

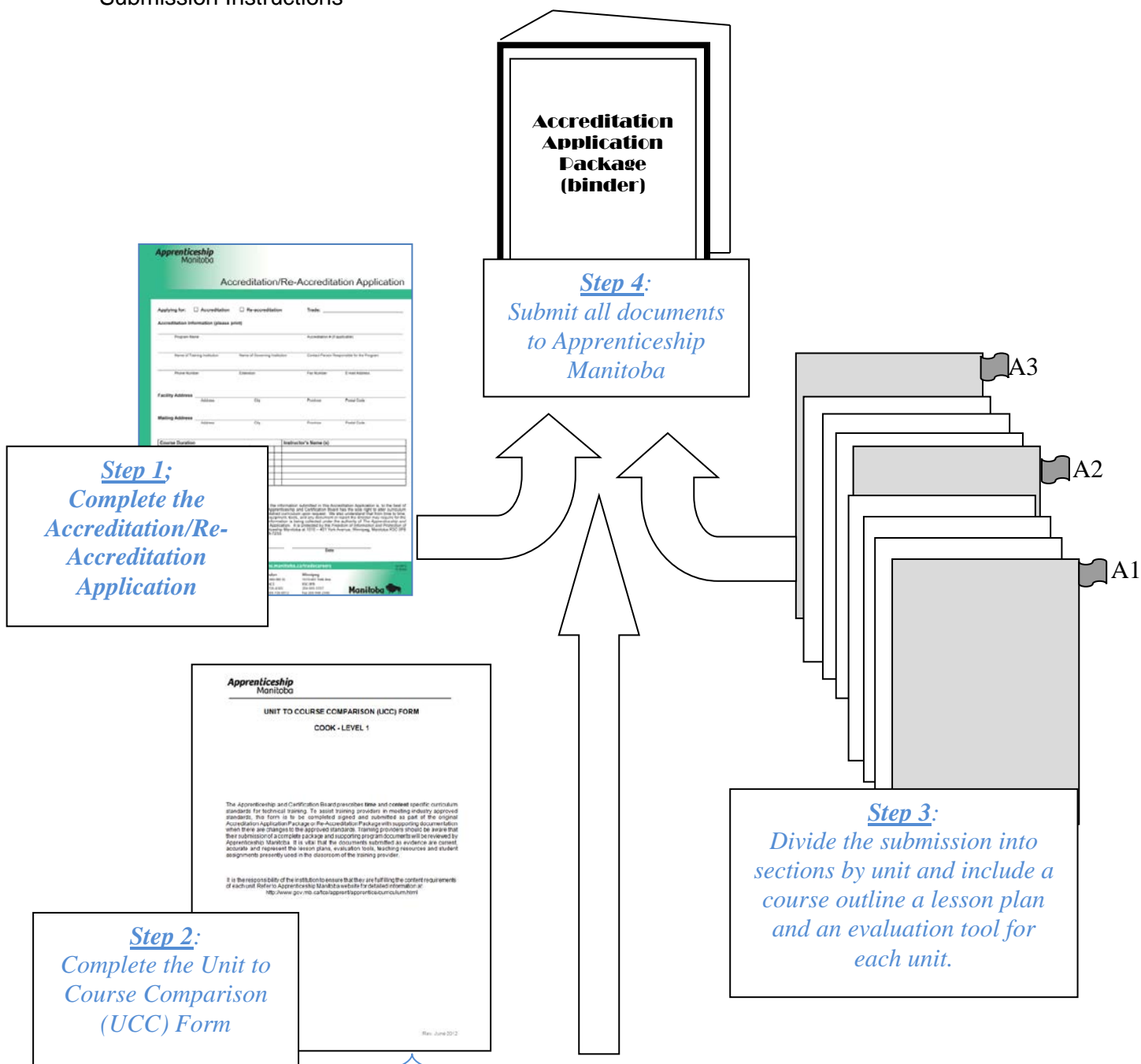
UNIT TO COURSE COMPARISON (UCC) FORM

Welder
Level 1

The Apprenticeship and Certification Board prescribes **time** and **content** specific curriculum standards for technical training. To assist training providers in meeting industry approved standards, this form is to be completed signed and submitted as part of the original Accreditation Application Package or Re-Accreditation Package with supporting documentation when there are changes to the approved standards. Training providers should be aware that their submission of a complete package and supporting program documents will be reviewed by Apprenticeship Manitoba. It is vital that the documents submitted as evidence are current, accurate and represent the lesson plans, evaluation tools, teaching resources and student assignments presently used in the classroom of the training provider.

