



fp&m
seta

Fibre Processing & Manufacturing Sector Education and Training Authority

Careers in the Fibre Processing and Manufacturing (FP&M) Sector

Clothing
Footwear
Forestry
Furniture
General Goods
Leather
Packaging
Print Media
Printing
Publishing
Pulp and Paper
Textile
Wood Products



1. Introduction

The Fibre Processing and Manufacturing (FP&M) SETA was established by the Minister of Higher Education and Training on 1 April 2011 after government took a decision to cluster sectors in order to strengthen value-chain linkages between related industries.

The FP&M SETA mandate is: to provide skills development services to the clothing, footwear, forestry, furniture, general goods, leather, packaging, print media, printing, publishing, pulp and paper, textiles and wood products sub-sectors, to implement the objectives of the National Skills Development Strategy (NSDS III) and to ensure that people obtain the critical or scarce skills that are needed to build the capacity of the FP&M sector to become economically sustainable and globally competitive.

The FP&M sector offers a range of exciting careers for those with the necessary skills and qualifications. Currently, there is a chronic shortage of scarce high-end skills within the sector including technologists, researchers, technicians and artisans, production managers, business managers, IT professionals and education and training practitioners. Therefore, highly skilled and appropriately qualified people will find a selection of challenging career opportunities within these sectors.

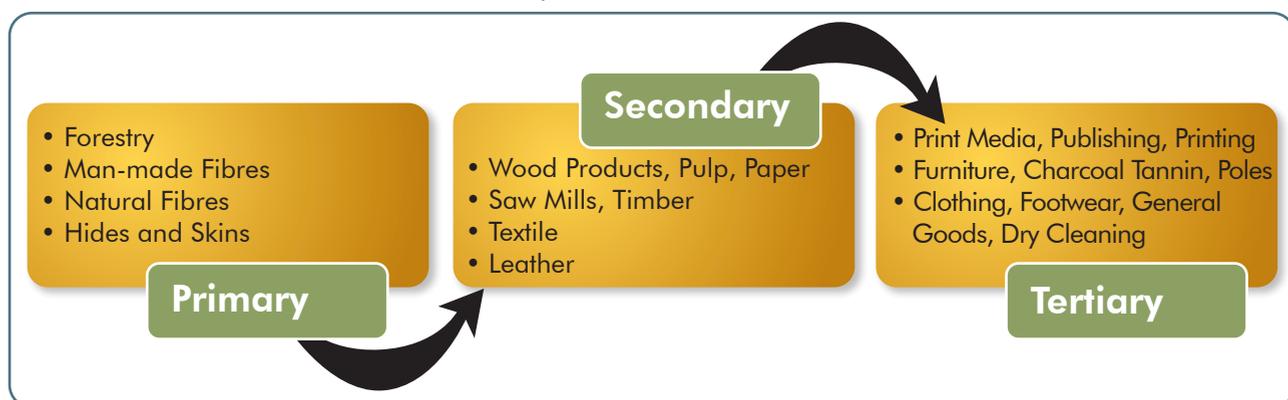
1.1. Purpose of this brochure

The purpose of this brochure is to provide learners and stakeholders with insight into the critical and scarce skills in the FP&M sector and promote a greater awareness of career opportunities in the FP&M sector among prospective learners.

2. What is the FP&M Sector all about?

The FP&M Sector consists of thirteen sub-sectors: clothing, footwear, forestry, furniture, general goods, leather, packaging, print media, printing, publishing, pulp and paper, textiles and wood products. Although classified individually, the sub-sectors are closely integrated. Together they create tremendous value in the lives of consumers, by converting lumber, pulp, natural or synthetic fibres, animal skins/hides into finished products such as furniture, clothing, shoes, protective equipment, paper and paper board, printing (books, magazines, etc), industrial fabrics and extending into high-tech applications in many different industries (automotive, health and building construction to name a few).

Overview of various elements that make up the value chain of the FP&M Sector



2.1. Evolution of Fibre Processing and Manufacturing

Fibres are used in multiple industries to manufacture different products. The primary resources for the FP&M sector are fibres, skins and forestry. These resources are processed to form the secondary resource that is used to manufacture the various products listed above. The primary resources are manufactured from natural fibres (cotton, wool, etc), forestry (woodlands, natural forest, plantation, forest, nurseries) and man-made fibres (produced from chemicals extracted from oil, coal or trees). Many of these processes involve ancient

techniques and skills that are thousands of years old. The technology within this industry is advancing rapidly, introducing new innovations in the manufacturing of fibres.

