

	Curriculum Document			
Curriculum Code	Curriculum Title		[insert image here]	
682201-003	Furniture Finisher			
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Development Quality Partner	Fibre Processing and Manufacturing SETA	AnsieN@fpmseta.org.za	0114031700	

Learner QDF Signature

Date

QDF Signature

Date

DQP Representative Signature

Date

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SECTION 1: CURRICULUM SUMMARY

1. Occupational Information

1.1 Associated Occupation

682201: Cabinet Maker

1.2 Occupation or Specialisation Addressed by this Curriculum

682201001: Furniture Maker

1.3 Alternative Titles used by Industry

- None

2. Curriculum Information

2.1 Curriculum Structure

This qualification is made up of the following compulsory Knowledge and Practical Skill Modules:

Knowledge Modules:

- 682201003-00-02-KM-01, Introduction to furniture manufacturing, NQF Level 2, Credits 2
- 682201003-00-02-KM-02, Wood finishing department and operations, NQF Level 2, Credits 12
- 682201003-00-02-KM-03, Computer technology and operations, NQF Level 2, Credits 4

Total number of credits for Knowledge Modules: 18

Practical Skill Modules:

- 682201003-00-02-PM-01, Operate a range of furniture finishing equipment to mix and apply furniture finishing materials to finish assembled furniture products or components, NQF Level 2, Credits 17

Total number of credits for Practical Skill Modules: 17

This qualification also requires the following Work Experience Modules:

- 682201003-00-02-WM-01, Furniture finishing operations, NQF Level 3, Credits 20

Total number of credits for Work Experience Modules: 20

2.2 Entry Requirements

NQF 1

3. Assessment Quality Partner Information

Name of body: Fibre Processing and Manufacturing SETA

Address of body: 1 Newton Avenue, Killarney, 2193

Contact person name: Me Ansie Nagel

Contact person work telephone number: 0800007395

4. Part Qualification Curriculum Structure

None

SECTION 2: OCCUPATIONAL PROFILE

1. Occupational Purpose

A Furniture Finisher prepares the furniture product for final finishing and performs the hand finishing and spraying applications to produce finished wooden furniture.

2. Occupational Tasks

- Prepare the product for final finishing and perform the hand finishing and spray applications (conventional and pumps), performing colour matching to produce finished wooden furniture (NQF Level 2)

3. Occupational Task Details

3.1. Prepare the product for final finishing and perform the hand finishing and spray applications (conventional and pumps), performing colour matching to produce finished wooden furniture. (NQF Level 2)

Unique Product or Service:

- Finished wooden furniture components and furniture

Occupational Responsibilities:

- Operate a range of tools and equipment to produce finished wooden furniture

Occupational Contexts:

- Furniture finishing department

SECTION 3: CURRICULUM COMPONENT SPECIFICATIONS

SECTION 3A: KNOWLEDGE MODULE SPECIFICATIONS

List of Knowledge Modules for which Specifications are included

- 682201003-00-02-KM-01, Introduction to furniture manufacturing, NQF Level 2, Credits 2
- 682201003-00-02-KM-02, Wood finishing department and operations, NQF Level 2, Credits 12
- 682201003-00-02-KM-03, Computer technology and operations, NQF Level 2, Credits 4

1. 682201003-00-02-KM-01, Introduction to furniture manufacturing, NQF Level 2, Credits 2

1.1 Purpose of the Knowledge Modules

The main focus of the learning in this knowledge module is to build an understanding of the manufacturing of furniture.

The learning will enable learners to demonstrate an understanding of:

- KM-01-KT01: Wooden and board furniture types, styles and construction (10%)
- KM-01-KT02: Timber technology (10%)
- KM-01-KT03: Composite board technology (10%)
- KM-01-KT04: Ergonomics related to furniture manufacturing (10%)
- KM-01-KT05: Processes in manufacturing of furniture (10%)
- KM-01-KT06: Productivity, quality and efficiency (10%)
- KM-01-KT07: Drawings for furniture manufacturing (10%)
- KM-01-KT08: Health and safety in the furniture machine/assembly/finishing department (10%)
- KM-01-KT09: Measuring and calculations (10%)
- KM-01-KT10: Compressor and compressed air (10%)

1.2 Guidelines for Topics

1.2.1. KM-01-KT01: Wooden and board furniture types, styles and construction (10%)

Topic elements to be covered include:

- KT0101 History of furniture
- KT0102 Styles and designs of furniture
- KT0103 Types, categories and uses of furniture
- KT0104 Antique and traditional furniture
- KT0105 Do-it-yourself (DIY) furniture
- KT0106 Furniture construction and components
- KT0107 Quality and customer requirements

Internal Assessment Criteria and Weight

- IAC0101 The history of furniture and furniture production is briefly outlined
- IAC0102 The styles and designs of furniture are listed and described along with the special considerations linked to each
- IAC0103 Antique and traditional furniture and furniture production are compared and contrasted
- IAC0104 Do-It-Yourself (DIY) furniture are discussed in terms of the considerations during their production
- IAC0105 The different types of furniture are described and matched to their uses
- IAC0106 The principles of furniture construction are outlined
- IAC0107 The functions of different components are listed
- IAC0108 The quality requirements for different types of furniture are outlined

- IAC0109 Customer requirements are identified and discussed

(Weight 10%)

1.2.2. KM-01-KT02: Timber technology (10%)

Topic elements to be covered include:

- KT0201 Origin of timber
- KT0202 Wood manufacturing principles
- KT0203 Types, properties and characteristics of timber
- KT0204 Structure of the timber
- KT0205 Drying processes
- KT0206 Timber products and uses
- KT0207 Timber used in construction and boat industry
- KT0208 Timber quality (faults and defects)
- KT0209 Related raw material used in the manufacturing of furniture

Internal Assessment Criteria and Weight

- IAC0201 The origin of different kinds of timber is listed
- IAC0202 The drying process is outlined and the reasons for each step in the process is clarified
- IAC0203 The effect of moisture in timber on timber products is explained to motivate the need for the drying process
- IAC0204 The different types of timber are listed along with their properties, characteristics and uses
- IAC0205 Timber structure is outlined along with the impact structure have on manufacturing
- IAC0206 The different products and uses of timber are described in order to ensure that timber is selected according to specification
- IAC0207 The specifications of timber used in the construction and boat industry are listed and explained
- IAC0208 Timber defects are listed and their impact on timber quality is explained

(Weight 10%)

1.2.3. KM-01-KT03: Composite board technology (10%)

Topic elements to be covered include:

- KT0301 Composite board manufacturing principles
- KT0302 Types and characteristics of boards
- KT0303 Composition of boards
- KT0304 Timber and board products and uses
- KT0305 Board used in construction and boat industry
- KT0306 Board quality (faults and defects)

Internal Assessment Criteria and Weight

- IAC0301 The manufacture of different kinds of boards is described
- IAC0302 The effect of moisture in board on board products is explained to motivate the need for proper storage
- IAC0303 The different types of boards are listed along with their properties, characteristics and uses
- IAC0304 Composite board structure is outlined along with the impact structure have on manufacturing
- IAC0305 The different products and uses of boards are described in order to ensure that composite boards are selected according to specification
- IAC0306 Board defects are listed and their impact on board quality is explained
- IAC0307 Manufacturing principles and best practices such as economical cutting of boards are explained

(Weight 10%)

1.2.4. KM-01-KT04: Ergonomics related to furniture manufacturing (10%)

Topic elements to be covered include:

- KT0401 Definition
- KT0402 Principles
- KT0403 Purpose
- KT0404 Standard measurements for furniture
- KT0405 Lifting and stacking
- KT0406 Moving materials and equipment

Internal Assessment Criteria and Weight

- IAC0401 Ergonomics is defined in terms of its applications and impact in furniture manufacture
- IAC0402 The principles and best practices of ergonomics in the industry is outlined
- IAC0403 The purpose of ergonomics is described in terms of the effect on the finished product and the production processes
- IAC0404 The need for standard sizes in furniture manufacture is motivated with reference to ergonomics
- IAC0405 Lifting and moving equipment are listed and their uses describe
- IAC0406 The lifting and moving equipment's impact on ergonomics during production is outlined
- IAC0407 Material storage (such as stacking) is described with reference to the different sizes, the use of spacers and the avoidance of damage
- IAC0408 The correct equipment is used based on the situation such as ladders of sufficient lengths for the heights involved
- IAC0409 The principles of ergonomics are applied to lifting to identify correct lifting procedures and minimizing the risk of injury to self

(Weight 10%)

1.2.5. KM-01-KT05: Processes in manufacturing of furniture (10%)

Topic elements to be covered include:

- KT0501 Process flow and productivity
- KT0502 Operations in the process flow
- KT0503 Routing sheets
- KT0504 Cutting lists
- KT0505 Product specifications
- KT0506 Finishing aids

