



## DSBN REGIONAL **ELECTRICAL INSTALLATION** SKILLS CHALLENGE 2024 SECONDARY LEVEL SCOPE

**CHAIR:** Calli Zwierschke

**E.L. CROSSLEY P:** 905 892-2635 X- 60921

[calli.zwierschke@dsbn.org](mailto:calli.zwierschke@dsbn.org)

### **Table of Contents**

1. General Contest information
2. Skills and Knowledge to be Tested
3. Equipment and Materials
4. Judging Criteria
5. Safety

### **1. General Contest Information**

#### **Purpose of the Competition:**

To test the competitor's theoretical knowledge, practical skills, and abilities pertaining to standards within the electrical industry.

#### **EVENT DETAILS:**

**Date:** Wednesday, March 6, 2024

**Time:** 8:00AM (Arrival & Setup) to 2:30PM (Clean-up & Judging)

**Location:** E.L. Crossley Secondary School Room 104

#### **ENTRY:**

Students must register online at 2024 Skills Challenge Registration Form with all the required information completed to be eligible to participate. Register here: <https://technological-skills-challenges.dsbni.org/>

\*Competitors must be on time for their contest or may be disqualified at the discretion of the Technical Committee.

## **2. Skills and Knowledge to be Tested**

**Competitors will be expected to perform competently in all aspects of wiring installations with respect to the following:**

- Perform the assigned task from given drawings and specifications.
- All work must conform to the rules and regulations of the 2021 Canadian Electrical Code, Part 1, 25th Edition.
- Conform to the Occupational Health and Safety Act and Regulations for Construction Projects 213/91.

**The assigned task will require a thorough working knowledge in any or all of the following aspects relating to electrical wiring:**

- Safety rules and practices in the electrical construction field.
- Proper use of all tools, materials and equipment that are used in the installation.
- Basic electrical theory including mathematical calculations, circuitry, schematics, prints, and all types of electrical measurements.
- Installation of distribution equipment and branch circuits.
- Competitors should have a basic knowledge of various wiring types, methods and practices used in the field.
- Installation of all types of outlet boxes and related equipment and devices.
- Troubleshooting of the installation if any problems arise.

### **Safety Requirements:**

Competitors are required to follow all "Industry Safety Standards" during the competition.

- It is mandatory for all competitors to wear CSA approved **EYEWEAR**.
- It is mandatory for all competitors to wear CSA approved **FOOTWEAR**.
- Jewelry such as rings, bracelets, and necklaces or any item deemed unsafe by the competition judges must be removed.
- Proper shop attire must be worn (NO LOOSE CLOTHING)

## **3. Equipment and Material:**

**Equipment Supplied by the DSBN Tech Department:**

- All electrical devices required to complete the project.
- All consumables to complete the project.

## **Equipment Supplied by the Competitor:**

Supplied by Competitor: Listed below are the **ONLY ITEMS** allowed on the competition site. Items not listed below will be confiscated and stored for the duration of the competition.

- toolbox and/or tool pouch
- Cordless electric drill and batteries
- continuity tester
- claw hammer
- screw drivers: 3 Robertson screwdrivers (1 red, 1 black, 1 green handle), 2 flat screw drivers (small and large), 2 Phillips screwdrivers (small and large)
- pliers: 1 linesman pliers, 1 diagonal pliers, 1 adjustable pliers (channellocks), 1 long-nosed pliers
- wire strippers
- 1 non-metallic sheath cable stripper
- solid blade knife
- torpedo level
- assorted driver bits
- Allen Keys
- Hack Saw
- METRIC tape measure or combination (all project dimensions are Metric)
- personal protective equipment listed in the SAFETY portion of this scope
- Competitors must be dressed in a clean and appropriate manner with no logos other than that of their school/school board.
- refillable water bottle, water stations will be on/ near the contest site.
- Optional : 2021 Canadian Electrical Code, Part 1, 25th Edition

**DO NOT BRING ANY ITEMS THAT ARE NOT LISTED ABOVE.**

## **CLOTHING REQUIREMENTS:**

- Competitors are to be dressed in a clean appropriate manner.
- Competitors are to wear DSBN technology shirts.
- Competitors are not permitted to wear clothing with any other logo than the DSBN.
- **Safety Glasses Required at "ALL TIMES".**
- CSA Approved safety footwear required.
- Any added PPE as per safety policies.

#### 4. Judging and Criteria:

##### **JUDGING CRITERIA:**

<b>Circuits</b>	<b>Possible Score</b>
<b>Working Order</b>	<b>/25</b>
Circuits wired correctly and to the appropriate breaker	
<b>Boxes &amp; Devices</b>	<b>/20</b>
Correct location of all outlet boxes and devices	
<b>Installation</b>	<b>/25</b>
Overall installations completed as per the 2021 Canadian Electrical Code, Part 1, 25th Edition	
<b>Grounding &amp; Bonding</b>	<b>/15</b>
Grounding and bonding of all devices as per the Code	
<b>Safety Procedures</b>	<b>/10</b>
Adherence to safety procedures for the duration of the competition as per the Occupational Health & Safety Act & Construction Regulations i.e. personal protective equipment, electrical safety regulations	
<b>Subjective Visual Inspection</b>	<b>/5</b>
<b>Total, Mark out of 100</b>	<b>/100</b>

**ENTRY:**

- Students must be registered online prior to the **Competition Dates: Wednesday, March 6, 2024** with all of the required information completed to be eligible to participate.

**TRANSPORTATION:**

- Teachers and students are responsible for their own transportation to and from their respective schools the day of the Electrical Challenge.

**TEACHER'S ROLE:**

- Instructors are expected to acquaint their student participants with all of the enclosed guidelines. Teachers may accompany their students or visit any time during the competition, **"But may not assist the competitors during the challenge."**

**\*\*Please Note: \*\* Judges will be instructed to deduct marks from participants that are deemed to be receiving instructions from teachers during the installation.**

**COMPETITION AGENDA:**

<p><b>8:00 a.m.</b> Arrival at Contest Site &amp; Set Up - (E.L. Crossley Secondary School)</p> <p><b>8:15 a.m.</b> Orientation &amp; Opening Remarks</p> <p><b>8:30- 8:45 a.m.</b> Competition begins</p> <p><b>11:30 a.m.</b> ***** Lunch (will be provided) *****</p> <p><b>2:30 p.m.</b> Competition Ends and Clean up</p> <p><b>3:00 p.m.</b> Final Judging and Closing Remarks</p>
--

**\*\* Each competitor will be given a number by their coordinator upon registration at the location and will be judged anonymously during the competition.**

**LOCATION:**

E.L. Crossley Secondary School, 350 Highway #20 West, Fonthill, ON L0S 1E0