We are surrounded by a huge variety of applications for fibres in our everyday lives. Apart from the familiar use of fibres in furniture, clothing, paper and packaging, fibres are also used in many ingenious ways to enhance our quality of life.

2.2. Manufacturing Process

The manufacturing process for the various sub-sectors of the FP&M SETA differs according to the variety of products produced within each sector. However, the manufacturing process contains the same factors outlining the manufacturing of the products produced in the FP&M SETA.

Overview of the Manufacturing Process in the FP&M Sector



The thirteen sub-sectors of the FP&M SETA produce various products that are manufactured using various processes. Below is a brief description of each of the manufacturing process for each sector.

2.3. Clothing Manufacturing and Fashion Design

The apparel (clothing) manufacturing industry transforms fabrics produced by textile manufacturers into clothing and accessories that supply the retail stores. The apparel industry consists mostly of production workers who perform the cutting and sewing functions in an assembly line. Computers and computer-controlled equipment aid in many functions.

Computerized systems are also used in the design component of the manufacturing process. Design is the beginning of any manufacturing process, whether it is the manufacture of textiles, clothing, footwear, or leather goods. The production of clothing, footwear and fashion accessories begins with fashion design. Fashion design is geared for the creative person who has a flair for fashion, style and an interest in prevailing trends, cultural influences and production.

2.4. Footwear Manufacturing

Footwear embraces a wide variety of types and styles produced by different construction methods. In a typical footwear manufacturing plant, the various component pieces of the footwear are first manufactured individually and then assembled into what we see as final products on the retailer's shelves. The



manufacturing of footwear involves more than 100 distinct processes. Throughout these processes, great care is taken to ensure quality of the product. The process of shoe manufacture essentially involves separate production of the top (upper) and bottom component parts of the shoe, which are then assembled into the final product in the lasting and finishing operations.

2.5. Forestry: Manufacturing of Timber/Wood

This sub-sector is made up of employers who grow trees on a commercial basis. There are four major activities that dominate this sub-sector namely transport, forestry and tree nurseries, harvesting and maintenance. The value chain is versatile as it feeds into a number of other sub-sectors of the FP&M environment. Processes used incorporate establishment, re-establishment, maintenance, forest conservation, forest protection, forest management, forestry and tree nurseries, harvesting, road construction and maintenance, transport (short haul and long haul), fire protection, fire suppression and fire prevention in forest, bush and velds and forest research.

2.6. Furniture Manufacturing

This sub-sector is made up of employers in the upholstery, bedding and curtaining industries in addition to the timber industry. Companies that manufacture wood furniture dominate this sub-sector. This sub-sector also include industries such as coffins (excluding the manufacture of coffins by funeral undertakers), furniture made predominantly of materials other than metal, plastic or concrete, furnishing of ships, cane furniture and caravan furniture.

2.7. General Goods Manufacturing

This sub-sector is responsible for the manufacturing of general goods, luggage and handbags from leather or other products. These companies make use of a number of textile, leather and other products to generate items used to compliment apparel, for use in households and the corporate environment.

2.8. Leather Manufacturing

Leather and leather goods such as handbags, luggage and saddlery, is manufactured from hides and skins, a natural resource obtained from animals, reptiles and birds (ostrich). Hides and skins are processed in tanneries, where they undergo a tanning process to prevent the leather from decaying, and produce a preserved, flexible, durable, and suitable material to make goods. The process of leather manufacture involves primarily a sequence of chemical operations that transform the hide/skin from a perishable state into the preserved, durable material that we know as leather.

2.9. Packaging

Packaging "is the single biggest driver of sales increases in the world." – Muhtar Kent, CEO of Coca-Cola. Packaging include the manufacture of paper and paperboard, containers of paper and paperboard (including cardboard boxes) and the manufacture of metal containers such as cans and tins. Packaging is the medium through which products are branded in order to be distinguished from other products. The quality of the packaging and the message it conveys are often more important than the quality of the product itself.

