



WELD4 – Multi-Process Alloy Welder (MPAW)

Trades

Effective Term & Year: Fall 2026

Program Outline Review Date: 2031-04-01

Program Area: Trades Apprenticeship Training

Description:

This 5-week program delivers training involving practical and theoretical applications in Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (GTAW), Specialized Processes, basic metallurgy, welding drawings, layout and fabrication. Students receive credit in the SkilledTradesBC (STBC) Welder's Log Book upon completion of Multi-Process Alloy Welding (MPAW) Endorsement.

Credentials Granted:

Upon successful completion of the 5-week Multi-process Alloy Welder program, students receive:

- MPAW Endorsement from SkilledTradesBC.

Delivery Methods: On-Campus (Face-to-Face)

Program Duration: 5 weeks

Instructional Activity and Hours:

Activity	Hours
Instructional Hours (hrs/wk)	28 hrs/wk
Directed Studies (hrs/wk)	2 hrs/wk
Total (hrs/wk)	30 hrs/wk
Total Program Hours	150 Hours

Content Weighting:

Activity	Percentage
Theory	20%
Practical Skills	80%

Admission Requirements:

Welder Certificate of Qualification with Interprovincial Red Seal Endorsement

Prior Learning and Recognition:

Credit cannot be awarded for this program through Flexible Assessment.

Program Transfer Credit:

For information about block transfer agreements between programs in British Columbia, Alberta, and elsewhere, please visit <http://www.cotr.bc.ca/transfer>.

To minimize transfer issues, check with an academic advisor at the institution that will receive the transfer credits.

Textbooks and Required Resources:

Textbook selection varies by instructor and may change from year to year. At the Program Outline Effective Date the following textbooks were in use: (most current edition)

Welding "A" Level Modules, King's Printer.

Please see the instructor's syllabus or check COTR's online text calculator <https://textbook.cotr.bc.ca/> for a complete list of the currently required textbooks.

Program Competencies and Technical Training Content:

Upon the successful completion of this program, students will be able to:

TECHNICAL TRAINING CONTENT:

WEAP 404 Shielded Metal Arc Welding (SMAW)

- Select electrodes for SMAW
- Use the SMAW process on low carbon steel plate and pipe
- Use the SMAW process on stainless steel and/or low carbon steel plate and pipe

WEAP 406 Gas Tungsten Arc Welding (GTAW)

- Use the GTAW process for stainless steel

WEAP 407 Basic Metallurgy

- Describe common ferrous, non-ferrous and reactive metals and their weldability
- Describe die castings and their weldability

WEAP 408 Welding Drawings, Layout and Fabrication

- Interpret and apply mechanical drawings and layout components
- Fabricate weldments

WEAP 411 Specialized Processes

- Describe specialized welding processes

Evaluation and Assessment:

WELDER MULTI-PROCESS ALLOY WELDING (MPAW)

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COTR COURSE	SUBJECT COMPETENCIES	THEORY WEIGHTING	PRACTICAL WEIGHTING
WEAP 404	Shielded Metal Arc Welding (SMAW)	15%	45%
WEAP 406	Gas Tungsten Arc Welding (GTAW)	15%	50%
WEAP 407	Basic Metallurgy	30%	0%
WEAP 408	Welding Drawings, Layout and Fabricate	25%	5%
WEAP 411	Specialized Processes	15%	0%
Total		100%	100%
In-school theory & practical subject competency weighting		20%	80%
Final in-school percentage score			
Apprentices must achieve a minimum 70% as the final in-school percentage score to be eligible to write the Interprovincial Red Seal or SkilledTradesBC CofO Exam.			IN-SCHOOL %

Pass Requirements:

- All apprentices who complete the Multi-Process Alloy Welding (MPAW) Endorsement of the Welder program with a final level percentage score of 70% or greater will write the Interprovincial Red Seal examination as their final assessment.
- A minimum percentage score of 70% on the examination is required for a pass.
- Refer to Policy 2.6.2 Vocational Student Withdrawals as a Result of Absence.

Students must provide their own:

- steel-toed leather work boots
- safety glasses
- welding gloves
- flame retardant work clothes (cotton or wool)
- leather welding jacket
- welding helmet (#11 lens)
- welding goggles (#5 lens)
- reference manuals
- Sharp D.A.L. Scientific calculator

Academic Policies:

College of the Rockies policies related to courses can be found at <https://cotr.bc.ca/about-us/college-policies/> and include the following:

- Policy 2.1.4 Course Audit
- Policy 2.4.1 Credential Framework
- Policy 2.4.3 Students with Documented Disabilities
- Policy 2.4.4 Student Rights, Responsibilities and Conduct
- Policy 2.4.8 Academic Performance
- Policy 2.4.9 Student Feedback and Concerns
- Policy 2.4.11 Storage of Academic Works
- Policy 2.5.3 Student Appeal
- Policy 2.5.5 Prior Learning Assessment and Recognition (PLAR)

Program Grade

COM	NCG
Completed to the defined standard – 70% or greater	No Credit Granted – less than 70%

Program Changes:

Information contained in program outlines is correct at the time of publication. Content of the program is revised on an ongoing basis to ensure relevance to changing educational, employment, and marketing needs. The instructor endeavours to provide notice of changes to students as soon as possible. The instructor reserves the right to add material to programs.

Industry Training:

The program competencies and technical training content delivered in this program follow the SkilledTradesBC Program Outline for this trade.

Safety Catalog:

WorkSafeBC regulations apply to all trades programs. Students are expected to follow all safe work practices and have high regard for the safety of others as well as of themselves. Students are responsible to wear personal protective equipment (PPE) as directed. At a minimum, students must provide and wear approved safety footwear and eyewear at all times in the shop. Additional PPE may be required for specific tasks. Students are expected to wear clothing suitable for working safely in the shop.