



merSETA

MANUFACTURING, ENGINEERING AND RELATED SERVICES SETA

THE MERSETA's

COURSEWARE

CATALOGUE

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1. The merSETA's courseware catalogue 2012/13

The merSETA's courseware catalogue represents more than a thousand learning support documents and DVDs.

Contributions

The learning support materials were developed in collaboration with subject matter experts, representatives of industry associations, federations and special interest groups. These individuals contributed generously in more than just expertise. Many of the experts selflessly gave up their private time to assist and provided access to resources for reference purposes. The merSETA salutes everyone who has been involved!

Curriculum framework process

The learning support materials are based on NQF-registered qualifications in the merSETA's primary focus. The majority of these qualifications are trade-related. The materials development process included the following steps:

- The qualifications were grouped into qualification suites (mostly NQF Levels 2 to 4);
- In the trade-related qualifications, a trade test can only be done after the successful completion of NQF Level 4. In view of this, it was important to approach the three NQF levels (in a regular suite) as a whole, and
- The outcomes-directed curricula frameworks were then designed as the underpinning of the scoping processes for learner modules and facilitator/assessment guides.
- The preparation phases, briefly described in the first three bullet points, enabled the writers to work within a curriculum framework context, which is important for articulation and sequencing purposes.

Skill sets

A single unit standard approach to materials development tends to make learning very technician and "removed" from developing learning concepts in a sequenced or scaffolded way. As an important step to make learning more meaningful, unit standards were approached in terms of skill sets. This could be interpreted as grouping unit standards with similar outcomes for the purpose of developing a specific learning module.

Cross-cutting generics

Right from inception of the materials development process, deep analyses of the qualifications showed that there were many unit standards that cut across several qualifications. In some cases, it may not have been the same unit standards, but very similar unit standards with virtually the same outcomes. A project decision was then made to “separate” these cross-cutting unit standards into what the courseware project termed “cross-cutting generics”.

The first section of the courseware catalogue starts with the cross-cutting generics for NQF Levels 2 to 4. A careful scrutiny of the modules in this section will show that the term “generic” could in fact point to some of the foundational principles of learning and application.

Systems development for storage, reference and distribution purposes

It has been pointed out on the previous page that more than a thousand documents are referenced in this version of the catalogue. A reference system had to be developed for this purpose, both from a storage perspective, as well as from a distribution and document management perspective.

Catalogue references

Every single tabled-line in the catalogue, from the next section onwards, represents a learner module and the related facilitator/assessment guide. The example below shows how the catalogue reference system must be interpreted.

Example

2-ABR-M01-T01, related to the NQF 2 qualification, NLRD 64709 in Automotive Body Repair

- The number **2** at the start of the reference represents the **NQF level**.
- **ABR** is the abbreviation for a qualifications title, namely **Automotive Body Repair**
- **M01** refers to **Module 1**
- **T01** refers to **Topic 1**

Module Ref	Module Title	Topic Title	Unit Standard
2-ABR-M01-T01	Vehicle body construction	Strip and assemble a vehicle and adjust headlights	119736; 119741 (core) 119752 (elective)

2. Cross-cutting Generic Modules

Cross-cutting Generic Modules – NQF Level 2

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01 Version 2	Safety and quality induction	Safety in the workplace	13220; 9443; 9839; 13167; 9964 (core) 13222; 14683 (elective)
2-G-M01-T02 Version 2	Safety and quality induction	Monitoring quality	13164; 119139 (core)
2-G-M01-T03	Safety and quality induction	Fire Fighting	110075; 252250;12484
2-G-M01-T04	Safety and quality induction	First Aid	12483; 119567; 116534 ;120496
2-G-M01-T05	Safety and quality induction	Safety and environmental impact	259604
2-G-M02-T01	Drawing and measuring	Engineering drawing	9882; 12215; 243075 (core)
2-G-M02-T02	Drawing and measuring	Measuring and marking off	12476; 9881; 244342 (core)
2-G-M02-T03	Drawing and measuring	Mark off made easy	335897; 13238
2-G-M02-T04	Drawing and measuring	Engineering drawings and sketches made easy	335860
2-G-M03-T01	Life skills	Introduction to the world of work	13172; 12036; 246449; 12456; 12466 (core)
2-G-M03-T02 Version 2	Life skills	Working and communicating with others	9322 (core) 13217; 9324 (elective)
2-G-M03-T03	Life skills	Personal and business finance	10718; 119913 (core) 9268; 14444 (elective)
2-G-M03-T04	Life Skills	HIV and Aids in the workplace	13169; 13915; 259762; 12463
2-G-M03-T05	Life Skills	Manage personal finance	243189
2-G-M04-T01	Working with materials and tools	Introduction to materials	13165
2-G-M04-T02	Working with materials and tools	Introduction to hand and measuring tools and tasks	13159
2-G-M04-T03	Working with materials and tools	Engineering materials	12477 (core)
2-G-M04-T04	Working with materials and tools	Using tools	13163; 119744; 12216; 12219 (core) 9879 (elective)
2-G-M04-T03	Working with materials and tools	Maintain stock levels	265001
2-G-M05-T01	Learning tools and techniques	Learning and studying techniques	12465; 13202 (elective)
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	116932; 117867; 117902; 117924; 9532; 116937 (elective)

Cross-cutting Generic Modules – NQF Level 3

Module Ref	Module Title	Topic Title	Unit Standard
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	13223; 12455 (core)
3-G-M01-T02	Workplace fundamentals	World of work	123258; 242814 (core)
3-G-M01-T03	Workplace fundamentals	Quality management	13234 (core)
3-G-M01-T04	Workplace fundamentals	Working off site	253880
3-G-M02-T01	Engineering and manufacturing technology	Engineering materials	13274 (core)
3-G-M02-T02	Engineering and manufacturing technology	Engineering drawings	9885 (core)
3-G-M02-T03	Engineering and manufacturing technology	Engineering drawings and sketches	13301; 335854
3-G-M03-T01	Life skills	Team dynamics	120379; 116714 (elective)
3-G-M03-T02	Life skills	Deal with dynamic and diverse work environment	9533; 116720 (elective)
3-G-M03-T03 Version 2	Life skills	Personal management skills	9530 (core) 12429 (elective)
3-G-M04-T01	Learning tools and techniques	Use of computers in the workplace	116940; 119078 (elective)
3-G-M04-T02	Learning tools and techniques	Learning techniques	12457; 117877 (elective)
3-G-M04-T03	Learning tools and techniques	Collect and record data	14051
3-G-M04-T04	Learning tools and techniques	Problem solving and decision making	244611
3-G-M04-T05	Learning tools and techniques	Power point	116930

Cross-cutting Generic Modules – NQF Level 4

Module Ref	Module Title	Topic Title	Unit Standard
4-G-M01-T01	Workplace fundamentals	Safety in the workplace	13224; 123369; 120344 (core) 120366 (elective)
4-G-M01-T02	Workplace fundamentals	Manage quality	14586; 243025 (core) 13235; 7117; 13194 (elective)
4-G-M01-T03	Workplace fundamentals	Understanding business processes	13952; (core) 242655 (elective)
4-G-M01-T04	Workplace fundamentals	The budget function	13941
4-G-M01-T05	Workplace fundamentals	The basic financial statements	117156
4-G-M02-T01	Project management	Project management	120372; 120373 (core) 120382; 120387; 120375; 120385; 120374; 120377 (elective)
4-G-M03-T01	Training, assessment and learning	Training and learning techniques in the workplace	7876; 7818 (elective)
4-G-M03-T02	Training, assessment and learning	Assessment in the workplace	115753 (elective)
4-G-M04-T01	Working with people	Supervision and leadership in the workplace	116380; 10981 (core) 12030 (elective)
4-G-M04-T02	Working with people	Team dynamics	242812; 242820; 15224; 11473; 13912 (elective)
4-G-M05-T01	Communications and personal management	Meetings	13914; 242816 (elective)
4-G-M05-T02	Communications and personal management	Writing and managing reports	119257; 12488 (core)
4-G-M05-T03	Communications and personal management	Personal management skills	114946; 244589 (core) 114589; 14609; 6995 (elective)
4-G-M05-T04	Communications and personal management	HIV and AIDS counselling in the workplace	13203

3. Automotive Engineering- Related Modules

Automotive Body Repair Modules – NQF Level 2

NLRD # 64709 - National Certificate: Automotive Body Repair

Automotive Body Repair-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-ABR-M01-T01	Vehicle body construction	Strip and assemble a vehicle and adjust headlights	119736; 119741 (core) 119752 (elective)
2-ABR-M02-T01	Minor dent repair techniques	Sealers and fillers	119734; 119747; 260158 (core)
3-ABR-M03-T01	Cutting and welding	Oxy-fuel cutting and welding	119753 (elective)

Automotive Body Repair-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-ARM-M02-T01	Use lifting equipment to lift loads	Lifting equipment	15123 (core)
3-ASP-M05-T01	Polishing panels	Polishing panels	260159 (elective)
2-WAP-M03	Basic oxy-fuel welding, cutting and brazing	Oxy-fuel equipment and gas cutting techniques	243067 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	13220 (core)
2-G-M03-T01	Life skills	Introduction to the world of work	12466 (elective)
2-G-M03-T02 Version 2	Life skills	Working and communicating with others	13217 (elective)
2-G-M03-T03	Life skills	Personal and business finance	9268 (elective)
2-G-M04-T02	Working with materials and tools	Using tools	119744 (core) 12219 (elective)
2-G-M05-T01	Learning tools and techniques	Learning and studying techniques	12465 (elective)
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	116932 (elective)

Automotive Body Repair Modules – NQF Level 3

NLRD # 64529: National Certificate: Automotive Body Repair

Automotive Body Repair-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-ABR-M01-T01	Body components	Remove, fit and align body components	244111; 244112; 244115 (core)
3-ABR-M02-T01	Metal repair	Metal repair techniques	244116 (core)
3-ABR-M03-T01	Cutting and welding	Oxy-fuel cutting and welding	119753; 243067 (core)

Automotive Body Repair-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-ARM-M01-T01	The fundamentals of engine technology	Engines and components	244056 (core)
2-WAP-M03	Basic oxy-fuel cutting, welding and brazing	Oxy-fuel equipment and gas cutting techniques	243067 (core)
3-ARM-M01-T01	Basic electrics and electronics	Circuits, starting, charging and ignition systems	260437 (core)
3-ARM-M03-T01	Inspect and repair automotive components	Test and repair vehicle components	244052; 244049; 244059; 244053 (core)
3-ARM-M04-T01	Install and maintain automotive components	Install and maintain components	15100 (elective)
3-ARM-M05-T01	Test, repair and report on other automotive components	Cooling, lubrication and air-conditioning systems	244051 (elective)
3-ARV-M06-T01	Inspect, repair and install motor vehicle air-conditioning systems	Check, diagnose and repair vehicle air-conditioning parameters	116703 (elective)
3-PF-M02-T01	Plasma and oxy-fuel cutting for pipe fabrication	Plasma and oxy-fuel cutting	253734 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M03-T01	Life skills	Introduction to the world of work	12456 (elective)
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	116937; 117924 (elective)
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	13223 (core)
3-G-M01-T03	Workplace fundamentals	Quality management	13234 (core)
3-G-M03-T03 Version 2	Life skills	Personal management skills	9530 (core)
3-G-M04-T02	Learning tools and techniques	Learning techniques	12457 (elective)

Training by specialist providers

Module Ref	Topic Title	Unit Standard
Specialist	Replace vehicle glass	244114 (elective)

Automotive Body Repair Modules – NQF Level 4

NLRD # 64549: Further Education and Training Certificate: Automotive Body Repair

Automotive Body Repair-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-ABR-M01-T01	Body alignment	Body alignment techniques	244167; 244172 (core)
4-ABR-M02	Advanced repair techniques	Plasma cutting	244164; (core)
		Repair of non-ferrous metal components	244166 (core)
		Repair of non-metal components	253734 Core)
4-ABR-M03-T01	Supplementary and restraint systems (SRS)	Trouble shooting and fault finding SRS	12234 (core)
4-ABR-M04-T01	Paintless dent removal	Paintless dent removal techniques	244110 (elective)

Automotive Body Repair-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-ARM-M04-T01	Install and maintain automotive components	Install and maintain components, brakes, clutches and steering geometry	244168; 15100; 15105 (core)
3-ARM-M05-T01	Test, repair and report on other automotive components	Cooling, lubrication and air-conditioning systems	244051 (core)
3-PF-M02-T01	Plasma and oxy-fuel cutting for pipe fabrication	Plasma and oxy-fuel cutting	253734 (core)
4-ARM-M02-T01	Principles for diagnosing and repairing automotive components and systems	Diagnose and repair components, cooling and steering systems	230462; 260657; 244136; 244144 (elective)
4-ASP-M03-T01	Cost estimates and job administration	Estimating cost and booking in work	244129; 244134 (elective)
4-ASP-M05-T01	Entrepreneurship	Entrepreneurship	114598; 117499 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	12455 (elective)
3-G-M01-T02	Workplace fundamentals	World of work	123258 (elective)
3-G-M03-T01	Life skills	Team dynamics	116714 (core)
3-G-M04-T02	Learning tools and techniques	Learning techniques	117877 (elective)
4-G-M01-T03	Workplace fundamentals	Understanding business processes	13254 (elective)

Automotive Repair and Maintenance Modules – NQF Level 2

NLRD 64810: National Certificate: Automotive Repair and Maintenance

Automotive Repair and Maintenance-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-ARM-M01-T01	The fundamentals of engine technology	Engines, components and basic auto electrics	12211; 244056 (core)
2-ARM-M02-T01	Use lifting equipment to lift loads	Lifting equipment	15123; 253582 (elective)
2-ARM-M03	Conduct an automotive service	Automobile service	260638; (core) 243769 (elective)
		Battery service	260719 (core)
2-ARM-M04-T01	Remove and install automobile components	Remove and fit components	260717 (core)
2-ARM-M05	Remove, repair and replace wheels and tyres	OTR wheels and tyres	256176; (elective)
		Balance wheels	260720 (elective)
		Motorcycle wheels and tyres	260722 (elective)
3-ARM-M05-T01	Test, repair and report on other automotive components	Cooling, lubrication and air-conditioning systems	119750; 244057 (elective)

Automotive Repair and Maintenance-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-F-M01-T01	Assemble mechanical components	Assemble mechanical components	253440 (elective)
2-FP-M02	Introduction to hydraulics	Principles of hydraulics	244686 (core)
		Components, hose and piping	244690 (elective)
		Static seals	(elective)
2-FP-M03	Introduction to pneumatics	Principles of pneumatics	244686 (core)
		Components, hose and tubing	244691 (elective)
		Static seals	13219 (elective)
2-WAP-M03	Basic oxy-fuel cutting, welding and brazing	Oxy-fuel equipment and gas cutting techniques	243067 (elective)
2-RIG-M02-T02	Rigging with lifting machines	Lifting hoisting machines	116235
3-ABR-M03-T01	Cutting and welding	Oxy-fuel cutting and welding	119753 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	13220 (core)
2-G-M02-T02	Drawing and measuring	Measuring and marking off	12476 (core)
2-G-M03-T01	Life skills	Introduction to the world of work	12466 (elective)
2-G-M03-T02 Version 2	Life skills	Working and communicating with others	13258; 9322 (elective)
2-G-M03-T03	Life Skills	Personal and business finance	9268 (elective)
2-G-M03-T04	Life Skills	HIV and Aids in the workplace	12463
2-G-M04-T02	Working with materials and tools	Using tools	12219; 119744 (core)
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	116932 (elective)

Automotive Repair and Maintenance – NQF Level 3

NLRD # 64809: National Certificate: Automotive Repair and Maintenance

Automotive Repair and Maintenance-specific Modules

Module Ref	Module Title	Topic Title	Unit Standards
2-ARM-M01-T01	The fundamentals of engine technology	Engines, components and basic auto electrics	244056 (elective)
3-ARM-M01-T01	Basic electricity and electronics	Troubleshoot and repair circuits and starting, charging and ignition systems	260437 (core) 12220; 260637 (elective)
3-ARM-M02-T01	Fundamentals of automotive fuel supply	Fuel supply systems, engine management and emission control	260679; 260718 (core)
3-ARM-M03-T01	Inspect and repair automotive components	Test and repair vehicle components	244048; 244049; 244053; 260721 (core)
3-ARM-M04-T01	Install and maintain automotive components	Install and maintain components, brakes, clutches and steering geometry	13282; 15099; 15100; 15105 (elective)
3-ARM-M05-T01	Test, repair and report on other automotive components	Cooling, lubrication and air-conditioning systems	244051; 244057 (core) 11202 (elective)
4-ARM-M05-T01	Advanced automotive troubleshooting and repair	Engine failure	244163; 244123 (core)

