



TVET



2023

# Technical

Vocational Education and

Training Programmes



**NAMCOL**

TAKING EDUCATION TO THE PEOPLE



## EMPOWER YOUR TOMORROW WITH CORE COMPETENCIES

- \* Office Administration - Level 1 to 3
- \* Welding and Metal Fabrication - Level 2 to 4
- \* Plumbing and Pipefitting - Level 1 to 3
- \* Automotive Engineering Mechatronics  
(Foundation) - Level 2 to 3



Visit our website  
[www.namcol.edu.na](http://www.namcol.edu.na)



TAKING EDUCATION TO THE PEOPLE



# Introduction

**NAMCOL offers the following Technical, Vocational Education and Training Programmes:**

- **Automotive Engineering Mechatronics**
- **Plumbing and Pipefitting**
- **Welding and Metal Fabrication**
- **Office Administration**

The aim of these programmes is to support the Government's effort to attain Vision 2030 which states that Namibia should become an industrialised country by then. As employment opportunities in the formal sector shrink, the acquisition of technical and entrepreneurial skills for self-employment becomes crucial, thus development of these skills for self-employment is a vital component of these programmes.

## **Target groups**

**The primary beneficiaries will be:**

- Existing NAMCOL trainees
- Unemployed youths and adults
- Artisans seeking to upgrade their skills.

## **Objectives**

**The programme objectives are to:**

- equip trainees with knowledge, skills and attitudes to become competent artisans;
- produce competitive artisans for the job market;
- produce entrepreneurial artisans;
- assist existing entrepreneurs with skills upgrading.

## **Admission requirements**

**To be admitted to this programme, a candidate must have:**

At least a Grade 10 certificate with 23 points plus an E in English, Mathematics and Science. There is no age restriction.

Prospective candidates will be subject to an objective and transparent selection process. Successful applicants will have an equal chance to apply for a study loan from NSFAS. After completion of Level 2 external assessment, all trainees that are found competent in level 2 are attached to the industry for job attachment.

## **Documents required for admission:**

- Namibian Identity document (ID, birth certificate or passport);
- Certified copies of highest qualification
- People from marginalised and diasadvantaged groups are encouraged to apply
- Candidates with pre-vocational subjects at secondary schools have an added advantage
- Proof of income of parents/guardians for loan application.

## **Trainee support**

Trainees are required to attend daily face-to-face classes. For new intakes an orientation workshop is organised at the beginning of each term. At this workshop trainees register, receive study materials and are introduced to their study environment.

## **Assessment**

Trainees are assessed internally and externally through the practical and theoretical activities. External assessment is regulated by Namibia Training Authority (NTA).

## **Job Attachment**

Trainees are required to go for job attachments after successful completion of level 2. This is compulsory to every trainee at this level.

## **Other programmes offered are:**

1. **Short Courses and Skills Upgrading**
2. **Assessment preparation both CEBT and Modular**
3. **RPL mentoring and coaching and skill gap training to RPL Candidate**



# Plumbing and Pipefitting

## Plumbing and Pipefitting

This trade aims to enable trainees to obtain the competencies required for performing basic plumbing tasks such as applying safety rules and regulations; using and maintaining hand tools; handling and storing plumbing materials; measurements and calculations, etc.

### **Programme structure and content:**

Each programme consists of Unit Standard Titles and modules, as prescribed by NTA.

