



Federal Democratic Republic of Ethiopia  
**OCCUPATIONAL STANDARD**  
**BASIC PRINTING AND GRAPHIC ARTS**  
**SERVICES**  
NTQF Level I



*Ministry of Education*  
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## Introduction

Ethiopia has embarked on a process of reforming its TVET-System. Within the policies and strategies of the Ethiopian Government, technology transformation – by using international standards and international best practices as the basis, and, adopting, adapting and verifying them in the Ethiopian context – is a pivotal element. TVET is given an important role with regard to technology transfer. The new paradigm in the outcome-based TVET system is the orientation at the current and anticipated future demand of the economy and the labor market.

The Ethiopia Occupational Standards (EOS) is the core element of the Ethiopian National TVET-Strategy and an important factor within the context of the National TVET-Qualification Framework (NTQF). They are national Ethiopian standards, which define the occupational requirements and expected outcome related to a specific occupation without taking TVET delivery into account.

This document details the mandatory format, sequencing, wording and layout for the Ethiopia Occupational Standard which comprised of Units of Competence.

A Unit of Competence describes a distinct work activity. It is documented in a standard format that comprises:

- Occupational title and NTQF level
- Unit title
- Unit code
- Unit descriptor
- Elements and Performance criteria
- Variables and Range statement
- Evidence guide

Together all the parts of a Unit of Competence guide the assessor in determining whether the candidate is competent.

The ensuing sections of this EOS document comprise a description of the occupation with all the key components of a Unit of Competence:

- chart with an overview of all Units of Competence for the respective level including the Unit Codes and the Unit Titles
- contents of each Unit of Competence (competence standard)
- occupational map providing the Technical and Vocational Education and Training (TVET) providers with information and important requirements to consider when designing training programs for this standards and for the individual, a career path

## UNIT OF COMPETENCE CHART

Occupational Standard: Basic Printing and Graphic Arts Services Level I		
Occupational Code: <b>IND BPS</b>		
<b>NTQF Level I</b>		
<p><b><u>IND BPS1 01 0613</u></b> Prepare, Load and Unload Reels and Cores on and off Machine</p>	<p><b><u>IND BPS1 02 0613</u></b> Lift and Shift Loads Mechanically</p>	<p><b><u>IND BPS1 03 0613</u></b> Prepare and Maintain the Work Area</p>
<p><b><u>IND BPS1 04 0613</u></b> Prepare Machine for Operation (Basic)</p>	<p><b><u>IND BPS1 05 0613</u></b> Prepare Stencil and Block Printing (Stamping)</p>	<p><b><u>IND BPS1 06 0613</u></b> Set up and Produce Foil Stamped Product</p>
<p><b><u>IND BPS1 07 0613</u></b> Prepare and Cut Screen Print Substrate</p>	<p><b><u>IND BPS1 08 0613</u></b> Manual Prepare and Produce Screen Prints</p>	<p><b><u>IND BPS2109 0613</u></b> Set up and Produce Hand-Fastened Product</p>
<p><b><u>IND BPS1 10 0613</u></b> Collate and Insert Sheets/Signature Manually</p>	<p><b><u>IND BPS1 11 0613</u></b> Dispose of Waste</p>	<p><b><u>IND BPS1 12 0613</u></b> Pack Product</p>
<p><b><u>IND BPS1 13 0613</u></b> Apply Quality Standards</p>	<p><b><u>IND BPS1 14 0613</u></b> Work with Others</p>	<p><b><u>IND BPS1 15 0613</u></b> Receive and Respond to Workplace Communication</p>
<p><b><u>IND BPS1 16 0613</u></b> Demonstrate Work Values</p>	<p><b><u>IND BPS1 17 0613</u></b> Develop Understanding of Entrepreneurship</p>	<p><b><u>IND BPS1 18 0613</u></b> Apply 3S</p>

Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Prepare, Load and Unload Reels and Cores on and off Machine
Unit Code	<a href="#">IND BPS1 01 0613</a>
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to load and unload reels and cores on and off <b>machines</b> . It should be assessed separately only when this is a substantial part of the worker's job. Otherwise it is integrated into most printing and converting, binding and finishing set up units.

Element	Performance Criteria
1. Prepare reels and cores	<p>1.1. Faulty material is visually identified and removed according to enterprise procedures.</p> <p>1.2. <b>Substrate types</b> are positioned in correct unwind direction.</p> <p>1.3. Substrate is <b>spliced medium</b>/joined according to job requirements.</p> <p>1.4. Reel cores are selected or prepared to meet OHS requirements and job specifications or <b>quality standards</b>.</p>
2. Load reels and cores onto machine	<p>2.1. Reels are loaded according to OHS requirements and manufacturer's and enterprise procedures and specifications.</p> <p>2.2. Reel cores are loaded to meet job specifications.</p> <p>2.3. Area around <b>machine range</b> is cleaned during and on completion of loading.</p>
3. Unload reels off machine	<p>3.1. Reels are unloaded according to OHS requirements, manufacturers, enterprise procedures and specifications.</p> <p>3.2. Reels are prepared (stripped, stacked, wrapped, labelled) for next process according to manufacturer's, enterprise procedures and specifications.</p> <p>3.3. Reels are stored according to manufacturer's and enterprise procedures and specifications for <b>substrate preparation</b>.</p>

Variable	Range
Substrate types	<p>may include:</p> <ul style="list-style-type: none"> <li>Range of substrates within the major categories of paper, pressure sensitive material, board, corrugated board, plastics and related films, or metal.</li> </ul>
Splicing medium	<p>may include:</p> <ul style="list-style-type: none"> <li>Splicing tapes and adhesives.</li> </ul>
Quality standards	<p>may include:</p> <ul style="list-style-type: none"> <li>Should meet client requirements and enterprise and industry standards.</li> </ul>
machine range	<p>may include:</p> <ul style="list-style-type: none"> <li>Range of printing, converting, binding and finishing, corrugating and laminating machines.</li> </ul>
Substrate preparation	<p>may include manual, semi-automatic and automatic zero speed or flying splicing mechanisms and a range of splicing patterns.</p>

<b>Evidence Guide</b>	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>• identify all stop and safety controls on the machine</li> <li>• the individual will correctly load and unload reels and cores on and off machines whilst maintaining OHS standards</li> <li>• Prepare, load and unload at least TWO wide OR narrow reels and cores demonstrating BOTH manual and EITHER semi-automatic OR automatic splicing, according to job specifications and listed performance criteria. BOTH tapes AND adhesive splicing mechanisms must be demonstrated</li> <li>• evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> <li>• all nip points, guards and safety devices on the machine</li> <li>• potential dangers at these points</li> <li>• characteristics of reels</li> <li>• information that can be obtained from the reel label</li> <li>• methods that could be used to identify reel grain direction</li> <li>• faulty reels and cores</li> <li>• features that would indicate that a reel is faulty</li> <li>• techniques that could be used to combat distorted reels</li> <li>• techniques that could be used to combat distorted cores</li> <li>• manual handling of reels</li> <li>• OHS concerns related to the manual handling of reels</li> <li>• preparing and loading selected reels</li> <li>• position of the reels on the unwind unit</li> <li>• techniques that could be used to join reels to the web</li> <li>• unloading reels off the machine for further processing</li> <li>• OHS concerns related to the unloading of reels off the machine</li> <li>• faults that could be created by reels being unloaded incorrectly</li> <li>• preparations that need to be considered for the next operation</li> <li>• machine manuals, safety and other documentation that are relevant to this task and where are they kept and information included in these documents</li> </ul>
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> <li>• OHS in relation to operating machinery such as safely switching off machinery before cleaning is started</li> <li>• communication of ideas and information by working with the printer to ensure that reels are suitably prepared and brought to the production process</li> <li>• collecting, analysing and organising information by identifying faulty material</li> <li>• planning and organising activities by preparing and loading reels</li> <li>• teamwork when working with printer to ensure that correct reels are loaded when needed to ensure efficient production</li> </ul>

	<ul style="list-style-type: none"> <li>• mathematical ideas and techniques by calculating weights of reels to ensure correct and safe handling; and calculating paper use to ensure timely delivery and loading of new reels</li> <li>• problem-solving skills by preparing reels for the next process</li> <li>• use of technology by loading and unloading reels and cores on and off the machine according to manufacturer's specifications</li> </ul>
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Lift and Shift Loads Mechanically
Unit Code	<a href="#">IND BPS1 02 0613</a>
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to use pallet trucks, overhead travelers and load shifting equipment. It does not include forklifts.

Element	Performance Criteria
1. Attach lifting gear to loads	<p>1.1. Routine pre-use checks are undertaken according to manufacturer's specifications and regulatory safety requirements.</p> <p>1.2. Non-compliance with specifications is reported for repair/replacement.</p>
2. Move loads	<p>2.1. Type of material is determined from labels, colour codes, signage.</p> <p>2.2. Material properties are understood.</p> <p>2.3. Load is inspected and best handling method is determined for weight and shape.</p> <p>2.4. All relevant uncertainties and unknowns are clarified with appropriately qualified authority.</p> <p>2.5. All relevant safety and emergency procedures are understood and implemented as required.</p> <p>2.6. All relevant regulations and codes of practices are understood and observed.</p> <p>2.7. Correct and appropriate handling methods are undertaken.</p>
3. Shift loads	<p>3.1. Most appropriate load shifting device or <b>equipment</b> is selected.</p> <p>3.2. Load shifting device is operated within design specifications and safe working load.</p> <p>3.3. Load is lifted, ensuring balance, vision of operation and protection of load.</p> <p>3.4. Safe and efficient path of movement is selected and used.</p> <p>3.5. Path of movement is checked and monitored for obstacles and hazards and safely maintained.</p>
4. Place loads	<p>4.1. Loads are placed ensuring safety, stability, protection of material and avoidance of hazards on site.</p> <p>4.2. Shifting device is removed or secured according to <b>enterprise procedures</b>.</p>

Variable	Range
Range of equipment	<p>may include:</p> <ul style="list-style-type: none"> <li>Load shifting equipment includes ride pallet trucks, overhead travellers, load shifting equipment operated within limits of manufacturer's recommended procedures and safe working loads.</li> </ul>

Enterprise procedures	<p>may include:</p> <ul style="list-style-type: none"> <li>• Work and organisational methods according to enterprise standard operating procedures and legislative requirements.</li> </ul>
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### Evidence Guide

Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>• shifting loads mechanically according to legislative and regulatory requirements</li> <li>• shift two loads mechanically using at least an electric trolley, according to enterprise and statutory requirements and the listed performance criteria</li> <li>• Evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity.</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of :</p> <ul style="list-style-type: none"> <li>• maintenance and safety checks for load shifting equipment</li> <li>• frequency of routine checks on equipment</li> <li>• reporting problems with load shifting equipment to a responsible person</li> <li>• circumstances that would necessitate replacement of such equipment</li> <li>• determining correct handling methods</li> <li>• type of material colour codes</li> <li>• information about correct handling methods</li> <li>• personal injuries that could occur if incorrect handling methods were undertaken</li> <li>• implementation of safety procedures and their effect on enterprise operations</li> <li>• statutory authority that is responsible for and regulates safety procedures</li> <li>• safety requirements for load shifting operations</li> <li>• licensing requirements that are needed to operate various load shifting devices</li> <li>• causes that could cause a load to move and become off balance during shifting</li> <li>• choice of path when shifting the load</li> <li>• the position shifting devices should be placed in after completing the shifting of the load</li> <li>• effect of incorrect placement of loads affect job requirements and enterprise procedures</li> <li>• information sources</li> <li>• machine manuals, safety and other documentation that are relevant to this task and where are they kept</li> <li>• information that is included in these documents</li> </ul>
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> <li>• OHS in relation to operating machinery such as safely switching off machinery before cleaning is started</li> <li>• communication of ideas and information by reporting non-compliance with equipment specifications</li> <li>• collecting, analysing and organising information by determining type of material by reading labels, signage and colour codes</li> </ul>



	<ul style="list-style-type: none"> <li>• planning and organising activities by determining handling methods before shifting the load</li> <li>• teamwork when working with others to ensure safe and timely moving of materials</li> <li>• mathematical ideas and techniques by calculating loads and volumes</li> <li>• problem-solving skills by working out best sequence for shifting loads of different sizes, weight and content</li> <li>• use of technology by using the range of equipment available for mechanically shifting loads</li> </ul>
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Prepare and Maintain The Work Area
Unit Code	<a href="#">IND BPS1 03 0613</a>
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to undertake basic housekeeping functions and retrieve and deliver materials including chemicals and liquid waste within the workplace.

