

1. Title	Basic metal inert gas (MIG)/gas metal arc welding (GMAW)
2. Code	EMCUIN211A
3. Range	Perform MIG/GMAW tasks on parent materials like carbon steel and aluminum alloy at electrical and mechanical welding workshops or work sites.
4. Level	2
5. Credits	5
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Code of practice and preparations for MIG/GMAW</p> <ul style="list-style-type: none"> ◆ Understand relevant code of practice for MIG/GMAW, including to: <ul style="list-style-type: none"> • Operate MIG/GMAW equipment and accessories correctly and safely • Wear proper personal protective gear • Protect against electric shock • Protect against fire and explosion • Protect against harmful arc ray effectively • Protect against harmful gases and poisonous fumes ◆ Know about the preparations for MIG/GMAW, including to: <ul style="list-style-type: none"> • Understand the general applications and their limitations of MIG/GMAW • Understand the types of MIG/GMAW machines, including the wire feeding system and gas supply system • Identify the requirements on welding materials of MIG/GMAW, such as welding wire and shielding gas <p>6.2 Methods and procedures for operating MIG/GMAW</p> <ul style="list-style-type: none"> ◆ Apply MIG/GMAW in the following areas: <ul style="list-style-type: none"> • Perform surface buildup at flat position • Perform square edge butt weld at flat position and horizontal positions • Perform fillet weld at flat position and horizontal positions ◆ Identify various types of common and simple surface weld defects at welded joints, such as undercut, overlap and porosities ◆ Avoid causing the simple surface weld defects mentioned above <p>6.3 Professionalism in MIG/GMAW</p> <ul style="list-style-type: none"> ◆ Perform MIG/GMAW tasks according to relevant safety guidelines and code of practice
7. Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <p>(i) Capable to complete basic MIG/GMAW tasks without causing obvious surface weld defects; and</p> <p>(ii) Capable to perform MIG/GMAW tasks safely.</p>
8. Remarks	This unit of competency is applicable to general electrical and mechanical welding practitioners.