Internal Assessment Criteria and Weight

- IAC0501 The process of furniture manufacture is briefly outlined
- IAC0502 The operations in furniture manufacture such as machining, assembling and finishing operations are reviewed
- IAC0503 The finishing processes of furniture is outlined
- IAC0504 The importance of productivity and methods to enhance productivity are discussed
- IAC0505 The role of the routing sheet is described
- IAC0506 Job card information such as component sizes and details, shoulder-to-shoulder size and chemicals to use is explained
- IAC0507 Product specifications are understood and their impact on the manufacturing process is discussed in terms of the process flow and methods that will be used

(Weight 10%)

1.2.6. KM-01-KT06: Productivity, quality and efficiency (10%)

Topic elements to be covered include:

- KT0601 Productivity
- KT0602 Interruptions
- KT0603 Waste management
- KT0604 Timber and board quality
- KT0605 Timber and board faults and defects
- KT0606 Product quality of the machining/assembling/finishing process and defects

Internal Assessment Criteria and Weight

- IAC0601 The importance of planning the job in avoiding delays is explained
- IAC0602 The importance of productivity is discussed
- IAC0603 The factors influencing productivity are outlined along with their impact on manufacturing processes
- IAC0604 The role of accurate cutting lists, specification sheets and routing sheets are described

- IAC0605 The importance of minimizing waste is discussed
- IAC0606 The need to reuse raw material (timber/board) and store reusable raw materials is motivated
- IAC0607 The role of planned interruptions is explained
- IAC0608 The procedures for dealing with unplanned interruption are outlined

(Weight 10%)

1.2.7. KM-01-KT07: Drawings for furniture manufacturing (10%)

Topic elements to be covered include:

- KT0701 Sketches and engineering drawings
- KT0702 Isometric views
- KT0703 Lines used
- KT0704 Hidden detail
- KT0705 Legends and symbols

Internal Assessment Criteria and Weight

- IAC0701 Sketches and engineering drawings are identified according to type and use
- IAC0702 Engineering drawings are correctly interpreted and the relevant actions and processes are identified
- IAC0703 Line structure and dimensions are correctly identified and their meanings described
- IAC0704 The interpretation is done methodically to ensure that all the important details are incorporated into the manufacturing process
- IAC0705 Work pieces to be used are identified based on the engineering drawing
- IAC0706 Hidden details are listed and the actions to be taken are outlined

(Weight 10%)

1.2.8. KM-01-KT08: Health and safety in the furniture machine/assembly/finishing department (10%)

Topic elements to be covered include:

- KT0801 BCOE Act
- KT0802 OHS Act
- KT0803 General hazards in the workshop
- KT0804 Fire extinguishers and uses
- KT0805 Evacuation plans and signage in the workshop
- KT0806 Demarcation lines
- KT0807 Safe working procedures in the various manufacturing operations
- KT0808 Machine safety
- KT0809 Personal safety

- KT0810 Hazards and incidents
- KT0811 Lock-out devices and procedures

Internal Assessment Criteria and Weight

- IAC0801 Routines are described in accordance with safety and work requirements
- IAC0802 Common and critical faults of equipment are listed and described to aid early identification and the proper channels for fault reporting are given
- IAC0803 The importance of keeping the work area free from hazards is explained
- IAC0804 Fire extinguishers and other methods of fire control are listed, their uses and applications outlined
- IAC0805 The importance of not tampering with fire extinguishers is clearly explained
- IAC0806 The evacuation plan is understood and memorized to ensure compliance in hazardous situations
- IAC0807 Signage in the workshop is described and the meanings are explained
- IAC0808 The different demarcation lines and their functions are described to ensure activities such as stacking is done in appropriate places
- IAC0809 Machine safety devices and their functions are given and the installation methods are outlined
- IAC0810 The safety checks for all machines used such as checking for blockages, testing emergency buttons and ensuring lock-out device availability are listed in order
- IAC0811 The personal protective equipment to be used in the workshop is described
- IAC0812 The protocol for incidents and injuries is described and the reporting channels for incidents and injuries are outlined

(Weight 10%)

1.2.9. KM-01-KT09: Measuring and calculations (10%)

Topic elements to be covered include:

- KT0901 Conversions
- KT0902 Taking accurate measures
- KT0903 Calculations
- KT0904 Angles
- KT0905 Tape Measure
- KT0906 Vernier calipers
- KT0907 Measuring cups
- KT0908 Viscosity cups

Internal Assessment Criteria and Weight

- IAC0901 Measuring equipment are identified and matched to their uses
- IAC0902 Correct measuring units are listed along with the scenarios in which they are used

- IAC0903 Conversions between units are demonstrated
- IAC0904 Angles are correctly identified, measured and calculated
- IAC0905 Measuring equipment are used accurately to get correct sizes and meet product specifications
- IAC0906 The considerations for using tape measures to ensure accuracy are listed
- IAC0907 The considerations for using Vernier calipers to ensure accuracy are listed
- IAC0908 The considerations for using measuring cups to ensure accuracy are listed
- IAC0909 The considerations for using viscosity cups to ensure accuracy are listed

(Weight 10%)

1.2.10. KM-01-KT10: Compressor and compressed air (10%)

Topic elements to be covered include:

- KT1001 Compressed air
- KT1002 Compressed air generation
- KT1003 Compressed air properties
- KT1004 Compressed air uses
- KT1005 Identify and solve problems
- KT1006 Hazards and risks
- KT1007 Pneumatic tools

Internal Assessment Criteria and Weight

- IAC1001 The concept of compressed air is described
- IAC1002 The process of compressed air generation is outlined
- IAC1003 Different compressors are identified and their advantages and disadvantages are outlined
- IAC1004 The properties of compressed air are listed and linked to the uses thereof
- IAC1005 Hazards arising from various air tools, including noise, vibration, fumes, hoses and connectors are explained
- IAC1006 The safety requirements and procedures of working with compressed air is outlined and linked to the hazards they are meant to address
- IAC1007 The standard operating procedures for pneumatic devices such as start-up and shut down procedures are outlined
- IAC1008 Common and critical faults of equipment are listed and described to aid early identification and the proper channels for fault reporting are given
- IAC1009 The importance of setting the correct pressure on all pneumatic tools and machines is explained
- IAC1010 The importance of draining water out of airlines is explained
- IAC1011 The proper colour coding for airlines is described

(Weight 10%)

1.3 Provider Programme Accreditation Criteria

Physical Requirements:

- The provider must have lesson plans and structured learning material or provide learners with access to structured learning material that addresses all the topics in all the knowledge modules.

Human Resource Requirements:

- Lecturer/learner ratio of 1:20.
- Qualifications of lecturers: 5 years relevant experience or NQF 2 58227 with 2 years of experience

Legal Requirements:

- OHS compliant

1.4 Exemptions

- No exemptions, but the module can be achieved in full through a normal RPL process

2. 682201003-00-02-KM-02, Wood finishing department and operations, NQF Level 2, Credits 12

2.1 Purpose of the Knowledge Modules

The main focus of the learning in this knowledge module is to build an understanding of the principles and procedures involved in basic wood finishing processes in the bulk production of furniture.

The learning will enable learners to demonstrate an understanding of:

- KM-02-KT01: Paint and other furniture finishes and their characteristics (20%)
- KM-02-KT02: Sanding paper and tools (20%)
- KM-02-KT03: Pneumatic tools (15%)
- KM-02-KT04: Measuring and mixing paint and finishes (10%)
- KM-02-KT05: Spray equipment and booths (15%)
- KM-02-KT06: Consumables used for furniture finishing (10%)
- KM-02-KT07: Quality control in furniture finishing processes (10%)

2.2 Guidelines for Topics

2.2.1. KM-02-KT01: Paint and other furniture finishes and their characteristics (20%)

Topic elements to be covered include:

- KT0101 Types of paint and finishes used in the finishing of furniture (such as lacquers, varnishes, tinted lacquers paints, varnishes, stains, sealers and primers)
- KT0102 Clear finishes
- KT0103 Enamel paints
- KT0104 Stains
- KT0105 Varnishes, primers and sealers
- KT0106 Waxes / polish
- KT0107 Thinners
- KT0108 Turpentine
- KT0109 Hazards and risks associated with chemicals
- KT0110 Safe handling and storage of adhesives and solvents

Internal Assessment Criteria and Weight

- IAC0101 The difference between oil, spirit and water based paint is described
- IAC0102 The characteristics of different types of paint and their respective uses are outlined and discussed
- IAC0103 The characteristics of different types of finishes and their respective uses are outlined and discussed
- IAC0104 The correct application techniques for different paints and finishes are identified
- IAC0105 The different types of stains such as penetrating and matching and their uses are outlined
- IAC0106 The uses of primers and sealers and their differences are described and explained
- IAC0107 Varnishes and their uses (exterior and interior) are explained

