Assessment Guide

Program or Discipline: Automotive Technology Division: Advanced Technology

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This guide is intended as a tool to help you plan assessments of student learning for the purpose of planning improvements—to identify where students may hit bumps in the road, or where course scope or sequence may not be aligned with program learning outcomes or the core abilities. You may want to start with concerns about some part of your curriculum. The assessment process may also help you identify where students are achieving outcomes at higher rates than you expected.

Part 1: Student Learning Outcomes – Determine Expectations (CONTENT to be assessed)

Process	Program or discipline response
A. List expected learning outcomes. (Describe knowledge, skills, abilities, or attitudes upon completion of program or significant discipline work)	The graduate of the Associate of Applied Science degree or the Two-Year Certificate of Completion will: • use automotive service resources to complete lab projects and become familiar with computer accessed information, internet accessed information and information available in print related to automotive repair. • be able to perform computations for gear ratios, engine displacement, electrical circuits, power output, vehicle alignment angles, conversion between the metric system and standard system, and use of precision measuring tools. • diagnose and repair current vehicles using advanced diagnostic tools and equipment. • successfully complete ASE certification tests. • demonstrate and use industry safety standards. • access library, computing, and communications services and obtain information and data from regional and national networks. • interpret the concepts of a problem-solving task and translate them into mathematical equations.

Process	Program or discipline response

B. Identify where expected outcomes are addressed in the curriculum. In which courses will students demonstrate each program/discipline outcome?

Automotive Technology	Program Courses									General Education								
	AM 143 Brakes	AM 145 Engine Repair	AM 147 Suspension and Steering	AM 149 Manual Drive Train and Axles	AM 242 Automatic Transmissions/Transaxle	AM 243 Electrical and Electronic Systems	AM 244 Engine Performance	AM 246 Heating and Air Conditioning	AM 280 Cooperative Education*	HE 125 Workplace Safety HE 252 First Aid	WR 115W Intro to College Writing	WLD 121 Shielded Metal Arc Welding 1	Sp 100 Basic Communications	SP 105 Listening & Critical Thinking	SP 218 Interpersonal Communications	CS 120 Concepts of Computing	CG 203 Human Relations at Work	MTH 076 Applied Geometry for Technicians	EET 129 Electrical Theory 1 Physics Elective
Associate Degree Credit Hours (107 Total Credits)	8	12	6	6	12	12	12	4	3	3	3	4	4			4	3	4	4
Certificate Credit Hours (96 Total Credits)	8	12	6	6	12	12	12	4											
Program Learning Outcomes																			
Demonstrate employability skills required for initial employment and advancement in the industry that include: attendance, proper attire, customer relations, following directions, working in teams, and understanding work rules and ethics.	P	P	P	P	P	P	P	P	P	S		P	P			S	P		S
Demonstrate safe work practices and tool usage while performing operations in a shop environment.	P	P	P	P	P	P	P	P	P	P		P							S
Demonstrate technical skills and knowledge to pass the certification exams in the eight areas of Automotive Service Excellence Standards: Electrica/Electronic Systems, Automatic Transmissions/Transaxle, Manual Drive Traine and Axles, Suspension and Steering, Brakes, Heating and Air Conditioning, Engine Performance, and Engine Repairs.	P	P	P	P	P	P	P	P	S			S						S	P
Demonstrate technical abilities in researching, accessing and interpreting written, computer program or web-based reference materials to service and repair automobiles.	P	P	P	P	P	P	P	P	S		S			P		S			
Perform computations for gear ratios, engine displacement, electrical circuits, power output, vehicle alignment angles, conversion between the metric system and standard system, and use of precision measuring tools.	P	P	P	P	P	P	P	P	S									P	P
Diagnose and repair current model vehicles using advanced diagnostic tools and equipment.	P	P	P	P	P	P	P	P	S							S			
Core Abilities																			
Communicate effectively.	P	P	P	P	P	P	P	P	P		P	S		P			P	S	S
Think critically and solve problems effectively.	P	P	P	P	P	P	P	P	S		S	S		P		P	P	P	P
Increase understanding of the relationship between self and community, including self-awareness and personal responsibility.	S	S	S	S	S	S	S	S	P					P			P		
Explore academic disciplines of liberal arts, social sciences, and physical sciences.										P	P	S		P		P	P	P	P
Learning College Principles																			
Learners are active partners in the learning process.	P	P	P	P	P	P	P	P	P										
Learners are self-directed.	P	P	P	P	P	P	P	P	P										
Multiple learning options for diverse learners.	S	S	S	S	S	S	S	S	P										
Learning is promoted across organizational boundaries.	S	S	S	S	S	S	S	S	P										
Learning is substantive and documented.	P	P	P	P	P	P	P	P											
Assessment Methods																			
Technical Skill Performance Observation/Evaluation	P	P	P	P	P	P	P	P											
Employability Skills Evaluation	S	S	S	S	S	S	S	S	P										
Group Project																			
Journaling																			
Library Research																			
Oral Report/Presentation																			
Peer Assessment																			
Portfolio																			
Pre and Post Test																			
Project Evaluation																			
Quizzes																			
Self Assessment																			
Written Report																			
Written Tests/Examinations																			

P = this is a primary course for meeting the program learning outcome, core ability, learning college principle, or assessment method.
S = this course meets some of the program learning outcome, core ability, learning college principle or assessment method.

