WELD4 – Multi-Process Alloy Welder (MPAW)

Trades

Effective Term & Year: Fall 2022
Program Outline Review Date: 2022-04-01

Program Area: Trades Apprenticeship Training

Description:

Apprentices attend for a set block of time throughout the year on a full-time basis. Training involves practical and theoretical applications. Students receive credit in the Welding Provincial Standard Log Book upon completion of Multi-Process Alloy Welding (MPAW). Over and above the program units, students may be expected to participate in projects and, in such cases, prepare materials and steel for the college. The time frame is 5 weeks for this level. There are several intakes offered each year.

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)	
Directed Studies (hrs/wk)	
Total (hrs/wk)	

Total Program Hours 140

Content Weighting:

Activity	Percentage
Theory	20%
Practical Skills	80%

Admission Requirements:

Welder Certificate of Qualification with Interprovincial Red Seal Endorsement

Flexible Assessment:

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

Modern Welding

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)

COTR COURSE	SUBJECT COMPETENCIES	THEORY WEIGHTING	PRACTICAL WEIGHTING
WEAP 404	Shielded Metal Arc Welding (SMAW)	15%	45%
WEAP 406	Gas Tungsten Arc Welding (GTAW)	30%	0%
WEAP 407	Basic Metallurgy	15%	50%
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 ITA CofQ Exam.		**IN-SCHOOL %**	

Pass Requirements:

Multi-Process Alloy Welding (MPAW) Endorsement of the Welder program with a FINAL level percentage score of 70% or greater will write the SkilledTradesBC examination as their final assessment.

SkilledTradesBC will enter the apprentices' Welder Multi-Process Alloy Welding (MPAW) Endorsement examination percentage score in STBC Direct Access. A minimum percentage score of 70% on the examination is required for a pass.

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

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 2.4.3 Students with Documented Disabilities
- Policy 2.4.4 Student Conduct (plagiarism, other cheating, behavioral misconduct)
- Policy 2.4.8 Academic Performance
- Policy 2.5.3 Grade Appeal
- Policy 2.4.9 Student Concerns Re Faculty

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.