It is the responsibility of the institution to ensure that they are fulfilling the content requirements of each unit. Refer to Apprenticeship Manitoba website for detailed information at:
manitoba.ca/tce/apprent/apprentice/curriculum.html

Submission Instructions



A3 Trade Safety Awareness	Included in A3:		
	__ Lesson Plan	__ Evaluation Tool	__ Course Outline
Course names	Course credit codes/numbers	Program Allotted Hours	
WS&H Issues and their Importance	Trade Safety Binder	55 minutes	
WS&H Legal rights and Responsibilities	Trade Safety Binder	70 minutes	
Unit total (hours): ▶			

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Demonstration of coverage of the Apprenticeship Manitoba technical training standard must include:

- Fully completed columns with course name(s), course credit code(s)/number(s) and the time allocated to the standards by the applicant.
- Submission of all Course Outlines.
- Supporting program documents: Lesson Plans, Evaluation Tools within the specific Apprenticeship Manitoba unit.

Submissions must include a balanced variety of supporting documentation to demonstrate adequate scope of technical training.

Tip: We do not require duplicates of supporting program documents within a submission package. If one of your Course Outlines is referenced more than once, place the one (1) copy in the first reference. For every other unit that refers to that Course Outline, include a note to indicate where the outline is located.

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A1 Trade Safety Awareness	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
Intro to Welding Technology Metal Design/Fabrication & Oxy-Acetylene Procedures Basic GMAW Procedures Basic SMAW Procedures Advanced GMAW (MIG) Procedures Advanced SMAW (ARC) Procedures Advanced Metal Design & Fabrication Applied Specialties & Qualifications GLO 1.1 (Objectives A1.1 to A 1.6, A1.8 to A1.10)	8378 8414 8474 8486 8487 8488 8489 8503	11.5 hours
Metal Design/Fabrication & Oxy-Acetylene Procedures Basic GMAW Procedures Basic SMAW Procedures Advanced GMAW (MIG) Procedures Advanced SMAW (ARC) Procedures Advanced Metal Design & Fabrication Applied Specialties & Qualifications GLO 1.1 (Objective A1.7)	8414 8474 8486 8487 8488 8489 8503	0.5 hours
Intro to Welding Technology Metal Design/Fabrication & Oxy-Acetylene Procedures Basic GMAW Procedures Basic SMAW Procedures GLO 8.1 (Objective A1.a1)	8378 8414 8474 8486	0.5 hours
Metal Design/Fabrication & Oxy-Acetylene Procedures GLO 6.3 (Objective A1.a2)	8414	0.5 hours
Advanced Metal Design & Fabrication GLO 6.3 (Objective A1.a3)	8489	1.0 hour
	Unit total (hours):▶	14 hours

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A2 Orientation I: Structure/Scope of Trade	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names (attach Course Outline(s))	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
Introduction to Welding Technology GLO 10.1 (objective A2.1)	8378	2.1 hours
Applied Specialties & Qualifications GLO 10.2 (Objectives A2.2, A2.3 & A2.4)	8503	4.9 hours
Unit total (hours):▶		7.0 hours

A3 Equipment	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names (attach Course Outline(s))	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
Introduction To Welding Technology GLO 7.1 (Objectives A3.1)	8378	0.4 hours
Introduction To Welding Technology GLO 3.1 (Objectives A3.2, A 3.4,	8378	1.7 hours
Introduction To Welding Technology GLO 3.2 (Objectives A3.3, A 3.5, A3.6, A3.7 & A3.8)	8378	3.4 hours
Metal Design / Fabrication & Oxy-Acetylene Procedures GLO 3.2 (Objectives A3.a1 to A3.a6)	8414	4.6 hours
Applied Specialties & Qualifications GLO 3.3 (Objectives A3.b1 to A3.b12)	8503	5.7 hours
Applied Specialties & Qualifications GLO 3.4 (Objectives A3.c1 to A3.c7)	8503	4.8 hours
Unit total (hours):▶		21 hours

