

**47.0604 Automobile Technician (ASE Certified) (2021)**

<b>Tools, Equipment, and Industry Standards</b>	<b>Brakes</b>	<b>Electrical and Electronic Systems</b>	<b>Automatic Transmissions, Transaxles, and Drivetrains</b>
Demonstrate shop and personal safety skills as recognized by industry standards. <b>A1</b>	Demonstrate and understand the fundamentals of the braking system and related service information. <b>B1</b>	Demonstrate the knowledge of the fundamentals of electricity and automotive electrical systems. <b>D1</b>	Demonstrate an understanding of vehicle automatic transmissions, transaxles and drive train components and service information. <b>F1</b>
Demonstrate knowledge and skill in the use of automotive tools and equipment according to manufacturers recommendations. <b>A2</b>	<b>Steering, Suspension and Alignment</b>	<b>Engine Repair</b>	<b>Manual Transmissions, Transaxles, and Drivetrains</b>
Demonstrate automotive industry standards and shop policies regarding customer vehicles. <b>A3</b>	Demonstrate an understanding of vehicle steering and suspension components and service information. <b>C1</b>	Demonstrate the knowledge of engine repair and related service information. <b>E1</b>	Demonstrate an understanding of vehicle manual transmissions, transaxles and drive train components and service information. <b>F2</b>
		<b>Engine Performance</b>	<b>Heating, Ventilation, and Air Conditioning (HVAC)</b>
		Understand and obtain engine performance vehicle information. <b>E2</b>	Research and understand components and service information of HVAC systems. <b>F3</b>

Orange Font = PCC Competency Code (A1 = PCC A, Competency Statement 1)

<b>Career Ready Practices* Required for ALL CTE programs.</b>
Demonstrate <b>problem solving skills</b> consistently and independently
Demonstrate <b>collaboration skills</b> consistently and independently
Demonstrate <b>personal management skills</b> consistently and independently
Demonstrate <b>communication skills</b> consistently and independently
Refer to the Career Ready Practices tab for standards and performance indicators

Career Ready Practices are required for ALL Michigan Career and Technical Education programs (reformatted 2022-print one page, landscape)

