



27th ANNUAL SKILLS MANITOBA COMPETITION

CONTEST DESCRIPTION

April 10, 2025

CONTEST NAME: Refrigeration and Air Conditioning

CONTEST NO: 38

LEVEL: Post-Secondary

NOTE: Maximum 6 Competitors

CONTEST LOCATION: Red River College - Notre Dame Campus – T1-31

CONTEST START TIME AND DURATION: 6 hours maximum, starting at 8:30 AM.

PURPOSE OF CHALLENGE: To assess the contestant's problem-solving skills relating to the installation, operation, maintenance, and repair of Refrigeration systems.

SKILLS AND KNOWLEDGE TO BE TESTED:

1. Apply basic electrical control systems concepts in the wiring of a ventilation system interlock. Contestant will be required to prepare an electrical schematic diagram prior to wiring the components. After wiring, the contestant will test the simulation for proper control operation.
2. Apply advanced brazing techniques and piping skills required in the day-to-day installation of refrigeration and air conditioning systems.

PREREQUISITES:

- The ability to use refrigeration tools and specialized equipment.
- Knowledge of and compliance with current industry codes and safety regulations.
- The ability to use precision electrical test equipment.
- A good operating knowledge of typical controls used in refrigeration and air-conditioning systems.

EQUIPMENT, TOOLS, MATERIALS TO BE PROVIDED BY COMMITTEE:

- All hand tools, testing equipment, and specialized equipment and consumables will be provided by the organization.
- Any additional safety equipment that may be required

EQUIPMENT, TOOLS, MATERIALS TO BE SUPPLIED BY COMPETITOR:

- Contestants must provide their own person protective equipment.
- Contestants must wear the appropriate clothing and standard safety gear. (CSA approved safety boots and safety glasses as required for the function they are performing).

NATIONAL COMPETITION ELIGIBILITY:

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

WORKSITE SAFETY RULES / REQUIREMENTS:

- As per Red River College shop/lab policies.

THE 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:

Hendrik Mills
Instructor; Refrigeration
Red River College
2055 Notre Dame Ave. T2-28
Email: hamills@rrc.ca
Phone: 204-631-3315