
Required	18	Demonstrate proficiency with technologies, tools, and machines common to a specific occupation.		
Required	19	Apply mathematical skills to job-specific tasks.		
Required	20	Demonstrate professionalism.		
Required	21	Demonstrate reading and writing skills.		
Required	22	Demonstrate workplace safety.		
<b>Examining All Aspects of an Industry</b>				
Required	23	Examine aspects of planning within an industry/organization.		
Required	24	Examine aspects of management within an industry/organization.		

Required	25	Examine aspects of financial responsibility within an industry/organization.		
Required	26	Examine technical and production skills required of workers within an industry/organization.		
Required	27	Examine principles of technology that underlie an industry/organization.		
Required	28	Examine labor issues related to an industry/organization.		
Required	29	Examine community issues related to an industry/organization.		
Required	30	Examine health, safety, and environmental issues related to an industry/organization.		
<b>Addressing Elements of Student Life</b>				
Required	31	Identify the purposes and goals of the student organization.		
Required	32	Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult.		
Required	33	Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects.		
Required	34	Identify Internet safety issues and procedures for complying with acceptable use standards.		
<b>Exploring Work-Based Learning</b>				
Required	35	Identify the types of work-based learning (WBL) opportunities.		
Optional	36	Reflect on lessons learned during the WBL experience.		
Required	37	Explore career opportunities related to the WBL experience.		
Optional	38	Participate in a WBL experience, when appropriate.		
<b>REQUIRED SUPPLEMENTAL TASKS</b>				
<b>Lab/Shop and Personal Safety</b>				
Required	39	Identify general lab/shop safety rules and procedures.		
Required	40	Utilize safe procedures for handling tools and equipment.		
Required	41	Identify and use proper placement of floor jacks and jack stands.		
Required	42	Identify and use proper procedures for safe lift operation.		
Required	43	Use proper ventilation procedures for working in the lab/shop area.		
Required	44	Identify marked safety areas.		

Required	45	Identify the location and the types of fire extinguishers and other fire safety equipment; demonstrate knowledge of the procedures for using fire extinguishers and other fire safety equipment.		
Required	46	Identify the location and use of eye wash stations.		
Required	47	Identify the location of posted evacuation routes.		
Required	48	Comply with the required use of safety glasses, ear protection, gloves, and shoes during lab/shop activities.		
Required	49	Identify and wear appropriate clothing for lab/shop activities.		
Required	50	Secure hair and jewelry for lab/shop activities.		
Required	51	Demonstrate awareness of the safety aspects of supplemental restraint systems (SRS), electronic brake control systems, and hybrid vehicle high-voltage circuits.		
Required	52	Demonstrate awareness of the safety aspects of high-voltage circuits such as high intensity discharge (HID) lamps, ignition systems, and injection systems.		
Required	53	Locate and demonstrate knowledge of safety data sheets (SDS).		
<b>Tools and Equipment</b>				
Required	54	Identify tools and their usage in automotive applications.		
Required	55	Identify standard and metric measurement designations.		
Required	56	Demonstrate safe handling and use of appropriate tools.		
Required	57	Demonstrate cleaning, storage, and maintenance of tools and equipment.		
Required	58	Demonstrate use of precision measuring tools (i.e., micrometer, dial-indicator, dial-caliper).		
<b>Preparing Vehicle for Service</b>				
Required	59	Identify information needed and the service requested on a repair order.		
Required	60	Identify purpose and demonstrate proper use of fender covers and mats.		
Required	61	Demonstrate use of the three Cs (i.e., concern, cause, and correction).		
Required	62	Review vehicle service history.		
Required	63	Complete work order to include customer information, vehicle identifying information, customer concern, related service history, cause, and correction.		
<b>Preparing Vehicle for Customer</b>				