Element	Performance Criteria
1. Perform general cleaning duties	<p>1.1. Requirements for cleaning duties are identified.</p> <p>1.2. Personal safety equipment, where needed, is selected and used according to OHS and <b>enterprise procedures</b>.</p> <p>1.3. Appropriate cleaning equipment and <b>chemicals</b>/detergents for specific tasks are determined, prepared and mixed to manufacturer's specifications and OHS procedures.</p> <p>1.4. Procedures for handling, storage and correct disposal of cleaning liquids are carried out according to enterprise, OHS requirements.</p> <p>1.5. Cleaning is carried out to OHS and enterprise requirements.</p>
2. Maintain supplies of materials	<p>2.1. Requests are received, where relevant, and tasks are confirmed and organised according to specific procedures.</p> <p>2.2. <b>Tools and equipment</b> are identified, stored and maintained according to manufacturer's recommendations to ensure ease of access and operator safety.</p> <p>2.3. Appropriate equipment for transferring material or equipment is identified and organised, where relevant.</p> <p>2.4. Material or equipment is loaded and unloaded using suitable equipment (other than forklift) according to materials handling requirements, safe work practices and correct manual handling techniques.</p> <p>2.5. Material is transferred to correct destination in a safe manner.</p>
3. Store and retrieve artwork, information, used plates and film	<p>3.1. Inventory control procedures are followed to ensure correct filing and retrieval of artwork, information, used plates and film.</p> <p>3.2. Artwork and other materials are stored and retrieved according to enterprise procedures to ensure preservation.</p>
4. Handle chemicals and liquid waste	<p>4.1. Material safety data sheets are used to identify safe chemical handling procedures.</p> <p>4.2. Chemicals and liquid waste are handled according to manufacturer's specifications and enterprise OHS requirements.</p> <p>4.3. The correct procedure for dealing with spilt chemicals is demonstrated according to OHS requirements.</p>

Variable	Range
Enterprise procedures	may include: <ul style="list-style-type: none"> <li>• Range of enterprise procedures within defined work area.</li> </ul>
Chemicals	may include: <ul style="list-style-type: none"> <li>• Wet and dry chemicals.</li> </ul>
Tools and equipment	may include: <ul style="list-style-type: none"> <li>• Manual, mechanical and electronic equipment used in the production process.</li> </ul>

Evidence Guide			
Critical Aspects of Competence	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> <li>• demonstrate cleaning, delivery of materials, equipment, artwork, information, used plates and film and chemical and liquid waste handling (if relevant to the workplace) according to the listed Performance Criteria</li> <li>• Evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity.</li> </ul>		
Underpinning Knowledge and Attitudes	Demonstrates knowledge of : <ul style="list-style-type: none"> <li>• personal safety equipment that may be required to perform cleaning duties</li> <li>• OHS concerns related to the use of cleaning chemicals</li> <li>• handling of supplies, parts and finished product</li> <li>• potential dangers when handling supplies or parts</li> <li>• safety requirements for transporting finished products</li> <li>• recording details necessary in the transfer of the finished product</li> <li>• safety requirements and procedures necessary for the disposal of liquid waste</li> <li>• operating inventory control systems</li> <li>• key information that is required for accurate storage and for ensuring retrieval</li> <li>• filing inventory procedures to be utilised in the work environment</li> <li>• the nature of various materials and substrates</li> <li>• OHS considerations are associated with materials and substrates used in the workplace</li> <li>• main environmental considerations associated with storage of artwork, photographic materials and plates</li> <li>• safety requirements for the storage and disposal of chemicals</li> <li>• potential accidents when cleaning or handling supplies</li> <li>• weight limitations</li> <li>• correct lifting techniques</li> <li>• placing loads so as to avoid back injury</li> </ul>		
Underpinning Skills	Demonstrates skills in: <ul style="list-style-type: none"> <li>• OHS in relation to operating machinery such as safely switching off machinery before cleaning is started</li> <li>• communication of ideas and information by supplying materials when needed and conveying information between production workers and stores people</li> <li>• collecting, analysing and organising information by accessing and using MSDSs; using basic inventory procedures</li> </ul>		
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	<ul style="list-style-type: none"> <li>• planning and organising activities by confirming and organising tasks</li> <li>• teamwork when working with others to ensure that correct consumables and materials are available when needed</li> <li>• mathematical ideas and techniques by calculating dilution factors for cleaning materials/chemicals to ensure correct and safe handling; calculating weights of materials to ensure safe handling</li> <li>• problem-solving skills by applying the correct procedure for dealing with spilt chemicals</li> <li>• use of technology by using manual handling equipment to move supplies</li> </ul>
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Prepare Machine for Operation (Basic)
Unit Code	<a href="#">IND BPS1 04 0613</a>
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to prepare machines and assist with their operation according to enterprise procedures. It is an integral part of most printing and finishing machine set ups but need not be assessed separately unless it represents the main job of the worker. It can also be used to assess processes on dedicated machines.

Element	Performance Criteria
1. Prepare or set up substrates (or loads)	<p>1.1. Job sheets or equivalent instructions are interpreted correctly.</p> <p>1.2. <b>Product</b> is located, checked and prepared to meet job specifications according to established <b>enterprise procedures</b> and OHS procedures.</p> <p>1.3. Faulty material is visually identified and removed according to established enterprise procedures and OHS procedures.</p>
2. Set up reel systems	<p>2.1. Unwind reel is set up and adjusted to suit job requirements.</p> <p>2.2. Webbing procedures are carried out according to enterprise procedures.</p> <p>2.3. Web-control system is set up and adjusted to suit job requirements.</p> <p>2.4. Reels are spliced/joined to suit job requirements.</p> <p>2.5. Rewind reel is set up and adjusted to suit job requirements.</p> <p>2.6. Folder is set up and adjusted to suit job requirements.</p> <p>2.7. Sheet is set up and adjusted to suit job requirements.</p> <p>2.8. Readiness of transport and delivery systems is reported according to enterprise procedures for final adjustments by designated person.</p>
3. Set up sheet or product systems	<p>3.1. Feeder is set up and adjusted to suit job requirements.</p> <p>3.2. Sheet/product pick-up and transportation system is set up and adjusted to suit job requirements.</p> <p>3.3. Transfer systems are set up and adjusted to suit job requirements.</p> <p>3.4. Delivery is set up and adjusted to suit job requirements.</p> <p>3.5. Product is removed from process according to job instructions.</p> <p>3.6. Sheet/product transfer and control system is set up and adjusted to suit job requirements.</p> <p>3.7. Readiness of transport and delivery systems is reported according to enterprise procedures for final adjustments by designated person, if required.</p>
4. Prepare machine	<p>4.1. <b>Machine</b> is set up according to job instructions.</p>

	<p>4.2. Inks, glues, liquid and or other materials are loaded as required according to manufacturer's instructions and enterprise procedures.</p> <p>4.3. Plates, cutting or other devices are installed as required according to manufacturer's instructions and enterprise procedures.</p> <p>4.4. Registration, alignment or centring is confirmed according to machine manufacturer's/supplier's instructions and enterprise procedures.</p> <p>4.5. Machine is run through cycle at the same time ensuring that the substrate/product is positioned properly and that the process is being performed according to established workplace and OHS procedures.</p> <p>4.6. Readiness of machine is reported according to enterprise procedures for final adjustments and proofing by designated person, if required.</p>
5. Conduct shutdown of production process	<p>5.1. Correct shutdown sequence is followed according to manufacturer's specifications and enterprise procedures.</p> <p>5.2. Shutdown is conducted in association with fellow workers, if required, and in compliance with OHS requirements.</p> <p>5.3. Unused materials are stored according to manufacturer's/supplier's specifications and enterprise procedures.</p> <p>5.4. Used plates, cutting and other devices are removed and stored according to manufacturer's/supplier's specifications and enterprise procedures.</p> <p>5.5. All product is removed from operating area according to enterprise procedures and OHS standards.</p> <p>5.6. Machine faults requiring repair are identified and reported to designated person according to enterprise procedures.</p> <p>5.7. Repair/adjustment is verified prior to resumption of operations.</p>
6. Clean and wash up machine at end of run	<p>6.1. Machine sections, as relevant to process, are cleaned ready for next run.</p> <p>6.2. Inking/gluing/coating system, if used in process, is washed up ready for next run, and waste is disposed of according to enterprise and regulatory requirements.</p> <p>6.3. In-line printing/converting/binding/finishing/coating units are cleaned ready for next run.</p> <p>6.4. Feed, transportation and delivery systems are disengaged and cleaned ready for next run.</p>

Variable	Range
Product	may include: <ul style="list-style-type: none"> <li>All substrates and paper or plastic converting products.</li> </ul>
Enterprise procedures	may include: <ul style="list-style-type: none"> <li>Range of enterprise procedures within defined work area.</li> </ul>

Machine	<p>may include:</p> <ul style="list-style-type: none"> <li>• Range of printing, converting, binding, corrugating, laminating, coating processes. Also minor processes including in-line auto packers, down stackers, or stackers, pile turners and wrappers on dedicated machines.</li> </ul>
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<b>Evidence Guide</b>			
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>• demonstrate all safety devices on the machine</li> <li>• prepare machines and assist with their operation according to enterprise procedures</li> <li>• prepare and set up to the stage of final adjustment of any One machine according to manufacturer's specifications and the listed Performance Criteria OR set up a minor process on a dedicated machine</li> <li>• Evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity.</li> </ul>		
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> <li>• handling of supplies, parts and finished product</li> <li>• avoiding back strain when lifting heavy objects</li> <li>• avoiding damaging finished product</li> <li>• supplies that require special handling</li> <li>• substrate preparation and machine set up procedures</li> <li>• OHS considerations when preparing substrates and setting up a machine</li> <li>• procedures for the disposal of faulty materials</li> <li>• possible danger areas of the machine</li> <li>• registration section of the machine</li> <li>• function of the registration section of the machine</li> <li>• problems that could interrupt the running cycle of the machine</li> <li>• shutdown procedures</li> <li>• areas of the Machine that are modified during shutdown</li> <li>• areas of the machine that should be checked for possible repair</li> <li>• details that should be included when labelling unused ink</li> <li>• cleaning and washing machine</li> <li>• OHS considerations when washing up a machine</li> <li>• ineffective wash-up affecting the following production run</li> </ul>		
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> <li>• OHS in relation to operating machinery such as safely switching off machinery before cleaning is started</li> <li>• communication of ideas and information by interpreting job tickets</li> <li>• collecting, analysing and organising information by reading data on substrates, inks and glues to ensure correct usage and handling</li> <li>• planning and organising activities by deciding on a sequence of set ups and wash-ups to ensure efficient operation</li> <li>• teamwork when working with others to ensure efficient set up and wash-up</li> <li>• mathematical ideas and techniques by calculating substrate and other consumable requirements for job</li> </ul>		
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	<ul style="list-style-type: none"> <li>• problem-solving skills by recognising and reporting problems in set up (or wash-up)</li> <li>• use of technology by using monitoring systems</li> </ul>
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.



Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Prepare Stencil and Block Printing (Stamping)
Unit Code	<a href="#">IND BPS1 05 0613</a>
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to prepare photographic indirect stencils.

Element	Performance Criteria
1. Prepare the work area	<p>1.1. Work area is made clean and functional prior to the commencement of work.</p> <p>1.2. All equipment, tools and materials are inspected to ensure they are functional and where necessary, appropriate remedial action is taken prior to the commencement of work.</p> <p>1.3. Activating chemicals are prepared according to OHS requirements and manufacturer's/supplier's specifications.</p>
2. Prepare the screen	<p>2.1. Screen is selected according to job specifications.</p> <p>2.2. Chemicals are applied and removed according to OHS requirements and manufacturer's/supplier's specifications.</p> <p>2.3. Tension of screen mesh is checked for suitability according to job specifications.</p>
3. Select indirect stencil material	<p>3.1. <b>Type of Stencil material</b> is selected according to requirements for ink type, print resolution, substrate and machine type.</p> <p>3.2. Stencil material is checked for faults and expiry date and suitable action taken.</p>
4. Process material	<p>4.1. Selected material is cut to size according to job specifications with minimisation of waste.</p> <p>4.2. Material is placed in vacuum frame with positive positioned and intimate vacuum achieved according to manufacturer's/supplier's and job specifications.</p> <p>4.3. Exposure is calculated and stencil is exposed according to manufacturer's/supplier's specifications.</p> <p>4.4. Light source is positioned according to manufacturer's/supplier's specifications.</p> <p>4.5. Exposed stencil is removed from vacuum frame and treated with the necessary activator, if required, according to OHS requirements and manufacturer's/supplier's specifications.</p> <p>4.6. Activated stencil is washed according to OHS requirements and manufacturer's/supplier's specifications.</p> <p>4.7. Exposed stencil is inspected for processing flaws.</p>
5. Apply stencil to screen	<p>5.1. Prepared screen is re-wet and inspected for cleanliness and dust.</p>

	5.2. Stencil is positioned and adhered accurately according to manufacturer's/supplier's specifications.
6. Dry stencil	6.1. Processed stencil is dried according to manufacturer's/supplier's specifications. 6.2. Backing sheet is carefully removed and stencil checked for full adhesion.
7. Block out screen	7.1. Stencil is inspected for flaws, scum and/orientation. 7.2. Non-image areas of prepared screen are blocked out with filler suitable for ink type and according to job specifications. 7.3. Pinholes are spotted out with suitable filler and faulty/damaged images are retouched and are taped according to ink type and job specifications.
8. Store screen	8.1. Prepared screen is labelled according to <b>enterprise procedures</b> specifications. 8.2. Prepared screen is stored in a clean, dry environment according to manufacturer's/supplier's specifications.

Variable	Range
Type of stencil material	may include: <ul style="list-style-type: none"> <li>Storage and use of indirect stencil materials and activators commonly used within the industry relative to industry sectors.</li> </ul>
Enterprise procedures	may include: <ul style="list-style-type: none"> <li>Tasks must be performed according to enterprise procedures.</li> </ul>

Evidence Guide	
Critical Aspects of Competence	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> <li>correctly prepare direct emulsion stencils using manual techniques according to job specifications</li> <li>demonstrate an ability to find and use information relevant to the task from a variety of information sources</li> <li>prepare two different direct screens using manual coating and exposure techniques according to manufacturer's and job specifications, enterprise procedures and the listed Performance Criteria</li> </ul>
Underpinning Knowledge and Attitudes	Demonstrates knowledge of : <ul style="list-style-type: none"> <li>preparing the screen</li> <li>significance of mesh count</li> <li>reason the screen must be tensioned correctly</li> <li>chemicals that are used for pre-treating and degreasing</li> <li>equipment used and preparation of work area</li> <li>method of preparing activator to OHS standards</li> <li>significance of a dust-free work area when working with indirect stencils</li> <li>inspection of necessary equipment to ensure it is functional</li> <li>indirect stencil material selection</li> <li>characteristics of indirect stencils relative to ink type, print resolution and substrate</li> </ul>

	<ul style="list-style-type: none"> <li>• selection of indirect stencil material</li> <li>• common faults associated with indirect film</li> <li>• exposing, activating and washing indirect stencils</li> <li>• vacuum pressure prior to exposing the stencil</li> <li>• position of light source</li> <li>• calculation of exposure time for this indirect film</li> <li>• effects of overexposure and underexposure</li> <li>• method of activating film</li> <li>• temperature of the water for washing indirect stencils</li> <li>• Recognising and rectifying flaws</li> <li>• applying stencil to screen and drying off</li> <li>• main considerations before applying the stencil to the screen</li> <li>• method of positioning and adhering stencil to screen</li> <li>• process of drying the stencil and removing the backing sheet</li> <li>• blocking out, spotting and storing the screen</li> <li>• method of rectifying flaws and scum in the stencil</li> <li>• type of filler used for blocking out and their use</li> <li>• pinholes spotting and the screen taping</li> <li>• means by which this screen is able to be identified at a later date</li> <li>• manuals, safety and other documentation that are relevant to this task and where are they kept and information that is included in these documents</li> </ul>
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> <li>• OHS in relation to operating machinery such as safely switching off machinery before cleaning is started</li> <li>• communication of ideas and information by correctly labelling prepared stencils</li> <li>• collecting, analysing and organising information by checking materials for faults and expiry dates</li> <li>• planning and organising activities by preparing the screen prior to applying the stencil</li> <li>• teamwork when maintaining the production process in association with others</li> <li>• mathematical ideas and techniques by cutting selected materials to size according to job specifications</li> <li>• problem-solving skills by retouching and taping damaged images</li> <li>• use of technology by using the vacuum frame and other equipment to prepare the stencil</li> </ul>
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Set up and Produce Foil Stamped Product
Unit Code	<a href="#">IND BPS1 06 0613</a>
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to set up for gold blocking and hot foil stamping.

Element	Performance Criteria
1. Confirm job specifications	<p>1.1. Job requirements are read and interpreted from job documentation or production control system.</p> <p>1.2. Set up is carried out correctly in minimum time with minimum wastage.</p> <p>1.3. Availability of all job related components is checked.</p>
2. Set up machine	<p>2.1. Die or block is selected and checked against job ticket.</p> <p>2.2. Die or block is locked into chase and checked for correct positioning.</p> <p>2.3. Chase is mounted in press.</p> <p>2.4. Foil transfer or feed system is set up and adjusted according to image size and job specifications.</p>
3. Set up reel system	<p>3.1. Unwind and rewind reels are set up and adjusted according to job specifications.</p> <p>3.2. Webbing procedures are carried out and web-control system is set up and adjusted according to job specifications.</p> <p>3.3. Reels are spliced/joined according to job specifications.</p> <p>3.4. Printed web viewing devices are set up and adjusted according to job specifications</p> <p>3.5. Set off/marketing prevention devices are set up and adjusted according to job specifications.</p>
4. Set up product jigs onto machine table	<p>4.1 Jigs are selected to suit product to be stamped.</p> <p>4.2 Jigs are fitted to machine table according to job specifications.</p> <p>4.3 Table height is adjusted to suit product.</p>
5. Select foils	<p>5.1 <b>Foils</b> are selected according to job specifications and end-user requirements.</p> <p>5.2 Quality and suitability of foils are checked and appropriate action is taken.</p> <p>5.3 Foils are selected according to suitability of <b>substrate handling</b>, physical and chemical performance and properties.</p> <p>5.4 Foils are prepared according to OHS requirements, and manufacturer's/supplier's instructions with suitable precautions to minimise waste.</p> <p>5.5 Foils are appropriately labelled, handled and stored according to manufacturer's/supplier's instructions to prevent damage and hazards to personnel and prolong shelf life.</p>

6.. Conduct proof run	<p>6.1. Material to be used for proof is organised correctly.</p> <p>6.2. Machine is operated according to manufacturer's and enterprise procedures to produce a specified proof.</p> <p>6.3. Proof is visually inspected and/or tested according to enterprise procedures.</p> <p>6.4. Production does not commence without client OK or authority where appropriate.</p> <p>6.5. Results are interpreted and adjustment changes are carried out according to product and <b>machine</b> specifications to determine adjustment requirements.</p>
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Variable	Range
Foils	<p>may include:</p> <ul style="list-style-type: none"> <li>Range of foils used in gold blocking and hot foils stamping.</li> </ul>
Substrate handling	<p>may include:</p> <ul style="list-style-type: none"> <li>Wide or narrow reel or large or small sheet or 3D object handling systems.</li> <li>Range of substrates within the major categories of paper, pressure sensitive material, board, wood, plastics and related films, metal injection moulded plastics, moulded plastics, lacquered substrate.</li> </ul>
Machine	<p>may include:</p> <ul style="list-style-type: none"> <li>A range of foil stamping machines, including machines with computerised monitoring and/or control.</li> </ul>

Evidence Guide	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate to:</p> <ul style="list-style-type: none"> <li>Set up a die or block and the reel or sheet systems and jigs for gold blocking or hot foil stamping. The individual will conduct a proof run and adjust settings to ensure production speeds are attained</li> <li>demonstrate use of computerised control, monitoring and data entry systems if available and appropriate</li> <li>demonstrate an ability to find and use information relevant to the task from a variety of information sources</li> <li>demonstrate all safety devices on the machine</li> <li>set up for foil stamping on TWO occasions (if possible including at least ONE in-line process if relevant) according to manufacturer's and job specifications, enterprise procedures and the listed Performance Criteria</li> <li>Evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity.</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of :</p> <ul style="list-style-type: none"> <li>job specifications</li> <li>procedures if vital information were missing from the job ticket</li> <li>Checks that should be undertaken prior to set up (availability of materials etc.)</li> <li>web or sheet or product transportation (as relevant)</li> <li>major OHS concerns when setting up transportation systems</li> </ul>

	<ul style="list-style-type: none"> <li>• printing side of the material</li> <li>• purpose of nip rollers</li> <li>• how the sheet position is determined for the job</li> <li>• why the same side lay is used in both print and foil stamping</li> <li>• selection of appropriate front lays</li> <li>• how high the side and front lays are to be set</li> <li>• register check be carried out</li> <li>• appropriate product jigs</li> <li>• correct table height</li> <li>• foils and substrates</li> <li>• characteristics that must be considered when selecting foil for foil stamped product</li> <li>• type of foil that would be required for foiling on plastic films</li> <li>• products and the appropriate foils</li> <li>• machine set up</li> <li>• OHS concerns related to the set up</li> <li>• effect of a soft packing on the foil stamped product</li> <li>• methods that can be used to create harder packing</li> <li>• effect a higher dwell time has on the foil stamped product</li> <li>• what temperature would be the starting point when setting up</li> <li>• implications if the temperature was set too high</li> <li>• height that the die should be mounted</li> <li>• required pressure</li> <li>• proofing and adjusting</li> <li>• precautions that should be taken to protect from burns</li> <li>• not using the first sheet or object printed as a proof during set up</li> <li>• cause of an uneven print (top to bottom)</li> <li>• length of time for temperature adjustments to become effective</li> <li>• signs of a temperature setting that is too high</li> <li>• how much the foil should draw through the press on each pass</li> <li>• machine manuals, safety and other documentation that are relevant to this task and where are they kept and information included in these documents</li> </ul>
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> <li>• OHS in relation to operating machinery such as safely switching off machinery before cleaning is started</li> <li>• communication of ideas and information by interpreting job tickets and requirements</li> <li>• collecting, analysing and organising information by collecting and assessing data about foil stamping process and machine specifications and characteristics and how these interact</li> <li>• planning and organising activities by providing information about time and materials requirements for production scheduling</li> <li>• teamwork when maintaining the production process in association with others</li> <li>• mathematical ideas and techniques by calculating die position and requirements for foil and substrate</li> </ul>

	<ul style="list-style-type: none"> <li>• problem-solving skills by recognising proofing faults and determining adjustments to correct them</li> <li>• use of technology by using monitoring equipment and interpreting readouts</li> </ul>
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Prepare and Cut Screen Print Substrate
Unit Code	<a href="#">IND BPS1 07 0613</a>
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to inspect and cut substrate according to job specifications.

