

**Specification of Competency Standards**  
**for the Manufacturing Technology Industry**  
**Unit of Competency**

Functional Area - Product Manufacturing

Title	Electrical discharge machining (EDM)
Code	106405L3
Range	This unit of competency is applicable to the production department of the corporation of tooling manufacturing industry. Practitioners should be capable to understand the knowledge of Electrical Discharge Machining (EDM) and carry out EDM operations. (Electrical Discharge Machining, EDM)
Level	3
Credit	3 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Understand electrical discharge machining (EDM)</p> <ul style="list-style-type: none"> <li>• Understand EDM principles, characteristics, applications and related EDM surface standard</li> <li>• Understand the workpiece gripping methods on EDM machines</li> <li>• Understand types, specifications and applications of standard fixtures</li> <li>• Understand the impact of processing fluid on workpiece and processing quality</li> <li>• Understand the material compositions, types, characteristics and selection conditions of copper, graphite and other electrical materials</li> <li>• Understand the impacts of different workpiece materials and engineering design on EDM processing parameter setting.</li> <li>• Understand the types, structure, size, processing principles, and processing fluid circulation systems of EDM machines</li> <li>• Understand the types, structures, applications, processing principles, processing parameters setting principles of CNC EDM machines</li> <li>• Understand various processing instructions, program structures and programming methods of CNC EDM machines</li> </ul> <p>2. Carry out electrical discharge machining (EDM)</p> <ul style="list-style-type: none"> <li>• Set the appropriate processing parameters, and online processing programs in accordance with the workpiece material and engineering design</li> <li>• Set appropriate processing parameters and compensation in accordance with the marked engineering drawing tolerances specifications</li> <li>• Set and calibrate the workpiece and electrode</li> <li>• Operate EDM machines and carry out all kinds of EDM operations</li> <li>• Evaluate the processing performance of the electrode used in EDM machine for EDM</li> <li>• Operate CNC EDM machines to carry out EDM operations, such as circumference, fan-shaped, vectors and fixed displacement pore-enlarging operations</li> <li>• Maintain EDM machines and carry out troubleshooting</li> </ul> <p>3. Professional handling of electrical discharge machining (EDM)</p> <ul style="list-style-type: none"> <li>• Follow the EDM safety guidelines and related codes of practice and in accordance with design drawings, specifications and production efficiency requirements to carry out electrical discharge machining</li> </ul>
Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> <li>• Capable to operate EDM machines to carry out electrical discharge machining</li> <li>• Capable to handle the unusual circumstances of EDM machines and carry out preventive maintenance</li> </ul>
Remark	