MECHATRONICS

ELIGIBILITY (Team of 2)

Open to active SkillsUSA members enrolled in programs with mechatronics as the occupational objective.

CLOTHING REQUIREMENTS

Home school uniform or Official SkillsUSA khaki work shirt and pants, black or brown leather work shoes, and safety glasses with side shields or goggles. (Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles.)
Note: At the district level if a student is not able to wear the official SkillsUSA attire he/she may wear an outfit that would be acceptable in their specific field of study. Please keep in mind that official SkillsUSA attire will be required at the state and national level.

EQUIPMENT AND MATERIALS SUPPLIED BY HOST

1. All task/project drawings, instructions, and procedure expectations.

EQUIPMENT AND MATERIALS SUPPLIED BY CONTESTANT

1. All students must have a one-page, typewritten resume.
2. Pencil, or pen
3. Safety glasses
4. Calculator
5. Multimeter

SCOPE OF THE CONTEST - (DEFINED BY THE NATIONAL COMPETITION REGULATIONS)

(District Competitions are meant to be a scaled down version of National Competition. It is important for the students to participate in a competition that will reflect a cross-section of the industry skills needed to prepare them for the state and national levels)
The contest will assess the ability to perform jobs or skills selected from the following list of competencies.

KNOWLEDGE PERFORMANCE

Complete a comprehensive written assessment in Mechatronic Technology.

SKILL PERFORMANCE

Teams will be required to understand Mechatronic systems according to printed directions and drawings. The contest shall consist of mechanical, pneumatic, electrical and control systems that must be assembled, wired, adjusted and tested for proper operation. Contestants will be judged for accuracy and neatness, as well as general interdisciplinary knowledge of the individual technologies and how they interact in an integrated system. In order to successfully complete, teams must demonstrate ability in the following areas:

1. Interpret mechanical drawings, electrical circuit diagrams and/or pneumatic circuit diagrams
2. Troubleshoot PLC system problem(s)
3. Create a schematic from a working circuit

MECHATRONICS

4. Complete a troubleshooting exercise to find faults in a system.

MECHATRONICS SCORING SHEET

Items Evaluated	Possible Points	Contestant Points
Written test	100	
Electrical Control Circuit	100	
Fluid Power Lab	100	
PLC Lab	100	
Mechanical Components	100	
	Subtotal = 500	
No Resume	Deduction -10	
Safety Penalty	Deduction - 10	
Clothing Penalty	Dedication -10	
	TOTAL	

Note: No cell phones or other electronic devices may be used at any time during a competition; this includes using a calculator function on a cell phone for competitions in which calculators are permitted.

Note: Scorecards should only be used as guidance. Changes may occur.