Element	Performance Criteria
1. Prepare substrate	<p>1.1. <b>Substrates</b> of suitable quality are selected according to job specifications and the end use of the product.</p> <p>1.2. Substrate is inspected and print capability assessed, including the need for any special preparation requirements.</p> <p>1.3. Necessary preventive action is taken to avoid wastage and to ensure best yield with respect to grain direction and the type of substrate selected.</p> <p>1.4. Substrate is suitably pre-treated, where required.</p>
2. Cut substrate	<p>2.1. Set-up is carried out correctly in minimum time with minimum wastage.</p> <p>2.2. Grip and lay edges of sheet are identified.</p> <p>2.3. Knives are checked for appropriate sharpness.</p> <p>2.4. Cutting sticks are replaced when necessary.</p> <p>2.5. Guillotine is manually set up and adjusted according to job specifications.</p> <p>2.6. Clamping pressures are set up and adjusted according to job specifications.</p> <p>2.7. Problems in cutting (guillotining) machine operation are identified and reported according to enterprise procedures.</p> <p>2.8. Quality of <b>cuts</b> is checked to ensure quality standards are met.</p>

Variable	Range
Substrates	may include: <ul style="list-style-type: none"> <li>• Range of substrates in categories of paper, paperboard, corrugated board, plastics.</li> </ul>
Cuts	may include single knife, manual guillotines.

Evidence Guide	
Critical Aspects of Competence	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> <li>• inspect and cut substrate according to job specifications</li> <li>• for valid and reliable assessment of this unit, evidence should be gathered over a period of time through a range of methods for assessment to indicate consistent performance</li> <li>• Evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity.</li> </ul>



Underpinning Knowledge and Attitudes	Demonstrates knowledge of : <ul style="list-style-type: none"> <li>• information contained in job specifications</li> <li>• process for checking guillotine knives</li> <li>• guillotine set up and operation</li> <li>• safe guillotine handling and operation</li> <li>• proper stacking and storage of processed substrate</li> </ul>
Underpinning Skills	Demonstrates skills in: <ul style="list-style-type: none"> <li>• OHS in relation to operating machinery such as safely switching off machinery before cleaning is started</li> <li>• communication of ideas and information by ensuring substrate quality standards</li> <li>• collecting, analysing and organising information by inspecting the substrate and its print capability, including the need for any special preparation requirements</li> <li>• planning and organising activities by taking necessary preventive action to avoid wastage and to ensure best yield with respect to grain direction and the type of substrate selected</li> <li>• teamwork when maintaining the production process in association with others</li> <li>• mathematical ideas and techniques by setting clamping pressures and adjusting them according to job specifications</li> <li>• problem-solving skills by checking quality of cuts to ensure quality standards are met</li> <li>• use of technology by using guillotines and other equipment to prepare and cut screen print substrate</li> </ul>
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Manual Prepare and Produce Screen Prints
Unit Code	<a href="#">IND BPS1 08 0613</a>
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to manually prepare and produce screen prints.

Element	Performance Criteria
1. Identify job requirements	<p>1.1. Material safety data sheets are used to identify safe chemical handling procedures.</p> <p>1.2. <b>Substrate</b> is checked for conformance to <b>job specifications</b> with any irregularities reported and/or rectified.</p> <p>1.3. Ink is checked for conformance to job specifications.</p> <p>1.4. Stencil is checked for conformance to job specifications.</p>
2. Prepare machine to print	<p>2.1. Substrate position and stencil registration are adjusted according to job specifications.</p> <p>2.2. Ink is applied to the screen in the quantity required for the screen size.</p> <p>2.3. Equipment is kept clean and spillage is minimised.</p>
3. Produce proof print	<p>3.1. Proof print is run off and checked for colour, strength, registration, adhesion, clarity, gloss level, <b>drying/curing</b>, artwork detail and other technical aspects according to job specifications.</p> <p>3.2. Adjustments are made according to product and machine specifications.</p> <p>3.3. Belt speed and energy required are set to achieve desired curing or drying properties.</p> <p>3.4. <b>Appropriate approval</b> to commence production is sought prior to commencement.</p>
4. Run job and monitor print quality	<p>4.1. Printing speed production is adjusted to maximise quality and output.</p> <p>4.3. Effects of ink alterations during run are monitored and any discrepancy is notified according to enterprise procedures.</p> <p>4.4. <b>Workplace documentation</b> on job is completed as required.</p> <p>4.5. Curing and drying are constantly monitored and adjusted according to manufacturer's/ supplier's and job specifications.</p>
5. Carry out routine user maintenance	<p>5.1. Equipment is cleaned according to enterprise procedures.</p> <p>5.2. Fault conditions are identified and reported according to enterprise procedures.</p>
6. Stack production output	<p>6.1. Output is checked for thorough drying/curing before stacking.</p> <p>6.2. Job status and progress are checked for conformance to job specifications and any necessary action is taken.</p>

7. Conduct shutdown of the production process	<p>7.1. Material is transferred to correct destination in a safe manner.</p> <p>7.2. Excess ink, screens, squeegees and flood coaters are removed and cleaned according to OHS requirements and manufacturer's/supplier's specifications.</p> <p>7.3. Waste materials and chemicals are disposed of according to manufacturer's/supplier's specifications, regulatory requirements and enterprise procedures.</p> <p>7.4. Equipment and surrounding areas are cleaned according to manufacturer's/supplier's specifications.</p> <p>7.5. Tools and equipment are identified, stored and maintained according to manufacturer's specifications to ensure ease of access and operator safety.</p> <p>7.6. The correct procedure for dealing with spilt chemicals is demonstrated according to OHS requirements.</p>
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Variable	Range
Substrate	may include material or substance that will hold an image.
Job specifications	may include job sheets, work tickets or processing orders.
Drying/curing	may include manual drying systems commonly used in specific industry sections.
Appropriate approval	may include client approval sought or enterprise approval from supervising personnel.
Workplace documentation	may include: <ul style="list-style-type: none"> <li>• Enterprise procedural documents.</li> </ul>

Evidence Guide	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate to:</p> <ul style="list-style-type: none"> <li>• set up screen printing machinery and produce a print that meets job specifications on a range of common substrates, using fundamental manual screening techniques</li> <li>• for valid and reliable assessment of this unit, evidence should be gathered over a period of time through a range of methods for assessment to indicate consistent performance</li> <li>• gather assessment of the unit of competency alone or through an integrated assessment activity.</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of :</p> <ul style="list-style-type: none"> <li>• information that can be gained from material data safety sheets</li> <li>• the need to check the substrate for conformance to the job specifications</li> <li>• action required if the ink did not comply with the job specifications</li> <li>• compliance checks that are made with the stencil</li> <li>• limitations that you have when setting the substrate position</li> <li>• the result if too much ink were applied to the screen</li> <li>• the need to keep equipment clean</li> <li>• OHS concerns that are there when producing a manual print</li> </ul>

	<ul style="list-style-type: none"> <li>• checks to be made on the printed sheet when the proof print has been run off</li> <li>• the drying/curing system to be used for this application</li> <li>• product and machine specifications</li> <li>• the result if the belt speed was too high</li> <li>• the need to obtain final approval before commencing the production run</li> <li>• aspects of the print that are evaluated during printing</li> <li>• the need to make ink alterations during the run</li> <li>• the workplace documentation action when the print run is completed</li> <li>• OHS concerns that are there in relationship to drying/curing systems?</li> <li>• maintenance that should be carried out on this machine</li> <li>• the importance of reporting any faulty equipment</li> <li>• How do you determine whether a print is dried/cured prior to stacking?</li> <li>• What would be the result of stacking while the ink film is still wet?</li> <li>• What action may be necessary if problems occur with job progress?</li> <li>• identifying the job's destination when you have completed the run</li> <li>• the result of not keeping screens and squeegees clean</li> <li>• the result of not following correct procedures when disposing of liquid waste</li> <li>• the result of not keeping equipment and surrounding areas clean</li> <li>• manuals, safety and other documentation that are relevant to this task and where are they kept</li> </ul>
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> <li>• OHS in relation to operating machinery such as safely switching off machinery before cleaning is started</li> <li>• communication of ideas and information by seeking appropriate approval to commence production prior to commencement</li> <li>• collecting, analysing and organising information by running off and checking the proof for various aspects according to the job specifications</li> <li>• planning and organising activities by continuously evaluating and adjusting print quality</li> <li>• teamwork when maintaining the production process in association with others</li> <li>• mathematical ideas and techniques by making adjustments according to product and machine specifications</li> <li>• problem-solving skills by undertaking the correct procedure for dealing with spilt chemicals</li> <li>• use of technology by using manual screen printing equipment</li> </ul>
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Set up and Produce Hand-Fastened Product
Unit Code	<a href="#">IND BPS1 09 0613</a>
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to set up and produce hand-fastened product.

Element	Performance Criteria
1. Prepare for job	<p>1.1. Job specifications are read and interpreted from job documentation or production control system.</p> <p>1.2. Set-up is carried out correctly in minimum time with minimum wastage.</p> <p>1.3. Availability of all job related components is checked.</p> <p>1.4. <b>Fastening process</b> system is set up and adjusted according to job specifications.</p>
2. Conduct sample run	<p>2.1. Raw material to be used for sample is organised correctly.</p> <p>2.2. Equipment is set up and operated to produce a specified sample according to OHS requirements, manufacturer's specifications and enterprise procedures.</p> <p>2.3. Sample is visually inspected and/or tested or laboratory testing is organised according to enterprise procedures.</p> <p>2.4. Results are interpreted to determine adjustment requirements.</p> <p>2.5. Adjustment changes are carried out according to product and equipment specifications.</p>
3. Maintain basic fastening (adhesive/mechanical) process (OR Element 4)	<p>3.1. Registration of fastening is monitored and adjusted to ensure quality of product meets the standard of the approved sample.</p> <p>3.2. Wire straightness, length, cut-off and clinching pressures are monitored and adjusted to ensure quality of product meets the standard of the approved sample.</p> <p>3.3. Adhesion is monitored and adjusted to ensure quality of product meets the standard of the approved sample.</p>
4. Maintain hand sewing process (OR Element 3)	<p>4.1. Appropriate sewing supports are selected and spaced according to job specifications.</p> <p>4.2. Consistent thread tension is maintained during sewing.</p> <p>4.3. Sections are aligned at the head.</p> <p>4.4. Swelling is monitored and controlled.</p>
5. Maintain production process	<p>5.1. Production process is operated in association with fellow workers and according to enterprise procedures and planned daily schedule.</p> <p>5.2. Production is maintained according to OHS requirements, manufacturer's specifications and enterprise procedures.</p> <p>5.3. Performance is monitored and verified using the process control system according to enterprise procedures.</p>