- IAC0108 The role of thinners and turpentine in the coating processes is explained
- IAC0109 The uses of waxes and polishes are explained
- IAC0110 The importance of preparing the material to receive the coatings is discussed in terms of its impact on the quality of the end product
- IAC0111 Material safety data sheet (MSDS) for the paint and finishes is explained
- IAC0112 The PPE to be used when working with paint and finishes is described
- IAC0113 Hazards associated with paint and finishes are identified and the correct safety procedures are described
- IAC0114 The safe and correct storage of paint and finishes are described

(Weight 20%)

2.2.2. KM-02-KT02: Sanding paper and tools (20%)

Topic elements to be covered include:

- KT0201 Types of sanding papers
- KT0202 Different sanding paper grits
- KT0203 Hand sanding and machine sanding
- KT0204 Sanding block
- KT0205 Sanding techniques
- KT0206 Scrapers
- KT0207 Stopping and fillers
- KT0208 Denibbing (sanding between coats)

Internal Assessment Criteria and Weight

- IAC0201 The different types of sanding papers are described
- IAC0202 The sanding paper grit selection is discussed in terms of product specifications
- IAC0203 The correct situations in which to use a sanding block is given
- IAC0204 Sanding machines (orbital sanders) uses and operation is outlined
- IAC0205 Sanding techniques such as sanding along and across the grains are explained and the situations in which they should be used are identified
- IAC0206 Stopping, fillers and scrapers are discussed in terms of use and appropriateness
- IAC0207 The process and reasons for denibbing are explained

(Weight 20%)

2.2.3. KM-02-KT03: Pneumatic tools (15%)

Topic elements to be covered include:

- KT0301 Principles of compressed air
- KT0302 Types of pneumatic tools

- KT0303 Uses
- KT0304 Maintenance
- KT0305 Staples and nails
- KT0306 Problem Solving
- KT0307 Hazards and risks

Internal Assessment Criteria and Weight

- IAC0301 The principles behind pneumatic tools are briefly outlined
- IAC0302 Different pneumatic tools are identified and their advantages and disadvantages are outlined
- IAC0303 The properties of pneumatic tools are listed and linked to the uses thereof
- IAC0304 The standard operating procedures for pneumatic tools such as start-up and shut down procedures are outlined
- IAC0305 The importance of setting the correct pressure on all pneumatic tools is explained
- IAC0306 Correct size staples and nails are matched to the product specifications and the given tool
- IAC0307 The importance of using the correct grease on the tools is explained
- IAC0308 Common problems when working with pneumatic tools are listed and corrective measures are described
- IAC0309 The role of safety pins on the tools is explained along with the consequences of breaking safety pins
- IAC0310 Hazards arising from various pneumatic tools, including noise, vibration, fumes, hoses and connectors are explained
- IAC0311 The safety requirements and procedures of working with compressed air is outlined and linked to the hazards they are meant to address
- IAC0312 Common and critical faults of equipment are listed and described to aid early identification and the proper channels for fault reporting are given

(Weight 15%)

2.2.4. KM-02-KT04: Measuring and mixing paint and finishes (10%)

Topic elements to be covered include:

- KT0401 The mixing process
- KT0402 Measuring and mixing equipment
- KT0403 Quality control
- KT0404 Risks and hazards
- KT0405 Catalyst / hardeners

Internal Assessment Criteria and Weight

- IAC0401 A brief overview of the mixing process is given
- IAC0402 The different mixing processes are compared and contrasted

- IAC0403 Measuring equipment such as measuring cups, viscosity cups and stirring rods are identified and their correct and accurate use is described
- IAC0404 The considerations while using measuring cups are outlined
- IAC0405 The correct sizes of viscosity cups to use while performing viscosity checks are identified based on the circumstances
- IAC0406 The use of a mixing chart is explained in terms of its role in mixing different colours
- IAC0407 The reasons for recording formulas for new colours are given
- IAC0408 The need for sufficient mixing of paint is motivated
- IAC0409 The situations in which catalysts are used are identified and the calculations for determining the amount necessary is outlined
- IAC0410 The correct thinning agent such as water, turpentine or thinners is identified based on the different types of finishes
- IAC0411 The situations in which hardeners are required are reviewed

(Weight 10%)

2.2.5. KM-02-KT05: Spray equipment and booths (15%)

Topic elements to be covered include:

- KT0501 Types of spraying equipment
- KT0502 Components
- KT0503 Purpose and function
- KT0504 Airless and air assisted guns
- KT0505 Spray booths
- KT0506 Filters and water curtains
- KT0507 Machine operation
- KT0508 Care and maintenance
- KT0509 Health and safety

Internal Assessment Criteria and Weight

- IAC0501 Different types of spray guns are identified along with its uses
- IAC0502 The components of the spraying equipment and their purposes are listed and described
- IAC0503 Terms such as suction feed, gravity feed, and pressure pots are defined and their uses explained
- IAC0504 The uses, purpose and characteristics of airless and air assisted guns are compared and contrasted
- IAC0505 The need for spray booths is explained and their set up and preparation is discussed
- IAC0506 The need for filters and water curtains is explained and their set up and preparation is discussed
- IAC0507 The preparation, set up and start-up and shut down procedures of the different spraying machines are outlined

- IAC0508 The operation and adjustment of the different machines is delineated and explained
- IAC0509 The maintenance procedures of the gun are reviewed

(Weight 15%)

2.2.6. KM-02-KT06: Consumables used for furniture finishing (10%)

Topic elements to be covered include:

- KT0601 Types, characteristics and uses
- KT0602 Different shapes and sizes
- KT0603 Quality and requirements
- KT0604 Defects and faults
- KT0605 Standard sizes
- KT0606 Safe handling and storage of consumables

Internal Assessment Criteria and Weight

- IAC0601 Different types of consumables and accessories are listed
- IAC0602 The characteristics of different types of consumables are described and matched to their uses in furniture manufacture
- IAC0603 The selection of consumables is discussed with reference to design specifications
- IAC0604 The quality requirements of consumables are given and fault identification is described
- IAC0605 The impact of shape and size of consumables is explained
- IAC0606 Standard sizes are given and their importance is explained
- IAC0607 The correct handling and storage procedures for consumables are delineated
- IAC0608 Defects and faults are listed and the reporting channels are identified

(Weight 10%)

2.2.7. KM-02-KT07: Quality control in furniture finishing processes (10%)

Topic elements to be covered include:

- KT0701 Quality of paint and other chemicals
- KT0702 Machine quality and faults
- KT0703 Process quality and faults
- KT0704 Product quality and faults

Internal Assessment Criteria and Weight

- IAC0701 Timber or board defects are listed and their impact on the quality of the finishing process is explained
- IAC0702 The grading and classification of timber and board quality is understood
- IAC0703 The quality requirements for different types of furniture are outlined

- IAC0704 The quality requirements of different operations such as sanding and spraying are described and their identification discussed
- IAC0705 Mixing, sanding, spraying and other process faults are discussed in terms of their effect on the end product and possible causes and ways to address it is reasoned

(Weight 10%)

2.3 Provider Programme Accreditation Criteria

Physical Requirements:

- The provider must have lesson plans and structured learning material or provide learners with access to structured learning material that addresses all the topics in all the knowledge modules.

Human Resource Requirements:

- Lecturer/learner ratio of 1:20.
- Qualifications of lecturers: 5 years relevant experience or NQF 4 qualified in furniture technology

Legal Requirements:

- OHS compliant

2.4 Exemptions

- No exemptions, but the module can be achieved in full through a normal RPL process

3. 682201003-00-02-KM-03, Computer technology and operations, NQF Level 2, Credits 4

3.1 Purpose of the Knowledge Modules

The main focus of the learning in this knowledge module is to provide the learner with an opportunity to acquire general knowledge and understanding of the functioning and purpose of information and computer technology and computer hardware units. The learning of this module will also enable the Learner to acquire an understanding of the principles of electronic communication and the operation and functioning of software packages, including the design of presentations and specialised computerised management information systems

The learning will enable learners to demonstrate an understanding of:

- KM-03-KT01 : Information, communication technology **3%**
- KM-03-KT02 : Computer hardware **10%**
- KM-03-KT03 : Electronic communication **10%**
- KM-03-KT04 : Software packages for office use **8%**
- KM-03-KT05 : Operating a software package **16%**
- KM-03-KT06 : Create text documents using an appropriate software package **16%**
- KM-03-KT07 : Create spreadsheets using an appropriate software package **16%**
- KM-03-KT08 : Presentations **12%**
- KM-03-KT09 : Specialised computerised management production systems **7%**

