Skills Compétences Canada











CONTEST DESCRIPTION

Mobile Robotics

SECONDARY

Skills Compétences Canada
Calgary2027

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1 THE SKILLS FOR SUCCESS FOR CAREERS IN THE SKILLED TRADES AND TECHNOLOGY

The Government of Canada has updated the previous Essential Skills framework to the new Skills for Success model in response to the evolving labour market and changing skill requirements. This model outlines nine fundamental skills Canadians need to thrive in work, education, training, and daily life.

Skills/Compétences Canada aims to highlight the importance of these skills, vital for success in trade and technology careers. Competitors can see how Skills for Success are integrated into contest descriptions, projects, and project documents. Recognizing these skills during the competition helps competitors match tasks with specific skills necessary for success and understand how these skills apply within their trade or technology programs and future careers.

The nine key Skills for Success, validated for workplace success, are:

1. Numeracy
2. Communication
3. Collaboration
4. Adaptability
5. Reading
6. Writing
7. Problem Solving
8. Creativity and Innovation
9. Digital

These Skills for Success are detailed in sections 2.4 and/or 3.2 (to be completed by SCC) of your Contest Description and, if relevant, in your Project and supporting documents.

2 CONTEST INTRODUCTION

2.1 Description of the associated work role(s) or occupation(s)

https://www.skillscompetencescanada.com/en/skill_area/mobile-robotics/

2.2 Purpose of the Challenge

To create engineering projects to encourage individuals with different skill sets to form co-operative teams to design, fabricate, and operate a robot or multiple robots.

2.3 Duration of contest

12 hours. A detailed schedule will be posted on our website prior to the event.

2.4 Skills and Knowledge to be tested.

The intent of the challenge is to have teams of students[2,3] independently designing / fabricating / operating robots[4,7,8] capable of completing the competition tasks in competition with other student-fabricated robots. Teams are not allowed to develop or implement strategies based on interfering with their opponent's ability to complete the competition task set.

3 CONTEST DESCRIPTION

3.1 List of documents produced and timeline for when competitors have access to the documents on the Skills/Compétences Canada website.

DOCUMENT	DATE OF DISTRIBUTION
Contest Description	September 2026
Project	September 2026
Court Specifications	November 2026
Build On-site Project	Morning of Competition Day 1
Q&R Documents	Monthly from September to March
Competition Questions Deadline	March 31st, 2027

3.2 Tasks that may be performed during the contest.

A team will consist of two competitors[2,3].

Teams will participate in BOTH the Teleoperation and the Autonomous Competition Elements on BOTH Competition Days

Skills for Success: [2]Communication, [3]Collaboration

4 EQUIPMENT, MATERIAL, CLOTHING

4.1 Equipment and material provided by Skills/Compétences Canada

- Exclusive Use Playing Fields for each Team's Game and Evaluated Robot Experiences

4.1.1 (IF NEEDED, 2ND LEVEL)

COMPETITORS WILL BE REQUIRED TO USE THE MATERIAL AND EQUIPMENT PROVIDED BY SCC. ALL OTHER MATERIAL AND EQUIPMENT WILL BE REMOVED FROM THE SKILL AREA.

4.2 Equipment and material provided by the competitor.

- Robots and Robot accessories (including batteries, battery charger, spare parts)
- Various tools required to modify and repair robots on site.
- 25-foot multi-outlet extension cord/power bar
- Wiring diagram
- Safety Data Sheet for Batteries
- Easily accessible fuses
- Easily accessible kill switch(es)
- Laptop(s)

4.2.1 Toolboxes Guidelines

One of the objectives of SCC is the sustainability of the Competition. As a result, the toolboxes brought by Competitors will be restricted to the following maximum specifications.

- The Competitor toolbox must not exceed (64ft^3) 1.81 meters^3 in volume. It can be multiple toolboxes, but the total of all toolboxes must not exceed the maximum volume indicated. There is no exception to this rule. If the Competitor toolbox is larger than what is indicated, the Competitor with the guidance of the NTC, will need to remove items from the toolbox and those items will not be used during the competition. All tools must fit inside one or more toolboxes. Tools outside of a toolbox will not be permitted.

