



**HVAC**  
TRAININGACADEMY

# LEARNERSHIP PROGRAM

**We assist learners in development of skills and knowledge necessary for employment and professional growth in the HVAC/R industry.**

## Mission Statement

**We strive to go above and beyond all limitations to guarantee our clients receive remarkable service. It is our promise to clients to leave no stone unturned when it comes to maintaining the highest quality and standards of training and development.**

## Goals and Objectives

- HVAC Training Academy will institute the following key procedures to reach its goals:
- The creation of a unique, upscale, innovative environment that will differentiate HVAC Training Academy from the other training and development centres.
- A learning environment that will bring people with diverse interests and backgrounds together in a common forum to overcome challenges both professionally and personally.
- Affordable access to the Academy to promote trade development in our province by giving small businesses the opportunity to make use of our training facility.
- We will provide professional services in the most effective manner and with on-going comprehensive quality control programs to ensure the highest standards are delivered.
- We aim to provide 100% client satisfaction.

## The Opportunity

- There is very few companies offering training and development in the country, creating a downward spiral in numbers of qualified artisans.
- The lack of opportunities to qualify, has created a “norm” **for artisans** to never obtain a trade qualification.
- Companies hiring unqualified artisans suffer financial losses due to artisans not having the proper required skills and knowledge to ensure customer satisfaction.
- These issues can only be addressed through proper training and development. HVAC Training Academy has the resources to train all aspects of the air-**conditioning and refrigeration fields up to technician’s** level. The emphasis is on adult training, the training of apprentices, learnerships, artisans and technicians.
- The training would be competency based. This means any student attending the course is given an in-depth theoretical knowledge and the practical skills in order to achieve efficiency in the workplace.
- The aim of the training is such that once any of the courses have been completed, the student will be capable to do the job as required.
- The Industries Professional Institute and governing bodies have been consulted in order to achieve consistently high standards.
- This in turn creates better response from customers towards artisan and businesses in terms of service and satisfaction.

## **PURPOSE AND RATIONALE OF THE QUALIFICATION**

### **Purpose:**

- The air conditioning, refrigeration and ventilation industry provides a service to many sectors of the country's economy such as food processing and warehousing, food transportation, distribution and retailing, deep level mining and industrial process, high rise and retail property, specialized medical care, automotive and mass transport, tourism and hospitality.
- This qualification enables a competent learner at NQF Level 2, under supervision, to demonstrate a basic ability to install, service, repair and operate mechanical equipment that is used in the air conditioning, refrigeration and ventilation industry.
- The current rate of urban development, the advance in technology and development of tourism creates an ever-increasing demand for air conditioning, refrigeration and ventilation equipment and systems and therefore a corresponding demand for technicians to repair, maintain, install and manufacture such equipment and systems.
- The technical skills required for this purpose are scarce and there is a growing demand for skilled technicians in the mechanical, electrical and thermal sciences. These qualifications are ideally suited to school-leavers (male and female) who have an interest in the engineering sciences and have practical skills. This series of qualifications also equips the learner with entrepreneurial skills which would lead to self-employment in the SMME field (Most businesses in the field of air conditioning, refrigeration, and ventilation are in fact SMME's).
- South African trained technicians are the obvious choice for work in this field, in many African countries. We also see an untapped potential for work and learning in this field, in many parts of Africa.
- This qualification specifically suits learners who have an interest in science and mathematics as well as manual dexterity (ability to use tools) and a consciousness of personal and environmental safety.

### **Learners credited with this Qualification will be able to:**

- Identify and handle refrigerants.
- Identify and use basic tools.
- Identify and work with component parts for air-conditioning, refrigeration and ventilation equipment.
- Understand the basic operation of air-conditioning, refrigeration and ventilation systems.
- Work safely and responsibly in the plant environment.

### **Rational:**

- Air conditioning, refrigeration and ventilation are subfields of specialized engineering which account for the design, manufacture, installation, maintenance, and repair of systems which provide artificial cooling for the environment and the processing and preservation of foodstuffs. The development of the urban lifestyle with its concentration of population into centralized areas, the food chain from producer to consumer as well as the working environment and medical care would not be possible without these specialized engineering services.
- This is the first qualification in a series of qualifications which will lead to a learner acquiring all the skills required to work in the industry in the repair, maintenance, installation, manufacture and ultimately design of the mechanical/electrical systems which provide temperature control for environmental or process needs. By qualifying at this level, a learner will achieve the status of an Assistant Mechanic.