3.2 Guidelines for Topics

3.2.1. KM-03-KT01 : Information, communication technology **5%**

Topic elements to be covered include:

- KT0101 Computer technology
- KT0102 Communication technology
- KT0103 Access to information
- KT0104 Cell phones
- KT0105 Social media

Internal Assessment Criteria and Weight

- IAC0101 Information is accessed using internet browser and search engines
- IAC0102 The use of computer technology as a communication tool is demonstrated

(Weight 5%)

3.2.2. KM-03-KT02 : Computer hardware **10%**

Topic elements to be covered include:

- KT0201 Monitor
- KT0202 Keyboard

- KT0203 Mouse
- KT0204 Input and output devices
- KT0205 Memory stick and compact disks

Internal Assessment Criteria and Weight

- IAC0201 Computer hardware is identified and the purpose is stated

(Weight 10%)

3.2.3. KM-03-KT03 : Electronic communication 10%

Topic elements to be covered include:

- KT0301 Internet
- KT0302 Web sites
- KT0303 Internet service providers
- KT0304 Electronic mail
- KT0305 Internet forums and virtual meetings
- KT0306 Digital learning

Internal Assessment Criteria and Weight

- IAC0301 Electronic communication options are identified and the purposes are described and applied

(Weight 10%)

3.2.4. KM-03-KT04 : Software packages for office use 8%

Topic elements to be covered include:

- KT0401 Electronic text documents
- KT0402 Electronic spreadsheets
- KT0403 Internet access
- KT0404 Electronic written communication
- KT0405 Electronic meetings
- KT0406 Electronic seminars

Internal Assessment Criteria and Weight

- IAC0401 Software packages for office use are identified and the purposes are described and applied

(Weight 8%)

3.2.5. KM-03-KT05 : Operating a software package

16%

Topic elements to be covered include:

- KT0501 Create new folders
- KT0502 Move files
- KT0503 Copy files
- KT0504 Open files and folders
- KT0505 Create folders and files
- KT0506 Undo commands
- KT0507 Find files
- KT0508 Recycle bin

Internal Assessment Criteria and Weight

- IAC0501 Ways to systemise and optimise operations on a computer are identified and applied

(Weight 16%)

3.2.6. KM-03-KT06 : Create text documents using an appropriate software package

16%

Topic elements to be covered include:

- KT0601 Select text
- KT0602 Replace text
- KT0603 Insert text
- KT0604 Format text
- KT0605 Find and replace text
- KT0606 Align text
- KT0607 Use tabs
- KT0608 Move, cut and paste text
- KT0609 Format size and appearance of text
- KT0610 Create tables

Internal Assessment Criteria and Weight

- IAC0601 The use of software for creating texts (documents) are described and applied

(Weight 16%)

3.2.7. KM-03-KT07 : Create spreadsheets using an appropriate software package

16%

Topic elements to be covered include:

- KT0701 Create tables

- KT0702 Addition
- KT0703 Sum
- KT0704 Subtraction
- KT0705 Multiplication
- KT0706 Division
- KT0707 Change text colours
- KT0708 Add and delete columns and rows
- KT0709 Clear cells and worksheets
- KT0710 Move data
- KT0711 Copy data
- KT0712 Costing and pricing worksheets

Internal Assessment Criteria and Weight

- IAC0701 The use of software for creating spreadsheets are described and applied

(Weight 16%)

3.2.8. KM-03-KT08 : Presentations

12%

Topic elements to be covered include:

- KT0801 Layout and design
- KT0802 Shapes, smart art and charts
- KT0803 Text and text box
- KT0804 Illustrations and visuals
- KT0805 Smart texts
- KT0806 Transitions
- KT0807 Animation
- KT0808 Slide show

Internal Assessment Criteria and Weight

- IAC0801 The use of software for creating presentations are described and applied

(Weight 12%)

3.2.9. KM-03-KT09 : Specialised computerised management production systems

7%

Topic elements to be covered include:

- KT0901 Capturing production information into a production system

Internal Assessment Criteria and Weight

- IAC0901 Production information is captured onto the system and is accurate

(Weight 7%)

3.3 Provider Programme Accreditation Criteria

Physical Requirements:

- The provider must have lesson plans and structured learning material or provide learners with access to structured learning material that addresses all the topics in all the knowledge modules.

Human Resource Requirements:

- Lecturer/learner ratio of 1:20.
- Qualifications of lecturers: 5 years relevant experience or NQF 4 qualified

Legal Requirements:

- OHS compliant

3.4 Exemptions

- No exemptions, but the module can be achieved in full through a normal RPL process

SECTION 3B: PRACTICAL SKILL MODULE SPECIFICATIONS

List of Practical Skill Module Specifications

682201003-00-02-PM-01, Operate a range of furniture finishing equipment to mix and apply furniture finishing materials to finish assembled furniture products or components, NQF Level 2, Credits 17

1. 682201003-00-02-PM-01, Operate a range of furniture finishing equipment to mix and apply furniture finishing materials to finish assembled furniture products or components, NQF Level 2, Credits 17

1.1 Purpose of the Practical Skill Modules

The focus of the learning in this module is on providing the learner an opportunity to prepare, set and operate a range of spraying equipment, pneumatic tools and hand tools and select and mix chemicals and solvents in the furniture finishing department to produce finished furniture components to specifications.

The learner will be required to:

- PM-01-PS01: Identify and categorize typical wooden furniture products and accessories
- PM-01-PS02: Identify timber and board used in the manufacturing of wooden furniture
- PM-01-PS03: Identify, select and prepare stains, sealers, primers, lacquers, varnishes, tinted lacquers and paint used for furniture finishing according to the required amount
- PM-01-PS04: Identify spraying machines, machine parts, machine attachments and tools
- PM-01-PS05: Apply safety measures related to tools or equipment operation and work area
- PM-01-PS06: Perform routine cleaning, quality change cleaning and housekeeping during furniture finishing processes
- PM-01-PS07: Prepare a workstation for furniture finishing operations
- PM-01-PS08: Prepare furniture products or components for initial/ base coat
- PM-01-PS09: Select and prepare spraying equipment for furniture finishing operations
- PM-01-PS10: Perform spraying application using conventional spray guns or pumps
- PM-01-PS11: Prepare the furniture product for the final coat applying sanding and denibbing procedures
- PM-01-PS12: Adhere to safety and housekeeping rules and within time allocated when performing operations
- PM-01-PS13: Inspect the finished work piece to ensure quality
- PM-01-PS14: Operate pneumatic machines/tools and compressed air according to manufacturer specifications
- PM-01-PS15: Record and report furniture finishing production information and prepare finishing documentation

1.2 Guidelines for Practical Skills

1.2.1. PM-01-PS01: Identify and categorize typical wooden furniture products and accessories

Scope of Practical Skill

Given a range of samples or photos of different wooden furniture products (styles, types, uses,) and accessories, the learner must be able to:

- PA0101 Identify and categorise the product according to types, uses and styles
- PA0102 Identify and categorise the products according to the raw materials used in the manufacturing process
- PA0103 Identify and categorise the accessories according to the uses and furniture style

Applied Knowledge

- AK0101 Furniture types, uses, styles and designs

Internal Assessment Criteria

- IAC0101 Furniture products are accurately identified according to the various categories
- IAC0102 Accessories identified is relevant to the specified use in the furniture manufacturing process

1.2.2. PM-01-PS02: Identify timber and board used in the manufacturing of wooden furniture

Scope of Practical Skill

Given a range of different types of timber and boards (which could be samples or access to a timber store) the learner must be able to:

- PA0201 Identify types of solid wood (soft and hard wood)
- PA0202 Identify types of composite boards (supa wood, chip board, melamine, veneer board, ply board, hard board)
- PA0203 Inspect wood and boards for defects and defaults visually
- PA0204 Use a metal detector to inspect reclaimed wood
- PA0205 Use a moisture meter to determine the moisture content of the wood
- PA0206 Identify standard sizes according to the product to be manufactured in order to reduce waste
- PA0207 Handle and store raw material such as lifting or pallet jacks in a safe manner in order to prevent injury to self and damage to the material
- PA0208 Identify and interpret the labeling and coding system used to identify and trace raw material and products

Applied Knowledge

- AK0201 Timber and board characteristics and quality
- AK0202 Stacking requirements and techniques

Internal Assessment Criteria

- IAC0201 Timber and board is correctly identified in terms of type and size and matched to the product specifications
- IAC0202 Raw materials are checked for quality and defects to ensure high quality end products
- IAC0203 Machinery and tools are correctly used to check, handle and store raw materials

1.2.3. PM-01-PS03: Identify, select and prepare stains, sealers, primers, lacquers, varnishes, tinted lacquers and paint used for furniture finishing according to the required amount