4.3 Required clothing provided by the competitor.

- Closed toe shoes
- Safety Glasses

5 HEALTH AND SAFETY

5.1 Safety program

SCC has implemented a comprehensive safety program as health and safety is an integral part of our competitions. Our safety program includes guidelines and procedures to make the work environment in each skill area safer.

5.1.1 Safety manual

As part of our program a safety manual has been created to monitor and document health and safety within each skill area. It includes a definite plan of action designed to prevent accidents. The safety manual will be provided for every skill and these instructions must be followed and respected by all participants and officials at the SCNC.

5.1.2 Safety workshop

During orientation, Competitors will participate in a Safety workshop and they will be expected to work and maintain a safe working area during the competition. Any Competitor breaking any health, safety, and environmental rules, may be required to

undertake a second safety workshop, this will not affect the Competitor's competition time.

5.2 List of required personal protective equipment (PPE) provided by Skills/Compétences Canada

- n/a

5.3 List of required personal protective equipment (PPE) provided by the competitor.

- Safety Glasses
- Ear plugs (if required by ESR)
- Closed toe shoes

Note: Competitors who do not have the required protective equipment will not be allowed to participate in the competition

6 ASSESSMENT

6.1 Point breakdown

Medals will be determined by the overall results of the two days of competition.

Note: This list is subject to change.

TASKS	/100
Build On-Site Task	28
Pre-Built Robot Task	67
Team Interview	3
Safety Mark	2

7 CONTEST SPECIFIC RULES

Contest specific rules cannot contradict or take priority over the Competition Rules. They do provide specific details and clarity in areas that may vary from contest to contest. Any additional contest rules will be reviewed during the competitor orientation.

TOPIC/TASK	CONTEST SPECIFIC RULE
Pre-built Robot Task	• Competitors will compete in the Pre-built Robot task during the 2 days of competition. This is described in detail in the project document.

Build On-site Task	• Competitors will compete in the On-site task during the 2 days of competition. The details of this task will be released at the beginning of the competition. • This task will make use of the same autonomous robot as the "Pre-built Robot Task"
Team Interview	• Competitors will be required to answer questions about their robot(s) specifications and functioning, game play strategy, and transferable competencies.

8 ADDITIONAL INFORMATION

8.1 Interpreter

If a competitor requires the help of an interpreter once onsite during the competition, the Skills/Compétences Canada Provincial/Territorial offices must advise Skills/Compétences Canada National Secretariat a minimum of 1 month prior to the competition or this service may not be guaranteed.

8.2 Ties

- Tiebreaker #1: Comparison of the tied team overall points scored totals in all tournament games each team played. If the teams remain tied, then:
- Tiebreaker #2: Comparison of each team total marks awarded in the "On-Site Robot Section."
- Tiebreaker #3: Comparison of the tied team total marks awarded based on their tournament play individual games (total # of individual game losses = 0 marks / total # of individual game ties = 1 mark / total # of individual game wins = 2 marks).

8.3 Test Project change at the Competition

Where the Test Project has been circulated to Competitors in advance, NTC shall change a maximum of 30% of the work content. Please refer to the Competition Rules.

8.4 Competition rules

Refer to the competition rules of the Skills Canada National Competition which can be found on our website.

9 NATIONAL TECHNICAL COMMITTEE MEMBERS

MEMBER ORGANIZATION	NAME
Newfoundland and Labrador	Dave Keefe

Alberta	Mark Shaw
New Brunswick	
Ontario	Dan Kurz
Manitoba	Ken Hartikainen
Saskatchewan	Dave Dalton – Chair
British Columbia	Steve Claassen
Yukon	Hadrien Collin
Nova Scotia	Kyle Denney – Co-Chair
Prince Edward Island	Jonathan Hayes

Contact the Skills/Compétences Canada national secretariat for any questions or concerns: Olga Malvine Rwemera (olgamr@skillscanada.com).