#### **Level 1:**

##### **Unit Standard Titles**

- Apply Occupational Health and Safety in Working Environment
- Use and maintain hand tools used in plumbing operations
- Handle and store plumbing materials
- Read and produce basic sketches and drawings used in plumbing operations
- Carry out basic excavation and backfilling as part of plumbing operations
- Perform basic estimations, measurements and calculations as part of plumbing operations
- Plan and organise plumbing work
- Perform basic pipe-work as part of plumbing operations
- Carry out maintenance of domestic plumbing installations
- Install and adjust water service controls and devices
- Install and fit sanitary fixtures as part of plumbing operations

##### **Generic Unit Standards**

- Numeracy, First Aid, Entrepreneurship, HIV AIDS, Computer Fundamental, occupational health & Safety and communication skills

#### **Level 2:**

##### **Unit Standard Titles**

- Communicate effectively with others as part of plumbing operations
- Use and maintain power tools and machines as part of plumbing operations
- Apply basic welding techniques as part of plumbing operations
- Perform calculations related to plumbing operations
- Carry out basic levelling as part of plumbing operations
- Perform basic bricklaying and plastering and rendering tasks as part of plumbing operations
- Perform basic concreting as part of plumbing operations
- Carry out basic setting out as part of plumbing operations
- Read and interpret basic building drawings as part of plumbing operations



- Install and repair water main pipes system
- Perform basic sheet metal work and Soft soldering
- Set out and install water services

#### **Generic Unit Standard**

- Mathematics, Building science, Building drawings

#### **Job Attachment**

- Level 2 trainees are required to go for job attachments after undertaking external assessments.

#### **Level 3:**

##### **Unit Standard Titles**

- Install basic gas supply system as part of plumbing operations
- Select and fit insulation and sheathing as part of plumbing installations
- Install storm water and sub-soil drainage systems as part of plumbing operations
- Install and Repair below ground sanitary drainage systems as part of plumbing operations
- Fabricate and install flashings as part of plumbing operations
- Install gutters and down pipes
- Erect and dismantle scaffolding as part of plumbing operations
- Plan and install hot water supply systems as part of plumbing operations.

#### **Generic Unit Standard**

- Mathematics, Building science, Building drawings



# Office Administration

# Office Administration



This trade aims to enable trainees to obtain the competencies required for performing basic office administration tasks.

## Programme structure and content

The programme consists of unit standard titles and modules as prescribed by NTA.

### Level 1:

#### Unit Standard titles

- Communicate effectively with colleagues and clients in an office environment
- Follow effective work practices in an office environment
- Demonstrate basic word processing skills to perform administrative duties in an office environment
- File and retrieve documents in an office environment
- Apply knowledge of an organisation to respond to basic customer enquiries in an office environment
- Demonstrate and apply knowledge of office equipment
- Demonstrate knowledge of teamwork

### ICT

- Apply fundamental computer literacy skills

### Generic unit standards

#### Numeracy, Financial skills

HIV and AIDS, Occupational Health and Safety, Entrepreneurship, Communication Skills, Numeracy & Financial Literacy

### Level 2:

#### Unit standard titles

- Handle office mail in an office environment
- Deliver a service to customer and provide feedback in an office environment
- Maintain a reception area in an office environment
- Communicate information in an office environment
- Process customer feedback as part of office procedures
- Demonstrate intermediate word processing skills to perform administrative duties in an office environment
- Access and secure records as part of office procedures
- Manage a diary as part of office procedures



# Office Administration

- Operate and maintain office equipment as part of office operations
- Complete routine financial documents in an office environment
- Maintain office records on a database programme in an office environment

### Level 3:

#### Unit standard titles

- Coordinate own work schedule with that of others to achieve team goals as part of office procedures
- Monitor and maintain stock levels in an office environment
- Demonstrate advanced word processing skills to perform administrative duties in an office environment
- Produce a presentation document as part of office procedures
- Produce a basic document in a desktop publishing application as part of office procedures
- Operate basic functions of a spreadsheet application as part of office procedures
- Plan and write office documents to facilitate communication flow as part of office procedures
- Provide an efficient and secure reception services

### Entrepreneurship

- It is currently a non-examinable Unit Standard. It covers the following learning outcome: Identify, create and select business opportunities.



# Welding and Metal Fabrication

This trade aims to enable trainees to obtain the competencies required for performing metal fabrication tasks such as applying safety rules and regulations; planning and organising metal fabrication work; using hand tools for metal fabrication operations and others.