2.10. Printing and Print Media

The Printing sub-sector is responsible for the printing of newspapers, books, magazines, packaging, labels and other related materials. The printing process is demand-driven and technical. People working in this sector must have good sense of colour and be able to manage complex technical processes to deliver against a defined deadline. Career streams range from factory manager, printers mechanic, and printer's technician through to specialist rotary printing apprentices. The Print Media sub-sector requires occupations such as journalists and authors. Editors who do layouts and ensure accuracy and appropriateness to the marketable audience are also in demand. Generally, people who are good communicators through written media are required in this sector.

2.11. Publishing

Publishing is the process of production and distribution of literature or information – the activity of making information available to the public. Traditionally, the term refers to the production of printed works such as books, magazines and newspapers (print media). With the advent of digital information systems and the Internet, the scope of publishing has expanded to include electronic resources, such as the electronic versions of books and periodicals.

Publishing includes: the stages of the development, acquisition, copy-editing, graphic design, production – printing (and its electronic equivalents), and marketing and distribution of newspapers, magazines, books, literary works and recorded media.

2.12. Pulp and Paper Manufacturing

It is difficult to imagine a world without pulp, paper and tissue products. Think about the cereal box on your breakfast table, the tissue products throughout your home, the posters you pass in the streets, the tickets issued when you go to the movies. Then there are the newspapers, books and magazines that are so much a part of our daily lives. While these are the obvious ones, there are also other products that we don't always associate with the industry. These include well-known fabrics like viscose, as well as cigarette filters, disposable nappies and detergents.

2.13. Textile Manufacturing

Textile manufacturing is the process of converting fibre (man-made or natural fibres such as cotton and wool) into yarn through a variety of processes, which typically involve a cleaning stage to remove any impurities (natural fibres usually require more pre-cleaning than man-made fibres), followed by spinning or twisting of the fibres. The fibres are processed either in their natural form or blended with synthetic fibres to produce a yarn according to the desired characteristics.

The yarn is knitted or woven into a fabric, and finished according to the specific design through a selection of processes that can include dyeing, printing and finishing. Other sectors of the industry include carpet manufacturing, non-woven fabrics and braiding. Non-woven and technical textiles use natural and man-made fibres to produce specialized fabrics for industrial and technical purposes.

2.14. Wood Products

The wood products sub-sector provides to several industries, which all processes timber in one form or another. Wood products are diverse in their very nature. These products are used in a number of industries, including the building and construction, mining, furniture and transport industries.

This sub-sector incorporates activities such as saw milling and preserving of timber, saw doctoring, wet milling, lumber drying, lumber grading, dry milling, finger jointing and laminating, mill maintenance, charcoal production, wattle extract manufacturing, manufacturing of veneer sheets, plywood, laminboard, particle board and other panels and boards, manufacturing of fibreboard and chipboard products, manufacturing of builders' carpentry and joinery products, manufacturing of trusses, manufacturing of matches, manufacturing of pallets and bulk bins and other articles of wood, cork, straw and plaiting materials.

2.15. What careers exist in the FP&M Sector?

Technology and the market environment in the FP&M Sector are continuously changing; therefore, building a career within the FP&M Sector will increasingly depend on acquiring the specific skills that are in demand within its sub-sectors, as well as a dedication to continuous learning.

There is a growing demand for technically skilled people in the sector, especially within the professional (e.g. technologist) and technician categories. This is indicative of the technically progressive and globally competitive environment of this industry, in which the market is increasingly demanding products that contain a higher technical knowledge component. There is a high skills demand for CAD technicians (pattern makers, graders and markers), artisans, work study officers and technical trainers. There is a particularly high skills demand for technologists, performance improvement managers and production managers.