Automotive Repair and Maintenance-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-FP-M01-T01	Electrical technology	Basic electronics	12218 (elective)
3-ARV-M06-T01	Inspect, repair and install motor vehicle air-conditioning systems	Check, diagnose and repair vehicle air-conditioning parameters	116703 (elective)
3-F-M02-T01	Maintain bearings and lubricating systems	Maintain bearings and lubricating systems	13283 (elective)
3-FP-M02-T01	Hydraulic operation and installation	Hydraulic operation and installation	260723; 13117 (elective)
3-FP-M03-T01	Basic hydraulic maintenance	Repair cylinders and installation of hydraulic seals	244704 (elective)
3-FP-M05-T02	Basic pneumatic maintenance	Installation and maintenance - basic pneumatic systems	260723; 13139 (elective)
4-ASP-M05-T01	Entrepreneurship	Entrepreneurship	114598 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M03-T01	Life skills	Introduction to the world of work	12456 (elective)
2-G-M03-T03	Life skills	Personal and business finance	9526; 9268 (elective)
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	7786; 116932; 7792; 117867; 242865; 116932; (elective)
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	12455 (elective)
3-G-M01-T03	Workplace fundamentals	Quality management	13234 (elective)
3-G-M03-T01	Life skills	Team dynamics	9527; 116714; 116714 (elective)
3-G-M03-T03 Version 2	Life skills	Personal management skills	9530 (elective)
3-G-M04-T02	Learning tools and techniques	Learning techniques	12457 (elective)
4-G-M04-T02	Working with people	Team dynamics	13916; 242820; 242820 (elective)

Automotive Repair and Maintenance – NQF Level 4

NLRD # 64849: Further Education and Training Certificate: Automotive Repair and Maintenance

Automotive Repair and Maintenance-specific Modules

Module Ref	Module title	Topic title	Unit Standard
3-ARM-M02-T02	Fundamentals of automotive fuel supply	Remove and fit fuel system components	260718 (elective)
3-ARM-M04-T01	Install and maintain automotive components	Install and maintain components, brakes, clutches and steering geometry	244131; 13282 (core)
3-ARM-M05-T01	Test, repair and report on other automotive components	Cooling, lubrication and air-conditioning systems	244140; 11202 (elective)
4-ARM-M01-T01	Introduction to automotive repair	Repair estimates and pre-delivery inspection	244134; 244172 (elective)
4-ARM-M02-T01	Principles for diagnosing and repairing automotive components and systems	Diagnose and repair components, cooling and steering systems	244136; 260657 (core) 244144 (elective)
4-ARM-M03-T01	Auto electrical and electronic circuits	Advanced auto electrical and electronic circuits and ignition systems	260677 (core) 12220; 12225; 260737 (elective)
4-ARM-M04-T01	Engine efficiency and emissions	Forced induction, exhaust and fuel component systems	244122; 260639 (core) 244127; 244133; 260678 (elective)
4-ARM-M05-T01	Advanced automotive troubleshooting and repair	Post installation checks	244117 (core)
		Engine failure	244123 (core)
		Bearings and bushes	244118 (elective)
		Automatic transmissions	260658 (core)
		Vehicle differentials	244107 (core)

Automotive Repair and Maintenance-related Modules

Module Ref	Module title	Topic title	Unit Standard
4-ASP-M03-T01	Cost estimates and job administration	Estimating cost and booking in work	244129; 244134 (elective)
4-ASP-M04-T01	Customer service	Pre-delivery inspection	244172 (elective)
4-ASP-M05-T01	Entrepreneurship	Entrepreneurship	114598; 117499 (elective)
4-FP-M03	Advanced hydraulic maintenance	Maintenance, repair and troubleshooting of hydraulic systems	244126; 244685 (core)
4-ABR-M01-T01	Body alignment	Body alignment techniques	244172 (elective)

Cross-cutting Generic Modules

Module Ref	Module title	Topic title	Unit Standard
3-G-M01-T02	Workplace fundamentals	World of work	123258 (elective)
3-G-M03-T01	Life skills	Team dynamics	116714 (core)
3-G-M03-T03 Version 2	Life skills	Personal management skills	12429 (core)
4-G-M01-T02	Workplace fundamentals	Manage quality	13235 (elective)
4-G-M01-T03	Workplace fundamentals	Understanding business processes	13254 (elective)
4-G-M05-T03	Communications and personal management	Personal management skills	114589 (core)

Automotive Spray Painting Modules – NQF Level 2

NLRD # 64410: National Certificate: Automotive Spray Painting

Automotive Spray Painting-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-ASP-M01-T01	Work safely with tools and equipment	Maintain spray painting equipment	260160 (core)
2-ASP-M02-T01	Vehicle body components	Vehicle inspection	119745 (elective)
2-ASP-M03-T01	Spray painting materials	Spray painting materials	119740 (core)
2-ASP-M04-T01	Get the surface ready	Surface preparation	119734; 119742 (core)
2-ASP-M05-T01	Spraying the primer	Basic spray painting	119737 (core)
3-ASP-M01-T01	Colour mixing and matching	Paint colour management	243672 (elective)
3-ASP-M05-T01	Polishing panels	Polishing panels	260159 (elective)

Automotive Spray Painting-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-ABR-M01-T01	Strip and assemble a vehicle	Auto body construction	119736 (elective)
2-ABR-M02-T01	Sealers and fillers	Surface preparation	260158 (elective)
2-ARM-M02-T01	Use lifting equipment to lift loads	Lifting equipment	15123 (core)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	13220 (core)
2-G-M03-T01	Life skills	Introduction to the world of work	12466 (elective)
2-G-M03-T03	Life skills	Personal and business finance	9268 (elective)
2-G-M04-T02	Working with materials and tools	Using tools	119744 (core) 12219 (elective)
2-G-M05-T01	Learning tools and techniques	Learning and studying techniques	12465 (elective)
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	116932 (elective)

Automotive Spray Painting Modules – NQF Level 3

NLRD # 64409: National Certificate: Automotive Spray Painting

Automotive Spray Painting-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-ASP-M01-T01	Colour mixing and matching	Paint colour management	242865; 244173; 243672 (core)
3-ASP-M02-T01	Seal and protect the vehicle	Apply sealers and cavity fillers	260158 (core)
3-ASP-M03-T01	Paint finishing	Apply finishing coats	244161 (core)
3-ASP-M04-T01	Spot repair and problem solving	Spot repair and problem solving	244162; 244403 (core)
3-ASP-M05-T01	Paint finishing	Polishing panels	260159 (core)
4-ASP-M02-T01	Paint defects	Diagnose paint defects	260157 (elective)

Automotive Spray Painting-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-ABR-M01-T01	Body components	Remove, fit and align body components	244115; 244111; 244112 (core)
4-ABR-M02	Advanced repair techniques	Plasma cutting	244164; (core)
		Repair of non-ferrous metal components	244166 (core)
		Repair of non-metal components	253734 Core)
4-ABR-M04-T01	Paintless dent removal	Paintless dent removal techniques	244110 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	13223 (core)
3-G-M01-T03	Workplace fundamentals	Quality management	13234 (core)
3-G-M03-T01	Life skills	Introduction to the world of work	12456 (elective)
3-G-M03-T03 Version 2	Life skills	Personal management skills	9530 (core)
3-G-M04-T02	Learning tools and techniques	Learning techniques	12457 (elective)
4-G—M04-T01	Working with people	Team dynamics	242820 (elective)
4-G-M04-T02	Working with people	Team dynamics	13916; 242820 (elective)

Training by specialist providers

Module Ref	Topic Title	Unit Standard
Specialist	Replace vehicle glass	244114 (elective)

Automotive Spray Painting Modules – NQF Level 4

NLRD # 64411: Further Education and Training Certificate: Automotive Spray Painting

Automotive Spray Painting-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-ASP-M01-T01	Specialised spray painting	Decorative painting techniques	244113 (core)
4-ASP-M02-T01	Paint defects	Diagnose paint defects	260157 (core)
4-ASP-M03-T01	Cost estimates and job administration	Estimating cost and booking in work	244129; 244134 (core)
4-ASP-M04-T01	Customer service	Pre-delivery inspection and problem solving	244172 (core)
4-ASP-M05-T01	Entrepreneurship	Entrepreneurship	114598; 117499 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M03-T03	Life skills	Personal and business finance	9505; 9268 (elective)
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	12455 (core)
3-G-M01-T02	Workplace fundamentals	World of work	123258 (core)
3-G-M03-T01	Life skills	Team dynamics	116714 (core)
3-G-M03-T03 Version 2	Life skills	Personal management skills	12429 (elective)
3-G-M04-T01	Learning tools and techniques	Use of computers in the workplace	242817; 116940 (core)
4-G-M01-T02	Workplace fundamentals	Manage quality	13235 (elective)
4-G-M01-T03	Workplace fundamentals	Understanding business processes	13254 (core)
4-G-M03-T01	Training, assessment and learning	Training and learning techniques in the workplace	7818 (core)
4-G-M05-T03	Communications and personal management	Personal management skills	114589 (elective)

4. Mechanical and Electrical Engineering- related Modules

Air-conditioning, Refrigeration and Ventilation Modules – NQF Level 2

NLRD # 65449: National Certificate: Air-conditioning, Refrigeration and Ventilation

Air-conditioning, Refrigeration and Ventilation specific modules

Module Ref	Module Title	Topic Title	Unit Standard
2-ARV-M01	Principles of air conditioning, refrigeration and ventilation	Thermodynamics	116236 (core)
		Vapour compression	262177 (core)
		Trade tools	116335 (core)
		Arc welding	116245 (elective)
2-ARV-M02	Identification and safe handling of refrigerants	Refrigerants and their uses	116334 (core)
		Handle refrigerants	116355 (core)
		Maintain refrigerant safety tools	116700 (core)
2-ARV-M03-T01	Electrical principles relating to ARV systems	Electrical principles	116232 (core)
2-ARV-M04	Identify and install piping for ARV systems	Identify materials	116230 (core)
		Install piping	116229 (core)
		Fixing methods	116234 (elective)
2-ARV-M05	Identify mechanical components and perform cleaning activities related to ARV systems	Identify mechanical components	116233 (elective)
		Cleaning	116238 (elective)
3-ARV-M02	Electrical practice ARV systems	Sketch and construct electrical circuits	116244 (elective)
		Install, connect and maintain electrical cables	116243 (elective)
3-ARV-M07	Self contained, externally powered transport and eutectic refrigeration systems	Install self contained and externally powered transport refrigeration systems	9266; 9546; 116716 (elective)
3-ARV-M08-T01	Marine refrigerated containers	Inspect and maintain marine refrigerated containers	261802; 262161; 262158 (elective)
3-ARV-M09-T01	Safe handling of ammonia refrigerant	Safe handling of ammonia refrigerant	116704 (elective)

Cross-cutting generic modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	116241; 9443 (core) 116246; 13222; 14683 (elective)
2-G-M01-T02	Life skills	Working and communicating with others	9322 (core)
2-G-M04-T02	Working with materials and tools	Using tools	116239; 119744; 12216; 12219 (core)
2-G-M05-T01	Learning tools and techniques	Learning and studying techniques	13202 (elective)
4-G-M01-T01	Workplace fundamentals	Safety in the workplace	116223; 120344 (core)
4-G-M05-T03	Communications and personal management	Personal management	244564; 244589 (elective)

Air-conditioning, Refrigeration and Ventilation Modules – NQF Level 3

NLRD # 65489 - National Certificate: Air-Conditioning, Refrigeration and Ventilation

Air-conditioning, Refrigeration and Ventilation-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-ARV-M05	Identify mechanical components and perform cleaning activities related to air conditioning, refrigeration and ventilation systems	Identify mechanical components	116233 (elective)
		Cleaning	116233 (elective)
3-ARV-M01	Practice of air-conditioning	Refrigeration cycle	261819 (core)
		Water reticulation system	116718 (elective)
		Plant Layout and component drawings, Sketches and specifications	116717 (core)
		Legal requirements of SANS 10147 when handling group 1 refrigerants	116468 (core)
3-ARV-M02	Electrical practice in air-conditioning, refrigeration and ventilation systems	Sketch and construct electrical circuits	116244 (core)
		Install, connect and maintain electrical cables	116243 (core)
3-ARV-M03	Installation of heavy equipment and insulation	Positioning of equipment	116701 (elective)
		Insulation methods	116707 (elective)
3-ARV-M04	Service air-conditioning, refrigeration and ventilation systems	Dismantle and assemble equipment	116712 (core)
		Install and service equipment	116713 (elective)
		Remove, install and service bearings	116715 (elective)
		Service air-conditioning, refrigeration and ventilation systems	116702 (core)
		Water treatment systems	116706 (elective)
3-ARV-M05	Controls and faultfinding associated with air-conditioning, refrigeration and ventilation systems	On-off control system	116226 (core)
		Modulating control systems	116465
		Fault finding	116697 (core)
3-ARV-M06	Inspect, repair and install motor vehicle air-conditioning systems	Check, diagnose and repair vehicle air-conditioning parameters	116703; 116708 (elective)
		Supply and fit air conditioners to vehicles	116705 (elective)
3-ARV-M07	Self contained, externally powered transport and eutectic refrigeration systems	Install self contained and externally powered transport refrigeration systems	9266; 9546 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M04-T02	Working with materials and tools	Using tools	116696; 119744; 12216 12219 (core)
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	9532 (elective)
3-G-M03-T02	Life skills	Deal with dynamic and diverse work environment	9533; 116720 (elective)
3-G-M03-T03 Version 2	Life skills	Personal management skills	9530 (core)
4-G-M01-T01	Workplace fundamentals	Safety in the workplace	116719; 120344 (core)
4-G-M05-T03	Communications and personal management	Personal management	244589 (elective)

Air-conditioning, Refrigeration and Ventilation Modules - NQF Level 4

NLRD # 65509 - Further Education and Training Certificate: Air-conditioning, Refrigeration and Ventilation

Air-conditioning, Refrigeration and Ventilation-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-ARV-M03	Installation of heavy equipment and insulation	Positioning of equipment	116701 (elective)
		Insulation methods	116707 (elective)
3-ARV-M08-T01	Marine refrigerated containers	Inspect and maintain marine refrigerated containers	261802; 262161; 262158 (elective)
3-ARV-M09-T01	Safe handling of ammonia refrigerant	Safe handling of ammonia refrigerant	116704 (elective)
4-ARV-M01	Inspect and maintain electrical installations associated with air conditioning, refrigeration and ventilation systems	Sketch and construct three-phase circuits	116464 (core)
		Fault find, repair and maintain AC motors	116463 (core)
		Inspect and maintain electrical control panels	116466 (core)
		Programmable logic controllers	116460 (elective)
4-ARV-M02	Service and repair air-conditioning, refrigeration and ventilation systems	Component overhaul and repair	116421 (elective)
		Service a refrigeration system	116403 (elective)
		Diagnose operational faults and take action	116406 (core)
		General quality standards within the industry	116392 (core)
4-ARV-M03-T01	Commissioning and plant optimisation	Properties of air	116695 (elective)
		Elementary airflow measurements and calculations	116698 (core)
		Commonly applied air conditioning systems	116710 (elective)
		The effect of operating conditions	262178 (core)
		Operating parameters of a refrigeration system	116699 (core)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-G-M03-T01	Life skills	Team dynamics	116714 (elective)
4-G-M01-T01	Workplace fundamentals	Safety in the workplace	116379; 120344 (core)
4-G-M04-T01	Working with people	Supervision and leadership in the workplace	116380 (core)
4-G-M05-T02	Communications and personal management	Writing and managing reports	116389; 119257; 12488 (elective)
4-G-M05-T02	Communications and personal management	Writing and managing reports	12488 (core)

Autotronics - NQF Level 2

NLRD # 78944: National Certificate: Autotronics

Autotronics-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-AUT-M01-T01	Fundamentals of Auto electricity	Theory Principles of Auto Electricity	376600; 376621; 376641
2-AUT-M02-T01	Automobile batteries and battery system components	Batteries	376600
2-AUT-M03-T01	Auto electrical circuits	Auto electrical circuits	376621
2-AUT-M04-T01	Auxiliary Harnesses	Auxiliary Harnesses	376641

Autotronics-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-ARM-M01-T01	The fundamentals of engine technology	Engines components and basic auto electrics	244056
2-ARM-M02-T01	Use lifting equipment	Lifting equipment	15123
2-ARM-M04-T01	Remove and Install automobile components	Remove fit components	260717
3- ABR-M03-T01	Cutting and welding	Oxy- fuel cutting and welding	119753
3-ARM-M01-T01	Basic electricity and electronics	Troubleshoot and repair circuits and starting, charging and ignition systems	260637

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	115101
2-G-M01-T02 Version 2	Safety and quality induction	Monitoring quality	9322;
2-G-M01-T03	Safety and quality induction	Fire Fighting	252250
2-G-M01-T04	Safety and quality induction	First Aid	119567
2-G-M01-T05	Safety and quality induction	Safety and environmental impact	259604
2-G-M02-T04	Drawing and measuring	Engineering drawings and sketches made easy	335860
2-G-M03-T03	Life skills	Personal and business finance	9268
2-G-M03-T04	Life Skills	HIV and Aids in the workplace	259762
2-G-M04-T02	Working with materials and tools	Using tools	119744 12219
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	116101

