

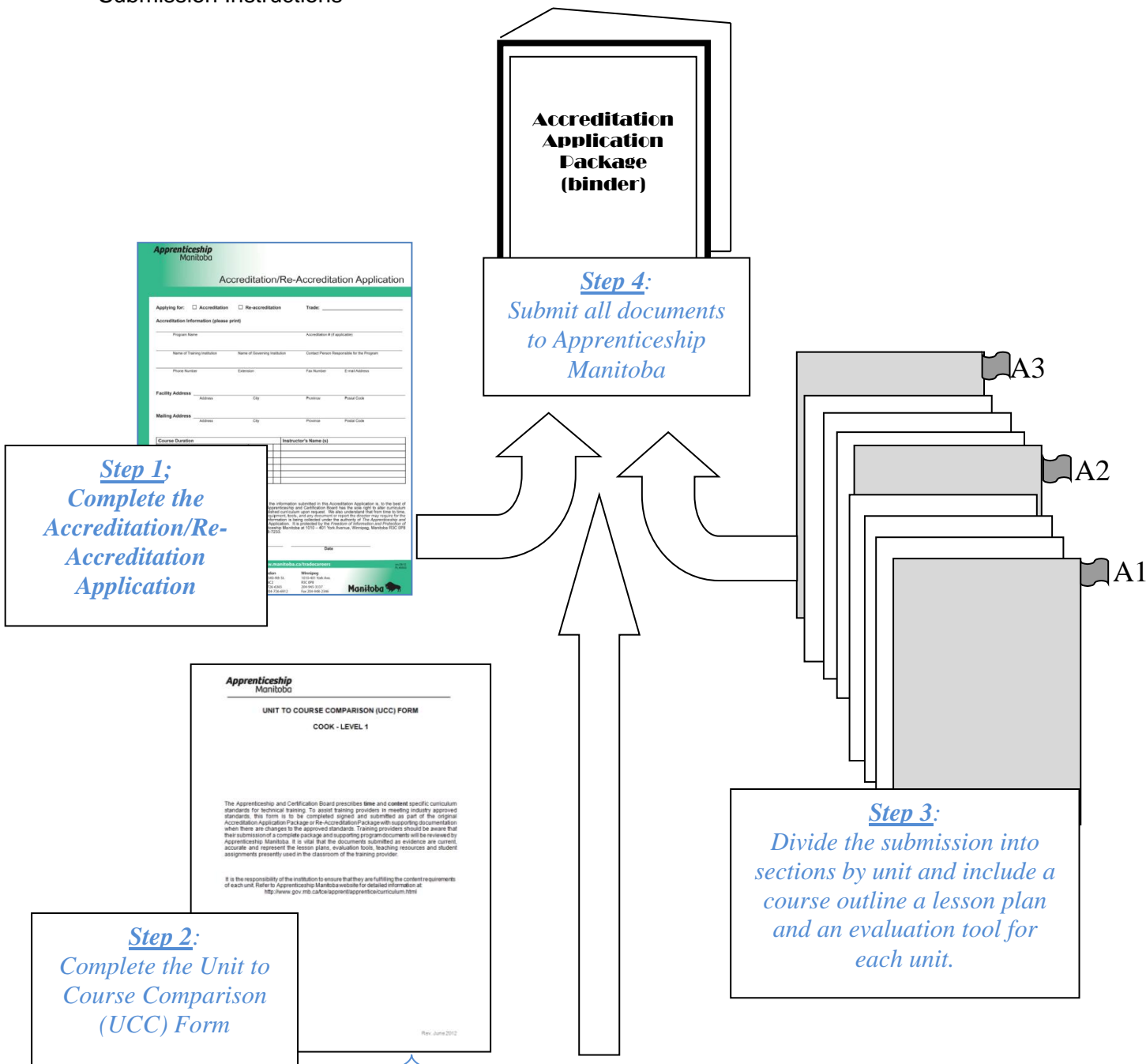
UNIT TO COURSE COMPARISON (UCC) FORM

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.

