2026 OKLAHOMA SLSC STATE MEMO

Robotics & Automation Contest Information

NO SUBSTITUTIONS WILL BE ALLOWED AFTER FRIDAY, MARCH 27, 2026

THERE WILL BE NO SUBSTITUTIONS ALLOWED ON-SITE AT THE CONFERENCE

Please double-check all registrations prior to the deadline. This includes secondary versus postsecondary as well as contests

***Contest will follow national technical standards unless otherwise stated in the state memo.**

The 2026 Oklahoma SkillsUSA contest will be held April 20th and will be hosted at the Arvest Center, 100 Civic Center, Tulsa, OK 74103

CONTEST FEES

In addition to the regular conference registration, there will be a lunch fee of $25.00.This fee will be added to the contestant's registration when it is completed online.

SETUP

Contestants will need to move into the Conference Hall at 2 p.m. Sunday to set up equipment and allow maximum time for the contest on Monday. No guarantee of equipment safety can be made, but a security guard will be on hand all night with orders to allow no one in until state staff arrive.
Present this memo to security or state staff as your pass to accompany your contestants to the Robotics and Automation Technology contest area only.

CONTEST

The contest orientation will begin at 8 a.m. **SHARP**. Any contractors or industry representatives present who wish to speak to the contestant group may leave their information with the contest chair. Contestants will receive this information and have a potential employment opportunity.

The contest will follow immediately after or by 9 a.m.

RESUME

All contestants will submit a digital resume prior to contest day. Contestants will receive an email to the address used to register the contestant for contest with instructions and link to access the SkillsUSA Competitor Portal page. The email will contain contestant's username and contestant number, which are required to login to the Competitor Portal.

CONTEST TESTING

Contestants will be judged on their SkillsUSA knowledge through the Professional Development test and a knowledge test based on their contest area, unless otherwise stated in the state memo.

Contestants will NOT be allowed to use cell phones or other electronic communication devices during the contest and will be disqualified for doing so.

LUNCH

A box lunch is included in contest registration/lunch fee for contestants. Also a box lunch will be provided for judges.

It is recommended to bring bottled water and snacks (energy bars, etc.) to tide contestants over until lunch

INDUSTRY AWARDS

*****NEW 2026- ADVISOR MEDALS WILL NOT BE PROVIDED BY OKLAHOMA SKILLSUSA, BUT WILL BE AVAILABLE FOR PURCHASE IN THE SKILLSUSA STORE**

*****Prizes are the responsibility of the individual contests. Prizes are not guaranteed and are not supplied at the SkillsUSA Oklahoma state level.**

Each participating school is expected to furnish an industry award. Industry awards should be labeled with the name and address of the award supplier so that an appropriate "Thank you" may be sent, must be accompanied by an *industry award donation information sheet* (available on the Oklahoma SkillsUSA website). **Please bring prizes to the awards area at the Arvest Convention Center Tulsa Ballroom on Sunday, April 19th between 12-4pm or Monday, April 20th between 8am-4pm.**

AWARDS CEREMONY

Winners will be recognized at the General Session on Monday night, April 20th, at 7pm, or Tuesday morning, April 21st at 9am. ***(please pick the correct awards ceremony for your contest)***

All competitors must wear official SkillsUSA dress to the Awards Session, where winners are announced. Competitors who are not dressed appropriately or lack official attire will be denied access to the awards stage. Students must be present when their contest is announced. If a student is improperly dressed, absent, or misses their contest being called, the production will not be paused for any reason, and they will forfeit their opportunity to go on stage to receive the award. No exceptions will be made. No hats or sunglasses will allow to be worn on stage.

- Official dress for men: Official blazer, jacket or sweater; black dress slacks; white dress shirt; plain black tie with no pattern or SkillsUSA black tie; black socks and black shoes.
- Official dress for women: Official blazer, jacket or sweater; black dress slacks or knee-length skirt with business like white, collarless blouse or white blouse with small, plain collar that may not extend onto the lapels of the blazer, and black dress shoes.

Please see the National SkillsUSA clothing guidelines as needed

TOOLS AND SUPPLIES

Rather than require exact equipment (some suggestions are presented below), the Technical Committee will specify a list of capabilities and functions the teams may be required to demonstrate. This list should remain consistent from year to year and represent typical process to be performed and general capabilities and let each participant bring sufficient equipment to complete the process to given specifications. Exact performance required at the competition will vary yearly but will be drawn from the capabilities specified.