## Programme structure and content:

Each programme consists of Unit Standard Titles and modules, as prescribed by NTA.

### Level 2:

#### Unit standard titles

- Apply safety rules and regulations in a metal fabrication work
- Plan and organize metal fabrication work
- Use hand tools for metal fabrication operations
- Operate portable electrical and power tools for metal fabrication
- Interpret welding signs and symbols as part of metal fabrication operations
- Assemble and test Oxy-Acetylene welding equipment as part of metal fabrication operations
- Weld mild steel using Oxy-Acetylene in the down hand position
- Weld mild steel using the manual arc welding process in the down hand position
- Cut mild steel using oxy-acetylene cutting equipment as part of metal fabrication operations
- Complete routine tasks using metal fabrication machines
- Demonstrate knowledge of engineering metals, properties and standards
- Demonstrate knowledge of the electrodes and filler rods

#### Gereric Units Standard

- Engineering science
- Engineering drawing
- Entrepreneurship
- First Aid
- Mathematics
- HIV/AIDS awerness
- Computing Fundamentals
- Occupational Health and Safety
- Communication Skills





## Welding and Metal Fabrication



### Level 3:

#### Unit standard titles

- Apply workplace communication processes in a metal fabrication workplace
- Perform basic estimations, measurements and calculations for metal fabrication operations
- Make templates and jigs as part of metal fabrication operations
- Weld cast iron using the manual arc welding process in the down hand position
- Estimate production costs
- Join Metals using oxy-acetylene brazing and silver soldering equipment as part of metal fabrication operations
- Weld Aluminium using the manual arc welding process in the down hand position
- Weld stainless steel using the manual arc welding process in the down hand position
- Cut work pieces using the plasma cutting process as part of metal fabrication operations
- Weld stainless steel using the tungsten inert gas welding process in the down hand position
- Weld mild steel using the metal inert gas welding process in the down hand position
- Carry out basic rigging and safe lifting practices as part of metal fabrication operations
- Interpret and draw basic engineering drawings and sketches as part of metal fabrication operations

## Welding and Metal Fabrication

- Weld mild steel using the manual arc welding process in horizontal, vertical up and overhead position
- Weld mild steel work piece using the shielded metal arc welding process in flat position

#### Generic Units Standard

- Mathematics
- Engineering drawing
- First Aid
- Engineering Science

### Level 4:

#### Unit standard titles

- Gouge metals using manual arc equipment as part of metal fabrication operations
- Weld aluminium using the tungsten inert gas welding process in the down hand position
- Weld thermoplastics with electrofusion equipment
- Weld mild steel using the tungsten inert gas welding process in all positions
- Perform advanced manual arc welding on aluminium in all positions
- Perform advanced tungsten inert gas welding on aluminium in all positions
- Perform advanced manual arc welding on stainless steel in all positions
- Perform advanced tungsten inert gas welding on stainless steel in all positions
- Hard face surfaces as part of metal fabrication operations
- Weld stainless steel pipe in all positions using the tungsten gas arc welding process

#### Generic Units Standard

- Engineering science
- Engineering drawing
- Mathematics



# Automotive Engineering

## Automotive Mechatronics (Foundation)

This trade aims to enable trainees to obtain the competencies required to demonstrate knowledge of basic components of an automobile and apply automotive mechanics services tools and equipment.

### **Programme structure and content:**

Each programme consists of Unit Standard Titles and modules, recognised by NTA.