Scope of Practical Skill

Given a range of different types of finishing chemicals used for furniture finishing the learner must be able to:

- PA0301 Confirm according to the specification sheet the type of stain/sealer/primer to be used
- PA0302 Read and interpret material safety data sheets (MSDS) of furniture finishing solutions and solvents to determine and apply the correct safety, storage and handling procedures

- PA0303 Read and interpret the required mixing instructions for use in the furniture finishing process
- PA0304 Identify various furniture finishing solutions and solvents according to the furniture finishing mixing instruction and verify furniture components against specification and select the correct thinning agent to prepare the chemical
- PA0305 Identify various mixing and measuring equipment and tools used for the mixing of furniture finishing solutions and solvents
- PA0306 Calculate and measure (weight and volume) quantities of chemicals and solvent for furniture finishing solutions and liquors in solid and liquid form
- PA0307 Prepare the furniture finishing solution by mixing correct quantities of finishing chemicals and solvents according to correct mixing sequence and temperature according to the mixing instruction
- PA0308 Take samples and readings of furniture finishing liquors and solutions during the process to monitor aspects such as viscosity, consistency, temperature and colour
- PA0309 Clean furniture finishing solutions and solvents spillages with consideration to occupational health and safety and environmental impact

Applied Knowledge

- AK0301 Types of finishing material, their uses and characteristics

Internal Assessment Criteria

- IAC0301 Chemical is selected and prepared according specifications using the correct equipment such as a stirring rod for mixing the chemicals
- IAC0302 The quality of the finishing chemicals is ensured by measuring the viscosity with a stop watch and a viscosity cup
- IAC0303 The relevant PPE such as gloves, goggles and respirator masks are used during the mixing of finishing chemicals
- IAC0304 The selection of stains, sealers, lacquers are according to the specification sheet/ job card

1.2.4. PM-01-PS04: Identify spraying machines, machine parts, machine attachments and tools

Scope of Practical Skill

Given access to a range of spraying machines, tools and attachments used in the spraying room the learner must be able to:

- PA0401 Identify the spraying machines, parts, attachments and tools used in the spraying operation
- PA0402 Identify the safety mechanisms applicable to the spraying machines
- PA0403 Identify the control systems for operating the spraying machine
- PA0404 Identify and explain different colour codes used on the machines

Applied Knowledge

- AK0401 Machines in the spraying room
- AK0402 Meaning of signals, switches, alarms, guides and gauges
- AK0403 Safety when using spraying machines, equipment and tools

Internal Assessment Criteria

- IAC0401 The different spraying machines are correctly identified along with their parts and their uses

- IAC0402 All switches, lights and signals on the panel board or control system are correctly identified and interpreted
- IAC0403 The safety mechanisms of the spraying process are correctly identified in order to ensure they are functioning properly

1.2.5. PM-01-PS05: Apply safety measures related to tools or equipment operation and work area

Scope of Practical Skill

Given access to a range of spraying equipment, tools and a spraying room/booth the learner must be able to:

- PA0501 Inspect the spraying machine to ensure it is in working condition and that all safety checks and protective measures are operating correctly
- PA0502 Use the correct PPC and PPE for the given situation and machine
- PA0503 Identify hazards and risks related to the operation and machine

Applied Knowledge

- AK0501 Understanding of safety notices, colour coding and demarcation lines
- AK0502 Personal protective equipment

Internal Assessment Criteria

- IAC0501 Different health and safety notices in the work area are identified and adhered to
- IAC0502 Work is performed within the demarcated area
- IAC0503 Work is performed without creating hazards for self or others and safety rules and practices are adhered to at all times

1.2.6. PM-01-PS06: Perform routine cleaning, quality change cleaning and housekeeping during furniture finishing processes

Scope of Practical Skill

Given access to the spraying room and workbenches and cleaning agents the learner must be able to:

- PA0601 Conduct a general cleaning of the spraying room to ensure safety and efficiency
- PA0602 Clean the spraying machine and equipment to remove dust, dirt and other contaminants
- PA0603 Check the spraying filters and replace when necessary and perform minor maintenance
- PA0604 Ensure the extraction system is working

Applied Knowledge

- AK0601 Reduction of waste, disposal of waste, different types of waste

Internal Assessment Criteria

- IAC0601 Different waste in the workshop is managed and disposed safely and according to company policies and regulations
- IAC0602 Tools and equipment are clean and in good and safe working condition at all times
- IAC0603 Waste is minimized during the operations and materials that can be reused are marked and stored

1.2.7. PM-01-PS07: Prepare a workstation for furniture finishing operations

Scope of Practical Skill

Given a product and workstation/spraying booth the learner must be able to:

- PA0701 Prepare the workbenches and spraying booth
- PA0702 Prepare all the required tools and materials
- PA0703 Make sure the workstation is free from foreign objects.
- PA0704 Check if the spray room/booth is clean and dust free
- PA0705 Check if the spray filters are clean and not clogged
- PA0706 Check if the extraction system is working

Applied Knowledge

- AK0701 Workstation is prepared and made ready for operation

Internal Assessment Criteria

- IAC0701 The workbenches are clean and free from nails and foreign objects and the necessary tools and equipment are prepared
- IAC0702 The spray room/ booth and filters are checked to ensure they are clean and free from dust and foreign objects
- IAC0703 The extraction system is checked and all necessary PPE are used according to safety rules and regulations

1.2.8. PM-01-PS08: Prepare furniture products or components for initial/ base coat

Scope of Practical Skill

Given assembled products or components, finishing equipment and consumables the learner must be able to:

- PA0801 Interpret the production specifications
- PA0802 Identify and rectify faults on the surface of the furniture product
- PA0803 Select and use the correct stopping materials that matches the colour of the wood
- PA0804 Select the correct sanding paper grit and use the sanding block to sand flat surfaces according to the grain of the wood
- PA0805 Remove dust and ensure that the work piece is ready for finishing
- PA0806 Perform masking in relevant areas of the workpiece

Applied Knowledge

- AK0801 Products or component preparation
- AK0802 Sanding technique

Internal Assessment Criteria

- IAC0801 Stopping and wood fillers are applied using the correct tools
- IAC0802 Sanding is done using the correct paper grit and a sanding block
- IAC0803 Water is drained from the air-system

- IAC0804 All hinges, handles or areas requiring different colour of material are masked and all sawdust is removed from the product before coat application

1.2.9. PM-01-PS09: Select and prepare spraying equipment for furniture finishing operations

Scope of Practical Skill

Given access to a spray booth/room and a range of spraying equipment and attachments the learner must be able to:

- PA0901 Identify the spray gun to be used according to production specifications
- PA0902 Assemble the spray gun and rinse with relevant solvent
- PA0903 Connect the spray gun to an air pipe and air line
- PA0904 Open the air valve to allow flow of air to the spray equipment
- PA0905 Check and adjust compressed air to the required pressure bar
- PA0906 Adjust spray gun pattern according to the size of the work piece
- PA0907 Run a sample to ensure specifications are met and adjust the equipment if necessary

Applied Knowledge

- AK0901 Different types of spray guns (suction gun, gravity feed gun, airless and air assisted guns)

Internal Assessment Criteria

- IAC0901 Different guns are identified and assembled
- IAC0902 Spray guns are connected to an airline and pressure is adjusted according to specifications
- IAC0903 The spray gun is adjusted correctly according to the size and product specifications

1.2.10. PM-01-PS10: Perform spraying application using conventional spray guns or pumps

Scope of Practical Skill

Given an assembled and prepared work piece, prepared chemicals/consumables and spraying equipment the learner must be able to:

- PA1001 Position the product in the spray booth / extraction booth
- PA1002 Adjust the tables to the required height
- PA1003 Adjust the gun air flow, pattern and liquid accordingly
- PA1004 Hold the gun in a correct manner
- PA1005 Move the hand in a straight and uniform position
- PA1006 Overlap evenly to ensure even coating
- PA1007 Move the product to the drying room without damaging the product or the wet coat

Applied Knowledge

- AK1001 Application techniques
- AK1002 Spray gun handling techniques

Internal Assessment Criteria

- IAC1001 The gun is properly adjusted and held perpendicular to the surface
- IAC1002 The spray strokes overlap each other by 50% to ensure the material covers the surface adequately giving an even colour

1.2.11. PM-01-PS11: Prepare the furniture product for the final coat applying sanding and denibbing procedures

Scope of Practical Skill

Given a product with initial or base coat, tools, attachments and consumables, the learner must be able to:

- PA1101 Confirm if the product is properly dry
- PA1102 Sand between coats or denib the product using the correct abrasive
- PA1103 Clean the product to ensure it is ready to accept the final coat