Required	64	Ensure vehicle is prepared to return to customer per school/company policy (floor mats, steering wheel cover, etc.).		
<b>ENGINE REPAIR</b>				
<b>General</b>				
Required	65	Research vehicle service information, including fluid type, vehicle service history, service precautions, and technical service bulletins.		
Required	66	Verify operation of the instrument panel engine warning indicators.		
Required	67	Inspect engine assembly for fuel, oil, coolant, and other leaks; determine necessary action.		
Required	68	Identify service precautions related to service of the internal combustion engine of a hybrid vehicle.		
<b>Lubrication and Cooling Systems</b>				
Required	69	Perform cooling system pressure and dye tests to identify leaks; check coolant condition and level; inspect and test radiator, pressure cap, coolant recovery tank, heater core, and galley plugs; determine needed action.		
Required	70	Inspect, replace, and/or adjust drive belts, tensioners, and pulleys; check pulley and belt alignment.		
Required	71	Remove, inspect, and replace thermostat and gasket/seal.		
Required	72	Inspect and test coolant; drain and recover coolant; flush and refill cooling system; use proper fluid type per manufacturer specification; bleed air as required.		
Required	73	Perform engine oil and filter change; use proper fluid type per manufacturer specification; reset maintenance reminder as required.		
<b>AUTOMATIC TRANSMISSION AND TRANSAXLE</b>				
<b>General</b>				
Required	74	Research vehicle service information, including fluid type, vehicle service history, service precautions, and technical service bulletins.		
Required	75	Check fluid level in a transmission or a transaxle equipped with a dipstick.		
Required	76	Check fluid level in a transmission or a transaxle not equipped with a dipstick.		
Required	77	Check transmission fluid condition; check for leaks.		
Required	78	Identify drive-train components and configuration.		
<b>In-Vehicle Transmission/Transaxle</b>				

Required	79	Inspect for leakage at external seals, gaskets, and bushings.		
Required	80	Drain and replace fluid and filter(s); use proper fluid type per manufacturer specification.		
<b>MANUAL DRIVE TRAIN AND AXLES</b>				
<b>General</b>				
Required	81	Research vehicle service information, including fluid type, vehicle service history, service precautions, and technical service bulletins.		
Required	82	Drain and refill manual transmission/transaxle and final drive unit; use proper fluid type per manufacturer specification.		
Required	83	Check fluid condition; check for leaks.		
<b>Clutch</b>				
Required	84	Check and adjust clutch master cylinder fluid level; use proper fluid type per manufacturer specifications.		
Required	85	Check for hydraulic system leaks.		
<b>Drive Shaft, Half Shafts, Universal Joints and Constant-Velocity (CV) Joints (Front, Rear, All, and Four-wheel Drive)</b>				
Required	86	Check for leaks at drive assembly and transfer case seals; check vents; check fluid level; use proper fluid type per manufacturer specification.		
<b>Differential Case Assembly</b>				
Required	87	Check and adjust differential case fluid level; use proper fluid type per manufacturer specification.		
Required	88	Drain and refill differential housing.		
Required	89	Inspect and replace drive axle wheel studs.		
<b>SUSPENSION AND STEERING SYSTEMS</b>				
<b>General</b>				
Required	90	Research vehicle service information, including fluid type, vehicle service history, service precautions, and technical service bulletins.		
<b>Related Suspension and Steering Service</b>				
Required	91	Inspect rack-and-pinion steering gear inner tie-rod ends (sockets) and bellows boots.		
Required	92	Inspect power steering fluid level and condition.		
Required	93	Flush, fill, and bleed power steering system; use proper fluid type per manufacturer specification.		
Required	94	Inspect for power steering fluid leakage.		

Required	95	Remove, inspect, replace, and/or adjust power steering pump drive belt.		
Required	96	Inspect and replace power steering hoses and fittings.		
Required	97	Inspect pitman arm, relay (center link/intermediate) rod, idler arm, mountings, and steering linkage damper.		
Required	98	Inspect tie rod ends (sockets), tie rod sleeves, and clamps.		
Required	99	Inspect upper and lower control arms, bushings, and shafts.		
Required	100	Inspect and replace rebound and/or jounce bumpers.		
Required	101	Inspect track bar, strut rods/radius arms, and related mounts and bushings.		
Required	102	Inspect upper and lower ball joints (with or without wear indicators).		
Required	103	Inspect suspension system coil springs and spring insulators (silencers).		
Required	104	Inspect suspension system torsion bars and mounts.		
Required	105	Inspect and/or replace front/rear stabilizer bar (sway bar) bushings, brackets, and links.		
Required	106	Inspect, remove, and/or replace strut cartridge or assembly; inspect mounts and bushings.		
Required	107	Inspect front strut bearing and mount.		
Required	108	Inspect rear suspension system lateral links/arms (track bars) and control (trailing) arms.		
Required	109	Inspect rear suspension system leaf spring(s), spring insulators (silencers), shackles, brackets, bushings, center pins/bolts, and mounts.		
Required	110	Inspect, remove, and/or replace shock absorbers; inspect mounts and bushings.		
Required	111	Inspect electric power steering assist system.		
Required	112	Identify hybrid vehicle power steering system electrical circuits and safety precautions.		
Required	113	Describe the function of suspension and steering control systems and components (i.e., active suspension and stability control).		
<b>Wheel Alignment</b>				
Required	114	Perform prealignment inspection; measure vehicle ride height.		
Required	115	Describe alignment angles (camber, caster, and toe).		
<b>Wheels and Tires</b>				