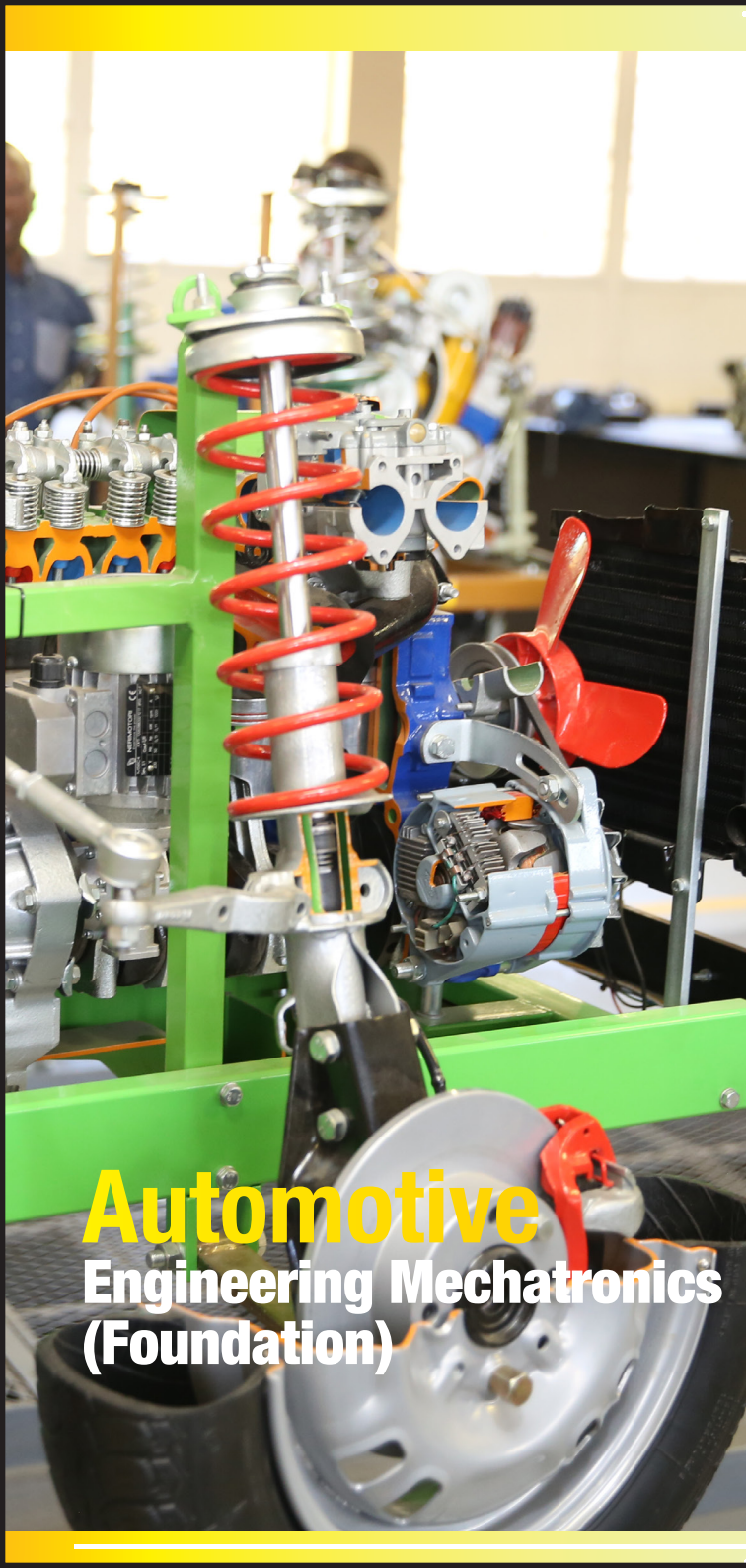
### **Level 2:**

#### **Unit Standard Titles**

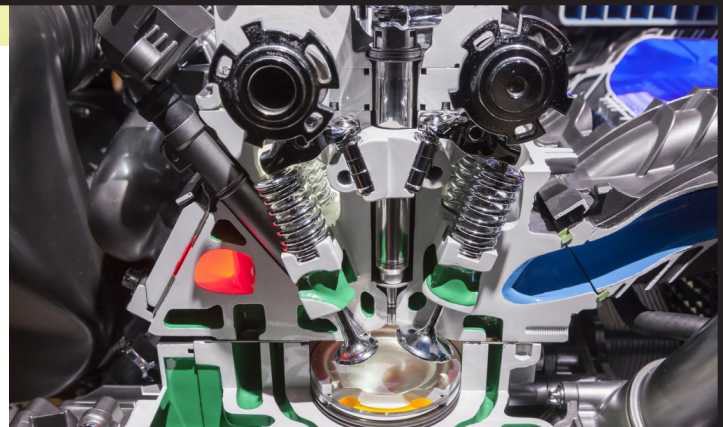
- Apply knowledge of basic mathematical and engineering science related to automotive mechanics
- Apply workplace safety fundamentals in an automotive workshop
- Communicate effectively in an automotive workplace
- Demonstrate basic metal joining techniques used in automotive mechanics
- Demonstrate knowledge on fuels, lubricants and materials
- Perform basic metal work in automotive engineering
- Prepare and use bearings, seals, gaskets, sealants, adhesives and locking devices
- Use and maintain measuring equipment and hand tools in an automotive workplace
- Demonstrate knowledge of motor vehicle care
- Demonstrate knowledge of motor vehicle fundamentals
- Service wheels and tyres of a motor vehicle in an automotive workshop
- Remove and replace electrical and electronic units
- Demonstrate knowledge and understanding of electrical fundamentals

#### **Generic Units Standard**

- First Aid
- HIV and AIDS Awareness
- Occupational health and Safety
- Entrepreneurship
- Mathematics
- Engineering Science
- Engineering Drawing
- Computer Fundamentals
- Communication Skills



**Automotive  
Engineering Mechatronics  
(Foundation)**



# Automotive Engineering

## (Automotive Mechatronics)

### Level 3:

#### Unit Standard Titles

- Carry out motor vehicle major service
- Demonstrate knowledge of basic electrical and electronic circuits and components
- Maintain batteries and lighting system
- Maintain chassis and suspension systems
- Maintain motor vehicle emission control