Autotronics - NQF Level 3

NLRD # 78923: National Certificate: Autotronics

Autotronics-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-AUT-M01-T01	Technical information of auto electrical systems	Technical information of auto electrical systems	376607(core)
3-AUT-M02-T01	Ignition systems	Ignition systems	376603
3-AUT-M03-T01	Starting systems	Starting systems	376606
3-AUT-M04-T01	Automobile charging system	Automobile charging system	376601
3-AUT-M05-T01	Electro – pneumatics and hydraulics	Electro – pneumatics and hydraulics	376604

Autotronics-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-ARM-M01-T01	Basic electricity and electronics	Troubleshoot and repair circuits and starting , charging and ignition systems	260437 (core)
3-FP-M02	Hydraulic operation and installation	Hydraulic operation and installation	113117; 244716
3-FP-M03-T01	Basic Hydraulic maintenance	Repair cylinders and installation of hydraulic seals	13139
4-ARM-M03-T01	Auto electrical and electronic circuits	Advances auto electrical and electronic circuits and ignition systems	260737

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M03-T03	Life Skills	Personal and business finance	9526
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	116937
3-G-M01-T02	Workplace Fundamentals	World of work	242814
3-G-M03-T02	Life skills	Deal with dynamic and diverse work environment	9533
3-G-M03-T03 Version 2	Life Skills	Deal with dynamic and diverse work environment	9530
4-G-M01-T01	Workplace Fundamentals	Safety in the workplace	120344

Autotronics - NQF Level 4

NLRD #78883: Further Education and Training Certificate: Autotronics

Autotronics-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-AUT-M01-T01	Air conditioning	Air conditioning	244140
4-AUT-M02-T01	Auxiliary Auto electrical equipment	Fuel injection engine control	376640 (core)
4-AUT-M03-T01	Networking and data transfer	Diagnose and repair data transfer systems	376622(core)
4-AUT-M04-T01	Auxiliary Auto electrical equipment	Auxiliary Auto electrical equipment	376605 (core)

Autotronics-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-ARM-M03-T01	Auto electrical and electronics circuits	Advanced auto electrical and electronic circuits and ignition systems	260677; 260737
4-ARM-M04-T01	Engine efficiency and emissions	Forced induction, exhaust and fuel component systems	260737
4-PT-M03-T01	Operations Optimisation	Operations Optimisation	114877
3-ARM-M05-T01	Test, repair and report on other automotive components	Cooling, lubrication and air-conditioning systems	244140

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	243301
3-G-M01-T02	Workplace fundamentals	World of work	242814
3-G-M03-T01	Life skills	Team dynamics	116714
3-G-M04-T02	Learning tools and techniques	Learning techniques	117877
4-G-M05-T01	Communications and personal management	Meetings	242816
4-G-M05-T02	Communications and personal management	Writing and managing reports	116389;376620
4-G-M05-T03	Communications and personal management	Personal management	114589

Autotronics - NQF Level 5 Modules

NLRD #78883: Further Education and Training Certificate: Autotronics (modules in Autotronics NQF Level 4)

Autotronics-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
5-AUT-M01-T01	Automobile climate control systems	Automobile climate control systems	376620
5-AUT-M02-T01	Automobile Convenience systems	Automobile Convenience systems	376642(core)
5-AUT-M03-T01	Automobile VSTDC systems	Automobile VSTDC systems	376623(core)

Boat and Yacht Building: NQF Level 2

NLRD #77003 National Certificate: Boat and Yacht Building

Boat and Yacht Building-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-YBB-M01-T01	Marine Joinery	Joinery	365159
2-YBB-M02-T01	Introduction to Boat Design	Boat Design	365146
2-YBB-M03-T01	Safe Boating	Crewing	123600
2-YBB-M04-T01	Inflatable Boats	Inflatables	365143
2-YBB-M05-T01	Laminating	Composite Construction	110289; 110281
2-YBB-M06-T01	Metals in the marine environment	Metalwork	365145

Boat and Yacht Building-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-AMA-M01-T02	Perform load slinging	Perform load slinging	12481
3-ABR-M03-T01	Cutting and welding	Oxy-fuel cutting and welding	119753

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	13220
2-G-M01-T03	Safety and quality induction	Fire Fighting	12484
2-G-M01-T04	Safety and quality induction	First Aid	12483
2-G-M05-T01	Learning tools and techniques	Learning and studying techniques	12465

Boat and Yacht Building: NQF Level 3

NLRD #78863 National Certificate: Boat and Yacht Building

Boat and Yacht Building-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-YBB-M01-T01	Boat Design and Lofting	Boat Design	376541
3-YBB-M02-T01	Marine Joinery	Joinery	376544
3-YBB-M03-T01	Onboard systems	Engine Marine systems	376542; 376543
3-YBB-M04-T01	Composite Construction and repair	Composite Construction	376560

Boat and Yacht Building-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-WAP-M04	Aluminium welding	Weld aluminium materials using gas tungsten arc welding process	10783
		Weld aluminium materials using gas metal arc welding process	

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-G-M03-T01	Life skills	Team dynamics	116714
3-G-M04-T03	Learning tools and techniques	Learning techniques	117877
3-G-M03-T02	Life skills	Deal with dynamic and diverse work environment	116720

Boat and Yacht Building: NQF Level 4

NLRD #78863 National Certificate: Boat and Yacht Building

Yacht and Boat Building-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-YBB-M01-T01	Design to Standard(III)	Boat Design	376540; 376580
4-YBB-M02-T01	Marine Systems(III)	Systems	376581; 376580
4-YBB-M03-T01	Advanced Composite Construction(II)	Composite Construction	376582
4-YBB-M04-T01	Boat fairing and Painting	Boat Finishing	376545

Electro-mechanics - NQF Level 2

NLRD # 58269: National Certificate: Electro-mechanics

Electro-mechanics-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-EM-M01-T01	Basic Hand tools	Select Use and care for engineering tools and measuring equipment	12476; 119744; 12219; 243783
2-EM-M01-T02	Basic Hand skills	Basic Engineering	13297; 9881; 10784; 13214; 243782
2-EM-M01-T03	Basic Hand Skills	Welding, brazing and cutting	114669; 114616; 113863
2-EM-M02-T01	Fundamentals of Electricity	Electricity Fundamentals	113877; 10237; 10254
2-EM-M02-T02	Fundamentals of Electricity	Electricity Application	10233; 10624; 10626; 10253; 10254; 10603; 113858; 10261; 14134
2-EM-M02-T03	Electricity Fundamentals	Basic Circuitry	11954
2-EM-M02-T04	Fundamentals of electricity	Electrical testing and inspections	110404
2-M03-T03-T01	Lubrications, bearings and seals	Lubrication	243769
2-EM-M03-T02	Lubrication, bearings and seals	Bearings	243769; 243780; 12383; 243781
2-EM-M03-T03	Lubrication bearings	Seals	13219; 13279
2-EM-M04-T01	Basic Engineering Support	Principles of transfer	243762

Electro-mechanics-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-ARM-M03	Conduct an automotive service	Automobile service	243769
		Battery service	
2-EF-M01	Mechanical technology	Safety considerations in the work environment	13214
		Effectively cut, punch and drill fabrication material	
		Quality and reporting requirements for cutting, drilling and punching	
2-FP-M02	Introduction to hydraulics	Principles of hydraulics	24686 ; 13219
2-LIM-M04-T01	Basic Electrics	Install electric wire ways	10253
2-PT-M01-T01	Maintain and repair	Maintaining and repairing equipment	13221
3-F-M03-T01	Maintain direct and indirect drives	Direct and indirect drivers	13216

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M02-T01	Drawing and measuring	Engineering drawing	12215
2-G-M02-T02	Introduction to hydraulics	Hydraulic components, hose, connectors, and fitting	12476; 243780
2-G-M04-T02	Working with materials	Using tools	119744
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	116932

Electro-mechanics - NQF Level 3

NLRD # 58288: National Certificate: Electro-mechanics

Electro-mechanics-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-EM-M01-T01	Mechanical maintenance	Maintain direct directives	13280
3-EM-M01-T02	Mechanical Maintenance	Maintain Indirect directives	13216
3-EM-M01-T03	Mechanical maintainable	Maintain gear boxes	13325
3-EM-M01-T04	Mechanical maintenance	Maintain gear boxes and clutches	13282
3-EM-M02-T01	Mechanical Maintenance	Understand basic electronic theory and components	114406
3-EM-M02-T02	Basic Electronics and PLC systems	Demonstrate a basic understanding of basic programmable logic controllers	113899
3-EM-M02-T03	Basic Electronics and PLC systems	Install and program basic programmable logic controllers	13134
3-EM-M02-T04	Basic electronics and PLC systems	Repair an electronics control system for an AC multi speed motor	110384
3-EM-M03-T01	Hydraulic, pneumatic, lubricating systems and pumps	Pneumatic, hydraulic systems and components	1116450
3-EM-M03-T02	Hydraulic, pneumatic, lubricating systems and pumps	Install test and maintain a basic hydraulic/ pneumatic system	13139
3-EM-M03-T03	Hydraulic, pneumatic, lubricating systems and pumps	Maintain hydraulic /pneumatic systems	13321
3-EM-M3-T04	Hydraulic, pneumatic, lubricating systems and pumps	Maintain lubricating systems	13277
3-EM-M03-T05	Hydraulic, pneumatic, lubricating systems and pumps	Overhaul/ repair single/multi stage centrifugal pumps	10746; 10779
3-EM-M03-T06	Hydraulic, pneumatic, lubrication systems and pumps	Replace multi stage centri fugal pump	10778
3-EM-M03-T01	Hydraulic, pneumatic, lubrication systems and pumps	Pneumatic and hydraulic systems and concepts	116450
3-EM-M04-T01	Advanced Electronics	Install commission three phase AC machines and control gear	10264
3-EM-M04-T02	Advanced electronics	Install and commission DC machine and control gear	10261
3-EM-M04-T03	Advanced Electronics	Install commission slip ring machines and control Gear	113891
3-EM-M04-T04	Advanced electronics	Install commission dual speed machines and control gear	10261

3-EM-M04-T05	Advanced Electronics	Fault find on alternative current AC and direct current DC	13639
3-EM-M04-T06	Advanced electronics	Install/replace mini sub stations and ring – main unit or switches	113891
3-EM-M04-T07	Advanced Electronics	Install medium voltage transformers	114660
3-EM—M04-T08	Advance Electronics	Maintain and repair three phase AC machines and control gear	10262
3-EM-M04-T09	Advanced Electronics	Install commission electrical measuring instruments	10260
3-EM-M04-T10	Advanced Electronics	Connect, test and commission a three phase direct on- line motor control system	10281

Electro-mechanics-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-F-M03-T01	Maintain direct and indirect drives	Direct and indirect drives	13280
3-F-M08-T01	Maintain brakes and clutches	Brakes and clutches	13282
3-FP-M01	Electrical technology	Programmable logic controllers	113899
3-FP-M02	Hydraulic Operation and installation	Hydraulic operation and installation	13117
3-FP-M05	Basic pneumatic maintenance	Installation and maintenance, basic pneumatic systems	13139
3-LIM-M02-T01	Basic Electronics	Construct basic electronic circuits	10270
3-LIM-M03-T01	Routine lift maintenance	Fault find and maintain bearings in machines on a lift	10281
4-FP-M01	Advanced electrical technology	Programmable logic controllers	13134

Electro-mechanics NQF Level 4

NLRD # 58270: Further Education and Training Certificate: Electro-mechanics

Electro-mechanics-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-EM-M01-T01	Programmable logic controllers	Fault find and repair equipment associated with final control elements	116046
4-EM-M01-T02	Programmable logic controller	Troubleshoot on programmable logic controllers	113897
4-EM-M02-T01	Advanced electrical fault finding	Fault find, repair and maintain three phase low voltage electrical circuits	10259
4-EM-M02-T02	Advanced electrical fault finding	Diagnose and repair faults on equipment and machinery during production and machinery/operation	13327
4-EM-M02- T03	Advanced electrical fault finding	Diagnose and repair Faults on low voltage transformers and equipment	12414
4-EM-M02-T04	Advanced electric fault finding	Carry out a detailed inspection on low voltage switch gear	110403
4-EM-M02-T05	Advanced electric fault	Maintain low voltage switch gear	13818
4-EM-M02-T06	Advanced electric Fault	Inspect record and report condition of medium /high voltage station apparatus and related equipment.	113969
4-EM-M02-T07	Advanced electric fault finding	Inspect, test and maintain medium/high voltage transformers	113880
4-EM-M02-T08	Advanced electrical fault finding	Identify the correct phase sequence on high voltage transformers and cables	10621
4-EM-M03-T01	Compressors	Maintain heat exchangers and pressure vessels	13278
4-EM-M03-T02	Compressors	Repair a compressor	243773
4-EM-M03-T03	Compressors	Maintain Safety Valves	13326

Electro-mechanics-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-F-M04-T01	Maintain gearboxes	Maintain gearboxes	13325
3-FP-M01	Electrical Technology	Programmable logic Controllers	113899
4-F-M01-T01	Commission equipment and machinery and diagnose and repair faults during production/operation	Commissioning, fault diagnosis and repair	13327;13326
3-FP-M03-T01	Basic hydraulic maintenance	Hydraulic machine maintenance and instrumentation	13321

Electro-mechanical Winding - NQF Level 2

NLRD # 58860: National Certificate: Electro-mechanical Winding

Electro-mechanical Winding-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-EMW-M01	Electrical Measuring instruments	Electrical Measuring instruments	258918 (10237)
2-EMW-M02	Perform basic winding/Rewinding	Perform basic winding/Rewinding	9921
2-EMW-M03	Dismantle Basic Components	Dismantle Basic Components	244664
2-EMW-M04	Prepare Metal Surfaces	Prepare Metal Surfaces	335896 (9919)

Electro-mechanical Winding-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-PT-M03-T02	Production processes	Assembling and finishing manufactured products	9877; 9878
2-PT-M03-T03	Production processes	Improving productivity	14445
3-ABR-M03-T01	Cutting and welding	Oxy-fuel cutting and welding	119753

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	13222
2-G-M01-T02 Version 2	Safety and quality induction	Monitoring quality	9322
2-G-M01-T03	Safety and quality induction	Fire Fighting	12484
2-G-M01-T04	Safety and quality induction	First Aid	12483
2-G-M02-T02	Drawings and measuring	Measuring and marking off	12476
2-G-M03-T01	Life Skills	Introduction to the world of work	12466
2-G-M03-T02 Version 2	Life Skills	Working and communicating with others	13258
2-G-M03-T04	Life Skills	HIV AND Aids in the workplace	12463
2-G-M04-T02	Working with materials and tools	Using tools	119744
2-G-M05-T01	Learning tools and techniques	Learning tools and techniques	13202;12465

Electro-mechanical Winding - NQF Level 3

NLRD # 58862: National Certificate: Electro-mechanical Winding

Electro-mechanical Winding-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-EMW-M01	Use Marking off equipment	Use Marking off equipment	9888
3-EMW-M02	Coat Material and components	Coat Material and components	9887
3-EMW-M03	Dismantle Complex Assemblies	Dismantle Complex Assemblies	9924
3-EWM-M04	Perform complex Winding/Rewinding	Perform complex Winding/Rewinding	12392

Electro-mechanical Winding-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-PT-M02-T01	Planning and logistics	Role of logistics in product environment	116218
3-FP-M01-T01	Electrical Technology	Programmable logic controllers	113899

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M03-T01	Life skills	Introduction to the world of work	12456
2-G-M05-T02	Learning tools and techniques	Use of computers in the	116938
3-G-M01-T01 Version 2	Workplace Fundamentals	Safety in the workplace	12455
3-G-M01-T03	Workplace Fundamentals	Quality Management	13234
3-G-M02-T02	Engineering and manufacturing technology	Engineering drawings	9885
3-G-M03-T02	Life Skills	Deal with dynamic and diverse work environment	116720
3-G-M04-T02	Learning tools and techniques	Learning techniques	116218

Electro-mechanical Winding-NQF Level 4

NLRD # 58861: Further Education and Training Certificate: Electro-mechanical Winding

Electro-mechanical Winding-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-EMW-M01	Anticipate and Trouble shoot machines	Anticipate and Trouble shoot machines	9890
4-EMW-M02	Principles of Balancing and Vibration Analysis	Principles of Balancing and Vibration Analysis	244665
4-EMW-M03	Assemble complex Components	Assemble complex Components	9923
4-EMW-M04	Perform General grinding Operations	Perform General grinding Operations	9925
4-EMW-M05	Change and set Tooling	Change and set Tooling	9905
4-EMW-M06	Conduct Advanced Electro Mechanical tests	Conduct Advanced Electro Mechanical tests	244663

Electro-mechanical Winding-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-PT-M02-T01	Logistics and planning	Production planning supply and demand	116292
4-PT-M03-T01	Operations Optimisation	Operations Optimisation	114877