## **The broader framework of qualifications (2008) is demonstrated by the following hierarchy of qualifications:**

- Assistant Mechanic - Level 2 (Technical competence - Has a basic understanding of equipment and is able to carry out technical work under supervision).
- Mechanic - Level 3 (Technical competence - Has a knowledge of equipment and systems and is able to carry out technical work without supervision).
- Artisan - Level 4 (Technical competence - Has an advanced knowledge of systems and equipment and is able to work without supervision and to supervise a team).
- Technician/Project Leader - Level 5 (Has knowledge of system design, selection and engineering and has management skills).
- The learner will be required to reach competence in the advanced skills of the servicing, repair and commissioning of systems and the selection of components and to understand and operate supervisory control systems. He will be required to supervise work teams and communicate at all levels in the workplace and with customers.

## **There are many applications of air conditioning, refrigeration and ventilation which relate directly to the tourism and hospitality industry:**

- Air conditioning of hotels, restaurants and recreation areas.
- Air conditioning of luxury buses, automobiles and other transport modes.
- Refrigeration related to the food chain (producers, processors, warehouses, transport, and retailing).
- Relevant future socio-economic developments, for example, the increase in level of tourism will create further demand for the services of trained technicians to install, service and repair cooling equipment at all skills levels.

## **HVAC Training Academy will institute the following key procedures to reach its goals:**

- The creation of a unique, upscale, innovative environment that will differentiate HVAC Training Academy from the other training and development centers.
- The formation of a learning environment that will bring people with diverse interests and backgrounds together in a common forum to overcome challenges both professionally and personally.
- Affordable access to the Academy to promote Trade development in our Province by allowing more small businesses the opportunity to make use of our Training Facility.
- The company will provide its professional development services in the most effective manner and with on-going comprehensive quality control program to ensure the highest standards are delivered and provide 100% client satisfaction.

Comparison between a Learnership and Apprenticeship		
	LEARNESHIPS	APPRENTICESHIPS
<b>Target group</b>	<ul style="list-style-type: none"> <li>Can be employed, unemployed or pre-employed at the time of entering the Learnership. Can be employed per level basis achieved.</li> </ul>	<ul style="list-style-type: none"> <li>Apprentices are employed for the duration of the apprenticeship</li> </ul>
<b>NQF Level</b>	<ul style="list-style-type: none"> <li>The qualification that L.S lead to, can span across all eight NQF levels. Need to complete level 2 – 4 minimum.</li> </ul>	<ul style="list-style-type: none"> <li>The qualification is not higher than the trade i.e. equivalent of NQF level 4</li> </ul>
<b>Age of Learners</b>	<ul style="list-style-type: none"> <li>Restriction on learners entering a learnership is from the age of 16 years to 35 years of age.</li> </ul>	<ul style="list-style-type: none"> <li>Usually entry level employees not younger than 16 years of age.</li> </ul>
<b>Duration</b>	<ul style="list-style-type: none"> <li>Duration is determined by the minimum of 120 credits, so learnerships are usually 12 or 18 months per NQF Level</li> </ul>	<ul style="list-style-type: none"> <li>Three to four years practical in the field knowledge and assessment. RPL can make a learner complete apprenticeship in 18 – 36 Months.</li> </ul>
<b>Contract with Learner</b>	<ul style="list-style-type: none"> <li>Formal Learnership Agreement is signed by the learner, employer and training provider</li> </ul>	<ul style="list-style-type: none"> <li>Contract is signed between the apprentice and a single employer for the duration of the apprenticeship</li> </ul>
<b>Approval / Registration</b>	<ul style="list-style-type: none"> <li>Must be approved by the relevant SETA, which submits it for registration to the DoL</li> <li>R150 000.00 allocated per registered student over the training period to Employer for help with stipend, studies, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Must be approved by the relevant SETA , which submits it for registration to the DoL</li> <li>R150 000.00 allocated per registered student over the training period to Employer for help with studies, wages, etc.</li> </ul>
<b>Tax Rebate</b>	<ul style="list-style-type: none"> <li>A yearly tax rebate of up to 30% over the period of the contract can be applied for from SARS.</li> </ul>	<ul style="list-style-type: none"> <li>A yearly tax rebate of up to 30% over the period of the contract can be applied for from SARS.</li> </ul>

