

2021 PROVINCIAL SKILLS CANADA COMPETITION



Contest Description

EVENT: Refrigeration and Air Conditioning	LEVEL: Post-Secondary																
WORLDSKILLS TRADE #: 38	LOCATION: Competitors will compete individually from their local Post-Secondary Institution																
DURATION: 10 Hrs. (Two Days)																	
COMPETITION SCHEDULE: <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> May 1, 2021: <table border="1" style="width: 100%;"> <tr><td>ORIENTATION</td><td>8:30AM-9:00AM</td></tr> <tr><td>COMPETITION</td><td>9:00AM-11:30AM</td></tr> <tr><td>LUNCH</td><td>11:30AM-12:30PM</td></tr> <tr><td>COMPETITION</td><td>12:30PM-3:00PM</td></tr> </table> </td> <td style="width: 50%; vertical-align: top;"> May 2, 2021: <table border="1" style="width: 100%;"> <tr><td>COMPETITION</td><td>8:00AM-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> </table> </td> </tr> </table>		May 1, 2021: <table border="1" style="width: 100%;"> <tr><td>ORIENTATION</td><td>8:30AM-9:00AM</td></tr> <tr><td>COMPETITION</td><td>9:00AM-11:30AM</td></tr> <tr><td>LUNCH</td><td>11:30AM-12:30PM</td></tr> <tr><td>COMPETITION</td><td>12:30PM-3:00PM</td></tr> </table>	ORIENTATION	8:30AM-9:00AM	COMPETITION	9:00AM-11:30AM	LUNCH	11:30AM-12:30PM	COMPETITION	12:30PM-3:00PM	May 2, 2021: <table border="1" style="width: 100%;"> <tr><td>COMPETITION</td><td>8:00AM-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> </table>	COMPETITION	8:00AM-11:30AM	LUNCH	11:30AM-12:30PM	COMPETITION	12:30PM-2:00PM
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COMPETITION FORMAT: (VIRTUAL, AT A POST-SECONDARY INSTITUTION)

Competitors will compete individually, in person, from their local Post-Secondary Institution. Location specific COVID-19 protocols must be followed. Post-Secondary Institutions and competitors will need to work together to ensure the competitor is ready for success on their competition day. They will need to prepare their competition space with all of the required tools, equipment, materials, and technology (as listed below) that will be needed to complete the competition. This competition will be closed to the public. Only registered competitors and assigned Provincial Technical Committee members will be allowed to attend.

COMPETITION ORIENTATION: The competition will begin with a virtual orientation. Competitors will join the assigned videoconference link that will be emailed to all registered competitors for the competition orientation. Camera's **MUST** be on and competitors visible on the camera during the orientation.

PROJECT SUBMISSION LINK:

- <https://form.jotform.com/SkillsAB/2021PSCC>
- Multiple files can be uploaded at once, each file has a maximum size of 1G. If file sizes are larger than 1G, please follow alternate instructions through the submission link.

ACCEPTED FILE TYPE: pdf, doc, docx, xls, xlsx, csv, txt, rtf, html, zip, mp3, wma, mpg, flv, avi, jpg, jpeg, png, gif. If you would like to submit a different type of file, please place it in a zip folder.

To create a zip folder – Select all the files that you would like to submit and right-click your mouse, a menu will open, select Send To, and then click on Compressed (zipped) folder. A zip file will then be created containing your submission documents.

2021 PROVINCIAL SKILLS CANADA COMPETITION



SAFETY:

The health, safety, and welfare of all individuals involved with Skills Canada Alberta are of vital importance. Safety is a condition of participation with Skills Canada Alberta and shall not be sacrificed for the sake of expediency. At the discretion of the judges and technical committees, any competitor can be denied the right to participate should they not have the required proper safety equipment and/or act in an unsafe manner that can cause harm to themselves or others.

Safety Checklist: It is the responsibility of each competitor and teacher to review the Safety Checklist (<https://skillsalberta.com/additional-2021-competition-resources/>) in advance of the competition and ensure they are able to meet all safety requirements. During the orientation, the safety checklist will be formally reviewed.

AWARDS CEREMONY INFORMATION: Please join us for a live virtual awards ceremony on May 13th at 6:30PM.