	<p>5.4. Production difficulties are anticipated and preventive action is taken to prevent occurrence by timely intervention.</p> <p>5.5. Process adjustments to eliminate problems are reported according to enterprise procedures.</p> <p>5.6. Faulty performance of equipment is identified and reported according to enterprise procedures.</p> <p>5.7. Waste is sorted according to enterprise procedures.</p>
6. Identify and rectify problems and faults	<p>6.1. Problems in fastening (adhesive/mechanical) equipment are identified and reported according to enterprise procedures.</p> <p>6.2. Adjustments or corrections are carried out according to specified procedures and are consistent with operator's skill level.</p> <p>6.3. Fastening (adhesive/mechanical) equipment operation is checked to ensure correct operation.</p>
7. Clean fastening equipment	<p>7.1. Mechanical <b>fastening unit</b> is disengaged and cleaned ready for next run.</p> <p>7.2. Glue system is washed up ready for next run, and liquid waste is disposed of according to regulatory requirements and enterprise procedures.</p> <p>7.3. <b>Substrate</b> waste is removed from operating area and recycled or disposed of, where required, according to regulatory requirements and enterprise procedures.</p> <p>7.4. Machine faults requiring repair are identified and reported to designated person according to enterprise procedures.</p> <p>7.5. Repair/adjustment is verified prior to resumption of operations.</p> <p>7.6. Production records or other documentation are accurately completed where required by enterprise procedures.</p>

Variable	Range
Fastening process	<p>may include:</p> <ul style="list-style-type: none"> <li>• adhesive fastening such as: <ul style="list-style-type: none"> <li>➢ cold and hot melt gluing</li> <li>➢ taping</li> </ul> </li> <li>• mechanical fastening such as wire stitching, velo, comb and wire binding</li> <li>• Hand section sewing.</li> </ul>
Fastening units	<p>may include:</p> <ul style="list-style-type: none"> <li>• A range of manually operated equipment.</li> </ul>
Substrate	<p>may include:</p> <ul style="list-style-type: none"> <li>• Range of substrates within the major categories of paper, pressure sensitive material, board, corrugated board, plastics and related films, or metal.</li> <li>• Manual handling of large or small sheets</li> </ul>

<b>Evidence Guide</b>			
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate to:</p> <ul style="list-style-type: none"> <li>• Correctly set up and produce hand-fastened products according to job specifications and within the production timeframe</li> <li>• Demonstrate an ability to find and use information relevant to the task from a variety of information sources</li> <li>• Demonstrate all safety devices on the machine</li> <li>• Competency must be demonstrated in TWO areas of: adhesive/thermal (drawn on cover or heated binding tape application), mechanical (wire stitcher or heavy duty stapler including saddle and flat stitching), hand sewing (single and multi-section books)</li> <li>• For each area set up equipment and produce TWO basic hand-fastened products of different thickness and spine length to demonstrate equipment adjustment, according to manufacturer's and job specifications, enterprise procedures and the listed Performance Criteria.</li> </ul>		
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of :</p> <ul style="list-style-type: none"> <li>• information concerning binding that you would expect to find in the job documentation or production control system</li> <li>• OHS factors that need to be addressed when adjusting machinery</li> <li>• circumstances a machine would need to be adjusted</li> <li>• correct binding technique for a job</li> <li>• safety measures that should be taken when setting up and operating this equipment</li> <li>• parts of the wire stitcher that would need to be adjusted to process books of different thicknesses</li> <li>• positioning of the wire stitches on the book</li> <li>• difference between a staple and a wire stitch</li> <li>• determining the appropriate wire calliper for a particular job</li> <li>• care that should be taken to ensure a neat and clean adhesive binding job</li> <li>• sewing stages positioning on the book</li> <li>• the term "Kettle stitch"</li> <li>• common sewing problems likely to be met when sewing a multi-section book</li> <li>• purpose of sewing frames</li> <li>• ensuring that hand sewing remains firmly together</li> <li>• problems that are associated with oiling a wire stitcher</li> <li>• problems that can occur if equipment is not properly cleaned and maintained</li> <li>• steps that can be taken to ensure the smooth passage of work through the factory</li> <li>• occurrence of production problems during processing</li> <li>• measures that can be used to prevent production interruptions</li> <li>• acceptable binding result</li> <li>• expectations if wire stitches are not in the right position</li> <li>• causes of a book to be "stab" stitched</li> <li>• special problems that may be encountered with "stab" stitching</li> </ul>		
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	<ul style="list-style-type: none"> <li>• "saddle" stitched or "flat"/"side" stitched determination</li> <li>• manuals, safety and other documentation that are relevant to this task and where they are kept</li> <li>• information that is included in these documents</li> </ul>
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> <li>• OHS in relation to operating machinery</li> <li>• communication skills when reporting faulty equipment performance and completing production records and other documentation</li> <li>• planning and organising by selecting and spacing appropriate sewing support</li> <li>• teamwork when maintaining the production process in association with other workers</li> <li>• using technology by maintaining the fastening process</li> <li>• identifying problems and developing solutions when disposing of liquid waste according to regulatory requirements and enterprise procedures</li> </ul>
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.



Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Collate and Insert Sheets/Signature Manually
Unit Code	<a href="#">IND BPS1 10 0613</a>
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to hand collate or insert product.

Element	Performance Criteria
1. Prepare for job	<p>1.1. Job specifications are read and interpreted from job documentation or production control system.</p> <p>1.2. Set-up is carried out correctly in minimum time with minimum wastage.</p> <p>1.3. Availability of all job related components is checked.</p> <p>1.4. <b>Collating/inserting process</b> system is set up according to job specifications.</p>
2. Conduct sample run	<p>2.1. Material to be used for sample is organised correctly.</p> <p>2.2. Collating or inserting system is operated to produce a specified sample according to OHS requirements, manufacturer's specifications and enterprise procedures.</p>
3. Organise sample inspection and/or testing	<p>3.1. Sample is visually inspected / tested and organised according to enterprise procedures.</p> <p>3.2. Results are interpreted to determine adjustment requirements.</p> <p>3.3. Adjustment changes are carried out according to product specifications.</p>
4. Maintain production process	<p>4.1. Hand collating process is monitored and adjusted to ensure quality of product meets the standard of the approved sample.</p> <p>4.2. Production process is operated in association with fellow workers and according to enterprise procedures and planned daily schedule.</p> <p>4.3. Production is maintained according to OHS requirements, manufacturer's specifications and enterprise procedures.</p> <p>4.4. Production difficulties are anticipated and preventive action is taken to prevent occurrence by timely intervention.</p> <p>4.5. Process adjustments to eliminate problems are reported according to enterprise procedures.</p>
5. Clean work area at end of run	<p>5.1. Collating area is cleaned ready for next run.</p> <p>5.2. Waste is sorted according to enterprise procedures.</p> <p>5.3. Substrate waste is removed from operating area and recycled or disposed of, where required, according to regulatory requirements and enterprise procedures.</p> <p>5.4. Production records or other documentation are accurately completed where required by enterprise procedures.</p>

Variable	Range
Collating/inserting process	<p>may include</p> <ul style="list-style-type: none"> <li>Manual collating/inserting of sheets, book sections or other products of identical or varied form, weight, shape.</li> </ul>

Evidence Guide	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate to:</p> <ul style="list-style-type: none"> <li>manually collate and insert sheets/signature documents according to job specifications and within the production timeframe</li> <li>manually collate and insert sheets/signature documents and reconcile the job. The individual will complete two full jobs.</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of :</p> <ul style="list-style-type: none"> <li>important information concerning this task that would be found on the production control job ticket</li> <li>steps that should be taken to ensure that the important features of the production control system are followed</li> <li>production records that need to be kept or written up</li> <li>information that should be included in this reporting procedure and why</li> <li>ergonomic and OHS factors that should be considered when setting up the job to facilitate ease of operation</li> <li>facilities that are available to assist with the picking up of product by hand</li> <li>precautions that should be taken when handling NCR paper</li> <li>methods that can be used to separate finished sets of product</li> <li>assistance to open of sections to be inserted</li> <li>adjustment that should be made to the set up to facilitate a two- or three-person operation</li> <li>printed images on sections that ensure correct sequencing</li> <li>how these images assure the correct sequence of sections</li> <li>steps that should be taken to ensure that important features of the production control system are followed</li> <li>areas of the finished product that should be inspected</li> <li>steps that should be taken if the test sample is incorrect</li> <li>processing remaining sheets (over's) at the completion of the job</li> <li>manuals, safety and other documentation that are relevant to this task, where kept and information that is included in these documents</li> </ul>
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> <li>OHS in relation to operating machinery</li> <li>communication skills when adjusting production in consultation with clients and reading and interpreting job specifications from job documentation or production control systems</li> <li>planning and organising sample inspection and/or testing</li> <li>teamwork when maintaining the production process in association with fellow workers</li> <li>using technology by readjusting the collating system</li> <li>problem solving by anticipating production difficulties through preventive action</li> </ul>

Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Dispose of Waste
Unit Code	<a href="#">IND BPS1 11 0613</a>
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to dispose of waste. Handling and consignment of untreated waste is covered to prepare and maintain the work area.

Element	Performance Criteria
1. Prepare waste	<p>1.1. <b>Waste environment</b> is stored according to OHS requirements.</p> <p>1.2. Waste treatment system is monitored to ensure correct operation and changes to procedures are recommended if required.</p> <p>1.3. Waste is treated, if necessary, to ensure compliance with workplace.</p>
2. Dispose of waste	<p>2.1. Appropriate disposal is arranged with regard to waste quality, quantity and government regulations.</p> <p>2.2. Waste is disposed of in an appropriate way to ensure compliance with workplace.</p> <p>2.3. Any subcontractors are checked to ensure that they comply with government regulations.</p> <p>2.4. Wastage rates are documented or collated for further review.</p>

Variable	Range
Waste environment	<p>may include:</p> <ul style="list-style-type: none"> <li>The competencies apply to personnel who are dealing with waste in the printing industry with appropriate equipment and resources.</li> </ul>

Evidence Guide	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>correctly disposing of waste as required</li> <li>treat and dispose of TWO lots of waste according to enterprise and statutory requirements and regulations and the listed Performance Criteria</li> <li>evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of :</p> <ul style="list-style-type: none"> <li>disposal procedures</li> <li>consequences of a company having excess waste</li> <li>segregating and packaging requirements for correct disposal</li> <li>handling procedures</li> <li>OHS regulations on the handling of waste</li> <li>appropriate handling method</li> <li>result of incorrectly handling waste</li> <li>appropriate storage method</li> <li>documentation and statutory requirements</li> <li>checking results obtained against enterprise and statutory details</li> </ul>

	<ul style="list-style-type: none"> <li>• details that are recorded when recording results of liquid waste treatment</li> <li>• maintaining waste testing equipment</li> <li>• OHS concerns related to cleaning and maintaining testing equipment</li> <li>• need for the equipment be kept clean and maintained</li> <li>• information sources</li> <li>• manuals, safety and other documentation that are relevant to this task and where are they kept and information that is included in these documents</li> </ul>
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> <li>• OHS in relation to operating machinery such as safely switching off machinery before cleaning is started</li> <li>• communication of ideas and information by liaising with printers, waste agencies and subcontractors about requirements for waste disposal</li> <li>• collecting, analysing and organising information by using data on waste from EPA and MSDSs to ensure safe and efficient operations</li> <li>• planning and organising activities by determining the sequence of operations to ensure safe efficient disposal with minimum disruption to production</li> <li>• teamwork when cooperating with printers and subcontractors to ensure efficient handling and disposal of waste</li> <li>• mathematical ideas and techniques by calculating volumes, weights and dilution factors</li> <li>• problem-solving skills by determining the treatment options for different types of waste</li> <li>• use of technology by correctly using waste disposal equipment</li> </ul>
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Pack Product
Unit Code	<a href="#">IND BPS1 12 0613</a>
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to pack basic printed or paper product.