Required	116	Inspect tire condition; identify tire wear patterns; check for correct tire size, application (load and speed ratings), and air pressure as listed on the tire information placard/label.		
Required	117	Rotate tires according to manufacturer's recommendations including vehicles equipped with tire pressure monitoring systems (TPMS).		
Required	118	Dismount, inspect, and remount tire on wheel; balance wheel and tire assembly.		
Required	119	Dismount, inspect, and remount tire on wheel equipped with TPMS sensor.		
Required	120	Inspect tire and wheel assembly for air loss; determine necessary action.		
Required	121	Repair tire following vehicle manufacturer approved procedure.		
Required	122	Identify tire pressure monitoring systems (indirect and direct); calibrate system; verify operation of instrument panel lamps.		
Required	123	Demonstrate knowledge of steps required to remove and replace sensors in a TPMS including relearn procedure.		
<b>BRAKES</b>				
<b>General</b>				
Required	124	Research vehicle service information, including fuel type, vehicle service history, service precautions, and technical service bulletins.		
Required	125	Describe procedure for performing a road test to check brake system operation, including an anti-lock brake system (ABS).		
<b>Hydraulic System</b>				
Required	126	Describe proper brake pedal height, travel, and feel.		
Required	127	Check master cylinder for external leaks and proper operation.		
Required	128	Inspect brake lines, flexible hoses, and fittings for leaks, dents, kinks, rust, cracks, bulging, wear, and loose fittings/supports.		
Required	129	Select, handle, store, and fill brake fluids to proper level; use proper fluid type per manufacturer specification.		
Required	130	Identify components of hydraulic brake warning light system.		
Required	131	Bleed and/or flush brake system.		
Required	132	Test brake fluid for contamination.		
<b>Drum Brakes</b>				

Required	133	Remove, clean, and inspect brake drum; measure brake drum diameter; determine serviceability.		
Required	134	Refinish brake drum and measure final drum diameter; compare with specification.		
Required	135	Remove, clean, inspect, and/or replace brake shoes, springs, pins, clips, levers, adjusters/self-adjusters, other related brake hardware, and backing support plates; lubricate and reassemble.		
Required	136	Inspect wheel cylinders for leaks and proper operation; remove and replace as needed.		
Required	137	Pre-adjust brake shoes and parking brake; install brake drums or drum/hub assemblies and wheel bearings; make final checks and adjustments.		
Required	138	Install wheel and torque lug nuts.		
<b>Disc Brakes</b>				
Required	139	Remove and clean caliper assembly; inspect for leaks and damage/wear; determine necessary action.		
Required	140	Inspect caliper mounting and slides/pins for proper operation, wear, and damage; determine necessary action.		
Required	141	Remove, inspect, and/or replace brake pads and retaining hardware; determine necessary action.		
Required	142	Lubricate and reinstall caliper, brake pads, and related hardware; seat brake pads and inspect for leaks.		
Required	143	Clean and inspect rotor and mounting surface; measure rotor thickness, thickness variation, and lateral runout; determine necessary action.		
Required	144	Remove and reinstall/replace rotor.		
Required	145	Refinish rotor on vehicle; measure final rotor thickness and compare with specification.		
Required	146	Refinish rotor off vehicle; measure final rotor thickness and compare with specification.		
Required	147	Retract and readjust caliper piston on an integrated parking brake system.		
Required	148	Check brake pad wear indicator; determine necessary action.		
Required	149	Describe importance of operating vehicle to burnish/break-in replacement brake pads according to manufacturer's recommendations.		
<b>Power-Assist Units</b>				
Required	150	Check brake pedal travel with and without engine running to verify proper power booster operation.		

