



TECHNOLOGICAL **SKILLS** CHALLENGES

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2025 DSBN REGIONAL **ELECTRICAL INSTALLATIONS** SKILLS CHALLENGE SECONDARY LEVEL SCOPE

CHAIR: Calli Zwierschke

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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 5, 2025

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

Location: E.L. Crossley Secondary School Rm 104

ENTRY:

Students must register online at 2025 Skills Challenge Registration Form with all the required information completed to be eligible to participate. Register here: <https://technological-skills-challenges.dsbm.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 includes 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:

Circuits	Possible Score
Working Order	/25
Circuits wired correctly and to the appropriate breaker	
Boxes & Devices	/20
Correct location of all outlet boxes and devices	
Installation	/25
Overall installations completed as per the 2021 Canadian Electrical Code, Part 1, 25th Edition	
Grounding & Bonding	/15
Grounding and bonding of all devices as per the Code	
Safety Procedures	/10
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	
Subjective Visual Inspection	/5
Total, Mark out of 100	/100

ENTRY:

- Students must be registered online prior to the **Competition Dates: Wednesday, March 5, 2025** 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>8:00 a.m. Arrival at Contest Site & Set Up - (E.L. Crossley Secondary School)</p> <p>8:15 a.m. Orientation & Opening Remarks</p> <p>8:30- 8:45 a.m. Competition begins</p> <p>11:30 a.m. ***** Lunch (will be provided) *****</p> <p>2:30 p.m. Competition Ends and Clean up</p> <p>3:00 p.m. Final Judging and Closing Remarks</p>
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**** 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