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M05-T02	Learning tools and techniques	Use computers in the workplace	116938
3-G-M03-T01	Life Skills	Team dynamics	116714
3-G-M03-T03 Version 2	Life Skills	Deal with dynamic and diverse work environment	12429
4-G-M01-T01	Workplace fundamentals	Safety in the workplace	13224
4-G-M01-T02	Workplace Fundamentals	Manage quality	13235
4-G-M01-T03	Workplace Fundamentals	Understanding business processes	13254
4-G-M05-T02	Communications and personal management	Writing and managing reports	119257

Engineering Fabrication Modules – NQF Level 2

NLRD # 58722: National Certificate: Engineering Fabrication

Engineering Fabrication-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-EF-M01	Mechanical Technology	Safety considerations in the work environment	12239; 13214 (core)
		Effectively cut, punch and drill fabrication material	12239; 13214 (core)
		Quality and reporting requirements for cutting, drilling and punching	12239; 13214 (core)
2-EF-M02	Fabrication	Prepare for fabrication activity	12240; 12246 (core)
		Conduct fabrication activity	12240; 12246 (core)
		Quality and reporting requirements for fabrication	12240; 12246 (core)
		Conduct fabrication activities safely	12240; 12246 (core)
3-EF-M02	Gas cutting	Contour marker method	244339 (elective)

Engineering Fabrication-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-WAP-M01	The welder's work environment	Identification of weld joints	14713 (elective)
		Welding symbols and related sketches	14713 (elective)
2-WAP-M03	Basic oxy-fuel welding, cutting and brazing	Oxy-fuel equipment and gas cutting techniques	243067 (core)
		Oxy-acetylene welding	243072 (core)
2-WAP-M04	Introduction to arc welding and processes	Shielded metal arc welding process	243063 (core)
3-LMO-M02-T01	Crane operations	Introducing cranes	8039
3-LMO-M02-T03	Crane Operations	Lift, move and /or transport a load	8039
3-PF-M05-T01	Pipe system fabrication	Pipe system fabrication	10824; 254357 (elective)
2-RIG-M02-T02	Rigging with lifting machines	Lifting hoisting machines	116235
3-WAP-M02	Weld carbon steel workpieces using different processes and techniques	Weld carbon steel in all positions using oxy-acetylene gas	243053 (elective)
		Weld carbon steel workpieces using the gas metal arc welding process in all positions	243064 (elective)
		Safely weld carbon steel workpieces using shielded metal arc process in all positions	243056 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	9443 (core) 14683; 9964; 13167; 13222 (elective)
2-G-M01-T03	Safety and quality induction	Fire Fighting	12484
2-G-M01-T04	Safety and quality induction	First Aid	12483
2-G-M02-T01	Drawing and measuring	Engineering drawing	243075 (core)
2-G-M02-T02	Drawing and measuring	Measuring and marking off	12476; 244342 (core)
2-G-M03-T01	Life skills	Introduction to the world of work	12466 (elective)
2-G-M03-T03	Life skills	Personal and business finance	9268 (elective)
2-G-M03-T04	Life Skills	HIV and AIDS in the workplace	12463
2-G-M04-T01	Working with materials and tools	Engineering materials	244345; 12477 (core)
2-G-M04-T02	Working with materials and tools	Using tools	12219; 119744 (core)
2-G-M05-T01	Learning tools and techniques	Learning and studying techniques	12465 (elective)
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	116932; 117867; 117902 (elective)
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	116520 (elective)

Engineering Fabrication Modules – NQF Level 3

NLRD # 58720: National Certificate: Engineering Fabrication

Engineering Fabrication-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-EF-M02	Fabrication	Prepare for fabrication activity	12246 (elective)
		Conduct fabrication activity	12246 (elective)
		Quality and reporting requirements for fabrication	12246 (elective)
		Conduct fabrication activities safely	12246 (elective)
3-EF-M01	Development, forming and shaping	Requirements for development, forming and shaping	12244; 12245; 115565; 115568; 115571 (core)
		Parallel line method	115568 (core)
		Radial line method	115571 (core)
		Triangulation method	115565 (core)
3-EF-M02	Gas cutting	Contour marker method	244339 (core)
		Introduction to gas cutting	243077 243080 243081 (core)
		Oxy-fuel pipe cutting	243077 (core)
		Oxy-fuel profile cutting	243080 (core) 10780 (elective)
		Oxy-fuel straight line cutting	243081 (core)

Engineering Fabrication-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-AMA-M01-T02	Perform load slinging	Perform load slinging	12481
2-WAP-M01	The welder's work environment	Identification of weld joints	14713 (core)
		Welding symbols and related sketches	14713 (core)
2-WAP-M03	Basic oxy-fuel welding, cutting and brazing	Oxy-acetylene welding	10789; 243072 (elective)
		Oxy-fuel brazing	243069 (elective)
2-WAP-M04	Introduction to arc welding and processes	Gas metal arc welding process	243066 (elective)
		Flux cored welding process	243076 (elective)
		Gas tungsten arc welding process	243068 (elective)
3-LMO-M02-T01	Crane operations	Introducing cranes	8039
3-LMO-M02-T03	Crane Operations	Lift, move and /or transport a load	12481,
3-LMO-T02-T02	Crane Operations	Prepare lift, move or transport a load	8039
3-LMO-M03-T03	Lift truck operations	Lift, move and or transport a load	8038
3-PF-M05-T01	Pipe system fabrication	Pipe system fabrication	243061 (elective)
3-WAP-M01	Plan and prepare workpiece for jigs, manipulators and other fixtures before welding	Select the correct tools and equipment for the job	243061 (elective)

3-WAP-M02	Weld carbon steel workpieces using different processes and techniques	Weld carbon steel in all positions using oxy-acetylene gas	10789; 243053 (elective)
3-WAP-M03-T01	Plasma cutting	Plasma cutting process	14698 (elective)
3-WAP-M03	Weld carbon steel workpieces using different processes and techniques	Safely weld carbon steel workpieces using shielded metal arc process in all positions	243056 (elective)
4-WAP-M02	Weld carbon steel pipe using GTAW and GMAW processes	Pipe welding with gas metal arc welding process	243065 (elective)
4-WAP-M03-T01	Weld carbon steel pipe using SMAW process	Pipe welding with shielded metal arc welding process	243062 (elective)
4-WAP-M04	Aluminium welding	Welding aluminium materials using gas metal arc welding process	10783; 243089 (elective)
		Welding aluminium materials using gas tungsten arc welding process	10783; 243079 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M02-T01	Drawing and measuring	Engineering drawing	243075 (core)
2-G-M03-T01	Life skills	Introduction to the world of work	12456 (elective)
2-G-M03-T03	Life skills	Personal and business finance	9526; 9268 (elective)
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	116520 (core)
3-G-M01-T03	Workplace fundamentals	Quality management	13234 (core)
3-G-M03-T03 Version 2	Life skills	Personal management skills	9530 (elective)
3-G-M04-T02	Learning tools and techniques	Learning techniques	12457 (elective)

Engineering Fabrication Modules – NQF Level 4

NLRD # 58721: Further Education and Training Certificate: Engineering Fabrication

Engineering Fabrication-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-EF-M01	Develop and fabricate from complex drawings	Material for fabrication and assemble practices	12252 (core)
		Equipment, Tools and Machines for Fabrication and assemble practices	12252 (core)
4-EF-M02	Cut, drill and punch, assemble and mechanically join structural steel work	Good working practices for fabrication and assembling	12253 (core)
		Development and fabrication from complex drawings	12253 (core)
		Mechanical Operations	12253 (core)
4-EF-M03-T01	Perform heat manipulation processes on plate, pipe and structural materials	Heat manipulation processes	244341 (core)

Engineering Fabrication-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-WAP-M04	Introduction to arc welding and processes	Gas tungsten arc welding process	243068 (elective)
2-WAP-M05-T01	Introduction to arc welding and processes	Air carbon arc gouging	12814; 14707 (elective)
3-WAP-M02	Weld carbon steel workpieces using different processes and techniques	Weld carbon steel in all positions using cored-wire welding process	243052 (elective)
		Weld carbon steel workpieces using the gas tungsten arc welding process in all positions	243058 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-G-M03-T01	Life skills	Team dynamics	116714 (core)
4-G-M01-T03	Workplace fundamentals	Understanding business processes	13254 (core)

Training by specialist providers

Module Ref	Topic Title	Unit Standard
Specialist	Develop and produce computer aided drawings	14473 (elective)
Specialist	Identify, interpret and produce working piping drawings	14492 (elective)

Foundry Operations - NQF Level 2

NLRD # 66512: National Certificate: Foundry Operations

Foundry Operations-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-FO-M01-T01	Foundry materials properties	Foundry materials properties	120402; 13165; 9909
2-FO-M02-T01	Melting operations	Melting operations	264095; 264044; 260077; 114881
2-FO-M03-T01	Furnace materials	Metals and refractory materials	264115; 13966; 9663; 13965
2-FO-M04-T01	Patternmaker	Patternmaker	264075; 264054; 114881

Foundry Operations-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-AMA-M01-T02	Perform load slinging	Perform load slinging	12481
2-WAP-M03	Basic oxy fuel welding, cutting and brazing	Oxy fuel equipment and gas cutting techniques	243067
		Oxy –acetylene welding	
		Oxy fuel brazing	

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T03	Safety and quality induction	Fire Fighting	12484
2-G-M01-T04	Safety and quality induction	First Aid	12483
2-G-M01-T05	Safety and quality induction	Safety and environmental impact	259604
2-G-M02-T01	Drawing and measuring	Engineering drawings	12238
2-G-M02-T03	Drawing and measuring	Mark off made easy	13238
2-G-M03-T01	Life Skills	Introduction to the world of work	12466
2-G-M03-T02 Version 2	Life Skills	Working and communicating with others	9322
2-G-M03-T03	Life Skills	Personal and business finance	9268
2-G-M03-T04	Life Skills	HIV and Aids in the workplace	13169
2-G-M04-T02	Working with materials and tools	Using tools	12219
2-G-M04-T05	Working with materials and tools	Introduction to hand and measuring tools and tasks	13159
2-G-M05-T01	Learning tools and techniques	Leaning tools and techniques	12465; 13202 ;12465
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	116938
3-G-M02-T02	Engineering and manufacturing technology	Engineering drawings	9885

Foundry Operations - NQF Level 3

NLRD # 6649: National Certificate: Foundry Operations

Foundry Operations-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-FO-M01-T01	Introduction to foundries	Set up changeover production machines	264014; 12319
3-FO-M02-T01	Melting Operations	Chemistry and die casting	12768; 264038; 264059
3-FO-M03-T01	Refractories	Refractories materials, products and processes	13974; 13935; 13976; 13977

Foundry Operations-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-AMA-M01-T05	Operate a production process	Operate a production process	244338
2-WAP-M04	Introduction to arc welding	Shielded metal arc welding process	243063
3-F-M01-T01	Produce detailed engineering drawings	Engineering drawings	13298

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M02-T01	Drawing and measuring	Engineering drawings	12238
2-G-M03-T01	Life skills	Introduction to the world of work	12456
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	13223
3-G-M01-T03	Workplace fundamentals	Quality Management	13234
3-G-M03-T03 Version 2	Life Skills	Deal with dynamic and diverse work environment	12429
3-G-M04-T01	Learning tools and techniques	Use of computers in the workplace	116940
3-G-M04-T02	Learning tools and techniques	Learning techniques	12457
4-G-M04-T02	Working with people	Team dynamics	242812
4-G-M05-T01	Communications and personal management	Meetings	242816

Foundry Operations - NQF Level 4

NLRD #78883: Further Education and Training Certificate: Foundry Operations

Foundry Operations-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-FO-M01-T01	Supervision	Planning maintenance and operations functions	12665; 9895
4-FO-M02-T01	Melting Operations	Properties of metals	264376
4-FO-M03-T01	Patternmaker	Design and make a pattern	264055; 9905; 264056; 064060
4-FO-M04-T01	Mould making	Mould making and metal casting	264114; 264094; 164074
4-FO-M05-T01	Machines operations	Set up, monitor and fault find production machines	9890; 9889; 13331

Foundry Operations-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-F-M01-T01	Produce detailed engineering drawings	Engineering drawings	13298
4-PT-M02-T01	Logistics and planning	Production planning, supply and demand	12665
4-PT-M03-T01	Operations Optimisation	Operations Optimisation	114877

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-G-M04-T01	Learning tools and techniques	Use of computers in the workplace	116940
3-G-M04-T05	Learning tools and techniques	Power point	116930
3-G-M04-T04	Learning tools and techniques	Problem solving and decision making	244611
4-G-M01-T01	Workplace fundamentals	Safety in the workplace	120344;13224
4-G-M01-T02	Workplace fundamentals	Quality management	13235
4-G-M01-T03	Workplace fundamentals	Understating business processes	13952
4-G-M02-T01	Project Management	Project Management	12665; 120375
4-G-M03-T02	Training assessment and learning	Assessment in the workplace	115753
4-G-M04-T01	Working with people	Supervision and leadership in the workplace	10981
4-G-M04-T02	Working with people	Team dynamics	242820

Lift Installation and Maintenance Modules – NQF Level 2

NLRD # 58268: National Certificate: Lift Installation and Maintenance

Lift Installation and Maintenance-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-LIM-M01-T01	Introduction to lift installation and maintenance	Induction to lift installation and maintenance	N/A
2-LIM-M02-T01	Find and replace lift components	Identify and replace lift components	243761 (core)
2-LIM-M03-T01	Clean and lubricate lift equipment	Clean and lubricate lift equipment	110300 (core)
2-LIM-M04-T01	Basic electrics	Install electric wire ways	10253 (core)
3-LIM-M04-T01	Roping and rigging	Basic rigging on a lift	14706 (core)
4-LIM-M04-T01	Install, commission, test and inspect a lift	Lift installation, commissioning and inspection	243760 (core)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	9839 (core)
2-G-M01-T04	Safety and Induction	First Aid	12483
2-G-M02-T01	Drawing and measuring	Engineering drawing	(core)
2-G-M02-T02	Drawing and measuring	Measuring and marking off	12476 (core)
2-G-M03-T01	Life skills	Introduction to the world of work	13172 (core)
2-G-M03-T01	Life skills	Introduction to the world of work	110078; 12036; 246449 (core)
2-G-M03-T02 Version 2	Life skills	Working and communicating with others	9322 (core)
2-G-M03-T03	Life skills	Personal and business finance	15092; 9268 (elective)
2-G-M03-T04	Life Skills	HIV AND Aids in the workplace	12463
2-G-M04-T01	Working with materials and tools	Engineering materials	12477 (core)
2-G-M04-T02	Working with materials and tools	Using tools	12219 (core)
2-G-M04-T02	Working with materials and tools	Using tools	119744 (core)

Training by specialist providers

Module Ref	Topic Title	Unit Standard
Specialist	Erect and dismantle scaffolding	119074 (core)

Lift Installation and Maintenance Modules – NQF Level 3

NLRD # 58271: National Certificate: Lift Installation and Maintenance

Lift Installation and Maintenance-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-LIM-M04-T01	Basic electrics	Install electric wire ways	13136 (core)
3-LIM-M01-T01	Induction to lift installation and maintenance	Induction to level 3	N/A
3-LIM-M02-T01	Basic electronics	Construct basic electronic circuits	10270 (elective)
3-LIM-M03-T01	Routine lift maintenance	Fault find and maintain bearings in machines on a lift	10281; 13283; 116652 (core)
3-LIM-M03-T03	Routine lift maintenance	Fault find and maintain gearboxes	10281; 116652 (core)
3-LIM-M04-T01	Roping and rigging	Basic rigging on a lift	243775 (core)
4-LIM-M02-T01	Advanced lift maintenance	Lift maintenance	243778 (core)
4-LIM-M04-T01	Install, commission, test and inspect a lift	Lift installation, commissioning and inspection	243768 (core)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M03-T01	Life skills	Introduction to the world of work	12456 (core)
2-G-M03-T03	Life skills	Personal and business finance	9268 (elective)
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	12455 (elective)
3-G-M03-T01	Life skills	Team dynamics	116714 (core)
3-G-M04-T02	Learning tools and techniques	Learning techniques	117877 (elective)

Lift Installation and Maintenance Modules – Level 4

NLRD # 58275: Further Education and Training Certificate: Lift Installation and Maintenance

Lift Installation and Maintenance-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-LIM-M03-T02	Routine lift maintenance	Fault find and maintain lift motors and generators	243767 (core)
3-LIM-M03-T03	Routine lift maintenance	Maintain gearboxes	13325 (core)
4-LIM-M01-T01	Induction to lift installation and maintenance	Induction to level 4	N/A (core)
4-LIM-M02-T01	Advanced lift maintenance	Perform routine maintenance on lift equipment	243778 (elective)
4-LIM-M03-T01	Advanced fault finding	Advanced fault finding	13781; 243759 (core)
4-LIM-M04-T01	Install, commission, test and inspect a lift	Lift installation, commissioning and inspection	243758; 243763 (core) 119246; 119268; 119269; 119270; 9882; 10253; 243760 (elective)

Lift Installation and Maintenance-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-FP-M03-T02	Basic hydraulic maintenance	Hydraulic machine maintenance and instrumentation	13321; 13117 (elective)
3-FP-M05-T02	Basic pneumatic maintenance	Installation and maintenance: basic pneumatic systems	13321; 13139 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-G-M01-T01	Working with people	Supervision and leadership in the workplace	116380 (core)
4-G-M05-T02	Communications and personal management	Writing and managing reports	119257 (core)
4-G-M05-T03	Communications and personal management	Personal management skills	114589 (elective)

Lifting Machine Operations - NQF Level 3

NLRD # 64829: National Certificate: Lifting Machine Operations

Lifting Machine Operations-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-LMO-M01-T01	Lift machinery and load handling	Overview of lifting machinery	116283; 260778; 260837
3-LMO-M01-T02	Lifting machinery and load handling	Identifying and handling loads	116283; 260778; 260837
3-LMO-M02-T01	Crane operations	Introducing cranes	8039, 12481, 115903, 116075, 116231, 116253, 116254, 116255, 116583, 116976, 117001, 117036, 242978, 242982, 243021, 253590, 253595, 253600, 254355, 260757, 260758, 260759, 260760, 260761, 260763, 260764, 260765, 260777, 260780, 260781, 260798, 260858.
3-LMO-M02-T02	Crane Operations	Prepare lift, move or transport a load	8039, 12481, 115903, 116075, 116231, 116253, 116254, 116255, 116583, 116976, 117001, 117036, 242978, 242982, 243021, 253590, 253595, 253600, 254355, 260757, 260758, 260759, 260760, 260761, 260763, 260764, 260765, 260777, 260780, 260781, 260798, 260858
3-LMO-M02-T03	Crane Operations	Lift, move and /or transport a load	8039, 12481, 115903, 116075, 116231, 116253, 116254, 116255, 116583, 116976, 117001, 117036, 242978, 242982, 243021, 253590, 253595, 253600, 254355, 260757, 260758, 260759, 260760, 260761, 260763, 260764, 260765, 260777, 260780, 260781, 260798, 260858.

