1. Title	Perform metal inert gas (MIG) / gas metal arc welding (GMAW) according to drawings	
2. Code	EMCUIN322A	
3. Range	Perform general MIG/GMAW on parent materials like carbon steel and aluminium alloy according to drawings, at electrical and mechanical welding workshops or work sites.	
4. Level	3	
5. Credits	4	
6. Competency		Performance Requirements
	6.1 Preparations for MIG/GMAW	♦ Understand the types of MIG/GMAW machines, their functions and properties, including the wire feeding system and arc characteristics ♦ Understand the MIG/GMAW requirements on welding materials (e.g. welding wire) ♦ Read the drawings correctly (including symbolisation of welding symbols and welding processes) ♦ Understand the code of safety for MIG/GMAW
	6.2 Perform MIG/GMAW according to drawings	♦ Estimate the impact of welding procedure on the dimensions of work piece ♦ Perform assembly (including root opening, tack weld and anti-distortion procedure) and groove preparation (including preparing and cleaning the groove before welding) according to the drawings ♦ Inspect the dimensions of weld and surface weld defects ♦ Understand the weldability of the joint design
	6.3 Professionalism in MIG/GMAW	♦ Perform MIG/GMAW tasks according to relevant safety guidelines and code of practice
7. Assessment Criteria	The integrated outcome requirements of this unit of competency are: (i) Capable to follow the safety instructions and code of practice to apply MIG/GMAW in one-side full-penetration welding at flat position, at horizontal position, at vertical up position , at vertical down position and at overhead positions, according to drawings, on different parent materials; and (ii) Capable to apply MIG/GMAW in fillet welding at flat position, at horizontal position, at vertical up position, at vertical down position and at overhead positions, according to drawings, on different parent materials.	
8. Remarks	This unit of competency is suitable for enhancing the competency of electrical and mechanical welding practitioners. The credit value of this unit of competency is set on the presumption that the person already possesses the competency of EMCUIN211A “Basic metal inert gas (MIG)/gas metal arc welding (GMAW)”.	