Summary of Careers in the FP&M Sector

PRODUCTION	Factory & Production Managers, Printers, Dyers, Operators, Supervisors, Computer Aided Design, Computer Aided Manufacturing, Work Study Officers
TECHNOLOGISTS AND ENGINEERS	Clothing, Footwear, Forestry, Furniture, Leather, Packaging, Printing & Publishing, Pulp & Paper, Textiles and Woodwork Technologists, Civil Engineers
DESIGN AND RESEARCH	Product Developers, Designers (Clothing, Footwear, Furniture, General Goods, Leather, Packaging, Printing, Publishing, Textiles & Wood Products), Industrial Designers, CAD Designers, Researchers & Scientists, Production Development
QUALITY MANAGEMENT AND MONITORING	Quality Assurance Manager, Health-Safety & Environmental Officers & Managers, Quality Controllers & Checkers (national and international quality standards/requirements)
TECHNICAL / MACHINE OPERATORS	Mechanical, Electrical, Electronic, Mechatronic, Printing and Forestry Technicians, Boiler Makers, Machine Mechanics & Machine Operators (across all sectors)
INFORMATION TECHNOLOGY	IT Specialists, IT Engineers, IT Administrators and Program Developers
GENERIC MANAGEMENT AND SUPPORT STAFF	Logistics Managers, Supply Chain Managers, Operations Managers, Business Managers, Industrial Relations Officers, Human Resource Officers, Merchandisers, Costing Clerks
EDUCATION, TRAINING AND DEVELOPMENT	Technical Training Managers, Curriculum Developers, Skills Development Facilitators, Technical Trainers, Training Officers/Managers
MARKETING AND SALES	Marketing Managers, Sales Reps, Market Analysts

3. Learning Opportunities in the FP&M SETA

The learning opportunities for careers in the FP&M sector lie primarily in the Further Education and Training (FET) and Higher Education and Training (HET) bands, as shown in the NQF table. Individuals who meet the entry requirements of tertiary courses may undertake one of the many higher education qualifications that focus on the scarce skills within the sector. Many higher education institutions, accredited workplace providers, and private institutions also provide certificate programmes and short courses addressing the critical skills and specialisations within organisations.

3.1. Training Providers

There are a number of providers offering learning programmes to individuals interested in entering the FP&M sector. The following is a guideline of the types of institutions and programmes being offered.

- **Higher Education and Training (HET)**
 - o Formal educational institutions, including universities, universities of technology and professional institutions make up the HET band. These institutions offer formal qualifications, which culminate in National Certificates, Diplomas or Degrees. These institutions generally cater for the demand for scarce skills training. However, many HET institutions also provide short courses addressing critical skills.
- **Further Education and Training (FET)**
 - o Further Education and Training Colleges as well as Workplace and Private Skills Development Providers make up the FET band. Workplaces and Private Skills Development Providers primarily offer apprenticeships, learnerships and other occupationally-directed skills programmes. Workplaces and Private Skills Development Providers offering full qualifications registered on the NQF must be registered with the Department of Education and Umalusi as a Private FET Colleges.
- **General Education and Training (GET)**
 - o Schools and Private Skills Development Providers offering adult education programmes at NQF Level 1 and below, make up the GET band.

Structure of the National Qualifications Framework (NQF)

NQF LEVEL	BAND	QUALIFICATION	INSTITUTIONS
10	HET	Post-doctoral Research Degrees, Doctorates	Universities, Universities of Technology and Private Providers
9	HET	Master Degrees	Universities, Universities of Technology and Private Providers
8	HET	Master Postgraduate Diploma / Professional Qualifications Degree	Universities, Universities of Technology and Private Providers
7	HET	Bachelor Degree / Advanced Diploma	Universities, Universities of Technology and Private Providers
6	HET	Diploma/Advanced Certificates	Universities of Technology
5	FET/HET	Higher Certificate, Advanced National Certificate (Vocational),	FET Colleges, Private Providers, Universities of Technology
4	FET	Adult National Senior Certificate, Grade 10 – 12, National Vocational Certificate 2-4,	FET Colleges, Private Providers, Schools
3			
2			
1	GET	Grade 9 ABET Level 4 National Certificates	Schools ABET Providers

4. Scarce Skills in the Sector

It is responsibility of the FP&M SETA to provide a menu of skills development services across the entire FP&M sector and to address identified skills needs within the thirteen sub-sectors through focused interventions. The identification of these skills needs and dissemination of information on scarce and critical skills in the FP&M industry is one of the main functions of FP&M SETA.