3-LMO-M02-T04	Crane Operations	Post operating crane operations	8039, 12481, 115903, 116075, 116231, 116253, 116254, 116255, 116583, 116976, 117001, 117036, 242978, 242982, 243021, 253590, 253595, 253600, 254355, 260757, 260758, 260759, 260760, 260761, 260763, 260764, 260765, 260777, 260780, 260781, 260798, 260858.
3-LMO-M03-T01	Lifting truck operations	Introducing lift trucks	242942; 242974; 242981; 260797; 260799; 260818
3-LMO-M03-T02	Lift truck operations	Prepare to lift, move or transport a load	242972; 242974; 242981; 260762; 260797
3-LMO-M03-T03	Lift truck operations	Lift, move and or transport a load	242972; 242974; 242981; 260762; 260797; 260818
3-LMO-M03-T04	Lift truck operations	Post operating lift truck operations	242972; 242974; 242981; 260762; 260797; 260818
3-LMO-M04-T01	MEWP Operations	Introducing MEWPs	243272; 243273; 243276
3-LMO-M04-T02	MEWP Operations	Lift personnel and/or material with MEWP	243272; 243273; 243276
3-LMO-M04-T03	MEWP Operations	Post operating MEWP operations	243272; 243273; 243276

Lifting Machine Operations-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-ARM-M02-T01	Use lifting equipment to lift loads	Lifting equipment	15123; 253582
2-MP-M01-T04	Do support activities	Identify and perform a support activity	116533

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T03	Safety and quality induction	Fire Fighting	12484
2-G-M01-T04	Safety and Quality Induction	First Aid	116534
3-G-M03-T03 Version 2	Life Skills	Deal with dynamic and diverse work environment	9530;12429

Mechatronics- NQF Level 2

NLRD # 67629: National Certificate: Mechatronics

Mechatronics-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-MEC-M01-T01	Master the fundamentals of the basic digital circuits	Demonstrate an understanding of basic digital circuits	253074

Mechatronics-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-ABR-M03-T01	Cutting and welding	Oxy- Fuel cutting and welding	119753
2-F-M01-T01	Assemble mechanical components	Assemble mechanical components	253440
2-LIM-M4-T01	Basic electrics	Install electric wire ways	13136

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	13220
2-G-M02-T01	Drawing and measuring	Engineering drawings	12215
2-G-M02-T02	Drawing and measuring	Measuring and marking off	12476
2-G-M02-T03	Drawing and measuring	Mark off made easy	13238
2-G-M03-T01	Life Skills	Introduction to the world of work	9322;12466
2-G-M03-T02 Version 2	Life Skills	Working and communicating with others	13217
2-G-M03-T03	Life skills	Personal and business finance	9268
2-G-M04-T02	Working with materials and tools	Using tools	12219
2-G-M05-T01	Learning tools and techniques	Learning tools and techniques	12465
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	117924

Mechatronics- NQF Level 3

NLRD #67609: National Certificate: Mechatronics

Mechatronics-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-MEC-M01-T01	Install test and maintain single phase AC/DC machines and control gear	Install , test and maintain single phase AC/DC machines and control gear	13141
3-MEC-M02-T02	Install, test and maintain basic pneumatic system	Install, test and maintain basic pneumatic system	13139
3-MEC-M02-T03	Install and program basic programmable logic controllers(PLC)	Install and program basic programmable logic controllers(PLC	13134

Mechatronics-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-FP-M05	Basic pneumatic maintenance	Installation and maintenance basic pneumatic systems	260723
3-EM-M02-T03	Basic Electronics and PLC systems	Install and program basic programmable logic controllers	13134
4-FP-M04	Advanced electrical technology	Programmable logic controllers	13334
		Bus systems	
		Variable speed drives	

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M03-T01	Life Skills	Introduction to the world of work	12456
2-G-M04-T01	Working with materials and tools	Engineering materials	12477; 244345
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	12455
3-G-M02-T01	Engineering and manufacturing technology	Engineering materials	13274
3-G-M01-T03	Workplace fundamentals	Quality management	13234
3-G-M03-T02	Life Skills	Deal with dynamic and diverse work environments	9533; 116720
3-G-M03-T03 Version 2	Life Skills	Deal with dynamic and diverse work environment	9530; 12429

Mechatronics - NQF Level 4

NLRD #67649: Further Education and Training Certificate: Mechatronics

Mechatronics-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-MEC-M01-T01	Install, test and maintain three phase AC/DC machines and control gear	Install, test and maintain three phase AC/DC machines and control gear	13154
4-MEC-M02-T01	Install, test and configure variable speed control drives	Install, test and configure variable speed control drives	13334
4-MEC-M3-T01	Programme, use and maintain an industrial robot system	Programme, use and maintain an industrial robot system	243070
4-MEC-M04-T01	Install and program advanced programmable logic controllers	Install and program advanced programmable logic controllers	67649

Mechatronics-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-FP-M01	Advanced electrical technology	Programmable	13334
		Bus systems	
		Variable speed drives	
4-FP-M05	Advanced pneumatic maintenance and design	Maintain electro-pneumatic systems	13116

Cross-cutting Generic modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M03-T03	Life Skills	Personal and business finance	9268; 14444 ; 119913
3-G-M03-T01	Life Skills	Team Dynamics	120379; 116714
3-G-M03-T02	Life Skills	Deal with dynamic and a diverse work group	9530; 12429
4-G-M01-T02	Workplace fundamentals	Manage quality	13235
4-G-M01-T03	Workplace Fundamentals	Understanding business processes	13952; 13254; 242655

NLRD # 59689: National Certificate: Mechanical Engineering

Note: NLRD # 59689: National Certificate: Mechanical Engineering at NQF Level 2, applies to qualifications for Mechanical Engineering: Fitting, Mechanical Engineering: Fluid Power, Mechanical Engineering: Machining and Tooling and Mechanical Engineering: Pipe Fitting areas. The qualification suites were designed using a “nested approach”.

Module Ref	Module Title	Topic Title	Unit Standard
2-AMA-M01-T02	Perform load slinging	Perform load slinging	12481
2-EF-M01	Mechanical technology	Cut, punch and drill fabrication material	13214 (elective)
2-F-M01-T01	Assemble mechanical components	Assemble mechanical components	253440 (core)
2-FP-M01-T01	Electrical technology	Basic electronics	12218 (elective)
2-FP-M02	Introduction to hydraulics	Principles of hydraulics	244686 (elective)
		Components, hose and piping	244688; 244690 (elective)
		Static seals	13219 (core)
2-FP-M03	Introduction to pneumatics	Principles of pneumatics	244686 (elective)
		Components, hose and tubing	244691; 244688 (elective)
		Static seals	13219 (core)
2-LIM-M04-T01	Basic electrics	Install electric wire ways	13136 (elective)
2-PF-M01-T01	Simple engineering drawings	Pipe fitting drawings	243075 (elective)
2-PF-M02-T01	Pipe systems and components	Pipe systems, components, hangers and threaded pipes	253474; 253495; 253496 (elective)
2-PT-M01-T01	Maintenance and repair	Maintaining and repairing equipment	13221 (elective)
2-WAP-M03	Basic oxy-fuel welding, cutting and brazing	Oxy-fuel equipment and gas cutting techniques	243067 (elective)
		Oxy-fuel brazing	243069 (elective)
2-WAP-M04	Introduction to arc welding and processes	Shielded metal arc welding process	243063 (elective)
3-ABR-M03-T01	Cutting and welding	Oxy-fuel cutting and welding	119753 (elective)
3-PF-M05-T01	Pipe system fabrication	Flanged sections, jigs and hydraulic bending	254357 (elective)

Machining, Tooling and CNC Production Machining-specific

Module Ref	Module Title	Topic Title	Unit Standard
2-MT-M03	Operate and monitor a drilling machine	Operate and monitor a drilling machine	13214; 13297
2-MT-M04	Operate and monitor a centre lathe	Operate and monitor a centre lathe	13215
2-MT-M05	Operate and monitor a milling machine	Operate and monitor a milling machine	13204
2-MT-M06	Operate and monitor a surface grinding machine	Operate and monitor a surface grinding machine	13215
2-MT-M07	Operate and monitor CNC machining equipment	Operate and monitor CNC machining equipment	243014

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	13220; 9839 (core)
2-G-M01-T03	Safety and quality induction	Fire Fighting	12484
2-G-M01-T04	Safety and Quality Induction	First Aid	12483
2-G-M02-T01	Drawing and measuring	Engineering drawing	12215; 243075 (core)
2-G-M02-T02	Drawing and measuring	Measuring and marking off	12476 (core)
2-G-M03-T01	Life skills	Introduction to the world of work	12466 (core)
2-G-M03-T02 Version 2	Life skills	Working and communicating with others	9322; 13217 (elective)
2-G-M03-T03	Life skills	Personal and business finance	9268 (elective)
2-G-M03-T04	Life skills	HIV and Aids in the workplace	12463
2-G-M04-T01	Working with materials and tools	Engineering materials	12477 (core)
2-G-M04-T02	Working with materials and tools	Using tools	12219; 119744 (core)
2-G-M05-T01	Learning tools and techniques	Learning and studying techniques	12465 (elective)
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	116932; 116938; 117924; 117867; 117902; 117924 (elective)

Mechanical Engineering: Fitting Modules – NQF Level 3

NLRD # 59669: National Certificate: Mechanical Engineering: Fitting

Fitting-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-F-M01-T01	Produce detailed engineering drawings	Engineering drawings	13298 (elective)
3-F-M02-T01	Maintain bearings and lubricating systems	Maintain bearings and lubricating systems	13277; 13283 (core)
3-F-M03-T01	Maintain direct and indirect drives	Direct and indirect drives	13216; 13280 (core)
3-F-M04-T01	Maintain gearboxes	Maintain gearboxes	13325 (elective)
3-F-M05-T01	Maintain conveyor systems	Conveyor systems	253475 (elective)
3-F-M06-T01	Maintenance of pumps	Centrifugal and positive displacement pumps	253391; 253497 (elective)
3-F-M07-T01	Maintain valves and steam traps	Manual and motorised valves and steam traps	253423; 253439 (elective)
3-F-M08-T01	Maintain brakes and clutches	Brakes and clutches	13282 (elective)
3-F-M09-T01	Maintain auxiliary equipment	Heat exchangers, pressure vessels, filters and strainers	253430; 253434 (elective)
3-F-M10-T01	Maintain compressors	Compressors	253494 (elective)

Fitting-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-WAP-M04	Introduction to arc welding and processes	Shielded metal arc welding process	243063 (elective)
3-LMO-M02-T02	Crane Operations	Prepare lift, move or transport a load	242976
2-RIG-M02-T02	Rigging with lifting machines	Lifting hoisting machines	242981 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M03-T01	Life skills	Introduction to the world of work	12456 (core)
2-G-M03-T03	Life skills	Personal and business finance	9526; 9268 (elective)
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	13223 (core)
3-G-M03-T01	Life skills	Team dynamics	116714 (core)
3-G-M03-T03 Version 2	Life skills	Personal management skills	9530 (core)

Mechanical Engineering: Fitting Modules – NQF Level 4

NLRD # 59709: Further Education and Training Certificate: Mechanical Engineering: Fitting

Fitting-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-F-M04-T01	Maintain gearboxes	Maintain gearboxes	13325 (elective)
3-F-M08-T01	Maintain brakes and clutches	Brakes and clutches	13282 (elective)
3-F-M09-T01	Maintain auxiliary equipment	Heat exchangers, pressure vessels, filters and strainers	253434 (elective)
4-F-M01-T01	Maintain safety valves	Safety valves	13326 (elective)
4-F-M02-T01	Overhaul centrifugal and positive displacement pumps	Overhaul pumps	253376; 253386 (elective)
4-F-M03-T01	Maintain pneumatic and hydraulic systems	Pneumatic and hydraulic systems	253361; 253415 (core)
4-F-M04-T01	Commission equipment and machinery and diagnose and repair faults during production / operation	Commissioning, fault diagnosis and repair	13299; 13327 (core)

Fitting-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-LMO-M02-T01	Crane operations	Introducing cranes	254355

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-G-M03-T03 Version 2	Life skills	Personal management skills	12429 (elective)
4-G-M01-T01	Workplace fundamentals	Safety in the workplace	13224 (core)
4-G-M01-T03	Workplace fundamentals	Understanding business processes	13254 (elective)

Mechanical Engineering: Fluid Power Modules – NQF Level 3

NLRD # 58882: National Certificate: Fluid Power

Fluid Power-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-FP-M01-T01	Electrical technology	Programmable logic controllers (PLC)	113899 (elective)
3-FP-M02-T01	Hydraulic operation and installation	Hydraulic operation and installation	13117; 244716 (core)
3-FP-M02-T02	Hydraulic operation and installation	Cleaning: conveyance systems	244717 (core)
3-FP-M02-T03	Hydraulic operation and installation	Hose, piping and tubing	244710; 244712 (core) 244709 (elective)
3-FP-M03-T01	Basic hydraulic maintenance	Repair cylinders and installation of hydraulic seals	244704 (core) 244715 (elective)
3-FP-M03-T02	Basic hydraulic maintenance	Hydraulic machine maintenance and instrumentation	13117; 244683 (core) 244711 (elective)
3-FP-M04-T01	Pneumatic operation and installation	Operation of pneumatic components	244714 (core)
3-FP-M04-T02	Pneumatic operation and installation	Tube installation and assembly	244710; 244712 (core)
3-FP-M05-T01	Basic pneumatic maintenance	Instrumentation	244683 (core)
3-FP-M05-T02	Basic pneumatic maintenance	Installation and maintenance: basic pneumatic systems	13139 (core) 244705 (elective)
3-FP-M05-T03	Basic pneumatic maintenance	Repair and test pneumatic cylinders and fit seals	244713 (elective)

Fluid Power-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-EF-M01	Mechanical technology	Safety considerations in the work environment	13214 (elective)
3-WAP-M02	Weld carbon steel workpieces using different processes and techniques	Weld carbon steel in all positions using cored-wire welding process	243052 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M03-T03	Life skills	Personal and business finance	9526; 9268 (elective)
2-G-M04-T01	Working with materials and tools	Engineering materials	12477 (core)
3-G-M01-T03	Workplace fundamentals	Quality management	13234 (elective)
3-G-M02-T01	Engineering and manufacturing technology	Engineering materials	13274 (elective)
3-G-M02-T02	Engineering and manufacturing technology	Engineering drawings	9885 (core)
3-G-M03-T01	Life skills	Introduction to the world of work	12456 (elective)

Mechanical Engineering: Fluid Power Modules – NQF Level 4

NLRD # 58880: Further Education and Training Certificate: Fluid Power

Fluid Power-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-FP-M01	Advanced electrical technology	Programmable logic controllers	13134 (core)
		Bus systems	13135 (elective)
		Variable speed drives	13334 (elective)
4-FP-M02-T01	Advanced hydraulic technology	Hydraulic filtration, power packs, installation and testing	244692; 244694; 244703 (elective)
4-FP-M03	Advanced hydraulic maintenance	Testing of hydraulic cylinders	244702 (elective)
		Maintenance, repair and troubleshooting hydraulic systems	244707; 244685 (core)
		Repair variable displacement pumps and motors	244697 (elective)
4-FP-M04-T01	Design of pneumatic systems	Design of pneumatic circuits and systems	244699 (core)
4-FP-M04-T02	Design of pneumatic systems	Designing pneumatic supply and conditioning systems	244696 (elective)
4-FP-M05-T01	Advanced pneumatic maintenance and design	Maintain electro-pneumatic systems	13116 (elective)
4-FP-M05-T02	Advanced pneumatic maintenance and design	Design advanced electro-pneumatic circuits	244701 (elective)

