

2024 Precision Machining State Contest Information

Revision Date 3/7/2024

Date, Time and Location

The 2024 State SkillsUSA Precision Machining Skill Championships will be held Tuesday April 16th, at Francis Tuttle Technology Center, 3500 NW 150th, OKC, OK 73134. The contest orientation will begin promptly at 8:00 a.m., and the contest will start at 8:30 a.m.

For safety purposes each contestant is to have a copy of their Personal Medical and Liability Release form with them at the contest site. The form is to be given to the contest chairman prior to the start of the contest. You must use the form found on the SkillsUSA web site.

Medical Forms and Resumes

The state supplied medical forms **are required. No others will be accepted at the contest.**

All contestants will be required to submit a typed resume. If any contestant does not submit a resume to the contest chair, penalty points will be assessed.

Transportation

You must provide your own transportation to the contest. Due to the rising cost of transportation...there will be **no transportation provided.**

Lunch

A lunch break will be provided and students will be expected to remain on campus for lunch.

Clothing Requirements

Jewelry including rings and watches are not allowed during the contest and long hair must be secured back. Contestants should not wear clothing that has school identification visible to the judges. Those contestants wearing program uniforms will need to cover all identifying patches. **Proper clothing includes name badges placed on chest left hand pocket area.**

Awards Ceremony

Contest winners will be recognized during the Awards Assembly at 9:00 a.m. on Tuesday, April 23rd, in the Arena at the Tulsa Convention Center. **OFFICIAL SkillsUSA ATTIRE IS REQUIRED!** According to the SkillsUSA Championships Technical Standards - clothing requirements are as follows: "*For men:* SkillsUSA official attire: Official red blazer or jacket, black dress slacks, white dress shirt, plain black tie with no pattern or SkillsUSA tie from Midwest Trophy, black socks and black shoes. *For women:* Official red blazer or jacket, black dress slacks or skirt, with businesslike white, collarless blouse or white blouse with small, plain collar that may not extend onto the lapels of the blazer, black sheer or skin-tone hose and black shoes." Any contest winner who is not in official SkillsUSA attire will not be permitted on stage. The student will be escorted behind the stage to receive his or her medallion and awards. The awards

ceremony is the **"Showplace"** of our state conference, and many industry guests and VIP's are invited to present medallions and honor our students.

Judges

Additional judges are needed...please contact Julia southern, julia.southern@francistuttle.edu, with the names of those that can assist.

Rules and Regulations

There will be no national contest for manual machining this year however, we will follow the national rules, regulations, as closely as possible.

Material will not be provided. Each contestant will need to bring his or her own material

Tools and Supplies

Continue to check this page until April 1st to confirm any materials to be supplied or to be brought.

<p>Mill</p> <p>The mill project will be made of aluminum. The part will finish at 3.0x4.0 the thickness will be machined at contest so bring 1.0 material</p> <p>**Tools required:</p> <p>Face mill or fly cutter - 3" Max diameter End mills; 3/8", 1/4" & 1/2" Center drill, Drill bits; #7", 1/4x20 tap Set of Parallels Edge finder, tap handle, tap guide.</p>	<p>Lathe</p> <p>The Lathe project will be made of 12L14 or 1045 cold rolled steel material . The material can be faced to 7.0 long with a 2.0 dia.</p> <p>**Tools required:</p> <p>Center Drill, Facing & turning tool, Threading tool, Grooving tool; .125" wide max. 1.375x12 and 1.125x12 tpi nut. Tool shank size is 3/4 max.</p>
<p>Measurement & Inspection</p> <p>Steel ruler; 6" and 12" OD Mic's, 0-1" (.0001 scale) & 1-2" (with standards) 6" Caliper 1-2" OD Blade Mic (can use 6" caliper) Depth Mic with standards;</p>	<p>Other tools/Equipment</p> <p>- Pencil - Paper - Calculator - Machinist Handbook or Shop Reference for Students and Apprentices - De-burring tools - State Medical release form - Safety glasses with side shields. 0-1 OD micrometer 1-2 OD micrometer, dial calipers, steel ruler, Thread pitch gauge, Thread fish,</p> <p>**And any other tools you think you might need</p>

Tool list and information

Each contestant will be required to bring toolboxes and their tools. Contestants should bring a Minimum of the tools listed above. Each contestant will need to bring their own tools. Must bring a 1.375x12 tpi and 1.123 x 12 tpi nut for a gauge. Gauge nut will remain with part through inspection. Sharing boxes or tools will not be allowed.

Safety

For safety reasons side shields and safety glasses are required. The maximum rpm are on the mill 1500 rpm and the lathe 650 rpm. Any minor safety violations there will be one verbal warning, one warning with 25pts off and on the third violation disqualification. Major violations will deem automatic disqualification at judge's discretion.

Equipment

Machines used during contest will be Kingston HJ1100 engine lathes and Kingston knee mills. Both lathes and Mills have DRO's and can be used during contest. Lathes use CA1 toolholder for Aloris mod CA toolpost if you have them.

Scope of contest

There will be four areas contestants will be judged on Manual lathe, Manual mill, there will be a print reading test , and a measurement test. During the all portions students will be allowed to use a calculator, and their machinist handbooks and TRIG sheet.

Parking for contest

Please park on the south side of the building, doors will be open

Map for Parking on Day of Contest