Element	Performance Criteria
1. Assess final product	<p>1.1. Finished job is collected/received and checked against job specifications according to <b>enterprise procedures</b>.</p> <p>1.2. Defects, irregularities and discrepancies are identified and action taken according to enterprise procedures.</p> <p>1.3. Fanning, knock up and splitting of <b>product</b> is performed safely and efficiently to ensure ease of use in next stage.</p>
2. Pack product	<p>2.1. Wrapping and <b>packaging techniques</b> materials are prepared according to enterprise procedures.</p> <p>2.2. Product is packaged to specification.</p> <p>2.3. Packaged goods are checked/<b>inspected</b>, weighed and labelled according to delivery instructions, enterprise procedures and <b>quality standard</b>.</p>
3. Prepare stock for next phase	<p>3.1. Product is stacked onto pallets in a predetermined pattern that will stop the product falling or being damaged.</p> <p>3.2. If required, the pallet is wrapped and moved safely to another location in predetermined form as appropriate to product size and type.</p> <p>3.3. Documentation associated with tasks is accurately completed according to enterprise procedures.</p>

Variable	Range
Enterprise procedures	<p>may include:</p> <ul style="list-style-type: none"> <li>Range of enterprise procedures within defined work area.</li> </ul>
Product	<p>may include:</p> <ul style="list-style-type: none"> <li>Range of products within the major categories of mail, security mail, paper, pressure sensitive material, board, corrugated board, plastics and related films.</li> </ul>
Packaging techniques	<p>may include:</p> <ul style="list-style-type: none"> <li>Various methods and equipment used in wrapping and packing of printed and printing related products.</li> </ul>
Inspection	<p>may include:</p> <ul style="list-style-type: none"> <li>Various types of inspection techniques (i.e. 100%, random, periodic or continuous in-line inspection).</li> </ul>
Quality standards	<p>may include:</p> <ul style="list-style-type: none"> <li>Should meet client requirements and enterprise and industry standards.</li> </ul>

<b>Evidence Guide</b>	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate to:</p> <ul style="list-style-type: none"> <li>• prepare and pack TWO lots of printed or other paper product following correct procedures, job and workplace specifications and the listed Performance Criteria</li> <li>• demonstrate an ability to find and use information relevant to the task from a variety of information sources</li> <li>• product is correctly packed and labelled where necessary with no damage occurring to product due to packing</li> <li>• evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> <li>• wrapping and packing materials and methods</li> <li>• OHS regulations on packaged goods</li> <li>• type of packaging determined</li> <li>• type of transport or destination have a bearing on the wrapping and packing method</li> <li>• number of units to be wrapped in each parcel</li> <li>• details need to be recorded on dispatching labels, and why</li> <li>• recorded of details when dispatching</li> <li>• shipping documentation</li> </ul>
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> <li>• OHS in relation to operating machinery such as safely switching off machinery before cleaning is started</li> <li>• collecting, analysing and organising information by collecting/receiving and checking finished job against job specifications</li> <li>• problem-solving skills by identifying defects, irregularities and discrepancies and taking action according to enterprise procedures</li> <li>• communication of ideas and information by labelling packaged goods according to enterprise procedures</li> <li>• planning and organising activities by performing safely and efficiently fanning, knock up and splitting of product to ensure ease of use in next stage</li> <li>• teamwork when maintaining the production process in association with others</li> <li>• mathematical ideas and techniques by checking and weighing packaged goods</li> <li>• use of technology by using pallet wrapping equipment</li> </ul>
Resources Implication	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Apply Quality Standards
Unit Code	<a href="#">IND BPS1 13 0613</a>
Unit Descriptor	This unit covers the knowledge, attitudes and skills required in applying quality standards in the operational activities.

Elements	Performance Criteria
1. Assess own work	<p>1.1 Completed work is checked against organization standards relevant to the activity being undertaken.</p> <p>1.2 An understanding is demonstrated on how the work activities and completed work relate to the next process and to the final appearance of the service / product.</p> <p>1.3 Faulty service is identified and isolated in accordance with policies and procedures.</p> <p>1.4 Faults and any identified causes are recorded and reported in accordance with standard procedures.</p>
2. Assess quality of service rendered	<p>2.1 Services rendered are <b>quality checked</b> against standards and specifications.</p> <p>2.2 Service rendered are evaluated using the appropriate evaluation parameters and in accordance with standards.</p> <p>2.3 Causes of any identified faults are identified and corrective actions are taken in accordance with policies and procedures.</p>
3. Record information	<p>3.1 Basic information on the quality performance is recorded in accordance with organization procedures.</p> <p>3.2 Records of work quality are maintained according to the requirements of the organization / enterprise.</p>
4. Study causes of quality deviations	<p>4.1 Causes of deviations from final outputs or services are investigated and reported in accordance with standard procedures.</p> <p>4.2 Suitable preventive action is recommended based on organization <b>quality standards</b> and identified causes of deviation from specified quality standards of final service or output.</p>
5. Complete documentation	<p>5.1 Information on <b>quality parameters</b> and other indicators of service performance is recorded.</p> <p>5.2 All service processes and outcomes are recorded.</p>

Variable	Range
Quality check	<ul style="list-style-type: none"> <li>• Visual inspection</li> <li>• Physical measurements</li> <li>• Check against specifications/preferences</li> </ul>
Quality standards	<ul style="list-style-type: none"> <li>• materials</li> <li>• service</li> <li>• output and processes/procedures</li> </ul>



Quality parameters	<ul style="list-style-type: none"> <li>• style/design/specifications</li> <li>• durability</li> <li>• service variations</li> <li>• materials</li> <li>• damage and imperfections</li> </ul>
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<b>Evidence Guide</b>	
Critical Aspects of Competency	<p>Assessment requires evidence that the candidate to:</p> <ul style="list-style-type: none"> <li>• Check completed work continuously against standard</li> <li>• Identify and isolate faulty service / workmanship</li> <li>• Check service rendered against organization standards</li> <li>• Identify and apply corrective actions on the causes of identified faults</li> <li>• Record basic information regarding quality performance</li> <li>• Investigate causes of deviations of services against standard</li> <li>• Recommend suitable preventive actions</li> </ul>
Underpinning Knowledge	<ul style="list-style-type: none"> <li>• Relevant quality standards, policies and procedures</li> <li>• Characteristics of services</li> <li>• Safety environment aspects of service processes</li> <li>• Relevant evaluation techniques and quality checking procedures</li> <li>• Workplace procedures</li> <li>• Reporting procedures</li> </ul>
Underpinning Skills	<ul style="list-style-type: none"> <li>• Interpret work instructions, specifications and standards appropriate to the required work or service</li> <li>• Carry out relevant performance evaluation</li> <li>• Maintain accurate work records in accordance with procedures</li> <li>• Meet work specifications</li> <li>• Communicate effectively within defined workplace procedures</li> </ul>
Resource Implications	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Work with Others
Unit Code	<a href="#">IND BPS1 14 0613</a>
Unit Descriptor	This unit covers the knowledge, skills, and attitudes required to develop workplace relationship and contribute in workplace activities.

Element	Performance Criteria
1. Develop effective workplace relationship	<p>1.1 <b>Duties and responsibilities</b> are done in a positive manner to promote cooperation and good relationship.</p> <p>1.2 Assistance is sought from <b>workgroup</b> when difficulties arise and addressed through discussions.</p> <p>1.3 <b>Feedback on performance</b> provided by others in the team is encouraged, acknowledged and acted upon.</p> <p>1.4 Differences in personal values and beliefs are respected and acknowledged in the development.</p>
2. Contribute to work group activities	<p>2.1 <b>Support is provided to team members</b> to ensure workgroup goals are met.</p> <p>2.2 Constructive contributions to workgroup goals and tasks are made according to <b>organizational requirements</b>.</p> <p>2.3 Information relevant to work are shared with team members to ensure designated goals are met.</p>

Variable	Range
Duties and responsibilities	<ul style="list-style-type: none"> <li>• Job description and employment arrangements</li> <li>• Organization's policy relevant to work role</li> <li>• Organizational structures</li> <li>• Supervision and accountability requirements including OHS</li> <li>• Code of conduct</li> </ul>
Work group	<ul style="list-style-type: none"> <li>• Supervisor or manager</li> <li>• Peers/work colleagues</li> <li>• Other members of the organization</li> </ul>
Feedback on performance	<ul style="list-style-type: none"> <li>• Formal/Informal performance appraisal</li> <li>• Obtaining feedback from supervisors and colleagues and clients</li> <li>• Personal, reflective behavior strategies</li> <li>• Routine organizational methods for monitoring service delivery</li> </ul>
Providing support to team members	<ul style="list-style-type: none"> <li>• Explaining/clarifying</li> <li>• Helping colleagues</li> <li>• Providing encouragement</li> <li>• Providing feedback to another team member</li> <li>• Undertaking extra tasks if necessary</li> </ul>
Organizational requirements	<ul style="list-style-type: none"> <li>• Goals, objectives, plans, system and processes</li> <li>• Legal and organization policy/guidelines</li> <li>• OHS policies, procedures and programs</li> </ul>

	<ul style="list-style-type: none"> <li>• Ethical standards</li> <li>• Defined resources parameters</li> <li>• Quality and continuous improvement processes and standards</li> </ul>
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<b>Evidence Guide</b>	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate to:</p> <ul style="list-style-type: none"> <li>• Provide support to team members to ensure goals are met</li> <li>• Act on feedback from clients and colleagues</li> <li>• Access learning opportunities to extend own personal work competencies to enhance team goals and outcomes</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> <li>• relevant legislation that affects operations, especially with regards to safety</li> <li>• reasons why cooperation and good relationships are important</li> <li>• knowledge of the organization's policies, plans and procedures</li> <li>• understanding how to elicit and interpret feedback</li> <li>• knowledge of workgroup member's responsibilities and duties</li> <li>• importance of demonstrating respect and empathy in dealings with colleagues</li> <li>• understanding of how to identify and prioritize personal development opportunities and options</li> </ul>
Underpinning Skills	<p>Demonstrates skills of:</p> <ul style="list-style-type: none"> <li>• ability to read and understand the organization's policies and work procedures</li> <li>• write simple instructions for particular routine tasks</li> <li>• interpret information gained from correspondence</li> <li>• communication skills to request advice, receive feedback and work with a team</li> <li>• planning skills to organized work priorities and arrangement</li> <li>• technology skills including the ability to select and use technology appropriate to a task</li> <li>• ability to relate to people from a range of social, cultural and ethnic backgrounds</li> </ul>
Resource Implications	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Receive and Respond to Workplace Communication
Unit Code	<a href="#">IND BPS1 15 0613</a>
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to receive respond and act on verbal and written communication.

Element	Performance Criteria
1. Follow routine spoken messages	1.1 Required information is gathered by listening attentively and correctly interpreting or understanding information/instructions. 1.2 Instructions/information is properly recorded. 1.3 Instructions are acted upon immediately in accordance with information received. 1.4 Clarification is sought from workplace supervisor on all occasions when any instruction/information is not clear.
2. Perform workplace duties following written notices	2.1 <b>Written notices and instructions</b> are read and interpreted correctly in accordance with <b>organizational guidelines</b> . 2.2 Routine written instruction is followed in sequence. 2.3 Feedback is given to workplace supervisor based on the instructions/information received.

