

**Specification of Competency Standards**  
**for the Printing & Publishing Industry**  
**Unit of Competency**

Functional Area - Printing Technology

Title	Analyse development potentials of functional material printing products
Code	106267L5
Range	Follow on the rapid development of electronic technology, there is an increase of deploying printing technology for producing low-cost, large quantity of electronic and optical scanning functional products. Understand functional material printing technology in printing department, deploy different printing technology and special materials for printing special electronic products, such as RFID antenna, paper battery, printed circuit board, etc.
Level	5
Credit	6 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Understand functional material printing technology.</p> <ul style="list-style-type: none"> <li>• Understand the development and scope of application of deploying printing technology in electronic product market.</li> <li>• Understand the applicable area of functional printing technology, including 3D printing, smart packaging printing, RFID, paper battery and interactive display, etc.</li> <li>• Understand the applied materials for functional printing.</li> <li>• Master applied technology in printing electronic products with electropasma based ink, including lithographic, screen, intaglio and inkjet printing, etc.</li> <li>• Master the function and production technology for smart packaging printing.</li> <li>• Understand the chemical characteristics of applying nanotechnology particles in metallic conductive ink, in order to realize green printed circuit board production.</li> <li>• Understand the printing of RFID products by photonic curable conductive ink technology and intensive pulse light sintering of copper oxide ink technology.</li> <li>• Understand product testing methods that match the quality specifications.</li> </ul> <p>2. With the above knowledge, be able to explore the feasibility and market potential of expansion in functional material printing products for a company, including the current market condition of electronic printing, smart packaging printing demand, investment, and the capabilities of company's production technology, etc.</p> <p>3. Analyze the development potential of functional materials for a company, and propose development strategy to the management.</p>
Assessment Criteria	<p>This integrated outcome requirement of this unit of competency:</p> <ul style="list-style-type: none"> <li>• Be able to explore the feasibility and market potential in expansion of functional material printing products for a company.</li> </ul>
Remark	The credit value of this unit of competency is based on the assumption that the learner has printing production technology application and management knowledge.