



## 2024 North West Regional Skills Canada Competition

*Contest Description (Scope Document)*

Northwestern Polytechnic (NWP) Fairview Campus

April 18 & 19, 2024

EVENT: Welding		LEVEL: Secondary										
DURATION OF CONTEST: 5 HOURS		LOCATION: NWP Fairview Campus- Welding Shop										
COMPETITION SCHEDULE: <table><tr><td>ORIENTATION</td><td>April 18 6:00pm</td></tr><tr><td>COMPETITION</td><td>April 19 8:00 am-12:00pm</td></tr><tr><td>LUNCH</td><td>12:00pm-12:30pm</td></tr><tr><td>COMPETITION</td><td>12:30pm -3:00pm</td></tr><tr><td>JUDGING</td><td>3:00pm-5:30pm</td></tr></table>		ORIENTATION	April 18 6:00pm	COMPETITION	April 19 8:00 am-12:00pm	LUNCH	12:00pm-12:30pm	COMPETITION	12:30pm -3:00pm	JUDGING	3:00pm-5:30pm	REGIONALIZED: YES If YES, To compete at the Provincial Skills Canada Competition students must qualify at their Regional Skills Canada Competition.
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COMPETITION	April 19 8:00 am-12:00pm											
LUNCH	12:00pm-12:30pm											
COMPETITION	12:30pm -3:00pm											
JUDGING	3:00pm-5:30pm											
ORIENTATION IS MANDATORY: Should a competitor not attend orientation they will be disqualified from the competition												
AWARDS CEREMONY INFORMATION: April 19 <sup>th</sup> @ 6 pm in the NWP Fairview Campus Theatre												

### CONTEST INTRODUCTION

To enable competitors to demonstrate their knowledge & skill of welding principles. The competition will consist of a practical examination. Competitors will be expected to utilize their practical skills & knowledge in drawing interpretation of fitting, and welding. The following processes are applicable: SMAW & GMAW. Safety procedures will also be evaluated.

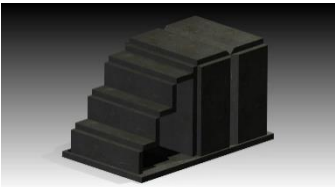
### SKILLS AND KNOWLEDGE TO BE TESTED

The regional skills competitors should be prepared to apply their theory knowledge in a layout and drawing interpretation to complete a 5 hour practical project which may include but not limited to the following tasks (please see the below isometric image and attached project drawing and weld procedures):

- SMAW 1G, 2G, 3G Butt Weld
- GMAW 1G,2G,3G Butt Weld
- SMAW or GMAW, 2F & 3F Welds
- SMAW- 1G on plate. Root E6010 1/8, E4310 3.2mm. Fill and cap E7018 3/32 or 1/8,E4918 2.5mm or 3.2mm
- Fillets- 2F, 3F, E7018 -1/8"and or 3/32", E6010 1/8", E4918 3.2 mm and or 2.5mm or E4310 3.2mm.
- GMAW- 1G & 3G on plate , 2F and 3F (vertical up and down)

**PROJECT DESCRIPTION**

Please see the attached dimensional print and weld processes. Competitors that advance onto the Provincial Skills Canada Competition will also be provided the dimensional print with their contest description; however the competition can be changed up to 30% on the day of the competition. This percentage change however, will not be implemented at the Regional competition level.



**EQUIPMENT & MATERIALS**

**Equipment and Materials Competitors Must Supply:**

Work Boots (CSA Approved steel toe work boots)	Welding Helmet
Side shields required for prescription glasses	Safety Glasses
Appropriate clothing (100% cotton coveralls recommended)	Welding Gloves
Long Sleeve Denim Shirt or Jacket - 100% cotton	Ear Plugs

**Competitors tools will be limited to the following:**

Pipe liner files	Wire Brush	Vice Grips/Pliers
Magnets	Tri Square	Imperial/Metric Tape Measure
Centre Punch	Hammer	Cold Chisel
Soap Stone		

\*Competitors are required to follow all industry standards during the competition.

**Equipment and Materials Supplied by the Committee:**

Materials and Consumables to build project.

**JUDGING CRITERIA**

ASPECT	The following aspects will be reviewed during the marking:
A1	GMAW fillet size-Are the GMAW fillet sizes according to prints?
A2	Are the GMAW welds free of surface porosity?
A3	SMAW fillet size-Are the SMAW fillet sizes according to prints?
A4	Are the SMAW welds free of surface porosity?
A5	SMAW penetration-Is the SMAW groove weld completely penetrated 0 to3mm
A6	SMAW reinforcement-Does the SMAW groove weld have excessive reinforcement 0 to 3mm



A7	GMAW penetration-Is the GMAW groove weld completely penetrated 0 to 3mm
A8	GMAW reinforcement-Does the GMAW groove weld have excessive reinforcement 0 to 3mm
A9	Weld cleaning-Is all weld spatter and slag removed?
A10	Overall appearance
A 11	Welding position – are the welds produced in the correct position and location?

#### **TIE BREAKING PROCESS**

In the event of a tie, the competitor with the higher marks in categories A5, A7 and A11 will win.

#### **RELATED CAREER AND TECHNOLOGY STUDIES COURSES**

Descriptions of all modules are located at the following website:

[https://education.alberta.ca/media/160533/fab\\_course\\_summaries\\_old.pdf](https://education.alberta.ca/media/160533/fab_course_summaries_old.pdf)

FAB 1040	FAB 2020	FAB 3048	101B	102A	103A
FAB 1048	FAB 2030	FAB 3050	101C	102B	103B
FAB 1050	FAB 2040	FAB 3060	101G	102C	103C
	FAB 2048	FAB 3170	101I	102D	103D
	FAB 2050		101F	103F,G&H	
	FAB 2060				
	FAB 2070				

#### **CLOTHING REQUIREMENT**

It is important that competitors present a professional image and appearance. 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 will not be permitted. No loose fitting clothes or jewelry.

#### **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.

#### **ADDITIONAL INFORMATION**

Lunch will be provided for all competitors. Unfortunately, all allergies may not be able to be accommodated for. Please connect with the local Regional Coordinator for more information.

Regulations & Policies: A copy of the Skills Canada Alberta Regional Regulations & Policies can be found at the following link: <https://skillsalberta.com/policies-and-procedures>

#### **COMMITTEE MEMBERS**

Bob Shmyruk	Tech Chair
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