



## Contest Description

Edmonton Expo Centre, Edmonton

May 6 & 7, 2026

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                            |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|-------------|---------------|-------------|---------------|-------|----------------|-------------|-----------------|-------|-----------------|-------------|----------------|-------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------|----------------|-------------|-----------------|-------|-----------------|-------------|----------------|
| <b>EVENT:</b> Electronics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>LEVEL:</b> Secondary                                    |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
| <b>WORLDSKILLS TRADE #:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>LOCATION:</b><br>Hall E, Edmonton Expo Centre, Edmonton |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
| <b>DURATION:</b> 13 hrs (Two Days)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>REGIONALIZED:</b> No                                    |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
| <b>COMPETITION SCHEDULE:</b><br><div> <div> <b>May 6:</b> <table> <tr><td>ORIENTATION</td><td>7:30AM-8:00AM</td></tr> <tr><td>COMPETITION</td><td>8:00AM-9:45AM</td></tr> <tr><td>BREAK</td><td>9:45AM-10:00AM</td></tr> <tr><td>COMPETITION</td><td>10:00AM-11:30AM</td></tr> <tr><td>LUNCH</td><td>11:30AM-12:30PM</td></tr> <tr><td>COMPETITION</td><td>12:30PM-2:00PM</td></tr> <tr><td>BREAK</td><td>2:00PM-2:15PM</td></tr> <tr><td>COMPETITION</td><td>2:15PM-3:30PM</td></tr> </table> </div> <div> <b>May 7:</b> <table> <tr><td>ORIENTATION</td><td>7:30AM-8:00AM</td></tr> <tr><td>COMPETITION</td><td>8:00AM-9:45AM</td></tr> <tr><td>BREAK</td><td>9:45AM-10:00AM</td></tr> <tr><td>COMPETITION</td><td>10:00AM-11:30AM</td></tr> <tr><td>LUNCH</td><td>11:30AM-12:30PM</td></tr> <tr><td>COMPETITION</td><td>12:30PM-2:15PM</td></tr> </table> </div> </div> <p>The times above are approximate and may change as required.</p> |                                                            | ORIENTATION | 7:30AM-8:00AM | COMPETITION | 8:00AM-9:45AM | BREAK | 9:45AM-10:00AM | COMPETITION | 10:00AM-11:30AM | LUNCH | 11:30AM-12:30PM | COMPETITION | 12:30PM-2:00PM | BREAK | 2:00PM-2:15PM | COMPETITION | 2:15PM-3:30PM | ORIENTATION | 7:30AM-8:00AM | COMPETITION | 8:00AM-9:45AM | BREAK | 9:45AM-10:00AM | COMPETITION | 10:00AM-11:30AM | LUNCH | 11:30AM-12:30PM | COMPETITION | 12:30PM-2:15PM |
| ORIENTATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 7:30AM-8:00AM                                              |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
| COMPETITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 8:00AM-9:45AM                                              |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
| BREAK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 9:45AM-10:00AM                                             |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
| COMPETITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 10:00AM-11:30AM                                            |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
| LUNCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 11:30AM-12:30PM                                            |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
| COMPETITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 12:30PM-2:00PM                                             |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
| BREAK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2:00PM-2:15PM                                              |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
| COMPETITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2:15PM-3:30PM                                              |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
| ORIENTATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 7:30AM-8:00AM                                              |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
| COMPETITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 8:00AM-9:45AM                                              |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
| BREAK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 9:45AM-10:00AM                                             |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
| COMPETITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 10:00AM-11:30AM                                            |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
| LUNCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 11:30AM-12:30PM                                            |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |
| COMPETITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 12:30PM-2:15PM                                             |             |               |             |               |       |                |             |                 |       |                 |             |                |       |               |             |               |             |               |             |               |       |                |             |                 |       |                 |             |                |

***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.***

## SKILLS AND KNOWLEDGE TO BE TESTED

The contest will cover the theoretical and practical aspects of current state-of-the-art electronic industry standards. The competitor may be asked to demonstrate abilities in the following areas:

- Interpret electronic schematic diagrams, pictorials, manufacturers technical specifications and suppliers' catalogues.
- Identify common electrical and electronic components.
- Construct, analyze, and troubleshoot DC circuits including series resistance, parallel resistance, series-parallel resistance and solid-state switching circuits
- Construct, analyze, and troubleshoot circuits which may include diodes, transistor amplifiers, IC amplifiers, operational amplifiers and comparator circuits, TTL/CMOS gates, timers.



- Construct, analyze, and troubleshoot circuits using solderless breadboards as well as soldering/desoldering through-hole components on PCBs.
- Apply the appropriate test procedures and equipment to a given situation.
- Interpret the observed values from the test equipment. (DC voltages, currents and waveforms and circuit resistance).
- Answer questions related to basic electrical/electronic theory.

## PROJECT DESCRIPTION

*Actual project details will be released on the morning of the competition.*

Tasks that may be performed during the contest:

### Day 1

- **Part 1 – Schematic Reading and Breadboarding:** Construct a circuit (or circuits) from provided schematics and datasheets on a solderless breadboard.
- **Part 2 – Electronics Theory:** Answer short-answer and/or multiple-choice questions on electronics theory, components, digital logic, circuit analysis, and/or measurement interpretation. The Theory test will be limited to any of the concepts covered in **Make: Electronics 2<sup>nd</sup> or 3<sup>rd</sup> Edition by Charles Platt**. The PTC recommends competitors to familiarize themselves with the contents of this text, though it will **not** be allowed to be used as reference during the competition.