A1 Trade Safety Awareness		Include: __ Lesson Plan __ Evaluation Tool __ Course Outline
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
All Courses GLO 1.1 (Objectives A1.1 to A1.6, A1.8 to A1.10)		13 hours
<ul style="list-style-type: none"> • Metal Design / Fabrication & Oxy-Acetylene Procedures • Basic GMAW (MIG) Procedures • Basic SMAW (ARC) Procedures • Advanced GMAW (MIG) Procedures • Advanced SMAW (ARC) Procedures • Advanced Metal Design & Fabrication • Applied Specialties & Qualifications GLO 1.1 (Objective A1.7)	8378 8414 8474 8486 8487 8488 8489 8503	1 hour
Unit total (hours):▶		14 hours

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A1. a Communication and Trade Documentation	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
Introduction to Welding Technology	8378	
Metal Design / Fabrication & Oxy-Acetylene Procedures	8414	
Basic GMAW (MIG) Procedures		
Basic SMAW (ARC) Procedures	8474	
GLO 8.1 (Objective A1.a1)	8486	
Metal Design / Fabrication & Oxy-Acetylene Procedures	8414	
GLO 6.3 (Objective A1.a2)		
Advanced Metal Design & Fabrication	8489	
GLO 6.3 (Objective A1.a3)		
Unit total (hours):▶		

A2 Orientation I: Structure/Scope of Trade	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
Introduction to Welding Technology	8378	
GLO 10.1 (Objective A2.1)		
Advanced Metal Design & Fabrication	8489	
GLO 10.2 (Objective A2.2)		
Applied Specialties & Qualifications	8503	
GLO 10.2 (Objective A2.3)		
Unit total (hours):▶		7 hours

A3 Equipment	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
Introduction to Welding Technology		
GLO 3.1 (Objectives A3.1, A3.2 & A3.4)	8378	2.1 hours
Introduction to Welding Technology		
GLO 3.2 (Objectives A3.3 & A3.5 to A3.8)	8378	3.4 hours
Unit total (hours):▶		5.5 hours

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A3.a Stationary Machinery		Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical	
Metal Design / Fabrication & Oxy-Acetylene Procedures GLO 3.2 (Objectives A3.a1 to A3.a6)	8414	5.0 hours	
Unit total (hours): ►			5.0 hours

A3.b Hoisting, Lifting and Rigging		Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical	
Applied Specialties & Qualifications GLO 3.3 (Objectives A3.b1 to A3.b12)	8503	5.7 hours	
Unit total (hours): ►			5.7 hours

A3.c Access Equipment Overview		Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names (attach Course Outline(s))	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical	
Applied Specialties & Qualifications GLO 3.4 (Objectives A3.c1 to A3.c7)	8503	4.8 hours	
Unit total (hours): ►			4.8 hours

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D1 Welding and Cutting Processes I A. Welding Processes:	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
	Course names	Course credit codes/numbers
Introduction to Welding Technology Basic SMAW (ARC) Procedures GLO 6.1 (Objective D1.1)	8378 8486	1.4 hours
Metal Design / Fabrication & Oxy-Acetylene Procedures GLO 5.1 (Objective D1.2)	8414	2.8 hours
Introduction to Welding Technology Metal Design / Fabrication & Oxy-Acetylene Procedures Basic GMAW (MIG) Procedures Basic SMAW (ARC) Procedures GLO 1.1 (Objective D1.3)	8378 8414 8474 8486	2.8 hours
Advanced Metal Design & Fabrication GLO 10.1 (Objective D1.4)	8489	2.8 hours
Introduction to Welding Technology Basic GMAW (MIG) Procedures Basic SMAW (ARC) Procedures Advanced Metal Design & Fabrication Applied Specialties & Qualifications GLOs 4.1 & 4.2 (Objective D1.5)	8378 8474 8486 8489 8503	4.2 hours
Metal Design / Fabrication & Oxy-Acetylene Procedures GLO 4.1 (Objective D1.6)	8414	2.8 hours
Introduction to Welding Technology GLO 4.2 (Objectives D1.7 & D1.8))	8378	2.8 hours
Metal Design / Fabrication & Oxy-Acetylene Procedures GLO 4,2 (Objective D1.9)	8414	2.8 hours
Applied Specialties & Qualifications GLO 4.6 (Objective D1.10)	8503	2.8 hours
	Unit total (hours):▶	28 hours