Scarce skills (also termed skills shortages) refer to an insufficient number of qualified and experienced people in specific occupations. Individuals focused on developing the relevant scarce skills will find many career opportunities within the FP&M Sector. These skills are reserved for those occupations in which there is a scarcity of qualified and experienced people– current or anticipated. This scarcity can arise from one or a combination of the following, grouped as relative or absolute:

- a) Relative scarcity (suitably skilled people available but do not meet other employment criteria), e.g.:
 - Geographical location, i.e. people are unwilling to work outside of urban areas;
 - Equity considerations, i.e. there are no or few candidates with the requisite skills (qualifications and experience) from specific groups available to meet the skills requirements of firms and enterprises;
 - Replacement demand would reflect a relative scarcity if there are people in education and training (formal and work-place) who are in the process of acquiring the necessary skills (qualification and experience) but where the lead time will mean that they are not available in the short term to meet replacement demand.
- b) Absolute scarcity:
 - A new or emerging occupation, i.e. there are few, if any, people in the country with the requisite skills (qualification and experience) and education and training providers have yet to develop learning programmes to meet the skills requirements;
 - Firms, sectors and even the country is unable to implement planned growth strategies and experience productivity, service delivery and quality problems directly attributable to a lack of skilled people;
 - Replacement demand would reflect an absolute scarcity where there are no people enrolled or engaged in the process of acquiring the skills that need to be replaced.



Scarce skills have been identified in each sub-sector of the FP&M SETA in the following occupational categories: machinery operators and drivers, technicians and trades workers (artisans), professionals, and managers. Skills shortages were frequently reported in respect of financial managers, engineering professionals and ICT professionals.

The following scarce skills have been identified within the FP&M sub-sectors:

- Technological skills (technologists, including performance improvement technologists)
- ICT skills (professionals, technicians, administrators & developers)
- Production and general management skills (human resource/production/general managers)
- Machine repair and maintenance skills (mechanics, artisans, technicians)
- Operators (manufacturing/plant machine operators)
- Work study skills (work study officer)
- Administration and marketing (sales, clerks, logistics)
- Technical training skills (technical training manager, trainers)
- CAD technician (design, pattern-making, grading, marking)

The future success of the FP&M sector depends on its capacity to master advanced technology domains, to innovate and to meet the needs of customers in terms of quality, price and delivery.

4.1. Summary of scarce skills as identified by each sub-sector

(see www.fpmseta.org.za for a complete list of scarce skills)

Sub-Sector	Scarce Skills
Clothing	Clothing Technologists, Performance Improvement Technologist, Technicians, Machine Mechanics/Mechanicians, Production Managers, Work Study Officers, Technical Training Managers, CAD and CAM Specialists, Supply Chain Managers.
Footwear	Performance Improvement Technologist, Technicians, Machine Mechanics/Mechanicians, Production Managers, Work Study Officers, Technical Training Managers, CAD and CAM Specialists, Supply Chain Managers
Forestry	Chemical Spraying; Environmentalists: Fire Fighting; Chainsaw Operators; Production Foreman; Foresters
Furniture	CNC Machining (Computerised Numerical Computer); CNC Technical Management; CNC Machine Centre Management; Furniture Designing; Production Management; Store Keeping; Tape Edging; Upholstery
General Goods	Performance Improvement Technologist, Technicians, Machine Mechanics/Mechanicians, Production Managers, Work Study Officers, Technical Training Managers, CAD and CAM Specialists, Supply Chain Managers
Leather	Leather Technologists, Performance Improvement Technologist, Technicians, Machine Mechanics/Mechanicians, Production Managers, Work Study Officers, Technical Training Managers, CAD and CAM Specialists, Supply Chain Managers
Packaging	Plant and Machine Operators and Assemblers, Sales and Plant Workers, Technicians and Associate Professionals, Factory Managers
Print Media	Journalists, Writers, Editors, Graphic Designers
Printing	Factory Managers, Sales Representatives, Artisans (Can Making), Litho-Graphers
Publishing	Publishers, Commissioning Editors, Writers, Authors, Graphic Designers, Managers
Pulp and Paper	Artisans (Electrical, Mechanical); Maintainer Operators (Tissue Converting); Electrical Technicians; Process Controllers; Management Accountants; Project Managers; Papermakers; Pulp Makers; Chartered Accountants; Civil Technicians;
Wood Products	Saw Doctors; Slicers; Splicers; Dryers In Veneer Manufacturing; Veneer Grading; Timber Drying Kiln Operator.