B3 Trade Problems	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names (attach Course Outline(s))	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
Basic GMAW (MIG) Procedures GLO 6.2 (Objectives B3.1, B3.2 & B3.4)	8474	16.8 hours
Advanced GMAW (MIG) Procedures GLO 6.2 (Objectives B3.3 & B3.5)	8487	11.2 hours
Unit total (hours):▶		28 hours

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C3 Oxy-fuel Welding	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
	Course names (attach Course Outline(s))	Course credit codes/numbers
Introduction to Welding Technology GLO 6.1 (Objective C3.1)	8378	0.5 hours
Introduction to Welding Technology GLO 4.2 (Objective C3.2, C3.4, C.11, C3.13)	8378	3.5 hours
Introduction to Welding Technology GLO 7.1 (Objective C3.3)	8378	0.5 hours
Introduction to Welding Technology GLO 4.1 (Objective C3.5, C3.6)	8378	1.0 hours
Introduction to Welding Technology GLO 3.2 (Objective C3.7, C3.8, C3.9)	8378	2.5 hours
Applied Specialties & Qualifications GLO 4.3 (Objective C3.10)	8503	1.5 hours
Metal Design / Fabrication & Oxy-Acetylene Procedures GLO 4.2 (Objective C3.12)	8414	0.5 hours
Unit total (hours):▶		10 hours

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D1 Introduction to Welding Processes	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names (attach Course Outline(s))	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
Introduction to Welding Technology GLO 6.1 (Objective D1.1)	8378	1.1 hour
Metal Design / Fabrication & Oxy-Acetylene Procedures GLO 5.1 (Objective D1.2)	8414	2.1 hours
Intro to Welding Technology Metal Design/Fabrication & Oxy-Acetylene Procedures Basic GMAW Procedures Basic SMAW Procedures GLO 1.1 (D1.3)	8378 8414 8474 8486	2.1 hours
Advanced Metal Design/Fabrication GLO 7.1 (Objective D1.4)	8489	2.1 hours
Advanced Metal Design/Fabrication GLO 4.1 (Objective D1.5) Introduction to Welding Technology Basic GMAW (MIG) Procedures Basic SMAW (ARC) Procedures Applied Specialties & Qualifications GLO 4.2 (Objective D1.5)	8489 8378 8474 8486 8503	3.2 hours
Metal Design / Fabrication & Oxy-Acetylene Procedures GLO 4.2 (Objective D1.6, D1.9)	8414	4.2 hours
Introduction to Welding Technology GLO 4.2 (Objective D1.7, D1.8)	8378	4.2 hours
	Unit total (hours):▶	21 hours

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D3 Shielded Metal Arc Welding (SMAW) I	Include:	
	<input type="checkbox"/> Lesson Plan	<input type="checkbox"/> Evaluation Tool
Course names (attach Course Outline(s))	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
Introduction to Welding Technology Basic SMAW (ARC) Procedures GLO 6.1 (Objective D3.1)	8378 8486	2.2 hours
Advanced SMAW (ARC) Welding Processes & Procedures GLO 1.1 (Objective D3.2)	8488	2.2 hours
Advanced SMAW (ARC) Welding Processes & Procedures GLO 10.1 (Objective D3.3)	8488	3.7 hours
Basic SMAW (ARC) Procedures GLO 3.1 (Objective D3.4)	8486	5.9 hours
Basic SMAW (ARC) Procedures GLO 4.1 (Objective D3.5)	8486	3.7 hours
Introduction to Welding Technology GLO 4.2 (Objectives D3.6)	8378	3.7 hours
Basic SMAW (ARC) Procedures GLO 4.2 (Objective D3.7)	8486	7.4 hours
Basic SMAW (ARC) Procedures GLO 3.2 (Objective D3.8)	8486	3.7 hours
Introduction to Welding Technology GLO 4.2 (Objective D3.9)	8378	3.7 hours
<i>Subtotal for D3</i>		<i>36.2 hours</i>
D3.a Shielded Metal Arc Welding (SMAW) I		
Basic SMAW (ARC) Procedures GLO 6.1 (Objectives D3.a.1)	8486	2.2 hours
Basic SMAW (ARC) Procedures GLO 6.1 (Objectives D3.a.2)	8486	2.2 hours
Basic SMAW (ARC) Procedures GLO 3.1 (Objective D3.a.3)	8486	3.7 hours
Basic SMAW (ARC) Procedures GLO 3.2 (Objective D3.a.4)	8486	3.7 hours
Basic SMAW (ARC) Procedures GLO 3.1 (Objective D3.a.5)	8486	3.7 hours
Basic SMAW (ARC) Procedures GLO 4.2 (Objective D3.a.6)	8486	3.7 hours
Introduction to Welding Technology GLO 4.4 (Objective D3.a.7)	8378	3.7 hours
Advanced SMAW (ARC) Welding Processes & Procedures GLO 4.2 (Objective D3.a.8)	8488	14.8 hours
<i>Subtotal for D3.a Shielded Metal Arc Welding (SMAW) I</i>		<i>37.7 hours</i>
Total for D3 & D3.a	Unit total (hours):▶	74 hours