Part 2: Assessment Methods – Determine Timing, Cohort(s), Assign Responsibility (PEOPLE assignments)

Process	Program or discipline response
C. Determine at least two methods to assess each outcome at the end of the program with at least one direct assessment of learning.	Students are directly assessed using quiz and test scores that relate to automotive theory and design. Homework and interactive problem solving assignments are given and graded through online data base. Students are also assessed using the NATEF task list as a guide. Each task involves hands on diagnosis and repair of vehicles. As a student completes a task they are graded on their performance as follows. Performance and Standards: A student performance is graded with the traditional letter grade system. A= Exceeds Expectations minimal supervision required B= Moderately Skilled has practiced tasks independently C=Limited Exposure additional training required D/F= Limited Exposure no training completed in this area Indirect assessment will come from employers involved with students in Cooperative work program or internship.
D. Describe level of expected performance, including conditions of assessment and criteria for success.	The graduate will use automotive service resources to complete lab projects and become familiar with computer accessed information, internet accessed information and information available in print related to automotive repair. The graduate will be able to perform computations for gear ratios, engine displacement, electrical circuits, power output, vehicle alignment angles, conversion between the metric system and standard system, and use of precision measuring tools. The graduate will be able to diagnose and repair current vehicles using advanced diagnostic tools and equipment. The graduate will be prepared to successfully complete ASE certification tests. The graduate will be able to demonstrate and use industry safety standards.
E. If appropriate for key course sequences, identify assessment methods for learning outcomes.	The student will be graded on attitude, attendance, test scores, personal habits, cleanliness of area, productivity, initiative, judgment, and quantity and quality of work complete. **Theory**: Computer-Based Training quizzes, and work sheets will represent 20% of

	the final grade. **Lab** :Several lab projects will be given and will represent 40% of the final grade. Lab project grades will be broken down as follows: **Quality of work:** Uses manuals and service information efficiently, uses proper tolls, treats vehicle as their own, shows genuine concern for quality. **Personal habits:** Cleanliness of work area, organization, care of tools and equipment, use of safe working procedures, proper dress. **Attitude:** Cooperative, takes positive approach, works well with others, takes pride in work. **Judgment:** Knows their limits, requests help when needed, usually makes the right decisions, handles problems constructively. **Initiative:** Does all assigned work, proceeds well on their own, manages time wisely, seeks other work when assignments are completed. **Productivity:** Efficient work habits, looks for work, keeps busy, puts in full day, plans work in advance. **Participation/Attendance:** A time clock will be used to punch in and out for Theory and LAB. This grade is dependent on participation, communication Teamwork and attendance which is calculated by the number of hours present divided by the number of hours available for the week. This will account for 20% of their Final Grade. **Exams:** Four End-of-Module exams will be given throughout the term and will count for 20% of their final Grade. **Specific Performance Outcomes:** Upon successful completion of this course (entry level ASE apprentice standard), the student should be able to:

	Comply with personal and environmental safety practices associated with clothing; eye protection; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations.
F. If appropriate, identify and collect baseline information on entering students.	All students are given one or more pretests at the beginning of each course before they are allowed access to their online resource, instruction and homework data base. This allows the instructors to identify the different learning needs of individual students.
G. Establish a 3-5 year schedule for assessment, including who will interpret results. Which students will be assessed? When will the assessments take place? Which outcomes will you assess this year? (Suggestion: assess a maximum of 3 outcomes per year, except in specially accredited career technical programs)	Long term assessment will come from employer and graduate feedback. Both participate in the advisory committee and report back as a group several times a year. ASE certification is expected 1-2 years after graduation once the student has met the work experience requirements. ASE tests are proctored at the University of Oregon and are given several times a year.
H. Determine how you will assess outcomes on an annual basis. Who will conduct the assessments? Who will tabulate data? Who will analyze the results? When will the work be completed?	Long term assessment will come from employer and graduate feedback. Both participate in the advisory committee and report back as a group several times a year. ASE certification is expected 1-2 years after graduation once the student has met the work experience requirements. After initial certification, certified technicians will recertify every 4 years through ASE.

3. Now you have a plan to implement—go forth and assess!

Part 4: Closing the Loop – Interpreting and Sharing Results to Enhance Institutional Effectiveness (COMMUNICATION)

Process	Program or discipline response
I. Identify the next steps, including any planned changes to curriculum or pedagogy. What do you expect to learn from these assessment efforts? Determine how and with whom you will share interpretations.	These interpretations will be shared with fellow faculty members and the Division Dean