4.2. Key Scarce Skills (Occupations) across all Sub-Sectors

4.2.1. Technologists

Technologists are responsible for ensuring that products are manufactured according to agreed specifications, and that they meet legal requirements. They use scientific and technical skills to ensure the production cycle runs efficiently and safely, and that finished products meet quality standards. Typical duties combine the supervision of production operatives with laboratory work, researching, and testing and sampling the input materials and products. Technologists also undertake administrative duties such as writing up research and operational reports for managers.

4.2.2. Technicians

Technicians maintain and repair machinery or plant used in the processing and / or manufacturing of products, and they play an important role in maintaining high productivity levels in processing and manufacturing plants / operations. They may work within a specialised area of large plants, or throughout all departments in smaller operations. Technicians check machines on a regular basis, fixing any minor problems, and carrying out regular maintenance that can involve cleaning, oiling, greasing and checking performance levels. The FP&M sector requires a significant number of technicians in the mechanical, electrical and electronic fields. The new occupation in the sector is that of mechatronic technician. The key disciplines of mechatronics include pneumatics, hydraulics, electronics and mechanics.

4.2.3. Machine Mechanics/Mechanicians

Machine mechanics set up, adjust and maintain machines and equipment used in the processing and manufacturing environment. A prominent trend in the industry is the training of mechanics, which combines the focus areas of technicians and mechanics into a single role (and may include electronics, pneumatics and computer work). Mechanics therefore assume total responsibility for setting up, running, and maintaining specialised equipment and production lines.

4.2.4. Production Managers

Production managers oversee the production process in all types of processing and manufacturing operations. They are responsible for ensuring the process runs smoothly, is cost-effective and delivers products to the desired quality and on time. Main activities would include production planning, budgeting, quality control, process methods and materials handling. Production managers liaise closely with maintenance technicians, company buyers, suppliers, quality control and training departments, as well as health and safety inspectors.

4.2.5. Work Study Officers

Work Study officers examine the ways jobs are carried out in factories and plants. They are essentially involved in production efficiency activities, and conduct investigations of all the resources and factors, which affect the efficiency of the process in order to effect improvement. They work out procedures to improve efficiency, and look at how best to use all the available resources (including staff).

4.2.6. Technical Training Managers

Training managers are responsible for staff training within an organisation. They identify the training needs of staff and develop and organise programmes to meet those needs. Their aim is to align training and development to business strategy and maximise workforce output through high performance. To be effective within the technical environment, training managers should possess technical "know-how" of the business, in addition to their education, training and development skills.

4.2.7. CAD and CAM Specialists

Advances in computers and software have led to the automation of production and design through computer-aided design (CAD) and manufacturing systems (CAM). A CAD (Computer-Aided Design) technician uses computer systems to produce diagrams for making or converting products. This design phase is typically the beginning of any production process, and these computer skills help firms respond faster to changing market needs.



4.2.8. Supply Chain Managers

Supply chain managers, also known as logistics or distribution managers, plan and manage the flow of goods and materials from manufacturers and suppliers through to customers. Supply chain managers work closely with purchasing officers, warehouse staff and transport clerks to make sure goods and materials arrive at the depot as scheduled, are in good order, stored correctly and despatched to customers on time.

5. Critical Skills in the FP&M Sector

Critical Skills refer to the skills gaps within FP&M organisations (i.e. the sector internal labour market). The lack of these critical skills among workers in many organisations limits their potential level of effectiveness, thereby hindering business growth. Therefore, critical skills represent deficiencies of specific knowledge, experience, or competencies amid the current workforce in the FP&M sector.

The critical skills in the sector are addressed through various interventions and short courses, examples of which are illustrated below. Critical Skills programmes are not always accredited through the SETA, since there are often no unit standards for them.



6. FP&M QUALIFICATIONS

The following table is a list of qualifications that fall under the scope of the FP&M SETA. These qualifications are run by accredited Skills Development Providers.