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Course names (attach Course Outline(s))	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
D6 Gas Metal Arc Welding (GMAW) I		
Introduction to Welding Technology Metal Design / Fabrication & Oxy-Acetylene Procedures GLO 6.1 (Objective D6.1)	8378 8414	0.7 hours
Advanced GMAW (MIG) Welding Processes & Procedures Advanced SMAW (ARC) Welding Processes & Procedures Advanced Metal Design/Fabrication Applied Specialties & Qualifications GLO 1.1 (Objective D6.2)	8487 8488 8489 8503	0.7 hours
Basic GMAW (MIG) Procedures GLO 3.1 (Objective D6.3)	8474	0.7 hours
Basic GMAW (MIG) Procedures GLO 4.2 (Objective D6.4)	8474	1.75 hours
Basic GMAW (MIG) Procedures GLO 4.2 (Objective D6.5)	8474	1.75 hours
Basic GMAW (MIG) Procedures GLO 4.2 (Objective D6.6)	8474	1.75 hours
Advanced GMAW (MIG) Welding Processes & Procedures GLO 4.2 (Objective D6.7)	8487	1.75 hours
Basic GMAW (MIG) Procedures GLO 4.2 (Objective D6.8)	8474	1.75 hours
Introduction to Welding Technology GLO 4.2 (Objective D6.9)	8378	7.0 hours
<i>Subtotal for D6</i>		<i>17.85 hours</i>
D6.a Gas Metal Arc Welding (GMAW) I		
Advanced GMAW (MIG) Welding Processes & Procedures GLO 6.1 (Objective D6.a.1)	8487	1.75 hours
Advanced GMAW (MIG) Welding Processes & Procedures GLO 5.1 (Objective D6.a.2)	8487	0.7 hours
Advanced Metal Design/Fabrication GLO 4.1 (Objective D6.a.3)	8489	0.7 hours
Advanced GMAW (MIG) Welding Processes & Procedures GLO 3.1 (Objective D6.a.4)	8487	1.75 hours
Advanced GMAW (MIG) Welding Processes & Procedures GLO 3.2 (Objective D6.a.5)	8487	1.75 hours
Advanced GMAW (MIG) Welding Processes & Procedures GLO 4.2 (Objective D6.a.6)	8487	1.75 hours
Advanced GMAW (MIG) Welding Processes & Procedures GLO 4.4 (Objective D6.a.7)	8487	1.75 hours
Advanced GMAW (MIG) Welding Processes & Procedures GLO 4.2 (Objective D6.a.8)	8487	7.0 hours
<i>Subtotal for D6.a Gas Metal Arc Welding (GMAW) I</i>		<i>15.4 hours</i>
Total for D6 Gas Metal Arc Welding (GMAW) I	Unit total (hours):▶	35 hours

