



2022 24th ANNUAL SKILLS MANITOBA COMPETITION CONTEST DESCRIPTION

CONTEST NAME: Precision Machining

CONTEST NO: 03

CATEGORY: Secondary and Post Secondary

NOTE: Secondary Level: 2 students from each school for a maximum of 8. virtual
Post-Secondary Level: 2 students from each school for a maximum of 4.

CONTEST LOCATION: Red River College - Notre Dame Campus - B168

CONTEST START TIME AND DURATION:

Provincial Secondary level Competition from April 4 - April 14, 2022
medals announced on Wednesday, April 20.

Provincial Post-Secondary contests will be held on Thursday, April 14, 2022.
Orientation at 8:15 am – Competition starts at 9:00 am

PURPOSE OF CHALLENGE:

To assess the contestant's precision machining skills and trade knowledge through practical testing at the secondary and post-secondary levels.

SKILLS AND KNOWLEDGE TO BE TESTED:

The contest will occur over one day. The contest involves machining a project using a conventional engine lathe.

Conventional Engine Lathe (may include any of the following):

- External and internal cylindrical turning
- Taper turning (internal and external)
- External threading

- Grooving (external)
- Drilling and Reaming
- Tapping
- Applied metrology
- Assembly of parts

POINT BREAKDOWN / 1000 TOTAL:

- * Project completion 100
 - * Compliance with occupational health and safety regulations 100
 - * Compliance with dimensions, tolerances, and fits as specified in plans 700
 - * Compliance with appropriate surface finish and deburring 100
- TOTAL 1000

In the event of a tie the contestant who completes the project in the shortest period of time will be awarded the higher placement.

NATIONAL COMPETITION ELIGIBILITY:

- A mark of **70% or higher** must be scored by the gold medalist in each contest in order to attend the National Skills Competition

EQUIPMENT, TOOLS, MATERIALS TO BE PROVIDED BY COMMITTEE•

Material: Turning project- 12L14 steel

Each contestant will be supplied with a maximum of two work piece blanks for the projects.

NOTE! If a second work piece blank is required, the contestant will lose 10% of the total project mark.

NOTE! Contestants may be required to share some of the supplied tools and equipment.

EQUIPMENT, TOOLS, MATERIALS TO BE SUPPLIED BY COMPETITOR:

Contestants may bring the following optional items:

- lathe tools
- measuring tools
- hand tools
- machinist ready reference
- project drawings
- calculators

WORKSITE SAFETY RULES / REQUIREMENTS:

- CSA approved safety glasses and safety boots or shoes.

*Prior to the start of the competition, contestants and coaches will be provided with a comprehensive safety orientation, which will include machine operations.

SPECIAL CONDITIONS / ADDITIONAL INFORMATION:

PROJECT DRAWINGS:

All project drawings will be provided one month prior to the Skills Manitoba competition. No dimensions will be identified.

THE IMPORTANCE OF ESSENTIAL SKILLS FOR CAREERS IN THE SKILLED TRADES;

Essential skills are used in nearly every job and at different levels of complexity. They provide the foundation for learning all other skills and enable people to evolve with their jobs and adapt to workplace change. Good Essential Skills means you will understand and remember concepts introduced in technical training. The level of Essential Skills required for most trades is as high as or higher than it is for many office jobs.

The following 9 skills have been identified and validated as key essential skills for the workplace:

Numeracy, Oral Communication, Working with Others, Continuous Learning, Reading Text, Writing, Thinking, Document Use, Digital.

Top Essential Skills Required for Precision Machining: Numeracy, Document Use

FOR MORE INFORMATION PLEASE CONTACT TECHNICAL COMMITTEE MEMBERS:

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