

Robotics & Automation Technology



Purpose - To evaluate each contestant's preparation for employment in the emerging arena of robotics and automation with emphasis on the team approach to problem-solving in a work environment. To recognize outstanding performance in the use of new work styles and technology by contestants.

<p>Contest Location</p>	<ul style="list-style-type: none"> ▪ C-Hall <p>** Contest in A, B, C or D Hall will not be able to leave for lunch, please select "Contestant Plus" when registering or having contestant prepared to purchase lunch with credit card at vendors in the Exhibit Hall.</p>
<p>Special Notes</p>	<ul style="list-style-type: none"> ▪ In view of the complexity and length of this contest, it will be necessary to be ready to start the contest on time and it is required that your equipment is setup and checked out before the contest starts. Your instructor may enter the contest area the morning of the contest, before it starts, for the purpose of setting up your equipment and ensuring its serviceability. ▪ All robots must be either in a safety enclosure, have an area scanner, or have a light stack indicating its run status. ▪ Devices supplied by the technical committee will not be disassembled or opened for any reason unless explicitly directed to do so by the contest officials. Disqualification will result if this is not adhered to. ▪ No smart watches and/or phones are permitted during the contest and/or in contest. ▪ No contact with anyone outside of the contest area once the contest begins. ▪ No inappropriate communication between contestants such as verbally degrading another contest. ▪ No cheating on any portion of the contest such as informing another contestant of the skills/test prior to competing.
<p>Testing</p>	<ul style="list-style-type: none"> ▪ N/A

<p>Eligibility</p>	<ul style="list-style-type: none"> ▪ One (1) team (2 person) from each school that has registered for this contest on the regional registration form.
<p>Clothing</p>	<ul style="list-style-type: none"> ▪ <u>Work/School Attire</u> – School uniform with all identifying logos/markers covered (no jeans) or appropriate work attire: no jeans, no tennis or open toe shoes. Shirts <u>cannot</u> have logos, slogans or pictures, school names and should be covered. Loose fitting clothing must be secure. Safety glasses are <u>required</u> and must meet SkillsUSA Technical Standards.
<p>Provided by Contestant (Tool List)</p>	<ul style="list-style-type: none"> ▪ Industrial Robot (6-Axis) with safety enclosure, area scanner, or light stack and gripper with the ability to open at least ½” (any collaborative robots must use a teach pendant. You may NOT manually move the robot into position ▪ Access to a minimum of 6 I/O points (3 In/3 Out) ▪ Air Supply (if required for End-of-Arm-Tooling) ▪ Small Phillips and Straight Screwdriver ▪ Wire Cutters ▪ Wire Strippers ▪ Pliers ▪ Needle Nose Pliers ▪ Measuring device (tape measure, calipers, ruler, etc.) ▪ 12” Straight Edge ▪ Painters/Masking Tape ▪ Two (2) or more pens/pencils (sharpened) ▪ Laptop ▪ Safety Glasses ▪ One hard copy of a 1-page typed resume <p>*Contest evaluator will supply the objects for the competition.</p>
<p>Competition Standards (Not all will be tested but contestant should be knowledge of all)</p>	<ul style="list-style-type: none"> ▪ RAT 1.0 – Demonstrate knowledge in safety rules and practices ▪ RAT 2.0 – Demonstrate ability to read and interpret electrical drawings ▪ RAT 3.0 – Produce examples of basic programming and flowcharting in a given scenario ▪ RAT 4.0 – Demonstrate electrical wiring in a robotic work cell ▪ RAT 5.0 – Install and adjust any devices provided ▪ RAT 6.0 – Create appropriate demonstration used in a robotic work cell ▪ RAT 7.0 – Write and verify a robot and PLC program

Resume

- In conjunction with National Standards, violations may result in student loss of contest.
- All SkillsUSA Ohio State Championship Contest will require a short interview component. Students should be prepared with basic job interview skills.