



Full Service Auto, Action Skills – Illinois*

Individual | Skilled and Technical | Transportation, Distribution and Logistics

To demonstrate those skills that are beneficial in successful automotive service employment.

Eligibility

Open to active SkillsUSA members enrolled in career and technical programs with automotive technician or automotive service technology as the occupational objective. A letter from an appropriate school official on school letterhead stating that the competition is classified under the provisions of Public Law 105-17, Individuals with Disabilities Education Act, 1997, is required for participation.

State/schools with restrictions on release of this information may submit a letter of eligibility that simply states, "I certify that (student's name) meets the eligibility requirements for the SkillsUSA Illinois Full-Service Auto career competition." The letter must be signed by the school official, who must also include their title. The eligibility letter must be submitted at the orientation meeting and/or during the registration process. Instructions will be provided to the chapter advisor.

Standards and Competencies

FSA 1.0 – Tire Changing

FSA 2.0 – Electrical Area

FSA 3.0 – Underhood Area

FSA 4.0 – Lighting Area

FSA 5.0 – Wiper and Tire Condition Area

FSA 6.0 – Technical Information

FSA 7.0 – Tool Identification

FSA 8.0 – SkillsUSA Framework

Scope of the Competition

Knowledge Performance

Professional Development Career Readiness Assessment – Assess preparedness to enter the workforce as defined by the SkillsUSA Framework which identifies skills that are essential for success in the workplace and life.

There is no written technical skill knowledge exam for this competition.

Skill Performance

The competition will include a series of workstations.

Competition Guidelines

Competition Outline – The following sample competition outline will be followed.

1. The greeting
2. Professional operation of equipment
3. Underhood checks
 - a. Check engine oil
 - b. Check transmission oil
 - c. Check coolant level and freezing point
 - d. Describe battery visual condition
 - e. Check belts
 - f. Check wiper fluid
 - g. Check power steering level
 - h. Check brake fluid
4. Minor repairs
 - a. Change headlight and/or taillight bulb
 - b. Replace wiper blades and fill washer fluid
 - c. Check and replace fuses
 - d. Determine battery condition with a voltmeter
 - e. Remove and replace a wheel/tire on a vehicle
 - f. Evaluate tire condition and wear problems
5. Technical information
 - a. Locate general auto specs
 - b. Locate service procedures
 - c. Find part numbers
 - d. Identify common automotive hand tools

Clothing Requirements

Class D: Contest Specific — Blue Attire

- Official SkillsUSA light blue work shirt
- Navy pants.
- Black, brown or tan leather work safety shoes (with protective top cap).

Note: Safety glasses with side shields or goggles (prescription glasses may be used only if they are equipped with side shields. If not, they must be covered with goggles).

Equipment and Materials

1. Supplied by the technical committee:

- a. All necessary equipment for the competition
- b. All necessary service publications

2. Supplied by the competitor:

- a. safety glasses
- b. a #15 Torx driver screwdriver
- c. a fuse puller
- d. a 12 volt probe or test light
- e. a multi-meter
- f. a tire pressure gauge
- g. a Phillips screwdriver
- h. All competitors must create a one-page resume and submit a hard copy. Failure to do so will result in a penalty.

Observer Rule

No observers shall be present during the actual judging unless permitted by competition supervisor.

Committee Identified Academic Skills

The technical committee has identified that the following academic skills are embedded in this competition.

Math Skills

- Use fractions to solve practical problems.
- Use proportions and ratios to solve practical problems.
- Use scientific notation.
- Solve practical problems involving percent's
- Measure angles
- Find surface area and perimeter of two-dimensional objects
- Find volume and surface area of three-dimensional objects
- Apply transformations (rotate or turn, reflect or flip, translate or slide, and dilate or scale) to geometric figures.
- Solve problems using proportions, formulas and functions

- Use laws of exponents to perform operations

Science Skills

- Use the knowledge of potential and kinetic energy
- Use the knowledge of mechanical, chemical and electrical energy
- Use the knowledge of temperature scales, heat and heat transfer
- Use the knowledge of principles of electricity and magnetism
- Use the knowledge of static electricity, current electricity and circuits
- Use the knowledge of magnetic fields and electromagnets
- Use the knowledge of motors and generators

Connections to National Standards

State-level academic curriculum specialists identified the following connections to national academic standards.

Language Arts Standards

- Students read a wide range of print and nonprint texts to build an understanding of texts, of themselves and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works
- Students apply a wide range of strategies to comprehend, interpret, evaluate and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics)
- Students adjust their use of spoken, written and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes
- Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes
- Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language and genre to create, critique and discuss print and nonprint texts
- Students conduct research on issues and interests by generating ideas and questions and by posing problems. They gather, evaluate and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts and people) to communicate their discoveries in ways that suit their purpose and audience
- Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge
- Students use spoken, written and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information)

Source: IRA/NCTE Standards for the English Language Arts. To view the standards, visit: www.ncte.org/standards.

Math Standards

- Numbers and operations.
- Algebra
- Geometry.
- Measurement.
- Data analysis and probability
- Problem solving.
- Communication.
- Connections.
- Representation.

Source: NCTM Principles and Standards for School Mathematics. To view high school standards, visit: standards.nctm.org/document/chapter7/index.htm. Select "Standards" from menu.

Science Standards

- Understands the structure and properties of matter.
- Understands the sources and properties of energy.
- Understand forces and motion
- Understands the nature of scientific inquiry.
- Understand the scientific enterprises

Source: McREL compendium of national science standards. To view and search the compendium, visit: www.mcrel.org/standards-benchmarks.