Fluid Power-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-WAP-M02	Weld carbon steel pipe using GTAW and GMAW processes	Pipe welding with combination gas tungsten arc and gas metal arc welding processes	243088 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-G-M03-T01	Life skills	Team dynamics	120379 (core)
4-G-M01-T02	Workplace fundamentals	Quality management	13235 (elective)
4-G-M02-T01	Project management	Project management	120374; 120375; 120382; 120385; 120387 (elective)

Mechanical Engineering: Machining and Tooling- NQF Level 3

NLRD #63649 National Certificate: Mechanical Engineering: Machining and Tooling, inclusive of CNC Machining

Machining and Tooling-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-MT-M03	Performing turning operations	Performing turning operations	258717
3-MT-M04	Perform milling Operation	Perform milling Operation	243024
3-MT-M05	Performing Grinding Operations	Performing Grinding Operations	258716
3-MT-M06	Set up and start CNC machining process	Set up and start CNC machining process	243024
3-MT-M07	Maintenance of production tooling	Maintenance of production tooling	258722
3-MT-M08	Manufacture production tooling to drawing or sample part	Manufacture production tooling to drawing or sample part	258723
3-MT-M09	Produce components by spark eroding machining operations	Produce components by spark eroding machining operations	258715

Machining and Tooling-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-F-M01-T01	Produce detailed engineering drawings	Engineering drawings	13298
3-PT-M02-T01	Planning and logistics	Role of logistics in a production environment	116218

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M03-T03	Life skills	Personal and business finance	9526
3-G-M03-T03 Version 2	Life skills	Personal management skills	9530
3-G-M01-T03	Workplace fundamentals	Quality management	13234 (core)
4-G-M05-T02	Communications and personal management	Writing and managing reports	12488
3-G-M04-T02	Learning tools and techniques	Learning techniques	12457
4-G-M01-T02	Workplace fundamentals	Manage quality	243025
3-G-M04-T02	Learning tools and techniques	Learning techniques	117877 (elective)
3-G-M02-T01	Engineering and manufacturing technology	Engineering materials	13274 (elective)

Mechanical Engineering: Machining and Tooling -NQF Level 4

NLRD #63629 Further Education and Training Certificate: Mechanical Engineering: Machining and Tooling, inclusive of CNC Machining

Machining and Tooling-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-MT-M04	Conduct complex turning operations	Conduct complex turning operations	258677
4-MT-M05	Conduct Advanced milling operations and methods	Conduct Advanced milling operations and methods	258680
4-MT-M06	Produce complex components for internal and external grinding operations	Produce complex components for internal and external grinding operations	258676
4-MT-M07	Write(CNC) programme, set and operate a CNC machine	Write(CNC) programme, set and operate a CNC machine	13315
4-MT-M08	Manufacture complex tooling	Manufacture complex tooling	13330
4-MT-M09	Diagnose and repair faults on tooling during the production run	Diagnose and repair faults on tooling during the production run	13331

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-G-M03-T03 Version 2	Life skills	Personal management skills	12429
3-G-M03-T02	Life skills	Deal with dynamic and diverse work environment	9506
4-G-M01-T03	Workplace fundamentals	Understanding business processes	13254
4-G-M05-T02	Communications and personal management	Writing and managing reports	116389

Pipe Fitting Modules – NQF Level 3

NLRD # 59750: National Certificate: Mechanical Engineering: Pipe Fitting

Pipe Fitting-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-PF-M01-T01	Produce a welded pipe fabrication assembly	Preparing for pipe fitting	253556; 253558; 253588 (core)
3-PF-M02-T01	Plasma and oxy-fuel cutting for pipe fabrication	Plasma and oxy-fuel cutting	243077; 253734 (core)
3-PF-M03-T01	Read and interpret complex drawings for pipe fabrication	Complex drawings	243086 (elective)
3-PF-M04-T01	Bevelling and gouging for pipe fitting	Bevel and gouge	253574; 253737 (elective)
3-PF-M05-T01	Pipe system fabrication	Pipe system fabrication	116654; 243061; 254357 (elective)
3-PF-M06-T01	TIG welding for pipe fabrication	TIG welding	243068 (elective)
3-PF-M07-T01	Pipe insulation	Pipe insulation	253634 (elective)

Pipe Fitting-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-EF-M02	Fabrication	Form, shape, join and assemble materials	12246 (elective)
3-F-M07-T01	Maintain valves and steam traps	Manual and motorised valves and steam traps	253439; 253599 (elective)
3-F-M09-T01	Maintain auxiliary equipment	Heat exchangers, pressure vessels, filters and strainers	253430; 253434 (elective)
2-WAP-M01	The welder's work environment	Welding symbols and related sketches	253736; 14713 (core)
2-WAP-M04	Introduction to arc welding and processes	Shielded metal arc welding process	243063 (elective)
3-WAP-M05-T01	Destructive testing	Destructive testing	243078 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	9532 (elective)
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	13223 (core)
3-G-M03-T01	Life skills	Introduction to the world of work	12456 (core)
3-G-M03-T01	Life skills	Team dynamics	116714 (core)
3-G-M03-T03 Version 2	Life skills	Personal management skills	9530 (elective)

Pipe Fitting Modules – NQF Level 4

NLRD # 58779: Further Education and Training Certificate: Mechanical Engineering: Pipe Fitting

Pipe Fitting-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-PF-M01-T01	Work scheduling principles for pipe fabrication	Plan and schedule work flow	253735 (elective)
4-PF-M02-T01	Advanced fabrication and hydrostatic testing	Pipe fabrication and quality control	253579; 253587 (core)
4-PF-M03-T01	Pipeline preparation	Network shut down and start up	119327; 119328 (elective)
4-PF-M04-T01	Stopples (hot tap)	Stopples operational pipelines	13329 (elective)

Pipe Fitting-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-F-M07-T01	Maintain valves and steam traps	Manual and motorised valves and steam traps	253423; 253439; 253599 (elective)
3-F-M09-T01	Maintain auxiliary equipment	Heat exchangers, pressure vessels, filters and strainers	253434 (elective)
4-EF-M01	Develop and fabricate from complex drawings	Material for fabrication and assemble practices	12252 (elective)
		Equipment, Tools and Machines for Fabrication and assemble practices	12252 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-G-M01-T03	Workplace fundamentals	Quality management	13234 (core)
4-G-M01-T01	Workplace fundamentals	Safety in the workplace	13224 (core)
4-G-M04-T01	Working with people	Supervision and leadership in the workplace	10981 (core)

Training by specialist providers

Module Ref	Topic Title	Unit Standard
Specialist	Identify, interpret and produce working pipe drawings	253592 (core)

Mechanical Handling (Rigging) - NQF Level 2

NLRD # 59729: National Certificate: Mechanical Handling (Rigging)

Mechanical Handling-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-RIG-M01-T01	Manual Handling	Rigging hand tools	253555
2-RIG-M01-T02	Manual Handling	Synthetic fibre ropes	253591
2-RIG-M01-T03	Manual Handling	Application of lifting equipment	253575; 253582; 253603
2-RIG-M02-T01	Lifting machinery skills	Application of crane regulations	116283; 253638
2-RIG-M02-T02	Rigging with lifting machines	Lifting hoisting machines	116235; 242976; 253595; 242981
2-RIG-M03-T01	Plant (lifting) operations	Application of crane regulations	116283
2-RIG-M03-T02	Plant (lifting) operations	Mechanised Plant Operations	116253; 116254

Mechanical handling-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-ARM-M02-T01	Use lifting equipment loads	Lifting equipment	253582
2-EF-M01	Mechanical Technology	Safety considerations in the work environment.	13214
		Effectively cut, punch and drill fabrication materials	
		Quality and reporting requirements cutting, drilling and punching	
2-WAP-M03	Basic oxy- fuel welding , cutting and brazing	Oxy-fuel equipment and gas cutting techniques	243072;243067
2-WAP-M04	Introduction to arc welding and processes	Shielded metal arc welding process	243063
3-ABR-M03-T01	Cutting and welding	Oxy – fuel cutting and welding	2430678

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	9839
2-G-M02-T01	Drawing and measuring	Engineering drawings	12215
2-G-M02-T02	Drawing and measuring	Measuring and marking off	12476
2-G-M03-T01	Life skills	Introduction to the world of work	12466
2-G-M04-T02	Working with materials and tools	Using tools	12477;12219
2-G-M05-T01	Learning tools and techniques	Learning and studying techniques	12465

Mechanical Handling (Rigging) - NQF Level 3

NLRD # 59730: National Certificate: Mechanical Handling (Rigging)

Mechanical handling-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-RIG-M01-T01	Mechanical Handling	Steel wire ropes	253554
3-RIG-M01-T02	Mechanical handling	Manoeuvres loads	253603
3-RIG-M01-T03	Mechanical Handling	Suspended load manoeuvres	253597; 253640
3-RIG-M01-T04	Mechanical Handling	Rigging and transportation	253601
3-RIG-M02-T01	Crane related skills	Pre-use maintenance and inspection of lifting equipment	253654
3-RIG-M02-T02	Crane related skills	Mobile cranes and rigging	253615; 253658
3-RIG-M02-T03	Crane Related Skills	Tower Cranes	116981
3-RIG-M03-T01	Maritime rigging skills	Ropes, wires and chains	113995
3-RIG-M03-T02	Marine Rigging Skills	Vessel based rigging	113981; 113994; 113998; 242977

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M03-T02 Version 2	Life Skills	Working and commutating with others	9322
2-G-M03-T03	Life Skills	Personal and business finance	9526
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	13223
3-G-M03-T03 Version 2	Life skills	Deal dynamic and diverse work environment	9530

Mechanical Handling (Rigging) - NQF Level 4

NLRD #59731: Further Education and Training Certificate: Mechanical Handling (Rigging)

Mechanical Handling-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-RIG-M01-T01	Advanced Rigging	Perform a pre engineering study	253596
4-RIG-M01-T02	Advanced Rigging	Winches	253883
4-RIG-M01-T03	Advanced Rigging	Specialised Transportation	113855; 113851
4-RIG-M02-T01	Lifting machines scaffolding	Suspended loads	116583; 253590; 116986; 253660
4-RIG-M02-T02	Lifting machines and scaffolding	Scaffolding	116692
4-RIG-M03-T01	Alternative rigging methods	Temporary construction	253594; 253589
4-RIG-M03-T02	Alternative rigging methods	Helicopters and rigging	115333

Mechanical Handling-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-WAP-M05-T01	Air carbon arc gouging	Air carbon arc gouging	14707

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-G-M01-T01	Workplace fundamentals	Safety in the workplace	13224
4-G-M01-T03	Workplace fundamentals	Understating business processes	13254

Welding Application and Practice Modules – NQF Level 2
NLRD # 57881: National Certificate: Welding Application and Practice

Welding Application and Practice-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-WAP-M01	The welder's work environment	Specifications, codes and standards that govern welding	14722 (core)
		Health and safety of welders	14722 (core)
		Identification of weld joints	14713 (core)
		Welding symbols and related sketches	14713 (core)
2-WAP-M02	Material selection and work piece preparation	Material identification	14712 (core)
		Heat treatment of metals	243055 (elective)
		Base metal preparation	243055 (elective)
2-WAP-M03	Basic oxy-fuel welding, cutting and brazing	Joint fit-up and alignment	243055 (elective)
		Oxy-fuel equipment and gas cutting techniques	243067 (core)
		Oxy-acetylene welding	243072 (core)
2-WAP-M04	Introduction to arc welding and processes	Oxy-fuel brazing	243069 (core)
		Shielded metal arc welding process	243063 (core)
		Gas metal arc welding process	243066 (core)
		Flux cored welding process	243076 (core)
3-WAP-M01	Plan and prepare workpiece for jigs, manipulators and other fixtures before welding	Gas tungsten arc welding process	243068 (core)
		Select the correct tools and equipment for the job	243061 (elective)
3-WAP-M02	Weld carbon steel workpieces using different processes and techniques	Weld carbon workpieces using the gas metal arc welding process	243064 (elective)
3-WAP-M03	Weld carbon steel workpieces using different processes and techniques	Safely weld carbon steel workpieces using shielded metal arc process in all positions	243056 (elective)

Welding Application and Practice-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-EF-M02	Fabrication	Prepare for fabrication activity	12240 (elective)
2-RIG-M02-T02	Rigging with lifting machines	Lifting hoisting machines	116235
2-RIG-M02-T02	Rigging with lifting machines	Lifting hoisting machines	116235
3-LIM-M04-T01	Roping and rigging	Basic rigging on a lift	14706 (core)
3-PF-M05-T01	Pipe system fabrication	Pipe system fabrication	243061 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	14683 (core) 13222 (elective)
2-G-M01-T03	Safety and quality induction	Fire Fighting	12484
2-G-M01-T04	Safety and quality induction	First Aid	12483
2-G-M02-T01	Drawing and measuring	Engineering drawing	243075 (elective)
2-G-M02-T02	Drawing and measuring	Measuring and marking off	12476 (core)
2-G-M04-T02	Working with materials and tools	Using tools	12219; 119744 (core)
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	116932; 117867; 117902 (elective)

Training by specialist providers

Module Ref	Topic Title	Unit Standard
Specialist	Erect and dismantle scaffolding	9672 (elective)

Welding Application and Practice – NQF Level 3

NLRD # 57886: National Certificate: Welding Application and Practice

Welding Application and Practice-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-WAP-M02	Material selection and work piece preparation	Heat treatment of metals	243055 (core)
		Base metal preparation	243055 (core)
		Joint fit-up and alignment	243055 (core)
2-WAP-M05-T01	Air carbon arc gouging	Air carbon arc gouging	14707 (core)
3-WAP-M01	Prepare, secure and assemble work pieces for welding	Plan and prepare work piece for jigs, manipulators and other fixtures before welding	243055 (core)
		Select the correct tools and equipment for the job	243055 (core) 243061 (elective)
		Prepare work piece for welding	243055 (core)
		Quality assurance checks	243055 (core)
3-WAP-M02	Weld carbon steel work pieces using different processes and techniques	Weld carbon steel in all positions using oxy-acetylene gas	243053 (core)
		Weld carbon steel in all positions using cored-wire welding process	243052 (core)
		Safely weld carbon steel work pieces using shielded metal arc process in all positions	243056 (core)
		Weld carbon steel work pieces using the gas tungsten arc welding process in all positions	243058 (core)
		Weld carbon steel work pieces using the gas metal arc welding process in all positions	243064 (core)
3-WAP-M05-T01	Destructive testing	Destructive testing	243078 (elective)
4-WAP-M02	Weld carbon steel pipe using GTAW and GMAW processes	Pipe welding with combination GTAW and GMAW processes	243088 (elective)
4-WAP-M04	Aluminium welding	Welding aluminium materials using GMAW process	243089 (elective)
		Welding aluminium materials GTAW process	243079 (elective)
4-WAP-M05	Stainless steel welding	Welding stainless steel materials GMAW process	243059 (elective)
		Welding stainless steel materials using GTAW process	243057 (elective)

Welding Application and Practice-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-EF-M02	Gas cutting	Introduction to gas cutting	243080; 243081 (elective)
3-PF-M02-T01	Plasma and oxy-fuel cutting for pipe fabrication	Plasma and oxy-fuel cutting	243077 (elective)
3-LMO-M02-T01	Crane operations	Introducing cranes	8039
3-LMO-M03-T03	Lift truck operations	Lift, move and or transport a load	8038
3-PF-M03-T01	Read and interpret complex drawings for pipe fabrication	Complex drawings	243086 (elective)
3-PF-M05-T01	Pipe system fabrication	Pipe system fabrication	243061 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T03	Safety and quality induction	Fire fighting	12484
2-G-M02-T01	Drawing and measuring	Engineering drawing	12238; 243075 (elective)
3-G-M03-T02	Life skills	Dealing with dynamic and diverse work environment	9533 (elective)
3-G-M04-T02	Learning tools and techniques	Learning techniques	12457 (elective)

Welding Application and Practice - NQF Level 4

NLRD #57887: Further Education and Training Certificate: Welding Application and Practice