Variable	Range
Written notices and instructions	<ul style="list-style-type: none"> <li>• Handwritten and printed material</li> <li>• Internal memos</li> <li>• External communications</li> <li>• Electronic mail</li> <li>• Briefing notes</li> <li>• General correspondence</li> <li>• Marketing materials</li> <li>• Journal articles</li> </ul>
Organizational guidelines	It may include: <ul style="list-style-type: none"> <li>• Information documentation procedures</li> <li>• Company policies and procedures</li> <li>• Organization and Service manuals</li> </ul>

Evidence Guide	
Critical Aspects of Competence	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> <li>• Demonstrated knowledge of organizational procedures for handling verbal and written communications</li> <li>• Received and acted on verbal messages and instructions</li> <li>• Demonstrated competence in recording instructions/information</li> </ul>
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: <ul style="list-style-type: none"> <li>• organizational policies/guidelines in regard to processing internal/external information</li> </ul>

	<ul style="list-style-type: none"> <li>• ethical work practices in handling communications</li> <li>• communication process</li> </ul>
Underpinning Skills	<p>Demonstrates skills of:</p> <ul style="list-style-type: none"> <li>• conciseness in receiving and clarifying messages/information/communication</li> <li>• accuracy in recording messages/information</li> </ul>
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Demonstrate Work Values
Unit Code	<a href="#">IND BPS1 16 0613</a>
Unit Descriptor	This unit covers the knowledge, skills and attitude required in demonstrating proper work values.

Elements	Performance Criteria
1. Define the purpose of work	<p>1.1 One's unique sense of purpose for working and the whys of work are identified reflected on and clearly defined for one's development as a person and as a member of society.</p> <p>1.2 Personal mission is achieved in harmony with company's values</p>
2. Apply work values/ethics	<p>2.1 <b>Work values/ethics/concepts</b> are classified and reaffirmed in accordance with the transparent company ethical standards, policies and guidelines.</p> <p>2.2 <b>Work practices</b> are undertaken in compliance with industry work ethical standards, organizational policy and guidelines</p> <p>2.3 Personal behavior and relationships with co-workers and/or clients are conducted in accordance with ethical standards, policy and guidelines.</p> <p>2.4 <b>Company resources</b> are used in accordance with transparent company ethical standard, policies and guidelines.</p>
3. Deal with ethical problems	<p>3.1 Company ethical standards, organizational policy and guidelines on the prevention and reporting of unethical conduct are accessed and applied in accordance with transparent company ethical standard, policies and guidelines.</p> <p>3.2 <b>Work incidents/situations</b> are reported and/or resolved in accordance with company protocol/guidelines.</p> <p>3.3 Resolution and/or referral of ethical problems identified are used as learning opportunities.</p>
4. Maintain integrity of conduct in the workplace	<p>4.1 Personal work practices and values are demonstrated consistently with acceptable ethical conduct and company's core values.</p> <p>4.2 Instructions to co-workers are provided based on ethical, lawful and reasonable directives.</p> <p>4.3 Company values/practices are shared with co-workers using appropriate behavior and language.</p>

Variable	Range
Work values/ethics/concepts	<p>May include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Commitment/ Dedication</li> <li>• Sense of urgency</li> <li>• Sense of purpose</li> </ul>

	<ul style="list-style-type: none"> <li>• Love for work</li> <li>• High motivation</li> <li>• Orderliness</li> <li>• Reliability and Dependability</li> <li>• Competence</li> <li>• Goal-oriented</li> <li>• Sense of responsibility</li> <li>• Being knowledgeable</li> <li>• Loyalty to work/company</li> <li>• Sensitivity to others</li> <li>• Compassion/Caring attitude</li> <li>• Balancing between family and work</li> <li>• Sense of nationalism</li> </ul>
Work practices	<ul style="list-style-type: none"> <li>• Quality of work</li> <li>• Punctuality</li> <li>• Efficiency</li> <li>• Effectiveness</li> <li>• Productivity</li> <li>• Resourcefulness</li> <li>• Innovativeness/Creativity</li> <li>• Cost consciousness</li> <li>• 5S</li> <li>• Attention to details</li> </ul>
Company resources	<ul style="list-style-type: none"> <li>• Consumable materials</li> <li>• Equipment/Machineries</li> <li>• Human</li> <li>• Time</li> <li>• Financial resources</li> </ul>
Work incidents/ Situations	<ul style="list-style-type: none"> <li>• Violent/intense dispute or argument</li> <li>• Gambling</li> <li>• Use of prohibited substances</li> <li>• Pilferages</li> <li>• Damage to person or property</li> <li>• Vandalism</li> <li>• Falsification</li> <li>• Bribery</li> <li>• Sexual Harassment</li> <li>• Blackmail</li> </ul>

<b>Evidence Guide</b>	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate to:</p> <ul style="list-style-type: none"> <li>• Define one's unique sense of purpose for working</li> <li>• Clarify and affirm work values/ethics/concepts consistently in the workplace</li> <li>• Demonstrate work practices satisfactorily and consistently in compliance with industry work ethical standards, organizational policy and guidelines</li> </ul>

	<ul style="list-style-type: none"> <li>• Demonstrate personal behavior and relationships with co-workers and/or clients consistent with ethical standards, policy and guidelines</li> <li>• Use company resources in accordance with company ethical standard, policies and guidelines.</li> <li>• Follow company ethical standards, organizational policy and guidelines on the prevention and reporting of unethical conduct/behavior</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> <li>• Occupational health and safety</li> <li>• Work values and ethics</li> <li>• Company performance and ethical standards</li> <li>• Company policies and guidelines</li> <li>• Fundamental rights at work including gender sensitivity</li> <li>• Work responsibilities/job functions</li> <li>• Corporate social responsibilities</li> <li>• Company code of conduct/values</li> <li>• Balancing work and family responsibilities</li> </ul>
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> <li>• Interpersonal skills</li> <li>• Communication skills</li> <li>• Self awareness, understanding and acceptance</li> <li>• Application of good manners and right conduct</li> </ul>
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.



<b>Occupational Standard: Basic Printing and Graphic Arts Services Level I</b>	
<b>Unit Title</b>	<b>Develop Understanding of Entrepreneurship</b>
<b>Unit Code</b>	<b><a href="#">IND BPS1 17 0613</a></b>
<b>Unit Descriptor</b>	This unit covers skills, knowledge and attitude required to understand the principles, functions, strategies and methods of entrepreneurship. It also covers identifying and developing the major entrepreneurial competences.

<b>Elements</b>	<b>Performance Criteria</b>
1. Describe and explain the principles, concept and scope of entrepreneurship	<p>1.1 The principles, concept and terminology of entrepreneurship are analyzed and discussed.</p> <p>1.2 The different / various forms of enterprises in the community are identified and their roles understood.</p> <p>1.3 The identified enterprises are categorized and classified.</p> <p>1.4 The terms and elements involved in the concept of enterprising, both on a personal level and in the context of <b>classification</b> being enterprising in business are identified and interpreted.</p> <p>1.5 Functions of entrepreneurship in business and how the entrepreneurs improved business and economic environment are explained.</p>
2. Discuss how to become entrepreneur	<p>2.1 Self-employment as an alternative option for an individual economic independence and personal growth is discussed and analyzed.</p> <p>2.2 Advantages and disadvantages of self-employment are discussed and explained</p> <p>2.3 Entrepreneurial characteristics and traits are identified and discussed.</p> <p>2.4 Self-potential is assessed to determine if qualified to become future entrepreneur.</p> <p>2.5 Major competences of successful entrepreneurship are identified and explained.</p>
3. Discuss how to organize an enterprise	<p>3.1 The importance and role of business entrepreneurship in the society are discussed and correlated to the operations of the economy.</p> <p>3.2 Facts about small and medium enterprises are discussed, clarified and understood.</p> <p>3.3 Key success factor in setting up small and medium business are identified and explained.</p> <p>3.4 Business opportunities are identified and assessed.</p> <p>3.5 Business ideas are generated using appropriate tools, techniques and steps.</p> <p>3.6 Procedures for identifying suitable market for business are discussed and understood.</p>

	<p>3.7 <b>Major factors</b> to consider in selecting a location for a business are identified and discussed.</p> <p>3.8 Basic types of business ownership are identified and explained.</p> <p>3.9 Amount of money needed to start an enterprise estimated and distinction between pre operations and initial operation payments clarified.</p> <p>3.10 Advantages and disadvantages of using various sources of capital to start an enterprise are identified.</p>
<p>4. Discuss how to operate an enterprise</p>	<p>4.1 Disadvantages and advantages of <b>three alternatives</b> means of becoming an entrepreneur are identified and understood.</p> <p>4.2 Process of hiring and managing people is discussed and explained.</p> <p>4.3 The importance and techniques of managing time are discussed and understood.</p> <p>4.4 The techniques and procedures of managing sales are discussed and explained.</p> <p>4.5 Factors to consider in selecting suppliers and the steps to follow when doing business with them are identified and discussed.</p> <p>4.6 Awareness of how new technologies can affect small and medium business are developed.</p> <p>4.7 Characteristics of appropriate technology for use in small and medium business are identified and explained.</p> <p>4.8 Different types of cost that occur in a business and how to manage them are discussed and understood.</p> <p>4.9 Factors and procedures in knowing the cost of the enterprise are discussed and understood.</p> <p>4.10 Importance of financial record keeping and preparing simple financial statement are explained and understood.</p> <p>4.11 The application of self-management skills and negotiation skills are discussed in operating a business.</p> <p>4.12 Risk assessment and management of business enterprise are performed.</p>
<p>5. Develop one's own business plan</p>	<p>5.1 Process of preparing/ writing a business plan is discussed and applied.</p> <p>5.2 Standard structure and format are applied in preparing business plan.</p> <p>5.3 Findings of the business plan are interpreted, assessed and analyzed .</p> <p>5.4 Feasibility of the business idea is made clear and understandable.</p> <p>5.5 Problems that may arise or encounter when starting a business are identified and understand.</p>

	5.6 Techniques and procedures in obtaining and sourcing information are discussed and understood.
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Variables	Range
Classification	<ul style="list-style-type: none"> <li>• Private vs. public</li> <li>• Profit vs. non-profit</li> <li>• Formal vs. Non-formal</li> <li>• Individual vs. Community</li> <li>• Local vs. Foreign</li> <li>• Business vs. Social</li> <li>• Small vs. Large</li> <li>• Manufacturing vs. Service</li> <li>• Consumer vs. Industrial</li> </ul>
Major factors	<ul style="list-style-type: none"> <li>• Economics (local economy)</li> <li>• Population</li> <li>• Competition</li> </ul>
Three alternatives	<ul style="list-style-type: none"> <li>• Buying an existing business</li> <li>• Starting a new business</li> <li>• Operating a franchising business</li> </ul>

Evidence Guide	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>• explain principles and concept of entrepreneurship</li> <li>• discuss how to become entrepreneur</li> <li>• discuss how to organize an enterprise</li> <li>• discuss how to operate an enterprise</li> <li>• develop business plan</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> <li>• Entrepreneurship principles, concepts and terminologies</li> <li>• Entrepreneurial competence</li> <li>• Entrepreneurial motivation</li> <li>• Risk assessment and evaluation</li> <li>• Principles and process of negotiations</li> <li>• Self-management and self-employment</li> <li>• Managing sales, people and time</li> <li>• Factors in setting up small and medium business</li> <li>• Small and Medium Enterprise</li> <li>• Business plan development</li> <li>• Discussion techniques and procedures</li> </ul>
Underpinning Skills	<p>Demonstrate skills in:</p> <ul style="list-style-type: none"> <li>• Planning and Leading</li> <li>• Presentation skills</li> <li>• Using technology</li> <li>• Managing money</li> <li>• Preparing simple financial statement</li> <li>• Selecting suppliers</li> </ul>

Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Basic Printing and Graphic Arts Services Level I	
Unit Title	Apply 3S
Unit Code	<a href="#">IND BPS1 18 0613</a>
Unit Descriptor	This unit of competence covers the knowledge, skills and attitudes required by a worker to apply 3S techniques to his/her workplace. The unit assumes the worker has a particular job in the allocated workplace known by the individual.