SUB-SECTORS	QUAL. ID	QUALIFICATION TITLE	MIN. CREDITS	NQF LEVEL
Clothing	21872	National Diploma: Clothing Manufacturing Technology	299	Level 5
Clothing	21871	National Certificate: Clothing Manufacturing Technology	130	Level 4
Clothing	65650	Further Education and Training Certificate: Sewing Machine Mechanics	121	Level 4
Clothing	65651	National Certificate: Sewing Machine Mechanics	122	Level 3
Clothing	21870	National Certificate: Clothing Manufacturing	141	Level 2
Clothing, Textiles, Footwear & Leather	48968	National Diploma: Clothing, Textiles, Footwear and Leather (CTFL) Mechanician Processes	250	Level 5
Clothing, Textiles, Footwear & Leather	48964	Further Education and Training Certificate: Clothing, Textiles, Footwear and Leather (CTFL) Mechanician Processes	178	Level 4

SUB-SECTORS	QUAL. ID	QUALIFICATION TITLE	MIN. CREDITS	NQF LEVEL
Clothing, Textiles, Footwear & Leather	48973	National Certificate: Clothing, Textiles, Footwear and Leather (CTFL) Mechanician Processes	130	Level 3
Clothing, Textiles, Footwear & Leather	58227	National Certificate: Clothing, Textile, Footwear and Leather Manufacturing Processes	120	Level 2
Clothing, Textiles, Footwear & Leather	50584	General Education and Training Certificate: Clothing Manufacturing Processes	120	Level 1
Footwear	22212	National Diploma: Footwear Technology	240	Level 5
Footwear	22211	National Certificate: Footwear Technology	120	Level 4
Footwear	22210	National Certificate: Footwear Processes	120	Level 2
Forestry	21488	National Certificate: Saw Doctoring	131	Level 4
Forestry	21492	National Certificate: Lumber Drying	121	Level 4
Forestry	21496	National Certificate: Dry Lumber Processing	121	Level 4
Forestry	66289	Further Education and Training Certificate: Lumber Milling	120	Level 4
Forestry	66349	Further Education and Training Certificate: General Forestry	120	Level 4
Forestry	79246	Further Education and Training Certificate: Wild Land Fire Fighting	120	Level 4
Forestry	21487	National Certificate: Saw Doctoring	133	Level 3
Forestry	21491	National Certificate: Lumber Drying	124	Level 3
Forestry	21495	National Certificate: Dry Lumber Processing	134	Level 3
Forestry	48988	National Certificate: Forestry: Timber Harvesting	122	Level 3
Forestry	50266	National Certificate: Forestry: Silviculture	123	Level 3
Forestry	65490	National Certificate: Arboriculture: Tree Preservation	120	Level 3
Forestry	66329	National Certificate: Lumber Milling	120	Level 3
Forestry	21486	National Certificate: Saw Doctoring	125	Level 2
Forestry	21490	National Certificate: Lumber Drying	122	Level 2
Forestry	21494	National Certificate: Dry Lumber Processing	124	Level 2
Forestry	66312	National Certificate: Lumber Milling	120	Level 2
Forestry	21485	National Certificate: Saw Doctoring	141	Level 1
Forestry	21489	National Certificate: Lumber Drying	146	Level 1
Forestry	21493	National Certificate: Dry Lumber Processing	141	Level 1
Forestry	50225	General Education and Training Certificate: General Forestry	120	Level 1
Forestry	66269	General Education and Training Certificate: Lumber Milling	123	Level 1
Furniture	49092	Further Education and Training Certificate: Furniture Making	155	Level 4
Furniture	49105	National Certificate: Furniture Making: Wood	122	Level 3
Furniture	49091	National Certificate: Furniture Making: Wood	125	Level 2
Printing / Packaging	11235	National Craft Diploma: Photo-gravure Cylinder Processing	240	Level 5
Printing / Packaging	11237	National Craft Diploma: Electronic Composition	240	Level 5
Printing / Packaging	11239	National Craft Diploma: Photo-Lithography	240	Level 5
Printing / Packaging	11241	National Craft Diploma: Process Engraving	240	Level 5
Printing / Packaging	11243	National Craft Diploma: Electronic Origination	240	Level 5
Printing / Packaging	11263	National Craft Diploma: Lithography (Paper Section)	240	Level 5
Printing / Packaging	11265	National Craft Diploma: Lithography (Metal Decorating)	240	Level 5
Printing / Packaging	11269	National Craft Diploma: Roll Label Machine Minding	240	Level 5
Printing / Packaging	11271	National Craft Diploma: Rotary Offset Machine Minding	240	Level 5
Printing / Packaging	11277	National Craft Diploma: Bag Making	240	Level 5
Printing / Packaging	11281	National Craft Diploma: Carton Making	240	Level 5
Printing / Packaging	11297	National Craft Diploma: Can Making	240	Level 5
Printing / Packaging	11303	National Craft Diploma: Laminating	240	Level 5
Printing / Packaging	11313	National Craft Diploma: Bookbinding Mechanised/Cutting	240	Level 5
Printing / Packaging	11315	National Craft Diploma: Ruling/Cutting	240	Level 5
Printing / Packaging	11325	National Craft Diploma: Commercial Printing and Packaging	240	Level 5