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D1 Welding and Cutting Processes I B. Cutting Processes:		Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical	
Applied Specialties & Qualifications GLO 4.3 (Objective D1B1, D1B3, D1B7, D1B8, D1B9)	8503		
Applied Specialties & Qualifications GLO 1.1 (Objective D1B2)	8503		
Applied Specialties & Qualifications GLO 3.1 (Objective D1B4, D1B5)	8503		
Applied Specialties & Qualifications GLO 4.5 (Objective D1B6)	8503		
		Unit total (hours):▶	28 hours

D1 Welding and Cutting Processes I B1.a Cutting		Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical	
Advanced Metal Design & Fabrication GLO 4.1 (Objectives D1B1.a1, D1B1.a3, D1B1.a7, D1B1.a8, D1B1.a9)	8489		
Advanced Metal Design & Fabrication GLO 1.1 (Objective D1B1.a2)	8489		
Advanced Metal Design & Fabrication GLO 3.1 (Objective D1B1.a4, D1B1.a5, D1B1.a6)	8489		
		Unit total (hours):▶	28 hours

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D3 Shielded Metal Arc Welding (SMAW) I		Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical	
Introduction to Welding Technology 8486 Basic SMAW (ARC) Procedures GLO 6.1 (Objective D3.1)	8378	3.2 hours	
Basic SMAW (ARC) Procedures GLO 1.1 (Objective D3.2)	8486	3.2 hours	
Advanced SMAW (ARC) Procedures GLO 10.1 (Objective D3.3)	8488	5.3 hours	
Basic SMAW (ARC) Procedures GLO 3.1 (Objective D3.4)	8486	8.5 hours	
Basic SMAW (ARC) Procedures GLO 4.1 (Objective D3.5)	8486	5.3 hours	
Introduction to Welding Technology GLO 4.2 (Objectives D3.6, D3.9)	8378	10.6 hours	
Basic SMAW (ARC) Procedures GLO 4.2 (Objective D3.7)	8486	10.6 hours	
Basic SMAW (ARC) Procedures GLO 3.2 (Objective D3.8)	8486	5.3 hours	
Unit total (hours): ►		54 hours	

D3.a Shielded Metal Arc Welding (SMAW) I		Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical	
Basic SMAW (ARC) Procedures GLO 6.1 (Objectives D3.a.1 & D3.a.2)	8486	3.2 hours	
Basic SMAW (ARC) Procedures GLO 3.1 (Objectives D3.a.3 & D3.a.5)	8486	3.2 hours	
Basic SMAW (ARC) Procedures GLO 3.2 (Objective D3.a.4)	8486	5.3 hours	
Basic SMAW (ARC) Procedures GLO 4.2 (Objective D3.a.6)	8486	5.3 hours	
Basic SMAW (ARC) Procedures GLO 4.4 (Objective D3.a.7)	8486	5.3 hours	
Advanced SMAW (ARC) Procedures GLO 4.2 (Objective D3.a.8)	8488	21 hours	
Unit total (hours): ►		46 hours	

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D6 Wire Feed Welding Processes I (GMAW, FCAW, MCAW)	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
Introduction to Welding Technology Metal Design / Fabrication & Oxy-Acetylene Procedures GLO 6.1 (Objective D6.1)	8378 8414	1.3 hours
Basic GMAW (MIG) Procedures GLO 1.1 (Objective D6.2)	8474	1.3 hours
Basic GMAW (MIG) Procedures GLO 3.1 (Objective D6.3)	8474	1.3 hours
Basic GMAW (MIG) Procedures GLO 4.2 (Objectives D6.4, D6.5, D6.6 & D6.8)	8474	13 hours
Advanced GMAW (MIG) Procedures GLO 4.2 (Objective D6.7)	8487	3.3 hours
Introduction to Welding Technology GLO 4.2 (Objective D6.9)	8378	3.3 hours
Unit total (hours): ►		34 hours