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D11 Flux Core Arc Welding (FCAW) 1 (page 1 of 2)	Include:	
	<input type="checkbox"/> Lesson Plan	<input type="checkbox"/> Evaluation Tool
Course names (attach Course Outline(s))	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
Basic GMAW (MIG) Procedures GLO 4.2 (Objective D11.1)	8474	
Advanced GMAW (MIG) Processes & Procedures GLO 4.2 (Objective D11.1)	8487	
Applied Specialties & Qualifications GLO 6.1 (Objective D11.1)	8503	1.4 hours
Applied Specialties & Qualifications GLO 1.1 (Objective D11.2)	8503	1.4 hours
Applied Specialties & Qualifications GLO 7.1 (Objective D11.3)	8503	1.4 hours
Applied Specialties & Qualifications GLO 3.1 (Objective D11.4)	8503	1.4 hours
Applied Specialties & Qualifications GLO 4.1 (Objective D11.5)	8503	2.1 hours
Applied Specialties & Qualifications GLO 4.2 (Objective D11.6)	8503	7.0 hours
Applied Specialties & Qualifications GLO 3.2 (Objective D11.7)	8503	2.8 hours
<i>Subtotal for D11</i>		<i>17.5 hours</i>
D11.a Flux Core Arc Welding (FCAW I)		
Applied Specialties & Qualifications GLO 6.1 (Objective D11.a.1)	8503	1.4 hours
Applied Specialties & Qualifications GLO 5.1 (Objective D11.a.2)	8503	1.4 hours
Applied Specialties & Qualifications GLO 4.1 (Objective D11.a.3)	8503	1.4 hours
Applied Specialties & Qualifications GLO 4.1 (Objective D11.a.4)	8503	2.1 hours
Applied Specialties & Qualifications GLO 4.1 (Objective D11.a.5)	8503	2.1 hours
Applied Specialties & Qualifications GLO 4.1 (Objective D11.a.6)	8503	7.0 hours
<i>Subtotal for D11.a Flux Core Arc Welding (FCAW I)</i>		<i>15.4 hours</i>
<i>The total for all of D11, D11.a, D11.b & D11.c is at the bottom of the following page.</i>		

The above chart is continued on the next page.

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D11 Flux Core Arc Welding (FCAW) 1 (<i>page 2 of 2</i>)	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names (attach Course Outline(s))	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
D11. b Metal Core Arc Welding (MCAW)		
Applied Specialties & Qualifications GLO 6.1 (Objective D11.b.1)	8503	1.4 hours
Applied Specialties & Qualifications GLO 1.1 (Objective D11.b.2)	8503	2.1 hours
Applied Specialties & Qualifications GLO 7.1 (Objective D11.b.3)	8503	2.1 hours
Applied Specialties & Qualifications GLO 3.1 (Objective D11.b.4)	8503	2.1 hours
Applied Specialties & Qualifications GLO 3.2 (Objective D11.b.5)	8503	2.1 hours
Applied Specialties & Qualifications GLO 4.2 (Objective D11.b.6)	8503	4.9 hours
Applied Specialties & Qualifications GLO 3.2 (Objective D11.b.7)	8503	3.5 hours
<i>Subtotal for D11. b Metal Core Arc Welding (MCAW)</i>		<i>18.2 hours</i>
D11.c Metal Core Arc Welding (MCAW)		
Applied Specialties & Qualifications GLO 6.1 (Objective D11.c.1)	8503	2.1 hours
Applied Specialties & Qualifications GLO 5.1 (Objective D11.c.2)	8503	2.1 hours
Applied Specialties & Qualifications GLO 4.1 (Objective D11.c.3)	8503	1.4 hours
Applied Specialties & Qualifications GLO 3.2 (Objective D11.c.4)	8503	2.1 hours
Applied Specialties & Qualifications GLO 4.1 (Objective D11.c.5)	8503	2.1 hours
Advanced GMAW (MIG) Processes & Procedures Applied Specialties & Qualifications GLO 4.2 (Objective D11.c.6)	8487 8503	7.0 hours
Applied Specialties & Qualifications GLO 4.4 (Objective D11.c.7)	8503	2.1 hours
<i>Subtotal for D11.c Metal Core Arc Welding (MCAW)</i>		<i>18.9 hours</i>
Total for D11, D11.a, D11.b & D11.c (pages 10 & 11 of this UCC)	Unit total (hours):▶	70 hours

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B3 Trade Problems	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names (attach Course Outline(s))	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
Basic GMAW (MIG) Procedures GLO 6.2 (Objective B3.1, B3.2, B3,4)	8474	16.8 hours
Advanced GMAW (MIG) Welding Processes and Procedures GLO 6.2 (Objective B3.3, B3.5)	8487	11.2 hours
	Unit total (hours):▶	28 hours

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