Applied Knowledge

- AK1101 Sanding and denibbing techniques

Internal Assessment Criteria

- IAC1101 The product is checked to ensure it has dried completely before denibbing or sanding is done
- IAC1102 Sanding between coats is sufficient to ensure a smooth coating without removing the first coat
- IAC1103 Product is cleaned and made ready to accept a final coat

1.2.12. PM-01-PS12: Adhere to safety and housekeeping rules and within time allocated when performing operations

Scope of Practical Skill

Given workstation and personal protective equipment the learner must be able to:

- PA1201 Identify and use the PPE correctly according to safety regulations and procedures
- PA1202 Confirm that the area is clean with sufficient lighting
- PA1203 Clarify all problems with the relevant personnel
- PA1204 Clean all spraying equipment and the working area between different colours or chemicals to prevent contamination
- PA1205 Safely store chemicals in an appropriate storing facility

Applied Knowledge

- AK1201 Health, safety and housekeeping procedures

Internal Assessment Criteria

- IAC1201 Moving of material is done in a safe manner using lifting equipment
- IAC1202 Waste such as over sprayed, wasted thinners and lacquers are disposed safely and according to company policy and regulations
- IAC1203 Spray guns are cleaned and stored according to safety procedures
- IAC1204 All chemicals is returned to storage (fire proof storage)

- IAC1205 All chemicals are properly labelled before returned to storage

1.2.13. PM-01-PS13: Inspect the finished work piece to ensure quality

Scope of Practical Skill

Given a range of finished wood products with faults and defects and different types of paint or coatings the learner must be able to:

- PA1301 Inspect the finished product visually and by feel to ensure compliance with product specifications
- PA1302 Check the finished product against specification
- PA1303 Identify product faults such as incorrect shape, warped joints, incorrect size and scratches
- PA1304 Identify process faults such as blade marks, paint/coating contaminated with water, over spraying, running, mixing of wrong paints/chemicals, wrong viscosity, wrong reaction or inconsistencies in the cut product
- PA1305 Identify machine faults such as wrong nozzle, pressure that is too high or low or incorrect balance of air extraction

Applied Knowledge

- AK1301 Different types of faults
- AK1302 Chemicals and coating solutions and their characteristics

Internal Assessment Criteria

- IAC1301 Faults are rectified or rejects are identified
- IAC1302 Materials are handled and stacked safely and securely
- IAC1303 Finishing chemicals are categorised as spirit or oil based and stored accordingly

1.2.14. PM-01-PS14: Operate pneumatic machines/tools and compressed air according to manufacturer specifications

Scope of Practical Skill

Given pneumatic tools the learner must be able to:

- PA1401 Follow safety routines and procedures
- PA1402 Adjust pressure to the required gauge
- PA1403 Identify correct connections (fittings for pipes)
- PA1404 Ensure all settings are correct according to product specifications
- PA1405 Start and stop the tool using standard operating procedures
- PA1406 Use the tool to produce the desired components or effects
- PA1407 Conduct clean-up procedures as required

Applied Knowledge

- AK1401 Different of pressure bar requirement, adjusting pressure gauge.

Internal Assessment Criteria

- IAC1401 The pressure gauge is adjusted to the required pressure
- IAC1402 Water and oil is drained from the system
- IAC1403 Compressed air is used according to standard safety and operating procedures
- IAC1404 Hazards associated with compressed air are identified and rectified

1.2.15. PM-01-PS15: Record and report furniture finishing production information and prepare finishing documentation

Scope of Practical Skill

Given access to production log book, product specification and writing material, the learner must be able to:

- PA1501 Identify the type of information to be recorded in the production document.
- PA1502 Record legibly the hourly production, down time, quality faults, and production history and mother roll specs.
- PA1503 Record any production related problems experienced during the shift.
- PA1504 Hand over to incoming shift following the correct procedure

Applied Knowledge

- AK1501 Record keeping techniques

Internal Assessment Criteria

- IAC1501 The relevant information during the production shift is recorded and reported via the correct reporting channels
- IAC1502 Production problems experienced during shift are recorded correctly, neatly and legibly

1.3 Provider Programme Accreditation Criteria

Physical Requirements:

- The provider must have a work site with all the machines, machine parts, attachments, equipment, control systems, lockout systems, tools, consumables, raw material, utensils, safety equipment, protective clothing, work instructions, internal practical assessment tools and practical training manual specified in the practical skill scope statement

Human Resource Requirements:

- Qualified and accredited facilitator or supervisor with a minimum of 3 years of experience in a furniture manufacturing environment and be NQF 3 qualified in furniture manufacturing processes.
- Supervisor/subordinate ratios = 1:20
- Availability of coaches and mentors = 1:5

Legal Requirements:

- Compliance with all occupational health and safety legislation
- Compliance with Skills Development Act and Regulations
- Compliance with Labour Legislation

1.4 Exemptions

- No exemptions, but the module can be achieved in full through a normal RPL process

SECTION 3C: WORK EXPERIENCE MODULE SPECIFICATIONS

List of Work Experience Module Specifications

- 682201003-00-02-WM-01, Furniture finishing operations, NQF Level 3, Credits 20

1. 682201003-00-02-WM-01, Furniture finishing operations, NQF Level 3, Credits 20

1.1 Purpose of the Work Experience Modules

The focus of the work experience is on providing the learner an opportunity to:

Demonstrate the ability to prepare workstation, material products and perform spraying of a furniture product.

The learner will be required to:

- WM-01-WE01: Read and interpret work instruction and product specifications for furniture finishing operations
- WM-01-WE02: Prepare a furniture finishing workstation by obtaining all necessary tools, equipment and removing all foreign objects from the workstation
- WM-01-WE03: Prepare a minimum of 100 products or components for initial/ base coat
- WM-01-WE04: Identify, select and prepare finishing chemicals such as lacquers, varnishes, tinted lacquers, paints, varnishes, stains, sealers and primers
- WM-01-WE05: Identify, select and adjust spraying equipment for furniture finishing operations
- WM-01-WE06: Perform spraying application using conventional spray guns or pumps for a minimum of 100 products
- WM-01-WE07: Prepare workpieces for the next coat by denibbing and/or sanding between coats for a minimum of 100 products/ components using correct grit sandpaper
- WM-01-WE08: Perform all operations by adhering to safety and housekeeping rules consistently and continuously
- WM-01-WE09: Conduct general housekeeping activities to ensure the work area is clean and neat and complying with safety regulations
- WM-01-WE10: Ensure quality of the finished furniture product by identifying machine faults
- WM-01-WE11: Ensure quality of the finished furniture product by identifying raw material faults
- WM-01-WE12: Ensure quality of the finished furniture product by identifying process and product faults
- WM-01-WE13: Conduct continuous quality inspection of the finished furniture product throughout the assembling operation
- WM-01-WE14: Perform minor maintenance activities to ensure a well maintain machine

1.2 Guidelines for Work Experiences

1.2.1. WM-01-WE01: Read and interpret work instruction and product specifications for furniture finishing operations

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0101 Interpret the job card, cutting list, production flow/routing chart and identify all job requirements and specifications including machines and operations for the finishing of furniture
- WA0102 Identify furniture types, styles and designs from the job card
- WA0103 Identify all finishing and chemical applications indicated on the job card
- WA0104 Read and interpret basic engineering drawings and identify all aspects relevant to the work specifications

Supporting Evidence

- SE0101 Time sheet/ job card and photos

1.2.2. WM-01-WE02: Prepare a furniture finishing workstation by obtaining all necessary tools, equipment and removing all foreign objects from the workstation

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0201 Obtain all required material such as sanding papers
- WA0202 Prepare workbenches and equipment to be used
- WA0203 Obtain all PPE required such as gloves, dust masks, respirators, etc.
- WA0204 Remove all foreign objects from the workbench
- WA0205 Obtain and set a stop watch
- WA0206 Ensure the spray room/booth is dust free and the extraction system is in working order

Supporting Evidence

- SE0201 Time sheet/ job card and photos

1.2.3. WM-01-WE03: Prepare a minimum of 100 products or components for initial/ base coat

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0301 Identify and rectify faults on the surface of the work piece
- WA0302 Apply stopping where required selecting a matching colour
- WA0303 Perform hand sanding using the correct sand paper grit to achieve the required surface in preparation for the base coat application
- WA0304 Remove dust from the work piece
- WA0305 Cover handles, hinges and areas with masking tape where necessary
- WA0306 Label all covered areas to ensure correct colour/chemical is applied

Supporting Evidence

- SE0301 Time sheet/ job card and photos

1.2.4. WM-01-WE04: Identify, select and prepare finishing chemicals such as lacquers, varnishes, tinted lacquers, paints, varnishes, stains, sealers and primers