Elements	Performance Criteria
1. Organize junior Kaizen Promotion Team (KPT).	<p>1.1 Basics, principles and stages of KPT are identified using appropriate procedures.</p> <p>1.2 Structure of <b>Junior KPT</b> is established in accordance with the organizational procedures.</p> <p>1.3 Effective and appropriate contributions are made to complement team activities and objectives using individual skills and competencies.</p> <p>1.4 Effective and appropriate forms of communications are used and undertaken with KPT members who contribute to know KPT activities and objectives.</p> <p>1.5 Kaizen Board (Visual Management Board) is prepared and used in harmony with different workplace contexts.</p>
2. Prepare for work.	<p>2.1 Work instructions are used to determine job requirements, including method, material and equipment.</p> <p>2.2 Job specifications are read and interpreted following working manual.</p> <p>2.3 <b>OHS requirements</b>, including dust and fume collection, breathing apparatus and eye and ear personal protection needs are observed throughout the work.</p> <p>2.4 Appropriate materials are selected.</p> <p>2.5 <b>Safety equipment and tools</b> are identified and checked for safe and effective operation.</p>
3. Sort items.	<p>3.1 Plan is prepared to implement sorting activities.</p> <p>3.2 Cleaning activities are performed.</p> <p>3.3 All <b>items</b> in the workplace are identified following <b>the appropriate procedures</b>.</p> <p>3.4 Necessary and <b>unnecessary items</b> are listed using the <b>appropriate format</b>.</p> <p>3.5 <b>Red tag</b> strategy is used for unnecessary items.</p> <p>3.6 Unnecessary items are evaluated and placed in an appropriate place other than the workplace.</p> <p>3.7 <b>Necessary items</b> are recorded and quantified using appropriate format.</p>

	<p>3.8 Performance results are reported using appropriate formats.</p> <p>3.9 Necessary items are regularly checked in the workplace.</p>
4. Set all items in order.	<p>4.1 Plan is prepared to implement set in order activities.</p> <p>4.2 General cleaning activities are performed.</p> <p>4.3 Location/layout, storage and indication methods for items are decided.</p> <p>4.4 Necessary <b>tools and equipment</b> are prepared and used for setting in order activities.</p> <p>4.5 Items are placed in their assigned locations.</p> <p>4.6 After use, the items are immediately returned to their assigned locations.</p> <p>4.7 Performance results are reported using appropriate formats.</p> <p>4.8 Each item is regularly checked in its assigned location and order.</p>
5. Perform shine activities.	<p>5.1 Plan is prepared to implement shine activities.</p> <p>5.2 Necessary tools and equipment are prepared and used for shinning activities.</p> <p>5.3 <b>Shine activity</b> is implemented using appropriate procedures.</p> <p>5.4 Performance results are reported using appropriate formats.</p> <p>5.5 Regular shinning activities are conducted.</p>

Variable	Range
Junior KPT	<p>may include but not limited to:</p> <ul style="list-style-type: none"> <li>• 3S</li> <li>• 3MU (Mura, Muri and MUDA)</li> <li>• 4P (Policy, Procedure, People and Plant)</li> <li>• 4M (Material, Method, Man and Machine)</li> <li>• PDCA (Plan, Do, Check and Act)</li> </ul>
OHS requirements may include but not limited to:	<ul style="list-style-type: none"> <li>• Legislation/ regulations/codes of practice and enterprise safety policies and procedures. This may include protective clothing and equipment, use of tooling and equipment, workplace environment and safety, handling of material, use of fire fighting equipment, enterprise first aid, hazard control and hazardous materials and substances.</li> <li>• Personal protective equipment is to include that prescribed under legislation/regulations/codes of practice and workplace policies and practices.</li> <li>• Safe operating procedures are to include, but are not limited to the conduct of operational risk assessment and treatments associated with workplace organization.</li> <li>• Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation.</li> </ul>

Safety equipment and tools	<p>may include but not limited to:</p> <ul style="list-style-type: none"> <li>• dust masks / goggles</li> <li>• glove</li> <li>• working cloth</li> <li>• first aid</li> <li>• safety shoes</li> </ul>
Items	<p>may include but not limited to:</p> <ul style="list-style-type: none"> <li>• tools</li> <li>• jigs/fixtures</li> <li>• materials/components</li> <li>• machine and equipment</li> <li>• manuals</li> <li>• documents</li> <li>• personal items (e.g. bags, lunch boxes and posters)</li> <li>• safety equipment and personal protective equipment</li> <li>• other items which happen to be in the work area</li> </ul>
The appropriate procedures	<p>may include but not limited to:</p> <ul style="list-style-type: none"> <li>• steps for implementing 3S (sort, set in order and shine) activities.</li> <li>• written, verbal and computer based or in some other format.</li> </ul>
Unnecessary items	<p>are not needed for current production or administrative operation and include but not limited to:</p> <ul style="list-style-type: none"> <li>• defective or excess quantities of small parts and inventory</li> <li>• outdated or broken jigs and dies</li> <li>• worn-out bits</li> <li>• outdated or broken tools and inspection gear</li> <li>• old rags and other cleaning supplies</li> <li>• electrical equipment with broken cords</li> <li>• outdated posters, signs, notices and memos</li> </ul> <p>some locations where unneeded items tend to accumulate may include but not limited to:</p> <ul style="list-style-type: none"> <li>• in rooms or areas not designated for any particular purpose</li> <li>• in corners next to entrances or exists</li> <li>• along interior and exterior walls</li> <li>• next to partitions and behind pillars</li> <li>• under the eaves of warehouses</li> <li>• under desks and shelves and in desk and cabinet drawers</li> <li>• near the bottom of tall stacks of items</li> <li>• on unused management and production schedule boards</li> <li>• in tools boxes that are not clearly sorted</li> </ul>
Appropriate format	<p>may include but not limited to:</p> <ul style="list-style-type: none"> <li>• all items.</li> <li>• necessary and unnecessary items.</li> </ul>
Red tag	<p>A format prepared with a red color paper or card which is filled and attached temporarily on the unnecessary items until decision is made. The red tag catch people's attention because red is a color that stands out. So to fill and attach red tag on items, asks the following three questions:</p>

	<ul style="list-style-type: none"> <li>• Is this item needed?</li> <li>• If it is needed, is it needed in this quantity?</li> <li>• If it is needed, does it need to be located here?</li> </ul>
Necessary items	Are required in the workplace for current production or administrative operation in the amount needed.
Tools and equipment	May include but not limited to: <ul style="list-style-type: none"> <li>• paint</li> <li>• hook</li> <li>• sticker</li> <li>• signboard</li> <li>• nails</li> <li>• shelves</li> <li>• chip wood</li> <li>• sponge</li> <li>• broom</li> <li>• pencil</li> <li>• shadow board/ tools board</li> </ul>
Shine activity	May include but not limited to: <ul style="list-style-type: none"> <li>• Inspection</li> <li>• Cleaning</li> <li>• Minor maintenance may include: <ul style="list-style-type: none"> <li>➤ Tightening bolts</li> <li>➤ Lubrication</li> <li>➤ Replacing missing parts</li> </ul> </li> </ul>

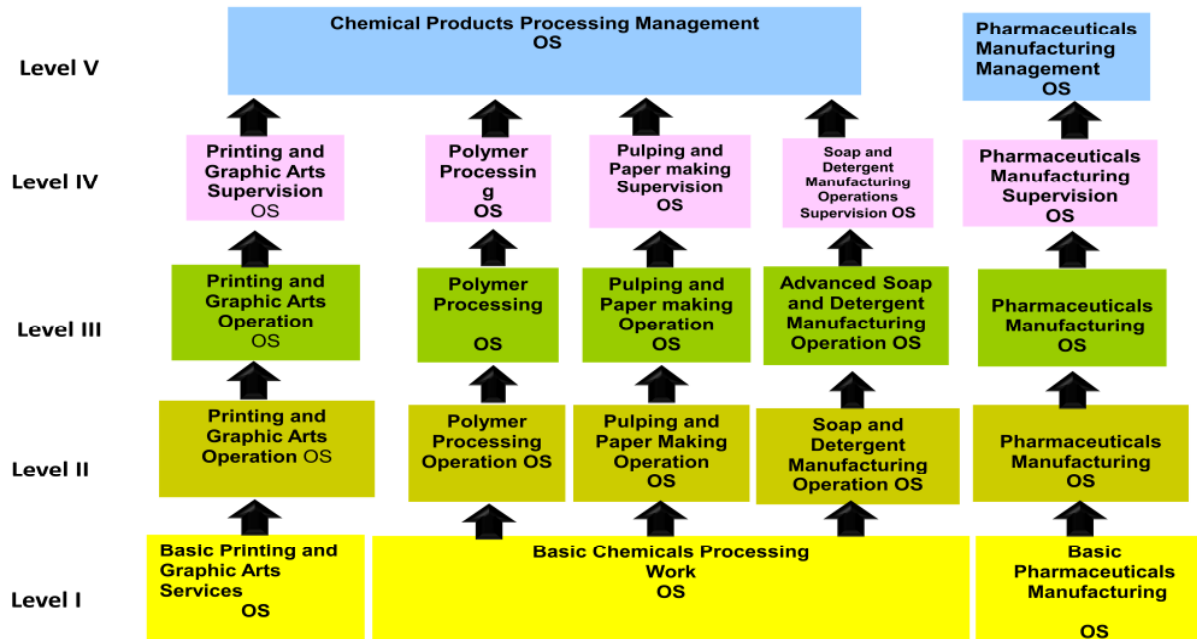
### Evidence Guide

Critical Aspects of Competence	Demonstrates skills and knowledge to: <ul style="list-style-type: none"> <li>• Discuss how to organize KPT.</li> <li>• Describe the pillars of 5S.</li> <li>• Implement 3S in own workplace by following appropriate procedures.</li> </ul>
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: <ul style="list-style-type: none"> <li>• Kaizen principle, pillars and concept</li> <li>• Key characteristic of Kaizen</li> <li>• Elements of Kaizen</li> <li>• Wastes/MUDA</li> <li>• Basics of KPT</li> <li>• Aims, benefits and principles of KPT</li> <li>• Stages of KPT</li> <li>• Structure and role of the components of Junior KPT</li> <li>• Concept and parts of Kaizen board</li> <li>• Concept and benefits of 5S</li> <li>• The pillars of 5S</li> <li>• Three stages of 5S application</li> <li>• Benefits and procedure of sorting activities</li> <li>• The concept and application of Red Tag strategy</li> <li>• OHS procedures</li> <li>• Benefits and procedure of set in order activities</li> </ul>



	<ul style="list-style-type: none"> <li>• Set in order methods/techniques</li> <li>• Benefits and procedure of shine activities</li> <li>• Inspection methods</li> <li>• Planning and reporting methods</li> <li>• Method of Communication</li> </ul>
Underpinning Skills	<p>Demonstrates skills of:</p> <ul style="list-style-type: none"> <li>• Participating actively in KPT</li> <li>• technical drawing</li> <li>• communication skills</li> <li>• planning and reporting own tasks in implementation of 3S</li> <li>• following procedures to implement 3S in own workplace</li> <li>• using sorting formats to identify necessary and unnecessary items</li> <li>• improving workplace layout following work procedures</li> <li>• preparing labels, slogans, etc.</li> <li>• reading and interpreting documents</li> <li>• observing situations</li> <li>• gathering evidence by using different means</li> <li>• recording activities and results using prescribed formats</li> <li>• working with others</li> <li>• solving problems by applying 3S</li> <li>• preparing and using Kaizen board</li> <li>• preparing and using tools and equipment to implement 3S</li> </ul>
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

**Sector: Industry**  
**Chemical Products Manufacturing**



## **Acknowledgement**

We wish to extend thanks and appreciation to the many representatives of business, industry, academe and government agencies who donated their time and expertise to the development of this occupational standard.

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This occupational standard was developed on May 2013 at Ethiopian Management Institute (EMI), Debre Zeyit.

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