SUB-SECTORS	QUAL. ID	QUALIFICATION TITLE	MIN. CREDITS	NQF LEVEL
Printing / Packaging	11347	National Craft Diploma: Continuous Stationery Machine Minding	240	Level 5
Printing / Packaging	11353	National Craft Diploma: Gravure Machine Minding	240	Level 5
Printing / Packaging	57122	National Certificate: Printing and Manufacture of Packaging	141	Level 5
Printing / Packaging	11275	National Craft Certificate: Screen Printing	120	Level 4
Printing / Packaging	11285	National Craft Certificate: Rotary Printing and Re-Reeling - Flexography	120	Level 4
Printing / Packaging	11287	National Craft Certificate: Rotary Printing and Re-Reeling - Gravure	120	Level 4
Printing / Packaging	11291	National Craft Certificate: Corrugated Board Manufacturing Maching Minding	120	Level 4
Printing / Packaging	11295	National Craft Certificate: Corrugated Board Printing and Finishing Machine Minding	120	Level 4
Printing / Packaging	11301	National Craft Certificate: End Making	120	Level 4
Printing / Packaging	11305	National Craft Certificate: Paper Sack Making	120	Level 4
Printing / Packaging	11309	National Craft Certificate: Bookbinding Craft/Cutting	120	Level 4
Printing / Packaging	11319	National Craft Certificate: Stationery and Envelope Machine Adjuster	120	Level 4
Printing / Packaging	11331	National Craft Certificate: Printing and Packaging Quality Assurance	120	Level 4
Printing / Packaging	11357	National Craft Certificate: Letterpress Machine Minding	120	Level 4
Printing / Packaging	57898	Further Education and Training Certificate: Printing and Manufacture of Packaging	146	Level 4
Printing / Packaging	57899	National Certificate: Printing and Manufacture of Packaging	128	Level 3
Printing / Packaging	57900	National Certificate: Printing and Manufacture of Packaging	126	Level 2
Pulp & Paper	49079	National Certificate: Pulp and Paper Technology	145	Level 5
Pulp & Paper	48643	Further Education and Training Certificate: Chemical Pulp Manufacturing	168	Level 4
Pulp & Paper	48644	Further Education and Training Certificate: Paper, Board or Tissue Manufacturing	176	Level 4
Pulp & Paper	48645	Further Education and Training Certificate: Pulp and Paper Chemical Recovery	158	Level 4
Pulp & Paper	59037	Further Education and Training Certificate: Tissue Conversion	136	Level 4
Pulp & Paper	61949	Further Education and Training Certificate: Pulp and Paper Operations	140	Level 4
Pulp & Paper	35939	National Certificate: Pulp and Paper Woodyard Operations	120	Level 3
Pulp & Paper	59019	National Certificate: Tissue Conversion	130	Level 3
Pulp & Paper	61971	National Certificate: Pulp and Paper Operations	130	Level 3
Pulp & Paper	35941	National Certificate: Pulp and paper Manufacturing	141	Level 2
Pulp & Paper	59017	National Certificate: Tissue Conversion	120	Level 2
Pulp & Paper	61929	National Certificate: Pulp and Paper Operations	130	Level 2
Textiles	20715	National First Degree: Textile Technology	380	Level 6
Textiles	20714	National Certificate: Textile Processes	123	Level 4
Textiles	20713	National Certificate: General Textiles	120	Level 2
Wood Products	66370	Further Education and Training Certificate: Roof Truss Technology	131	Level 4
Wood Products	49083	National Certificate: Wood Products Processing	130	Level 3
Wood Products	49082	GETC: Wood Products Processing	138	Level 1

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