- Repair steering systems and wheels
- Repair engine cooling systems
- Repair vehicle lubrication systems
- Service hydraulic and electronically controlled motor vehicle braking systems
- Use and maintain diagnostic testing tools and equipment
- Demonstrate basic knowledge of advanced car technologies
- Implement dealership workshop organization

#### Generic Units Standard

- Entrepreneurship
- Mathematics
- Engineering Science
- Engineering Drawings



# Technical Vocational Education and Training Programmes

For further information, please contact:



## **Northern Region**

### **Mr. L. Bock**

NAMCOL Regional Office  
P. O. Box 80002  
Marula Street  
Ongwediva  
Tel. No. [065] 233 781  
Fax. No. [065] 216 987  
E-mail: [bock@namcol.edu.na](mailto:bock@namcol.edu.na)

## **Central Region**

### **Ms. D. Haufiku**

NAMCOL Regional Office  
P. O. Box 2006  
Erf 280, Corner of Prosit and Waterberg  
streets, Otjiwarongo  
Tel. No. [067] 304 379  
Fax. No. [067] 303 170  
E-mail: [haufiku@namcol.edu.na](mailto:haufiku@namcol.edu.na)

## **North-Eastern Region**

### **Ms. N. Afunde**

NAMCOL Regional Office  
Independence Avenue  
P/Bag 2123,  
Rundu  
Tel. No. [066] 255 545  
Fax. No. [066] 255 386  
E-mail: [Afunde@namcol.edu.na](mailto:Afunde@namcol.edu.na)

## **NAMCOL Head Office**

### **Mr. J. Nelumbu**

P/Bag 15008  
Katutura  
Windhoek  
Tel. No. [061] 320 5265  
Tel. No. [061] 320 5306  
Fax. No. [061] 216 987  
E-mail: [Nelumbu@namcol.edu.na](mailto:Nelumbu@namcol.edu.na)



Visit our website  
[www.namcol.edu.na](http://www.namcol.edu.na)



**"TAKING EDUCATION TO THE PEOPLE"**