Competency	Problem Solving (PS)	Competency	Collaboration (CL)	Competency	Personal Management (PM)	Competency	Communication (CM)
<b>PS</b> Competency Statement	Demonstrate <b>problem solving skills</b> consistently and independently	<b>CL</b> Competency Statement	Demonstrate <b>collaboration skills</b> consistently and independently	<b>PM</b> Competency Statement	Demonstrate <b>personal management skills</b> consistently and independently	<b>CM</b> Competency Statement	Demonstrate <b>communication skills</b> consistently and independently
<b>PS1 Standard</b>	<b>Employ valid and reliable research strategies</b>	<b>CL1 Standard</b>	<b>Work productively in teams while using cultural global competence</b>	<b>PM1 Standard</b>	<b>Attend to personal health and financial well-being</b>	<b>CM1 Standard</b>	<b>Communicate clearly and effectively and with reason</b>
PS1A	Evaluate validity of sources	CL1A	Contribute to every team, whether formal or informal	PM1A	Understand the relationship between personal health, workplace performance and personal well being	CM1A	Communicate thoughts, ideas and action plans with clarity, whether using written, verbal and/or visual methods
PS1B	Use an informed process to research new information and test new ideas and practices	CL1B	Apply awareness of cultural differences to avoid barriers to productive and positive interaction	PM1B	Act on an understanding to regularly practice healthy diet, exercise, and mental health activities	CM1B	Communicate in the workplace with clarity and purpose to make maximum use of your own and others' time
PS1C	Discern accepting and using information to make informed decisions	CL1C	Increase the engagement and contribution of all team members	PM1C	Take regular action to contribute to personal financial well-being	CM1C	Write master conventions, word choice and organization, and use effective tone and presentation skills to articulate ideas
<b>PS2 Standard</b>	<b>Consider the environmental, social and economic impacts of decisions</b>	CL1D	Plan and facilitate effective team meetings (in person and virtual)	PM1D	Recognize that personal financial security provides the peace of mind required to contribute more fully to career success	CM1D	Interact with others; actively listen and speak clearly and with purpose
PS2A	Understand the interrelated nature of actions and their impact	<b>CL2 Standard</b>	<b>Act as a responsible and contributing citizen and employee</b>	<b>PM2 Standard</b>	<b>Plan education and career paths aligned to personal goals</b>	CM1E	Consider the audience for all communications and prepare accordingly to ensure the desired outcome
PS2B	Make decisions that positively impact or mitigate negative impact on the environment and others	CL2A	Understand the obligations and responsibilities of being a member of a community and demonstrate this understanding through interactions with others	PM2A	Take personal ownership of educational goals and career goals and regularly act on a plan to attain these goals	<b>CM2 Standard</b>	<b>Use technology to enhance productivity</b>
PS2C	Be aware of new resources, procedures, technologies, and materials and their impact on the environment, social condition and the organization	CL2B	Be conscientious of the impact of decisions on others and the environment	PM2B	Understand personal interests, preferences, and goals	CM2A	Maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems
<b>PS3 Standard</b>	<b>Utilize critical thinking to make sense of problems &amp; persevere in solving them</b>	CL2C	Identify the near-term and long-term consequences of actions and seeking to act in ways that contribute to the betterment of the team, family, community, and workplace	PM2C	Display perspective regarding the career pathways available and the time, effort, experience, and other requirements to pursue each, including the path of entrepreneurship	CM2B	Flexible and adaptive in acquiring and using new technology
PS3A	Recognize problems in the workplace, understanding the nature of the problem and devising effective plans to solve the problem	CL2D	Be reliable and consistent in going beyond the minimum expectations and participating in activities that serve the greater good	PM2D	Recognize the value of each step in the educational and experiential process	CM2C	Proficient with ubiquitous technology applications
PS3B	Recognize problems as they occur and take action to quickly address the problem	<b>CL3 Standard</b>	<b>Model integrity, ethical leadership and effective management</b>	PM2E	Recognize that nearly all career paths require ongoing education and experience	CM2D	Understand and take actions to prevent or mitigate inherent risks of technology applications both personal and organizational
PS3C	Investigate the root cause of the problem prior to introducing solutions	CL3A	Consistently act in ways that align to personal and community-held ideals and principles	PM2F	Seek counselors, mentors, and other experts to assist in the planning and execution of career and personal goals		
PS3D	Carefully consider the options to solve the problem	CL3B	Employ strategies to positively influence others in the workplace				
PS3E	Follow through with the agreed upon solution to ensure the problem is solved, either by your own actions or that of others	CL3C	Understand integrity and act on this understanding in every decision				
<b>PS4 Standard</b>	<b>Demonstrate creativity and innovation</b>	CL3D	Use a variety of means to positively impact the direction and actions of a team or organization				
PS4A	Regularly think of ideas that solve problems in new and different ways	CL3E	Apply insights into human behavior to change others' actions, attitudes and/or beliefs				
PS4B	Contribute ideas in a useful and productive manner to improve the organization	CL3F	Recognize the near-term and long-term effects that management's actions and attitudes can have on productivity, morale, and organizational culture				
PS4C	Consider unconventional ideas and suggestions as solutions to issues, tasks or problems and distinguish which ideas will add greatest value						
PS4D	Seek new methods, practices and ideas from a variety of sources and seek to apply those ideas to the workplace						
PS4E	Take action on ideas and understand how to bring innovation to an organization						
<b>PS5 Standard</b>	<b>Apply appropriate academic and technical skills</b>						
PS5A	Use knowledge and skills to be productive						
PS5B	Make connections between abstract concepts and real-world applications						
PS5C	Make correct insights and apply academic skills in the workplace as appropriate						

**COLOR KEY**

**Problem Solving (PS) Standards**  
PS1, PS2, PS3, PS4, PS5

**PS Performance Indicators:**  
PS1A-1C, PS2A-2C, PS3A-3E, PS4A-4E, PS5A-5C

**Collaboration (CL) Standards**  
CL1, CL2, CL3

**CL Performance Indicators:**  
CL1A-1E, CL2A-2D, CL3A-3E

**Personal Management (PM) Standards**  
PM1, PM2

**PM Performance Indicators:**  
PM1A-1E, and PM2A-2E

**Communication (CM) Standards**  
CM1, CM2

**CM Performance Indicators:**  
CM1A-1E, CM2A-2D

Source:  
<https://careertech.org/career-ready-practices>