### Day 2

- **Part 3 – Soldering/Desoldering:** Hand solder through-hole and surface mount components on a printed circuit board to acceptable industry standards. Desolder through-hole components, preserving the PCB pads to solder in new components.
- **Part 4 – Measurement and Troubleshooting:** Identify and correct errors with a provided circuit. Use a digital multimeter to measure DC voltage, current, and continuity in the corrected circuit. Use measurements to determine what to change in the circuit to produce provided results.

## EQUIPMENT & MATERIALS

### Skills Canada Alberta Provided Tools, Materials, and Equipment

- Workstation (Table, Chair, Power bar)
- Soldering Equipment
  - Soldering Iron
  - Fume extraction
  - ROHS Compliant Lead-Free Solder
  - Solder wick

- Flux
- Third hand or another appropriate work-holding device
- Electronics Components, Power Supply, PCBs

## Competitor Provided Tools, Materials, and Equipment\*

- Digital multimeter (w/ a fresh battery)
- Spare Fuse for multimeter
- Long nose pliers
- Side Cutters (for 18-gauge wires)
- Flush Trim Cutters
- Wire Stripper
- Screwdrivers (including precision set)
- “Third Hand” including magnifying glass. (optional)
- Safety Glasses
- Pens, Pencils, Eraser, Ruler
- Stand-alone calculator (non-programmable i.e. TI-30Xa)

## Competition Specific Rules

The following Competition Specific rules along with SCA's overall Policies and Procedures provide specific details in competition areas that may vary from one another. Any additional contest rules will be reviewed during the Competitor Orientation.

| Topic/Task                          | Contest Specific Rule                                                                                                                                                                                       |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Use of Technology                   | Competitors are <b>not allowed</b> laptops, tablets, cameras, cell phones, ear buds, calculators or other personal electronics in the competition area unless specified by the committee for certain tasks. |
| Use of Artificial Intelligence (AI) | Competitors <b>cannot</b> use AI to develop/generate any of the submitted work for any aspects of the competition.                                                                                          |

## JUDGING CRITERIA

| Task                                   | Weight |
|----------------------------------------|--------|
| 1. Schematic Reading and Breadboarding | 30%    |
| 2. Electronics Theory                  | 20%    |
| 3. Soldering/Desoldering               | 30%    |
| 4. Measurement/Troubleshooting         | 20%    |



## **TIE BREAKING PROCESS**

In the case of a tie, the winner will be determined by the highest score in Part 3: Soldering/Desoldering. If these scores are tied, the winner will be determined by the highest score in Part 1: Schematics Reading and Breadboarding. If these scores are also tied, the winner will be determined by the highest score in Part 4: Measurement/Troubleshooting.

## **CLOTHING REQUIREMENT**

Appropriate work clothing must be worn to compete. All clothing must be neat and clean, and free of rips and tears. Casual wear such as shorts and open toed shoes/sandals will not be permitted. No loose-fitting clothes or jewelry. Long hair must be tied back for the soldering/desoldering task.

## **ADDITIONAL INFORMATION**

### **Skills Canada Alberta Regional and Provincial Rules and Regulations**

[Regional and Provincial Rules and Regulations](#)

### **Skillz & Thrillz Podcast**

Check out our podcast – Skillz & Thrillz: Alberta’s Trade & Tech Youth Podcast. Our talented alumni share tips and tricks on how to succeed in competitions and your career! Their insights can help you prepare for your Skills journey, and who knows, you might just be a future guest!

<https://skillsalberta.com/student-resources/skillz-thrillz-albertas-trade-tech-youth-podcast/>

### **Project Change at the Competition**

Where a Test Project has been circulated to competitors in advance, the PTC can change the project up to a maximum of 30% of the work content for the competition.

### **Competitor Registration**

Registration for the Provincial Skills Canada Competition (PSCC) will open online on January 14, 2026 @ 3:30 PM. Please refer to this competitions event page for additional registration and competition information: <https://skillsalberta.com/competition/>

### **Lunch**

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

### **Parking & Venue Maps**

Parking is FREE for all attendees.

Attendees **MUST** register for FREE parking by clicking the below link. Attendees can pre-register their vehicle at anytime prior to the PSCC or register onsite at the PSCC.

<https://www.offstreet.io/events/CBLHM7U1>

<http://edmontonexpocentre.com/attend/parking/>



### **Opening Ceremonies / Competitor Onsite Registration**

Opening Ceremonies for the PSCC will take place on Tuesday May 5, 2026, 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 7, 2026, 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- May 30, 2026, in Toronto, Ont. It is recommended that competitors review and become familiar with the SCNC contest description and project at <https://www.skillscompetencescanada.com/en/event/skills-canada-national-competition-2026/>

During the PSCC Awards Ceremony on Thursday May 7, 2026, 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 highest-ranking individual will be asked to participate. If a student is not able to attend the Awards Ceremony an email confirming the student's interest in Team Alberta participation must be emailed to [javierad@skillsalberta.com](mailto:javierad@skillsalberta.com) prior to the start of competition on May 6, 2026.

**Please prepare your students in advance to accept a position on Team Alberta and review how your school will support their participation.**

**Please see this link for additional Team Alberta information:** <https://skillsalberta.com/team-alberta/>

### **Questions?**

Please contact Mike Sury [MikeS@SkillsAlberta.com](mailto:MikeS@SkillsAlberta.com)

### **COMMITTEE MEMBERS**

|            |               |  |
|------------|---------------|--|
| Joe Wilson | Lee Bannister |  |
|------------|---------------|--|