Welding Application and Practice-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-WAP-M03-T01	Plasma cutting	Plasma cutting process	14698 (elective)
3-WAP-M04-T01	Combination welding	Combination welding with SMAW and GTAW processes in all positions	243085 (elective)
4-WAP-M01	Weld carbon steel pipe using OAW and FCAW processes	Oxy-fuel pipe welding process	14721 (elective)
		Cored wire pipe welding process	243049 (core)
4-WAP-M02	Weld carbon steel pipe using GTAW and GMAW processes	Weld carbon steel with gas tungsten arc welding process	243054 (core)
		Weld carbon steel with gas metal arc welding process	243065 (elective)
		Weld carbon steel with gas tungsten arc and gas metal arc combination welding	243088 (elective)
4-WAP-M03-T01	Weld carbon steel pipe using SMAW process	Shielded metal arc welding	243062 (core)
4-WAP-M04	Aluminium welding	Weld aluminium materials using gas tungsten arc welding process	243079 (core)
		Weld aluminium materials using gas metal arc welding process	243089 (core)
4-WAP-M05	Stainless steel welding	Weld stainless steel materials using gas metal arc welding process	243057 (core)
		Weld stainless steel materials using gas tungsten arc welding process	243059 (core)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-G-M01-T03	Workplace fundamentals	Understanding business processes	13254 (elective)
4-G-M04-T01	Working with people	Supervision and leadership in the workplace	10981 (elective)

Training by specialist providers

Module Ref	Topic Title	Unit Standard
Specialist	Develop and produce computer aided drawings	14473 (elective)
Specialist	Identify, interpret and produce working structural steel drawings	14497 (elective)

5. Manufacturing and Production Modules

Automotive Components Manufacturing and Assembly-NQF Level 2

NLRD # 71950: National Certificate: Automotive Components Manufacturing and Assembly

Automotive Components Manufacturing and Assembly-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-AC-M01-T01	World of work	Explain the individuals role with in the business	12466
2-AC-M02-T01	Preparing for Production or Assembly	Prepare surfaces	335896
2-AC-M03-T01	Working with production machines	Operate and prepare production machines	335859

Automotive Components Manufacturing and Assembly-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-ABR-M03-T01	Cutting and welding	Oxy-fuel cutting and welding	119753
2-PT-M03-T01	Production processes	Production processes	13162

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	115101
2-G-M01-T04	Safety and quality induction	First Aid	12483
2-G-M01-T05	Safety and quality induction	Safety and environmental impact	259604
2-G-M02-T01	Drawing and measuring	Engineering drawing	9882
2-G-M02-T04	Drawing and measuring	Engineering drawings and sketches made easy	335860
2-G-M03-T02 Version 2	Life Skills	Work in a team	9322
2-G-M03-T01	Life skills	Introduction to the world of work	12466
2-G-M04-T02	Working with materials and tools	Using Tools	10252

Automotive Components Manufacturing and Assembly- NQF Level 3

NLRD #71989: National Certificate: Automotive Components Manufacturing and Assembly

Automotive Components Manufacturing and Assembly-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-AC-M01-T01	Introduction to automotive component assembly and manufacturing	Use marking off equipment for routine shapes	335864
3-AC-M01-T02	Assemble and produce components	Running a stable process	243025
3-AC-M01-T03	Assemble and produce components	Monitor and adjust production machines	335900
3-AC-M01-T04	Preparing to assemble and produce components	Preparing to monitor and adjust production machines	335901
3-AC-M01-T05	Preparing materials for production	Handle and care for materials	259722
3-AC-M01-T06	Coat materials and components	Coat materials and components	335862

Automotive Components Manufacturing and Assembly-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-MP-M01-T03	Operate Metals production equipment	Prepare and perform metals production equipment	259624

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T03	Safety and quality induction	First Aid	116534
2-G-M03-T04	Life Skills	HIV and Aids in the workplace	13915
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	13223; 12455
3-G-M01-T02	Workplace fundamentals	World of work	242814
3-GM01-T03	Workplace fundamentals	Quality Management	13234
3-G-M02-T02	Engineering and manufacturing technology	Engineering drawings	9885
3-G-M02-T03	Engineering and manufacturing technology	Engineering drawings and sketches	335854
4-G-M04-T02	Working with people	Team dynamics	13912

Automotive Components Manufacturing and Assembly- NQF Level 4

NLRD # 71949: Further Education and Training Certificate: Automotive Components Manufacturing and Assembly

Automotive Components Manufacturing and Assembly-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-AC-M01-T01	Preparing for production	Change and set tools	335856
4-AC-M02-T01	Production process	Prepare and set up production machines	335874; 335865
4-AC-M03-T01	Production processes	Marking off non routine shapes	335861
4-AC-M04-T01	Solving problems and managing productivity	Solving problems on productions machines	335863

Automotive Components Manufacturing and Assembly-related modules

Module Ref	Module Title	Topic Title	Unit Standard
4-PT-M02-T02	Logistics and planning	Product costing	11473
4-PT-M03-T01	Operations Optimisation	Operation optimisation	114877

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	243301
3-G-M03-T01	Life skills	Team dynamics	243301
4-G-M01-T02	Workplace fundamentals	Manage Quality	14586
4-G-M01-T03	Workplace Fundamentals	Understanding business processes	242816
4-G-M04-T01	Working with people	Supervision and leadership in the workplace	242819
4-G-M04-T02	Working with people	Team Dynamics	242819; 14586
4-G-M05-T01	Communications and personal management	Meetings	242816
4-G-M05-T03	Communications and personal management	Personal management skills	15234; 242811;242815

Automotive Manufacturing and Assembly: NQF Level 2

NLRD #65809: National Certificate: Automotive Manufacturing and Assembly

Automotive Manufacturing and Assembly-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-AMA-M01-T01	Use and maintain equipment	Use and maintain equipment	9876
2-AMA-M01-T02	Perform load slinging	Perform load slinging	12481
2-AMA-M01-T03	Operate and monitor computerised numerically controlled(CNC) machining equipment	Operate and monitor computerised numerically controlled(CNC) machining equipment	243014
2-AMA-M01-T04	Demonstrate an understanding of quality procedures and practices	Demonstrate an understanding of quality procedures and practices	243705
2-AMA-M01-T05	Operate a production process	Operate a production process	244338
2-AMA-M01-T06	Vehicle Assembly perform vehicle assembly	Vehicle Assembly perform vehicle assembly	253440
2-AMA-M01-T07	Understand production systems and production management	Understand production systems and production management	262706
2-AMA-M01-T08	Fit and remove doors and panels to a body shell	Fit and remove doors and panels to a body shell	262709
2-AMA-M01-T09	Prepare metal panels for finishing in the body shop	Prepare metal panels for finishing in the body shop	262711
2-AMA-M01-T10	Test weld joints	Test weld joints	262714
2-AMA-M01-T11	Operate a fluid filling machine	Operate a fluid filling machine	262716
2-AMA-M01-T012	Test vehicle for compliance to manufacturer specifications	Test vehicle for compliance to manufacturer specifications	262725
2-AMA-M01-T13	Remove and fit vehicle components	Remove and fit vehicle components	262733

Automotive Manufacturing and Assembly-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-ABR-M02-T01	Minor dent repair techniques	Sealers fillers	119734
2-ARM-M01-T01	The fundamentals of engine technology	Engines, components and basic auto electrics	244056
2-ARM-M02-T01	Use lifting equipment to lift loads	Lifting equipment	15123
2-F-M01-T01	Assemble mechanical components	Assemble mechanical components	253440
2-FP-M02	Introduction to hydraulics	Principles of hydraulics	244686
2-FP-M03	Introduction to pneumatics	Static seals	13219
2-ASP-M01-T01	Work safely with tools and equipment	Maintain spray painting equipment	260160
2-ASP-M03-T01	Spray painting materials	Spray painting materials	119740
2-ASP-M04-T01	Get the surface ready	Surface preparation	119742

2-ASP-M05-T01	Spray panting primer	Basic spray painting	119737
2-PT-M01-T01	Maintenance and repair	Maintaining and repairing equipment	13221
2-PT-M02-T01	Logistics and planning	Inventory in the supply chain	12667
2-PT- M03-T03	Production processes	Assembling and finishing manufactured good	9877
3-ABR-M03-T01	Cutting and welding	Oxy-fuel cutting and welding	119753
3-ASP-M05-T01	Polishing panels	Polishing panels	260159
4-ABR-M04-T01	Paint less debt removal	Paint less dent removal techniques	244140

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	13220
2-G-M02-T01	Drawing and measuring	Engineering drawings	9882
2-G-M02-T02	Drawing and measuring	Measuring and marking off	12476
2-G-M03-T01	Life skills	Introduction to the world of work	12466
2-G-M03-T03	Life Skills	Personal and business finance	9268
2-G-M04-T01	Working with materials and tools	Engineering materials	12219
2-G-M04-T02	Working with materials	Using tools	119744
2-G-M05-T02	Learning tools and equipment	Use of computers in the workplace	117902

NLRD #67569 National Certificate: Electronics Manufacturing and Assembly

Electronics Manufacturing and Assembly specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-EMA-M01-T01	Understanding electronic circuits	Soldering and de-soldering	114605
2-EMA-M01-T01	Understand electronic circuits	Construct and test basic electronic circuits	264996
2-EMA-M01-T03	Produce an ear mould/component	Produce an ear mould and a shell	264998
2-EMA-M01-T04	Perform post and finishing functions	Complete [post production and finishing operations	265000
2-EMA-M01-T05	Perform post and finishing functions	Complete finishing operations and dispatch product	259737
2-EMA-M01-T06	Produce and ear mould/Component	Sound and acoustics	264998

Electronics Manufacturing and Assembly related modules

Module Ref	Module Title	Topic Title	Unit Standard
2-PT-M01-T01	Maintenance and repair	Maintaining and repairing equipment	13221
2-PT-M02-T01	Logistics and planning	Inventory in the supply chain	114891

Cross-cutting generic modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M04-T02	Working with materials and tools	Using tools	10252; 12216
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	116932

Metals Production Modules – NQF Level 2

NLRD # 64189: National Certificate: Metals Production

Metals Production-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M03-T01	Life skills	Introduction to the world of work	9322 (core)
2-G-M03-T01	Life skills	Introduction to the world of work	12466 (core)
2-G-M04-T02	Working with materials and tools	Using tools	10252; 12216 (core)
2-MP-M01-T01	Do support activities in metals production	Identify, plan and understand a support activity	259720 (core)
2-MP-M01-T02	Do support activities in metals production	The production principles influencing my support activity	116520; 116533; 259720 (core)
2-MP-M01-T03	Do support activities in metals production	Plan the input material in metal production	259720 (core) 259722 (elective)
2-MP-M01-T04	Do support activities in metals production	Identify and perform a support activity	116520; 116533; 116533; 259721 (core) 13221 (elective)
2-RIG-M02-T02	Rigging with lifting machines	Lifting hoisting machines	242976
2-RIG-M02-T01	Lifting machinery skills	Application of crane regulations	253638

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	115101;13167 (elective)
2-G-M01-T03	Safety and quality induction	Fire Fighting	252250
2-G-M01-T04	Safety and quality induction	First Aid	119567
2-G-M03-T02 Version 2	Life skills	Working and communicating with others	12461; 9324 (elective)
2-G-M03-T02 Version 2	Life skills	Working and communicating with others	13217 (elective)
2-G-M03-T03	Life skills	Personal and business finance	9268 (elective)
2-G-M03-T04	Life Skills	HIV and Aids in the workplace	259762
2-G-M05-T01	Learning tools and techniques	Learning and studying techniques	12465 (elective)
2-G-M05-T02	Learning tools and techniques	Use of computers in the workplace	116932 (elective)

Metals Production Modules – NQF Level 3

NLRD # 64190: National Certificate: Metals Production

Metals Production-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-MP-M01-T01	Operate metals production equipment	Plan to operate an electric arc furnace	259697 (core)
3-MP-M01-T02	Operate metals production equipment	Plan to operate metal production equipment	259697 (core)
3-MP-M01-T03	Operate metals production equipment	Prepare and perform metals production equipment	244108; 259624; 259697; 259723; 259724 (core)
3-MP-M01-T04	Operate metals production equipment	Plan input materials in metals production	259697 (core)
3-MP-M01-T05	Operate metals production equipment	Prepare and operate metals production equipment	244108; 259697; 259723; 259724 (core)

Metals Production-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-LMO-M02-T01	Crane operations	Introducing cranes	8039

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	120329; 13222 (elective)
2-G-M01-T03	Safety and quality induction	First Aid	116534
2-G-M03-T01	Life skills	Introduction to the world of work	12456 (elective)
3-G-M01-T03	Workplace fundamentals	Quality management	13234 (elective)
3-G-M03-T02	Life skills	Deal with dynamic and diverse work environment	116720 (elective)
3-G-M03-T03 Version 2	Life skills	Personal management skills	9530 (elective)

Metals Production – NQF Level 4

NLRD # 64209: Further Education and Training Certificate: Metals Production

Metals Production-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-MP-M01-T01	Control a metal production process	Analyse problems and find solutions in a metal production process	242817 (core)
4-MP-M01-T02	Control a metals production process	Plan the input material in metals production	259685 (core)
4-MP-M01-T03	Control a metals production process	Plan to operate an electric arc furnace and auxiliary processes	259694 (core)
4-MP-M01-T04	Control a metals production process	Prepare and perform metals production equipment	259694 (core)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	243301; 13222 (core)
2-G-M03-T03	Life skills	Personal and business finance	9505; 9268 (elective)
3-G-M03-T01	Life skills	Team dynamics	116714; 242821; (elective)
3-G-M03-T02	Life skills	Deal with dynamic and diverse work environment	9506; 9533 (elective)
3-G-M03-T03 Version 2	Life skills	Personal management skills	12429 (elective)
4-G-M01-T01	Workplace fundamentals	Safety in the workplace	120366 (core)
4-G-M01-T02	Workplace fundamentals	Manage quality	14586 (core)
4-G-M01-T03	Workplace fundamentals	Understanding business processes	13254; 242815; 242655 (elective)
4-G-M04-T02	Working with people	Team dynamics	11473; 242819; 15224 (elective)
4-G-M05-T01	Communications and personal management	Meetings	242816 (elective)
4-G-M05-T03	Communications and personal management	Personal management skills	242811; 114589 (core) 15234; 114589 (elective)

Non-metallics: Inspection and Assessment NQF Level 4

NLRD# 50021: Further Education and Training Certificate: Non-metallics: Inspection and Assessment

Non-Metallics-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-IA-M01-T01	Perform the role of a safety, health and environmental protection officer	Perform the role of a safety, health and environmental protection officer	12455
4-IA-M01-T02	Monitor the application of safety	Monitor the application of safety	13224
4-IA-M01-T03	Lead a team, plan, allocate and assess their work	Lead a team, plan, allocate and assess their work	116714
4-IA-M01-T04	Contribute to the implementation and maintenance of business processes	Contribute to the implementation and maintenance of business processes	13254
4-IA-M01-T05	Maintain business relationships during inspection and assessment processes	Maintain business relationships during inspection and assessment processes	120221
4-IA-M01-T06	Apply the budget function in a business unit	Apply the budget function in a business unit	13941
4-IA-M01-T08	Inspect and test manufactured components and assemblies	Inspect and test manufactured components and assemblies	120220; 120225
4-IA-M01-T08	Monitor and control quality control practices	Monitor and control quality control practices	14586
4-IA-M01-T09	Maintain the quality assurance	Maintain the quality assurance	13235
4-IA-M01-T10	Analyse trends and implement continuous improvements	Analyse trends and implement continuous improvements	116783
4-IA-M01-T11	Perform technical tasks	Commission and Handover Non-Metallic Fabrications	140411
4-IA-M01-T12	Perform technical tasks	Commission and Handover Non-Metallic Fabrications	14708
4-IA-M01-T13	Perform Technical tasks	Maintain calibrated materials	119185

Cross-cutting Generics

Module Ref	Module Title	Topic Title	Unit Standard
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	12455
3-G-M03-T03 Version 2	Life Skills	Personal Management skills	12429
3-G-M03-T01	Life Skills	Team dynamics	116714
3-GM04-T01	Learning tools and techniques	Use of computers in the workplace	116940
4-G-M01-T01	Workplace Fundamentals	Safety in the workplace	13941; 13224
4-G-M01-T02	Workplace Fundamentals	Manage quality	14586; 13235
4-G-M01-T03	Workplace Fundamentals	Understanding business processes	13254

Non-Metallics Modules NQF level 5

National Certificate: Non-Metallics: Inspection and Assessment NLRD 60070

Non-metallics-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
5-IA-M01-T01	Address safety, health and environmental requirements and hazards in a technical context	Address safety, health and environmental requirements and hazards in a technical context	117701
5-IA-M01-T02	Building teams to achieve goals and objectives	Building teams to achieve goals and objectives	252037
5-IA-M01-T03	Apply efficient time management to the work of a department/division/section	Apply efficient time management to the work of a department/division/section	15234
5-IA-M01-T04	Implement training needs for teams and individuals to upgrade skills levels	Implement training needs for teams and individuals to upgrade skills levels	15223
5-IA-M01-T05	Conduct costing and budgeting	Conduct costing and budgeting	113830
5-IA-M01-T06	Promote a productivity improvement strategy	Promote a productivity improvement strategy	114879
5-IA-M01-T07	Conduct Inspections and Commission Equipment	Conduct Inspections and Commission Equipment	253995
5-IA-M01-T08	Conduct Inspections and Commission Equipment	Commission Machines and Equipment or Pilot and Test a New Technical Service	116790
5-IA-M01-T09	Analyse trends and implement continuous improvements	Analyse trends and implement continuous improvements	116783
5-IA-M01-T10	Audit quality documentation	Audit quality documentation	253996
5-IA-M01-T11	Develop quality plans and ensure overall quality of products or services	Develop quality plans and ensure overall quality of products or services	116778
5-IA-M01-T12	Operate within a Technical Environment	Identify and Interpret Legislation	15225
5-IA-M01-T13	Resolving manufacturing and quality related disputes	Resolving manufacturing and quality related disputes	254015

