



27th ANNUAL SKILLS MANITOBA COMPETITION CONTEST DESCRIPTION APRIL 10, 2025

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.
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:

Start time: 8:15 AM for safety and contest information

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

PLEASE NOTE: All Shop safety procedures must be followed, or the contestant will be removed from the competition

* 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:

- CSA-approved safety glasses and safety boots or shoes
- Shop coat or equivalent (optional)
- A non-programmable scientific calculator

Contestants may bring the following optional items:

- Machinists ready reference
- No tutorials of any kind can be used.**

Material: Turning project- Mild 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 SKILLS FOR SUCCESS FOR CAREERS IN THE SKILLED TRADES AND TECHNOLOGY;

In response to the evolving labour market and changing skill needs, the Government of Canada has launched the new Skills for Success (former Essential Skills) model defining nine key skills needed by Canadians to participate in work, in education and training, and in modern society more broadly. SCC is currently working with Employment and Social Development Canada (ESDC) to bring awareness of the importance of these skills that are absolutely crucial for success in Trade and Technology careers. Part of this ongoing initiative requires the integration and identification of the Skills for Success in contest descriptions, projects, and project documents. The following 9 skills have been identified and validated as key skills for success for the workplace: 1.Numeracy, 2.Communication, 3.Collaboration, 4.Adaptability, 5.Reading, 6.Writing, 7.Problem Solving, 8.Creativity and Innovation, 9.Digital

FOR MORE INFORMATION PLEASE CONTACT TECHNICAL COMMITTEE MEMBER:

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