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0401 Confirm with the specification sheet the type of finish to be used
- WA0402 Obtain relevant finishing chemicals
- WA0403 Ensure that the finishing chemicals is within its shelf life
- WA0404 Prepare the required amount of finishing chemicals to avoid waste

- WA0405 Read and understand the relevant material safety data sheet (MSDS)
- WA0406 Mix chemicals and add catalyst where required
- WA0407 Perform viscosity checks to determine readiness for spraying

Supporting Evidence

- SE0401 Time sheet/ job card and photos

1.2.5. WM-01-WE05: Identify, select and adjust spraying equipment for furniture finishing operations

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0501 Assemble the spray gun and rinse with relevant solvent ensuring the gun is properly clean and free from oil and water
- WA0502 Connect the spray gun to an air pipe and airline and allow flow of air to the spraying equipment
- WA0503 Check and adjust compressed air to the required pressure bar
- WA0504 Adjust the spray gun according to required pressure, fluid, pattern and size of the work piece
- WA0505 Run a sample to ensure specifications are met and adjust settings if necessary

Supporting Evidence

- SE0501 Time sheet/ job card and photos

1.2.6. WM-01-WE06: Perform spraying application using conventional spray guns or pumps for a minimum of 100 products

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0601 Use turn tables for spraying in the spray booth/room
- WA0602 Start the extraction booth and fan
- WA0603 Place work piece in such a way that excess spray flows through freely
- WA0604 Handle the gun correctly and perpendicular to the surface
- WA0605 Ensure the movement of the gun is straight avoiding twisting of the hand and over lapping strokes ensuring even coverage of the workpiece

Supporting Evidence

- SE0601 Time sheet/ job card and photos

1.2.7. WM-01-WE07: Prepare workpieces for the next coat by denibbing and/or sanding between coats for a minimum of 100 products/ components using correct grit sandpaper

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0701 Obtain correct grit sanding paper for denibbing
- WA0702 Sand product without removing the initial coat
- WA0703 Clean the workpiece and ensure that the surface is dry and ready to accept the final coat

Supporting Evidence

- SE0701 Time sheet/ job card and photos

1.2.8. WM-01-WE08: Perform all operations by adhering to safety and housekeeping rules consistently and continuously

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0801 Maintain safe working environment by complying with safety standards and using PPE such as ear and eye protection, dust masks, overall and no loose clothes
- WA0802 Ensure lifting equipment is used for moving heavy products material
- WA0803 Dispose of waste according to regulation and company policy
- WA0804 Work area is kept clean at all times
- WA0805 All chemicals are stored safely in fireproof storage according to safety requirements
- WA0806 Label all material in the storage facility
- WA0807 Attend regular safety meetings according to the requirements of the workplace
- WA0808 Report inadequate lighting in the finishing department
- WA0809 Participate in a simulated fire emergency evacuation procedure

Supporting Evidence

- SE0801 Time sheet/ job card and photos

1.2.9. WM-01-WE09: Conduct general housekeeping activities to ensure the work area is clean and neat and complying with safety regulations

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0901 Record and report furniture finishing production information and prepare assembly documentation
- WA0902 Clean dust extraction bags where applicable
- WA0903 Check the dust extraction system for working condition
- WA0904 Comply with attendance and time keeping standards as determined by the company
- WA0905 Take necessary actions and measures and to reduce wastage
- WA0906 Produce minimum waste levels as determined by the company within set tolerances
- WA0907 Apply all safety routines and procedures when working with compressed air
- WA0908 Store and label components and assembled furniture according to specifications and size

Supporting Evidence

- SE0901 Time sheet/ job card and photos

1.2.10. WM-01-WE10: Ensure quality of the finished furniture product by identifying machine faults

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA1001 Inspect the finished product visually and by feel to ensure compliance with product specifications
- WA1002 Check the finished product against specification
- WA1003 Identify and immediately report any power tool defects
- WA1004 Ensure the power tool is operated within design specifications
- WA1005 Identify any wrongly fitted attachment and replace
- WA1006 Identify and correct incorrect power tool settings
- WA1007 Identify machine faults such as wrong nozzle, pressure that is too high or low or incorrect balance of air extraction
- WA1008 Identify product faults such as incorrect shape, warped joints, incorrect size and scratches
- WA1009 Identify process faults such as blade marks, paint/coating contaminated with water, over spraying, running, mixing of wrong paints/chemicals, wrong viscosity, wrong reaction or inconsistencies in the cut product

Supporting Evidence

- SE1001 Time sheet/ job card and photos

1.2.11. WM-01-WE11: Ensure quality of the finished furniture product by identifying raw material faults

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA1101 Inspect the finished product visually and by feel to ensure compliance with product specifications and identify and report all component defects such as cracks, knots, twists, insects, wet rot and dry rot
- WA1102 Identify component faults such as squareness of the component, incorrect size, knots causing rejects, smoothness and scratches

Supporting Evidence

- SE1101 Time sheet/ job card and photos

1.2.12. WM-01-WE12: Ensure quality of the finished furniture product by identifying process and product faults

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA1201 Inspect the finished product visually and by feel to ensure compliance with product specifications
- WA1202 Check the finished product against specification
- WA1203 Perform quality or style changes such as changing from solid wood to board or from soft wood to hard wood paying attention to tool settings such as speed and cleaning to prevent scratching
- WA1204 Identify process faults such as blade marks, timber moisture content, burn marks, paint contaminated with water, over spraying, running, mixing of wrong paints, wrong viscosity, wrong reaction or inconsistencies in the cut product
- WA1205 Ensure the wood is correctly clamped in the vice to avoid damage to machine, unsafe working condition, or not producing the designed product
- WA1206 Select components correctly according to type as specified on the job card
- WA1207 Handle furniture product components with utmost care to prevent damaging or chipping the edges
- WA1208 Avoid any misinterpretation of job cards by clarifying information which could be vague or unclear

Supporting Evidence

- SE1201 Time sheet/ job card and photos

1.2.13. WM-01-WE13: Conduct continuous quality inspection of the finished furniture product throughout the assembling operation

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA1301 Check samples at set intervals (spot checks) for correctness and consistency of cut components
- WA1302 Conduct a quality inspection checking for consistency, accuracy, defects of the product
- WA1303 Conduct a final quality inspection of the machined product before hand over to next process
- WA1304 Record all defects

Supporting Evidence

- SE1301 Quality checklist

1.2.14. WM-01-WE14: Perform minor maintenance activities to ensure a well maintain machine

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA1401 Lubricate, clean and service the machine at required intervals as part of routine maintenance activities
- WA1402 Identify and immediately report any machine or machine part or attachment defects

Supporting Evidence

- SE1401 Completed machine maintenance checklist

1.3 Contextualised Workplace Knowledge

1 Company products

2 Various departments and workflow

3 Reporting structures

4 Company standard operating and safety procedures and quality standards

5 Workshop layout and designated areas

6 Personal protective clothing and equipment

1.4 Criteria for Workplace Approval

Physical Requirements:

- Fully equipment wood machining department with advanced wood and board machining machines, tools and equipment and various types of raw material
- Compressed airline and extraction
- Key processes: wood machining processes using advanced machines

Human Resource Requirements:

- Qualifications, registration or experience of supervisor: NQF 3 qualified in furniture technology with 3 years of experience in the furniture making industry
- Supervisor/subordinate ratios = 1:20
- Availability of coaches and mentors = 1:5

Legal Requirements:

- Compliance with occupational health and safety regulations
- Compliance with Labour Legislation
- Bargaining Council Main Agreement

1.5 Additional Assignments to be Assessed Externally

None

SECTION 4: STATEMENT OF WORK EXPERIENCE

Curriculum Number:	682201003
Curriculum Title:	Furniture Finisher

Learner Details	
Name:	
ID Number:	

Employer Details	
Company Name:	
Address:	
Supervisor Name:	
Work Telephone:	
E-Mail:	

682201003-00-02-WM-01, Furniture finishing operations, NQF Level 3, Credits 20

WM-01-WE01	Read and interpret work instruction and product specifications for furniture finishing operations		
	Scope Work Experience	Date	Signature
WA0101	Interpret the job card, cutting list, production flow/routing chart and identify all job requirements and specifications including machines and operations for the finishing of furniture		
WA0102	Identify furniture types, styles and designs from the job card		
WA0103	Identify all finishing and chemical applications indicated on the job card		
WA0104	Read and interpret basic engineering drawings and identify all aspects relevant to the work specifications		
	Supporting Evidence	Date	Signature
SE0101	Time sheet/ job card and photos		
WM-01-WE02	Prepare a furniture finishing workstation by obtaining all necessary tools, equipment and removing all foreign objects from the workstation		
	Scope Work Experience	Date	Signature
WA0201	Obtain all required material such as sanding papers		
WA0202	Prepare workbenches and equipment to be used		
WA0203	Obtain all PPE required such as gloves, dust masks, respirators, etc.		
WA0204	Remove all foreign objects from the workbench		
WA0205	Obtain and set a stop watch		
WA0206	Ensure the spray room/booth is dust free and the extraction system is in working order		
	Supporting Evidence	Date	Signature
SE0201	Time sheet/ job card and photos		
WM-01-WE03	Prepare a minimum of 100 products or components for initial/ base coat		