SUPPLIED BY CONTESTANT TEAMS:

Equipment sufficient to fulfill the manufacturer's requirements. Required equipment will vary with the individual abilities of specific equipment, but a suggested list is presented below.

Servo Robot with controller and programming software
Appropriate tools

- VOLT-OHM-MILLIMETER (VOM OR DMM)
- MANUALS FOR EQUIPMENT
- EYE PROTECTION WITH SIDE SHIELDS
- ROLL OF MASKING TAPE
- PENCILS / PENS

CLOTHING REQUIREMENTS

Contestant will follow official contest dress as described in the national technical unless otherwise stated in the state memo. Students can not wear any identifying information on their uniform that will associate them with a school or technology center.

Please see the National SkillsUSA clothing guidelines as needed

CELLPHONES AND OTHER SMART DEVICES

Cellphones, electronic watches and/or other electronic devices not approved by a competition's technical committee are NOT allowed in the competition area. Please follow the guidelines in each technical standard for approved exceptions. Technical committee members may also approve exceptions onsite during the SkillsUSA Championships if deemed appropriate.

CONTEST DESCRIPTION AND SCORING

TASK OVERVIEW

The team must create a robotic work cell that separates metallic and non-metallic blocks from a randomized stack of blocks. Each time a NON-metallic block is identified, an LED must light up for two seconds and the robot must place the NON-metallic block into a separate vertical stack. After two metallic blocks are identified, they must be assembled together by inserting an allen wrench in the aligned hole of the two metallic blocks. Once the allen wrench is inserted, the robot will pick up the "assembly" and place it to the side, and prompt the operator "Assembly Complete", and then return to the randomized stack of blocks to resume the process. After 3 successful "Assemblies", the robot task is complete. Judges will then alter/bug/delete one line of programming on the robot, and the team will be asked to fix the issue and run their program again.

PROCESS SPECIFICATIONS

The robot must begin in the HOME position
An LED must be properly wired into the robot controller
An inductive sensor must be properly wired into the robot controller
All program lines must be properly named to identify their action for t-shooting
The vertical stack of blocks will contain at least 6 blocks (metallic and/or non-metallic)
When a NON-metallic block is detected, an LED must illuminate for 2 seconds
NON-metallic blocks will be stacked vertically in a separate tower
Metallic blocks have a 10 mm hole in them, and the holes of the blocks must be aligned
After two metallic blocks are detected, the robot must immediately begin "assembly"
The robot "Assembles" two metallic blocks by inserting an allen wrench into the hole
The robot will prompt the operator "Assembly Complete", and wait for operator input
The judges will clear the "Assembly" and then allow the robot program to resume
The robot must create 3 of the "Assemblies" and then prompt "Task Complete"

Special Conditions:
If no metallic blocks are detected after 6 blocks are stacked, the robot must return to the HOME position and prompt the operator "No Metal" before it can resume.
After the robot successfully completes 3 "Assemblies", judges will alter/bug/delete one line of programming and the team will be asked to fix the issue and then run the program again.

The contest will consist of an online SkillsUSA (PDP) knowledge test, online written test covering knowledge of robotics concepts and practices, and practical hands- on activities that will measure the contestants' skill in common robotics and automation tasks. The written test will contribute 10 percent to the total score and 87.5 percent will be divided among the various practical tasks as assigned by the technical committee. The SkillsUSA PDP test accounts for 2.5 percent, which is consistent with National SkillsUSA competition.

Judges will supply a 4 mm allen wrench, metallic blocks, non-metallic blocks, LED, and inductive sensor
Judges must be able to place the workpieces in order of depalletization at the beginning of the process
Judges will test depalletizing using no metal blocks, all metal blocks, and mixed blocks
The program should be less than 100 lines
After completion, judges will "bug" the robot by changing one aspect of the programming
Teams must then identify what has changed, correct the change, and then run the

process again.

ADDITIONAL INFORMATION

If you have any questions about the contest, please contact **James Peterson (Trade Chair), Ben Morgan (Program Specialist).**
National Technical Standards can be found on Pathful, which you can access with your professional SkillsUSA membership. Technicals are updated periodically, please check regularly.

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