D6.a Gas Metal Arc Welding (GMAW) I	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
Advanced GMAW (MIG) Procedures GLO 6.1 (Objective D6.a.1)	8487	3.3 hours
Advanced GMAW (MIG) Procedures GLO 5.1 (Objective D6.a.2)	8487	1.3 hours
Advanced Metal Design & Fabrication GLO 4.1 (Objective D6.a.3)	8489	1.3 hours
Advanced GMAW (MIG) Procedures GLO 3.1 (Objective D6.a.4)	8487	3.3 hours
Advanced GMAW (MIG) Procedures GLO 3.2 (Objective D6.a.5)	8487	3.3 hours
Advanced GMAW (MIG) Procedures GLO 4.2 (Objective D6.a.6 & D6.a.8)	8487	3.3 hours
Advanced GMAW (MIG) Procedures GLO 4.5 (Objective D6.a.7)	8487	13.2 hours
Unit total (hours): ►		32 hours

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D6.b Flux Core Arc Welding (FCAW) I		Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical	
Applied Specialties & Qualifications GLO 6.1 (Objective D6.b.1)	8503	1.3 hours	
Applied Specialties & Qualifications GLO 1.1 (Objective D6.b.2)	8503	1.3 hours	
Applied Specialties & Qualifications GLO 7.1 (Objective D6.b.3)	8503	1.3 hours	
Applied Specialties & Qualifications GLO 3.1 (Objective D6.b.4)	8503	1.3 hours	
Applied Specialties & Qualifications GLO 4.1 (Objective D6.b.5)	8503	2.0 hours	
Applied Specialties & Qualifications GLO 4.2 (Objective D6.b.6)	8503	6.6 hours	
Applied Specialties & Qualifications GLO 3.2 (Objective D6.b.7)	8503	2.6 hours	
		Unit total (hours):▶	17 hours

D6.c Flux Core Arc Welding (FCAW I)		Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical	
Applied Specialties & Qualifications GLO 6.1 (Objective D6.c.1)	8503	1.3 hours	
Applied Specialties & Qualifications GLO 5.1 (Objective D6.c.2)	8503	1.3 hours	
Applied Specialties & Qualifications GLO 4.1 (Objective D6.c.3 & D6.c.5)	8503	3.3 hours	
Applied Specialties & Qualifications GLO 3.2 (Objective D6.c.4)	8503	2.0 hours	
Applied Specialties & Qualifications GLO 4.2 (Objective D6.c.6)	8503	6.6 hours	
		Unit total (hours):▶	15 hours

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D6.d Metal Cored Arc Welding (MCAW)		Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical	
Applied Specialties & Qualifications GLO 6.1 (Objective D6.d.1)	8503	1.3 hours	
Applied Specialties & Qualifications GLO 1.1 (Objective D6.d.2)	8503	2.0 hours	
Applied Specialties & Qualifications GLO 7.1 (Objective D6.d.3)	8503	2.0 hours	
Applied Specialties & Qualifications GLO 3.1 (Objective D6.d.4)	8503	2.0 hours	
Applied Specialties & Qualifications GLO 3.2 (Objective D6.d.5 & D6.d.7)	8503	5.3 hours	
Applied Specialties & Qualifications GLO 4.2 (Objective D6.d.6)	8503	4.6 hours	
		Unit total (hours): ►	
		17 hours	

D6.e Metal Core Arc Welding (MCAW)		Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical	
Applied Specialties & Qualifications GLO 6.1 (Objective D6.e.1)	8503	2.0 hours	
Applied Specialties & Qualifications GLO 5.1 (Objective D6.e.2)	8503	2.0 hours	
Applied Specialties & Qualifications GLO 4.1 (Objective D6.e.3 & D6.e.5)	8503	3.3 hours	
Applied Specialties & Qualifications GLO 3.2 (Objective D6.e.4)	8503	2.0 hours	
Advanced GMAW (MIG) Procedures Applied Specialties & Qualifications GLO 4.2 (Objective D6.e.6)	8487 8503	6.6 hours	
Applied Specialties & Qualifications GLO 4.5 (Objective D6.e.7)	8503	2.0 hours	
		Unit total (hours): ►	
		18 hours	

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C3 Oxy-fuel Welding	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	Course credit codes/numbers	Time Allocated (Hours) Theory and Practical
Introduction to Welding Technology GLO 6.1 (Objective C3.1)	8378	3.3 hours
Introduction to Welding Technology GLO 4.2 (Objective C3.2, C3.4, C3.11 & 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

B3 Trade Problems	Include: __ Lesson Plan __ Evaluation Tool __ Course Outline	
Course names	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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