	Scope Work Experience	Date	Signature
WA0301	Identify and rectify faults on the surface of the work piece		
WA0302	Apply stopping where required selecting a matching colour		
WA0303	Perform hand sanding using the correct sand paper grit to achieve the required surface in preparation for the base coat application		
WA0304	Remove dust from the work piece		
WA0305	Cover handles, hinges and areas with masking tape where necessary		
WA0306	Label all covered areas to ensure correct colour/chemical is applied		
	Supporting Evidence	Date	Signature
SE0301	Time sheet/ job card and photos		
WM-01-WE04	Identify, select and prepare finishing chemicals such as lacquers, varnishes, tinted lacquers, paints, varnishes, stains, sealers and primers		
	Scope Work Experience	Date	Signature
WA0401	Confirm with the specification sheet the type of finish to be used		
WA0402	Obtain relevant finishing chemicals		
WA0403	Ensure that the finishing chemicals is within its shelf life		
WA0404	Prepare the required amount of finishing chemicals to avoid waste		
WA0405	Read and understand the relevant material safety data sheet (MSDS)		
WA0406	Mix chemicals and add catalyst where required		
WA0407	Perform viscosity checks to determine readiness for spraying		
	Supporting Evidence	Date	Signature

SE0401	Time sheet/ job card and photos		
WM-01-WE05	Identify, select and adjust spraying equipment for furniture finishing operations		
	Scope Work Experience	Date	Signature
WA0501	Assemble the spray gun and rinse with relevant solvent ensuring the gun is properly clean and free from oil and water		
WA0502	Connect the spray gun to an air pipe and airline and allow flow of air to the spraying equipment		
WA0503	Check and adjust compressed air to the required pressure bar		
WA0504	Adjust the spray gun according to required pressure, fluid, pattern and size of the work piece		
WA0505	Run a sample to ensure specifications are met and adjust settings if necessary		
	Supporting Evidence	Date	Signature
SE0501	Time sheet/ job card and photos		
WM-01-WE06	Perform spraying application using conventional spray guns or pumps for a minimum of 100 products		
	Scope Work Experience	Date	Signature
WA0601	Use turn tables for spraying in the spray booth/room		
WA0602	Start the extraction booth and fan		
WA0603	Place work piece in such a way that excess spray flows through freely		
WA0604	Handle the gun correctly and perpendicular to the surface		
WA0605	Ensure the movement of the gun is straight avoiding twisting of the hand and over lapping strokes ensuring even coverage of the workpiece		
	Supporting Evidence	Date	Signature
SE0601	Time sheet/ job card and photos		

WM-01-WE07	Prepare workpieces for the next coat by denibbing and/or sanding between coats for a minimum of 100 products/ components using correct grit sandpaper		
	Scope Work Experience	Date	Signature
WA0701	Obtain correct grit sanding paper for denibbing		
WA0702	Sand product without removing the initial coat		
WA0703	Clean the workpiece and ensure that the surface is dry and ready to accept the final coat		
	Supporting Evidence	Date	Signature
SE0701	Time sheet/ job card and photos		
WM-01-WE08	Perform all operations by adhering to safety and housekeeping rules consistently and continuously		
	Scope Work Experience	Date	Signature
WA0801	Maintain safe working environment by complying with safety standards and using PPE such as ear and eye protection, dust masks, overall and no loose clothes		
WA0802	Ensure lifting equipment is used for moving heavy products material		
WA0803	Dispose of waste according to regulation and company policy		
WA0804	Work area is kept clean at all times		
WA0805	All chemicals are stored safely in fireproof storage according to safety requirements		
WA0806	Label all material in the storage facility		
WA0807	Attend regular safety meetings according to the requirements of the workplace		
WA0808	Report inadequate lighting in the finishing department		
WA0809	Participate in a simulated fire emergency evacuation procedure		
	Supporting Evidence	Date	Signature
SE0801	Time sheet/ job card and photos		

WM-01-WE09	Conduct general housekeeping activities to ensure the work area is clean and neat and complying with safety regulations		
	Scope Work Experience	Date	Signature
WA0901	Record and report furniture finishing production information and prepare assembly documentation		
WA0902	Clean dust extraction bags where applicable		
WA0903	Check the dust extraction system for working condition		
WA0904	Comply with attendance and time keeping standards as determined by the company		
WA0905	Take necessary actions and measures and to reduce wastage		
WA0906	Produce minimum waste levels as determined by the company within set tolerances		
WA0907	Apply all safety routines and procedures when working with compressed air		
WA0908	Store and label components and assembled furniture according to specifications and size		
	Supporting Evidence	Date	Signature
SE0901	Time sheet/ job card and photos		
WM-01-WE10	Ensure quality of the finished furniture product by identifying machine faults		
	Scope Work Experience	Date	Signature
WA1001	Inspect the finished product visually and by feel to ensure compliance with product specifications		
WA1002	Check the finished product against specification		
WA1003	Identify and immediately report any power tool defects		
WA1004	Ensure the power tool is operated within design specifications		
WA1005	Identify any wrongly fitted attachment and replace		
WA1006	Identify and correct incorrect power tool settings		

WA1007	Identify machine faults such as wrong nozzle, pressure that is too high or low or incorrect balance of air extraction		
WA1008	Identify product faults such as incorrect shape, warped joints, incorrect size and scratches		
WA1009	Identify process faults such as blade marks, paint/coating contaminated with water, over spraying, running, mixing of wrong paints/chemicals, wrong viscosity, wrong reaction or inconsistencies in the cut product		
	Supporting Evidence	Date	Signature
SE1001	Time sheet/ job card and photos		
WM-01-WE11	Ensure quality of the finished furniture product by identifying raw material faults		
	Scope Work Experience	Date	Signature
WA1101	Inspect the finished product visually and by feel to ensure compliance with product specifications and identify and report all component defects such as cracks, knots, twists, insects, wet rot and dry rot		
WA1102	Identify component faults such as squareness of the component, incorrect size, knots causing rejects, smoothness and scratches		
	Supporting Evidence	Date	Signature
SE1101	Time sheet/ job card and photos		
WM-01-WE12	Ensure quality of the finished furniture product by identifying process and product faults		
	Scope Work Experience	Date	Signature
WA1201	Inspect the finished product visually and by feel to ensure compliance with product specifications		
WA1202	Check the finished product against specification		
WA1203	Perform quality or style changes such as changing form solid wood to board or from soft wood to hard wood paying attention to tool settings such as speed and cleaning to prevent scratching		
WA1204	Identify process faults such as blade marks, timber moisture content, burn marks, paint contaminated with		

	water, over spraying, running, mixing of wrong paints, wrong viscosity, wrong reaction or inconsistencies in the cut product		
WA1205	Ensure the wood is correctly clamped in the vice to avoid damage to machine, unsafe working condition, or not producing the designed product		
WA1206	Select components correctly according to type as specified on the job card		
WA1207	Handle furniture product components with utmost care to prevent damaging or chipping the edges		
WA1208	Avoid any misinterpretation of job cards by clarifying information which could be vague or unclear		
	Supporting Evidence	Date	Signature
SE1201	Time sheet/ job card and photos		
WM-01-WE13	Conduct continuous quality inspection of the finished furniture product throughout the assembling operation		
	Scope Work Experience	Date	Signature
WA1301	Check samples at set intervals (spot checks) for correctness and consistency of cut components		
WA1302	Conduct a quality inspection checking for consistency, accuracy, defects of the product		
WA1303	Conduct a final quality inspection of the machined product before hand over to next process		
WA1304	Record all defects		
	Supporting Evidence	Date	Signature
SE1301	Quality checklist		
WM-01-WE14	Perform minor maintenance activities to ensure a well maintain machine		
	Scope Work Experience	Date	Signature
WA1401	Lubricate, clean and service the machine at required intervals as part of routine maintenance activities		
WA1402	Identify and immediately report any machine or machine part or attachment defects		

	Supporting Evidence	Date	Signature
SE1401	Completed machine maintenance checklist		

	Contextualised Workplace Knowledge	Date	Signature
1	Company products		
2	Various departments and workflow		
3	Reporting structures		
4	Company standard operating and safety procedures and quality standards		
5	Workshop layout and designated areas		
6	Personal protective clothing and equipment		

	Additional Assignments to be Assessed Externally	Date	Signature
	None		