

**Missouri  
SKILLS USA**

**2019**

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**CNC  
Turning & Milling  
Skills Contest**

Hosted By **State Technical College of Missouri**

## **Skills USA State Competition 2019 CNC Milling & Turning Contest**

### **Contest Objective:**

This contest is to evaluate contestants in preparation for employment in CNC Technology.

### **Contest Times:**

Pre-Contest: 8:00 am – 9:00 am (Friday, April 5<sup>th</sup>, 2019)

Programming: 9:00 am – 11:30 am

Lunch 11:30- 12:00

Program debug and execution 12:00-3:00

### **Contest Guidelines**

Typewritten resume (due at Pre-Contest meeting)

All competing Skills USA team members of the CNC turning and Milling competition@ State Tech will report to proper location at proper times or be disqualified from competition if tardy.

#### **Pre Contest 8:00-9:00**

Contestants will be given a number at the pre contest along with contest exams. Attendance will be taken and resumes submitted.

#### **Programming 9:00-11:30**

Contestants will be provided with dimensioned drawings of parts to produce when the competition is scheduled to begin.

Each participant will be given 2 hrs. to hand program the assigned part on windows 7 notepad software. The program will be saved on a flash drive.

#### **Program debug and execution 12:00-3:00**

Each contestant will be allowed 30 minutes to debug and run their program.

Contestants will be selected by number to debug (Setting graph on Haas) and run their program.

No program will be run until setting graph approved.

Mill tools and work offsets will be pre-set by the judges.

Lathe tooling and offsets will be pre-set by the judges.

Only 3 contestants at a time milling and 3 contestants at a time turning.

The final g-code program on the flash drive and part (with contestant #) must be submitted to the judges.

Fill out and return student survey.

Judges will monitor all portions of the competition.

When contestants finish machining parts or time is called, they will present to the judges in a timely fashion: all documentation required for the competition & parts w/ contestant #s written on parts w/ a permanent marker for evaluation.

**Materials Supplied by Contestants:**

- Safety glasses with side shields
- 0-1" micrometer **Optional**
- 6" caliper (digital or dial) **Optional**
- Non-programmable calculator **Optional**
- Pencils and paper
- Machinery's handbook **Optional**
- Deburring tools (files, Emory cloth, etc.) **Optional**

**Materials Supplied by Contest Host:**

- Cutting Tools- Mill/Lathe
- Vertical Machining Center w/ vise
- Part Material for contest
- 1 Flash drive **(to be return to judges upon contest completion)**

**Contest Notes:**

Only HAAS machines will be available for the contest.

A viewing area will be roped off within the contest area. NO ONE will be allowed past this area except contestants, judges, and committee members. Thank you for your cooperation.

If a technical problem should arise w/ any equipment malfunction during the contest, the contestant should notify the acting chairman or a judge. If it is decided from that a malfunction has actually occurred, time will be stopped from that teams allotted time and the malfunction will be reconciled or an alternate piece of equipment will be used for the time that is remaining for the contestant. If any contestant argues or upsets any judges or helpers that contestant will be disqualified.