Non Metallics: Inspection and Assessment Modules NQF level 5

NLRD: 60072 National Diploma: Non-metallics: Inspection and Assessment

Non-metallics-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
5-IA(b)-M01-T01	Optimise SHE systems	Optimise SHE systems	15136
5-IA(b)-M01-T02	Investigate an incident	Investigate an incident	117391
5-IA(b)-M01-T03	Create and use a range of resources to effectively manage teams, sections, departments or divisions.	Create and use a range of resources to effectively manage teams, sections, departments or divisions.	15231
5-IA(b)-M01-T04	Coordinate work group to produce product	Coordinate work group to produce product	9904
5-IA(b)-M01-T05	Maintain business processes	Maintain business processes	13256
5-IA(b)-M01-T06	Manage business processes	Plan, monitor, and control the financial resources for a small company or business unit	116787
5-IA(b)-M01-T07	Apply the law of contract	Apply the law of contract	120128
5-IA(b)-M01-T08	Evaluate current practices against best practice	Evaluate current practices against best practice	252024
5-IA(b)-M01-T09	Ensure quality standards	Evaluate non-conformances, approve concessions and recommend process rectification	254014
5-IA(b)-M01-T11	Ensure quality standards	Ensure design proposals, design realisation and installation operations meet standards	254034
5-IA(b)-M01-T12	Perform a procedures audit and implement sustainable procedures	Perform a procedures audit and implement sustainable procedures	253997; 116781
NO FG	Resolving manufacturing and quality related disputes	Resolving manufacturing and quality related disputes	254015
5-IA(b)-M01-T13			253997; 13237
5-IA(b)-M01-T14	Resolving manufacturing and quality related disputes	Resolving manufacturing and quality related disputes	254015

5-IA(b)-M01-T15	Manage technical processes	Manage installation and maintenance contractors	114716
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Production Technology Modules – NQF Level 2

NLRD 58781: National Certificate: Production Technology

Production Technology-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-PT-M01-T01	Maintenance and repair	Maintaining and repairing equipment	13221; 7106 (core)
2-PT-M02-T01	Logistics and planning	Inventory in the supply chain	12667; 114891 (core) 117897; 117901; 244504 (elective)
2-PT-M03-T01	Production processes	Production processes	13162 (core)
2-PT-M03-T02	Production processes	Assembling and finishing manufactured goods	9877; 9878 (elective)
2-PT-M03-T03	Production processes	Improving productivity	14445 (core)
2-PT-M04-T01	Production Technology: Lock and safe Manufacturing	Separate, handle, store treat and transport waste.	119555

Production Technology-related Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-AMA-M01-T02	Perform load slinging	Perform load slinging	12481
2-ASP-M01-T01	Work safely with tools and equipment	Maintain spray painting equipment	260160 (elective)
2-ASP-M05-T01	Spraying the primer	Basic spray painting	119737 (elective)
3-ABR-M03-T01	Cutting and welding	Oxy-fuel cutting and welding	119753 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M01-T01	Safety and quality induction	Safety in the workplace	9964; 13167 (core) 13222 (elective)
2-G-M01-T02 Version 2	Safety and quality induction	Monitoring quality	119139 (core)
2-G-M01-T03	Safety and quality induction	Fire Fighting	12484
2-G-M01-T04	Safety and quality induction	First Aid	12483
2-G-M02-T01	Drawing and measuring	Engineering drawings	9882 (elective)
2-G-M02-T02	Drawing and measuring	Measuring and marking off	9881; 12476 (elective)
2-G-M03-T01	Life skills	Introduction to the world of work	12036; 12456 (core)
2-G-M03-T03	Life skills	Personal and business finance	14444 (elective)
2-G-M3-T04	Life Skills	HIV and Aids in the workplace	12463
2-G-M04-T02	Working with materials and tools	Using tools	9879; 119744 (elective)
2-G-M05-T01	Learning tools and techniques	Learning and studying techniques	12465 (elective)

Training by specialist providers

Module Ref	Topic Title	Unit Standard
Specialist	Erect and dismantle scaffolding	119074 (elective)

Production Technology Modules – NQF Level 3**NLRD #58785: National Certificate: Production Technology****Production Technology-specific Modules**

Module Ref	Module title	Topic Title	Unit Standard
3-PT-M01-T01	Maintenance and repair	Perform first line maintenance	9913 (core)
3-PT-M02-T01	Planning and logistics	Role of logistics in production	116218; 244504 (core) 113829 (elective)
3-PT-M03-T01	Operations	Production systems	N/A
3-PT-M04-T01	Production Technology: lock and safe manufacturing	Apply methods of opening locks	123586
3-PT-M04-T02	Production Technology: lock and safe manufacturing	Perform keying and repairs of lock systems	123596
4-PT-M02-T01	Logistics and planning	Production planning, supply and demand	116280 (elective)

Production Technology-related Modules

Module Ref	Module title	Topic Title	Unit Standard
2-ASP-M01-T01	Work safely with tools and equipment	Maintain spray painting equipment	260160 (elective)
2-ASP-M05-T01	Spraying the primer	Basic spray painting	119737 (elective)

Cross-cutting Generic Modules

Module Ref	Module title	Topic Title	Unit Standard
2-G-M01-T03	Safety and quality induction	Fire Fighting	12484
2-G-M03-T04	Life Skills	HIV and Aids in the workplace	13915
3-G-M01-T01 Version 2	Workplace fundamentals	Safety in the workplace	13223 (core) 12455 (elective)
3-G-M01-T02	Workplace fundamentals	World of work	242814 (core)
3-G-M01-T03	Workplace fundamentals	Quality management	13234 (core)
3-G-M03-T01	Life skills	Team dynamics	120379 (core)
3-G-M03-T02	Life skills	Deal with dynamic and diverse work environment	116720 (elective)
3-G-M03-T03 Version 2	Life skills	Personal management skills	9530 (elective)

Production Technology Modules – NQF Level 4

NLRD # 58779: Further Education and Training Certificate: Production Technology

Production Technology-specific Modules

3-PT-M02-T01	Planning and logistics	Role of logistics in a production environment	113829 (elective)
4-PT-M02-T01	Logistics and planning	Production planning, supply and demand	116287; (core) 116280; 116292; 116294; 12665; 8019 (elective)
4-PT-M02-T02	Logistics and planning	Product costing	114737 (elective)
4-PT-M03-T01	Operations optimisation	Operations optimisation	114877; 114884; 116284 (core) 114878 (elective)
4-PT-M04-T01	Production Technology: lock and safe manufacturing	Receive store and issue goods	243946
4-PT-M04-T02	Production Technology: lock and safe manufacturing	Open and restore the security on con categorised safes	123588
4-PT-M04-T03	Production Technology: lock and safe manufacturing	Open and restore the security of a categorised safe	123592
4-PT-M04-T04	Production Technology: lock and safe manufacturing	Install and remove locks	123595
4-PT-M04-T05	Production Technology: lock and safe manufacturing	Install electronic locking systems	12594
4-PT-M04-T06	Production Technology: lock and safe manufacturing	Manufacture concrete products	14625

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
3-G-M03-T01	Life skills	Team dynamics	120379 (elective)
4-G-M01-T01	Workplace fundamentals	Safety in the workplace	120366; 123369 (elective)
4-G-M01-T02	Workplace fundamentals	Manage quality	14586; 243025 (core) 7117; 13194; 13235 (elective)
4-G-M01-T03	Workplace fundamentals	Understanding business processes	13952 (core) 120476; 242655 (elective)
4-G-M02-T01	Project management	Project management	120375 (core) 120377 (elective)
4-G-M03-T01	Training, assessment and learning	Training and learning techniques in the workplace	7818; 7876 (elective)
4-G-M03-T02	Training, assessment and learning	Assessment in the workplace	115753 (elective)
4-G-M04-T01	Working with people	Supervision and leadership in the workplace	10981; 120300 (elective)
4-G-M04-T02	Working with people	Team dynamics	11473; 15224; 242812; 242820 (elective)

4-G-M05-T01	Communications and personal management	Meetings	242816 (elective)
4-G-M05-T03	Communications and personal management	Personal management	7997; 14609; 114589; 114946 (elective)

6. Service-related Modules

Automotive Sales and Support Services Modules – NQF Level 4

NLRD # 64289: Further Education and Training Certificate: Automotive Sales and Support Services

Automotive Sales and Support Services - General Module

Module Ref	Module Title	Topic Title	Unit Standard
4-ASS-M01	Overview for vehicle sales and support services	Understanding sales organisations	259879 (core)
		Sustain customer relations	119676 (core)
		Maintain ethical business	242655 (core)
		Encourage personal development in the workplace	259918 (core)
		Understand basic finances and money laundering legislation	242593 (elective)
		Control workflow	259884 (elective)

Passenger Vehicle Sales-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-ASS-M02	Conduct passenger vehicle sales	Generating sales opportunities	259917 (core)
		Advise customers on optimal choices	259898 (core)
		Orientate the customer to the technical features of a passenger vehicle	259899 (elective)
		Conduct sales	259886 (core)
		Understand vehicle finance	259882 (elective)
		Deliver a purchased vehicle to the client	259881 (elective)
		Valuate used vehicles	259887 (elective)
4-ASS-M03-T04	Manage products and processes – Passenger sales	Facilitate sales of products to fleet owners	259959 (core)
		Procure and buy stock	259888 (elective)
		Display stock	259897 (elective)

Commercial Vehicle Sales-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-ASS-M03-T01	Manage products and processes - Commercial sales	Procure and buy stock	259888 (elective)
		Display stock	259897 (elective)
		Generate selling opportunities	259917 (core)
		Advise customers on optimal choices	259898 (core)
		Orientate the customer to the technical features of a vehicle	259899 (elective)
4-ASS-M07	Conduct commercial and ORT vehicle sales	Provide technical orientation of heavy vehicle options and add-on products	259889 (elective)
		Conduct sales of commercial vehicles	259886 (core)
		Understand vehicle finance	259882 (elective)
		Deliver a purchased vehicle to the client	259881 (elective)
		Facilitate sales of products to fleet owners	259959 (core)

Motorcycle Sales-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-ASS-M03-T02	Manage products and processes – Motorcycle sales	Procure and buy stock	259888 (elective)
		Display stock	259897 (elective)
		Generating selling opportunities	259917 (core)
		Advise customers on optimal choices	259898 (core)
		Orientate the customer to the technical features of a motorcycle	259899 (elective)
4-ASS-M08	Facilitate motorcycle sales	Conduct motorcycle sales	259886 (core)
		Understand vehicle finance motorcycle	259882 (elective)
		Deliver a purchased motorcycle to the client	259881 (elective)
		Valuate used motorcycles	259887 (elective)
		Facilitate sales of products to fleet owners	259959 (core)

Parts Sales-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-ASS-M03-T03	Manage products and processes – Parts sales	Procure and buy stock	259888 (elective)
		Display stock	259897 (elective)
4-ASS-M06	Facilitate parts sales	Generate selling opportunities	259917 (core)
		Advise customers on optimal choices	259898 (core)
		Conduct sales	259886 (core)
		Facilitate sales of products to fleet owners	259959 (core)
		Receive and maintain stock	259880 (elective)
		Administer payments	259958 (elective)
		Demonstrate product knowledge of vehicle components and systems	259877 (elective)

Tyre Sales-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-ASS-M03-T05	Manage products and processes – Tyre sales	Procure and buy stock	259888 (elective)
		Display stock	259897 (elective)
		Generating selling opportunities	259917 (core)
		Advise customers on optimal choices	259898 (core)
		Conduct sales	259886 (core)
4-ASS-M05	Facilitate tyre sales	Facilitate sales of products to fleet owners	259959 (core)
		Receive and maintain stock	259880 (elective)
		Administer payments	259958 (elective)
		Categorise tyre application for agricultural machinery and other applications	259883 (elective)
		Demonstrate knowledge of automotive vehicle tyres	259885 (elective)

Finance and Insurance-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-ASS-M04	Finance and insurance	Generating selling opportunities passenger	259917 (core)
		Advise customers on optimal choices passenger	259898 (core)
		Orientate the customer to the technical features of a passenger vehicle	259899 (elective)
		Conduct sales	259886 (core)
		Understand basic finances and money laundering legislation	242593 (elective)
		Understand vehicle finance	259882 (elective)
		Demonstrate knowledge of financial and insurance services	242584 (elective)
		Explain credit life insurance	119260 (elective)
		Warranty as a class of insurance	120014 (elective)

Advice on Vehicle Servicing-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-ASS-M09	Advise on vehicle servicing	Generating selling opportunities	259917 (core)
		Advise customers on optimal choices	259898 (core)
		Conduct sales	259886 (core)
		Process service and repair requests	259919 (elective)
		Schedule a vehicle for servicing	259957 (elective)
		Handover a serviced vehicle	259878 (elective)
		Demonstrate product knowledge of vehicle components and systems	259877 (elective)
		Facilitate sales of products to fleet owners	259959 (core)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
4-G-M01-T01	Workplace fundamentals	Safety in the workplace	120344 (elective)
4-G-M01-T03	Workplace fundamentals	Understanding business processes	242655 (core)

Service Station Operations Modules – NQF Level 2

NLRD # 62709: National Certificate: Service Station Operations

Forecourt Attendant-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-SSO-M01-T01	Forecourt attendants	Perform vehicle maintenance on the forecourt	256599 (elective)
2-SSO-M01-T02	Forecourt attendants	Receive fuel (forecourt wet stock)	114896 (elective)
2-SSO-M01-T03	Forecourt attendants	Record transactions	114889 (elective)

Cashier-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-SSO-M02-T01	Cashier	Conduct point of sales operation in a retail environment	114889; 114902 (elective)
2-SSO-M02-T02	Cashier	Process payment at point of sales	114894 (elective)
2-SSO-M02-T03	Cashier	Mark merchandise and maintain displays	114906 (elective)
2-SSO-M02-T04	Cashier	Dispatch stock	114892 (elective)
2-SSO-M02-T05	Cashier	Maintain stock balances	117897 (elective)
2-SSO-M02-T06	Cashier	Receive stock	114896 (elective)

Merchandiser-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-SSO-M03-T01	Merchandiser	Mark merchandise and maintain displays	114906 (elective)
2-SSO-M03-T02	Merchandiser	Dispatch stock	114892 (elective)
2-SSO-M03-T03	Merchandiser	Maintain stock balances	117897 (elective)
2-SSO-M03-T04	Merchandiser	Receive stock	114896 (elective)
2-SSO-M03-T05	Merchandiser	Receive and control forecourt dry stock	114896 (elective)

Car Wash Attendant-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-SSO-M04-T01	Car wash attendant	Clean vehicle interior	116376 (elective)
2-SSO-M04-T02	Car wash attendant	Wash the exterior of a car manually	116378 (elective)
2-SSO-M04-T03	Car wash attendant	Wash the exterior of a car using automated vehicle washing equipment	116386 (elective)
2-SSO-M04-T04	Car wash attendant	Record transactions	114889 (elective)

Cleaner-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-SSO-M05-T01	Cleaner	Clean bathrooms and toilets	243206 (elective)
2-SSO-M05-T02	Cleaner	Clean windows	elective)
2-SSO-M05-T03	Cleaner	Sweep floors	243194 (elective)
2-SSO-M05-T04	Cleaner	Wet-mop floors	243198 (elective)

Food Handler-specific Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-SSO-M06-T01	Food handler	Handle and bake frozen goods	123367 (elective)
2-SSO-M06-T02	Food handler	Follow food safety practices	114908 (elective)
2-SSO-M06-T03	Food handler	Identify good health habits	243193 (elective)

Cross-cutting Generic Modules

Module Ref	Module Title	Topic Title	Unit Standard
2-G-M03-T04	Life Skills	HIV and Aids in the workplace	12463
2-G-M01-T04	Safety and quality induction	First Aid	12483
2-G-M01-T03	Safety and quality induction	Fire Fighting	252250

7. DVDs and Deaf-friendly Modules

DVDs and deaf-friendly modules

** In this section the references are still under development

Module/DVD Ref	DVD/Module Title	Description
DVD	Automotive Spraypainting skill sets	NLRD 64410, 64409 and 64411, sign language voiceover
DVD	Based on Module 2-G-M01-T01, Safety and Quality Induction	Sign language voiceover
Deaf-friendly Module	Module 2-G-M01-T01, Safety and Quality Induction	Deaf-friendly
DVD	Based on Module 2-G-M04-T02, Working with Materials and Tools	Sign language voiceover
Deaf-friendly Module	Module 2-G-M04-T02, Working with Materials and Tools	Deaf-friendly