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

CONTEST INTRODUCTION:

To assess the competitors ability to demonstrate theoretical and practical skills in performing Refrigeration and Air Conditioning system installation, start-up, maintenance/service, troubleshooting, and customer relations.

SKILLS AND KNOWLEDGE TO BE TESTED:

- Exemplify safety, use of PPE & Code of Practice
- Maintain neatness and cleanliness
- Effective planning and use of time
- Accurate application of wiring diagrams
- Troubleshooting and installation of wiring and controls
- Pipe measurement, cutting, connecting within tolerances
- Demonstrate efficient use of materials
- Demonstrate proper/safe use of trade specific tools & equipment
- Perform system pressure testing, evacuation, and charging
- Perform system commissioning
- Exhibit interpersonal ability

PROJECT DESCRIPTION

- Low temperature refrigeration system installation project

2021 PROVINCIAL SKILLS CANADA COMPETITION



EQUIPMENT & MATERIALS

Equipment and Materials Competitors Must Supply:

CSA approved safety steel toed footwear	CSA approved hearing protection	Swaging tool kit
Common nut drivers ¼" – ½"	Hammer	Inspection mirror, flashlight & spare batteries
Set of combination wrenches	File set	Pens, pencils, erasers, rulers, notepads & calculator
6", 10", 12" adjustable wrenches	Set of imperial allen keys	Tape measure
Linesman, needle nose, slip joint and water pump pliers	Valve wrenches	Tubing cutter ¼" – ¾"
Pressure Temperature Chart	Refrigeration gauge manifold	Utility knife
Separate or combination wire strippers and crimpers	Flaring block and yoke	CSA approved safety glasses
Common screwdrivers (Phillips, Robertson, slot, terminal)	Electrical side cutters	Task specific gloves for brazing, refrigerant charging, mechanical work, delicate dexterity, and cutting

Institute Supplied Equipment and Materials:

Charging scale and equipment	Refrigerant	Leak Detector
Vacuum pump and equipment	Torches and Brazing materials	Nitrogen Cylinder and Regulator
Micron gauge	Tube benders (competitor can supply)	Purging flow meters
Electrical meters	Parts and fittings	Probe style, and pipe clamp thermometers
Cord Caps and Padlocks		

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JUDGING CRITERIA

- Controls/wiring
- Piping
- Refrigerant Handling
- Safety
- Functionality/Commissioning
- Trade Knowledge
- Effective Communication

*Points will be awarded or deducted as evaluated by the judges. Competitors will be ranked by total accumulated points.

TIE BREAKING PROCESS

In the event of a tie for any ranking, total refrigeration project time will be the tie breaker.

CLOTHING REQUIREMENT

Appropriate clothing (preferably natural fibers or fire retardant), free of rips or tears must be worn to compete. All clothing including boots and PPE must be in good repair, neat, clean and free of rips tears or anything that may compromise the integrity of the protection it offers (i.e. worn toes on work boots, holes in gloves). Casual wear such as shorts will not be permitted. No loose clothing or jewelry allowed for your safety. Long sleeve shirts must be worn while brazing.

ADDITIONAL INFORMATION

Skills Canada Alberta Regional and Provincial Rules and Regulations
[Regional and Provincial Rules and Regulations](#)

Post-Secondary Competitor Information is [available here](#).

Lunch

Lunch will be provided by Skills Canada Alberta

Team Alberta Information

Team Alberta will be selected from competition Gold medalists who will then be eligible to participate at the Skills Canada National Competition (SCNC) in a virtual format May 25-30, 2021. 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/>.

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Ethical Conduct

We recognize that participants will be competing individually in their own unique environments. We expect all competitors to compete fairly, respecting and abiding by the established rules in the true spirit of Skills Canada Alberta.

Letter of Participation

Competitors who participate in the 2021 Provincial Skills Canada Competition are eligible for a Letter of Participation by request by contacting katherinek@skillsalberta.com.

COMMITTEE MEMBERS

Justin Evernden – NAIT	Tyson Frank – SAIT
Brian Zinter – SAIT	Dominic Auger – SAIT
John Kennedy – NAIT	Gordon Olson – NAIT