DoL – Department of Labour

NQF – National Qualifications Framework

RPL – Recognition of Prior Learning

## NQF Level 2 - 12 Month Course Content: (1 week per month)

- Trade induction
- Perform basic first aid (2-012483)
- Perform basic firefighting (2-12484)
- Demonstrate understanding of rational and irrational numbers and number systems (2-007480)
- Explain the basic individual role within the business (2-012466)
- Measure, estimate and calculate physical quantities and explore, describe and represent geometrical relationships in 2-dimensions in different life or workplace contexts (2-012444)
- Manage basic personal finance (2-009268)
- Use mathematics to investigate and monitor the financial aspects of personal and community life (2-007469)
- Work with a range of patterns and functions and solve problems (2-009007)
- Write/present for a defined context (2-119456)
- Work in a team (2-G-M01-T02)
- Demonstrate knowledge of the OHS Act as it applies to employees in the air-conditioning, refrigeration and ventilation industries (4-G-M01-T01)
- Work safely and use safety equipment when carrying out mechanical or electrical work on air conditioning, refrigeration and ventilation installations (2-G-M01-T01)
- Demonstrate understanding of fundamentals of electricity and its application in air conditioning, refrigeration and ventilation equipment (2-ARV-M03-T01)
- Identify materials, piping, fitting, jointing methods and insulation materials used for air-conditioning and refrigeration installations (2-ARV-M04)
- Define and explain the principles of thermodynamics and carry out basic calculations involving heat (2-ARV-M01)
- Explain the basic vapour compression cycle, the components, the handling and storage of refrigerants (2-ARV-M01)
- Handle refrigerant containers and transfer refrigerants into service cylinders (2-ARV-M02)
- Identify refrigerant containers, explain handling procedures and discuss the use of refrigerants (2-ARV-M02)
- Maintain safety in the handling group 1 and 2 refrigerants (2-ARV-M02)
- Identify, use and maintain hand tools and measuring instruments used in the air-conditioning, refrigeration and ventilation trades (2-G-M04-T02)
- Perform basic arc welding of metals as applicable to air-conditioning, refrigeration and ventilation installations (2-ARV-M01)
- Join and install refrigerant piping (2-ARV-M04)
- Identify and apply fixing methods for piping, ducting and equipment used in the trade of air-conditioning, refrigeration and ventilation installations (2-ARV-M04)
- Sketch and construct electrical circuits applicable to single-phase air conditioning, refrigeration and ventilation installations (3-ARV-M02)
- Identify, use and maintain refrigeration trade specific tools and instruments (2-ARV-M01).



## TERMS AND CONDITIONS

### **Cancellation Policy**

HVAC Training Academy reserves the right to make changes/cancellations to the course schedule if there are less than 4 students. Cancellation must be in writing or via email, no show or late cancellation will result in the full amount being charged (no refunds). Cancellations must be made no less than seven calendar days prior to the course date. R250 will be deducted off your refund due to administrative fees.

### **Assessment and Certification**

After the course, and at the discretion of the mentor the students will be reviewed, discussed, assessed and tested on their learning outcome. A score of 80% will be required for successful completion of the course and to be awarded a certificate.

### **Payment**

A 50% deposit of the course value is required to secure your registration. The remainder is to be paid 1 week prior to the start date. Full payment is required before the course commences.

Purchase orders are accepted on enrolment, but payment is due prior to the start of the course.

The total tuition fee includes refreshments and all training material.



## Learner Enrolment Document

Please read the following carefully before completing the form below:

**Payment and registration policy:**

- Enrolments for all courses close two days prior to the training start date, subject to availability.
- HVAC Training Academy will confirm your booking upon receipt of a completed learner enrolment form, as well as a 50% deposit of the course value. Proof of payment and the enrolment form must be emailed to: [info@hvactraining.co.za](mailto:info@hvactraining.co.za) to secure your registration.
- The remainder 50% must be paid 1 week prior to the start date of the workshop. Certification will not be issued to the student/employer if the remainder of the payment is not received.

**Cancellation and refund policy:**

- To be eligible for a refund of your deposit, we require seven calendar days' notice before the course commences. **Please Note:** A R250 registration admin fee will be deducted from your refund.
- Should no notice of cancellation be received, you will be charged the balance of the course (we will notify the employer after the attendance register has been completed).

### Learning Program Details

Please tick the relevant box:     Western Cape                       Gauteng                       Kwa-Zulu Natal

Name of Course:			
Course Date:			

### Learner Information

First Name:		Surname:	
ID Number:		Cell No:	
Email Address:			
Postal Address:			Code: <input style="width: 50px;" type="text"/>
Job Title:		Job Field:	<input style="width: 100px;" type="text"/>
Highest Qualification:			

### Invoice Information

Company Name:			
VAT Registration Number:			
Postal Address:			
For Attention:			
Telephone Number:		Fax:	<input style="width: 100px;" type="text"/>
Email Address:			

### Authorisation Information

Authorized By:			
Designation:			
Signature:		Date:	<input style="width: 100px;" type="text"/>

### Payment Details

Fee: R _____	Vat: R _____	Total Payment Due: R _____
Direct Deposit: Nedbank Current Account	Branch: Business Southern Peninsula	Account Number: 1133 984 649
	Branch Code: 12 32 09	Payment Due: Final payment due 1 week prior to workshop start date

Conditions: 50% deposit of course value to be paid to register for course. Full payment is due 1 week prior to the start date of the workshop. Please email proof of payment to [info@hvactraining.co.za](mailto:info@hvactraining.co.za).

I confirm that the information I have provided is correct and accept responsibility for payment of this account.

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Where did you hear about us?	
Would you like to be informed of other upcoming courses?	Please tick:    yes <input type="checkbox"/> no <input type="checkbox"/>

**Please contact us for more information about our courses, training dates and costs.**