



Contest Description
Edmonton Expo Centre, Edmonton
May 8 & 9, 2024

EVENT: Robotics	LEVEL: Secondary																
WORLDSKILLS TRADE #: 18	LOCATION: Hall A, Edmonton Expo Centre, Edmonton																
DURATION: 16 hrs (Two Days)	REGIONALIZED: No																
COMPETITION SCHEDULE:																	
May 8:	May 9:																
<table border="1"> <tr><td>ORIENTATION</td><td>8:00am – 9:30am</td></tr> <tr><td>COMPETITION</td><td>9:30am – 12:00pm</td></tr> <tr><td>LUNCH</td><td>12:00pm – 1:00pm</td></tr> <tr><td>COMPETITION</td><td>1:00pm – 4:00pm</td></tr> </table>	ORIENTATION	8:00am – 9:30am	COMPETITION	9:30am – 12:00pm	LUNCH	12:00pm – 1:00pm	COMPETITION	1:00pm – 4:00pm	<table border="1"> <tr><td>ORIENTATION</td><td>8:00am – 9:30am</td></tr> <tr><td>COMPETITION</td><td>9:30am – 12:00pm</td></tr> <tr><td>LUNCH</td><td>12:00pm – 1:00pm</td></tr> <tr><td>COMPETITION</td><td>1:00pm – 4:00pm</td></tr> </table>	ORIENTATION	8:00am – 9:30am	COMPETITION	9:30am – 12:00pm	LUNCH	12:00pm – 1:00pm	COMPETITION	1:00pm – 4:00pm
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<p>The times above are approximate and may change as required. Team Size: <u>Two</u> Students maximum</p>																	

*Please Note: This document is subject to change as competition information is updated. Competitors are responsible for staying up to date with the most recent information. Check the footer for last updated date. Changes will be highlighted in **yellow**.*

Purpose of the Challenge:

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

Mission Statement:

The intent of the challenge is to have teams of students independently designing, fabricating, and operating robots 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.

Skills and Knowledge Applied:

- Drafting
- Mechanics
- Electronics
- Computer Programming
- Metalwork
- Woodworking
- Communications

Responsibility of Competitors:

- Robots – Robot accessories (including batteries, battery charger, spare parts, hockey blade)
- Various tools required to modify and repair robots onsite
- Safety equipment including Mandatory Eye Protection
- 25-foot multi-outlet Extension cord and power bar
- Wiring Diagram
- Autonomous Robot Set (Any brand, please see updated scope with basic requirements)
- Easily accessible fuses
- Easily accessible emergency-stop switch(s)
- Robot Stand (the stand must allow robot motors to spin without moving the robot)
- Teams will provide their own Laptop(s)
- Safety Data Sheet for Batteries

Recommended Autonomous Set:

- The following kit is the currently used kit for the autonomous competitions at Nationals. Nationals will supply a kit to the winning team of the Provincial Competition to allow them to prepare for Nationals.
- Skills Alberta makes no recommendation to use this specific kit for Provincial competitions but it is guaranteed to meet all requirements for the current autonomous outline.
- The remote control is NOT used for autonomous competitions.



- <https://www.studica.ca/en/skills-canada-mobile-robotics-collection>

Supplied by the Committee:

- Exclusive use Playing Fields for each Team’s Game and Evaluated Robot Experiences.
- One worktable with access to a 120V power outlet (minimum 100W) per team
- Shared use of autonomous court.
- A Component’s Collection providing mechanical / electrical / control hardware to the Provincial winner that is required for the ‘Built On-site Autonomous Robot Competition Element’ at the National Event. (After Provincials)

Assessment

Point breakdown

Topic/Task	/100
Autonomous Task	39
Teleoperated Task	59
Safety Mark	2

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 Rules
Autonomous Task	<ul style="list-style-type: none"> • Competitors will compete in the Autonomous 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 COMPETITOR supplied Autonomous Competition Set
Teleoperated Task	<ul style="list-style-type: none"> • Competitors will compete in the Teleoperated task during the 2 days of competition. This is described in detail in the project document.
Safety Mark	<ul style="list-style-type: none"> • Safe operation and safe workspace practices

Ties

Ties in individual games are allowed. No ties in overall mark total are allowed. If a tie in overall marks occurs, the tie will be broken by examining the following individual mark categories in this order:

- 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 “Autonomous Robot Section.”
- Tiebreaker #3: Comparison of the tied team total marks awarded based on their 20 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).

Test Project change at the Competition

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

ADDITIONAL INFORMATION

Skills Canada Alberta Regional and Provincial Rules and Regulations

[Regional and Provincial Rules and Regulations](#)

Competitor Registration

Registration for Provincial Skills Canada Competition (PSCC) will open online on January 17, 2024 @ 8:30 AM. Please refer to this competitions event page for additional registration and competition information: <https://skillsalberta.com/competition/>

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Lunch

Lunch for accredited competitors will be provided by Skills Canada Alberta.

Parking & Venue Maps: <http://edmontonexpocentre.com/attend/parking/>

Parking is FREE for all attendees.

Opening Ceremonies / Competitor Registration

Opening Ceremonies for the PSCC will take place on Tuesday May 7, 2024, at 6:00 pm in Hall D of the Edmonton EXPO Centre. Admission is free, and everyone is welcome to attend. It is important to note that competitor registration will open immediately following the Opening Ceremonies.



Awards Ceremony

The Awards Ceremony will take place on Thursday May 9, 2024, at 6:30 pm in Hall D of the Edmonton EXPO Centre. Admission is free and everyone is welcome to attend. The Awards Ceremony will be shown live at <http://skillsalberta.com/>

Team Alberta Information

Team Alberta will be selected at the PSCC Awards Ceremony. Gold medalists will then be eligible to participate at the Skills Canada National Competition (SCNC) on May 27- June 1, 2024, in Quebec City, QC. It is recommended that competitors review the SCNC contest description to be familiar with the national contest description and project at <http://www.skillscanada.com/>.

During the PSCC Awards Ceremony on Thursday May 9, 2024, gold medalists will be given their Team Alberta information package and will confirm their participation in the SCNC. Students must be present at the Awards Ceremony to claim their position on Team Alberta. If the Gold medalist is not able to attend SCNC, the next top ranking individual will be asked to participate. If a student is not able to attend the Awards Ceremony a letter confirming the student’s interest in Team Alberta participation must be emailed to javierad@skillsalberta.com prior to the start of competition on May 8, 2024.

Please prepare your students in advance to accept a position on Team Alberta and outline how your school will support their participation. Furthermore, it is very important that all fieldtrip/travel information for potential Team AB members is organized and completed prior to the selection of Team AB.

Questions?

Please contact Whitney Koop at whitneyk@skillsalberta.com if you have any questions regarding the Contest Description.

Further Communication

Questions for clarification of the rules can be made to your provincial technical committee member.

Provincial Technical Committee (PTC):

Erin Whitby	Josh Inniss
Jim King	Mark Shaw – Chair
John Heslinga	Sam Cheng
Sheldon Marquis	

