

# Welcome to Heating, Ventilation, Air Conditioning, and Refrigeration

## **Our mission:**

The mission of the HVAC/R program is to provide training in the construction trades in order to meet the occupational needs of the citizens of the school's service area who have an interest in this type of employment.

## **Program objectives:**

1. To develop skills, attitudes, and proper working habits that will enable the student to make an intelligent entry into the HVAC/R field.
2. To provide opportunities for the student to learn the standards, codes, and regulations governing the phases of the HVAC/R field.
3. To develop within the student certain ethics that will cause them to realize the importance of quality workmanship to the customer.

## **Testing Procedures:**

Each unit or chapter will have a detailed assignment sheet and/or activity. The assignment sheet will include reading, media to be viewed, and work to be completed. After completing all assignments on the assignment sheet, you are now ready to see the instructor to schedule your test/quiz. Testing may only be done during school hours and with the instructor's approval. Upon passing the written and/or digital test/quiz, you are then eligible for a skills exam over the subject, where the student will perform hands on work.

## Grading Procedures and policies:

Each student will be graded in two areas, Theory and Skills. Listed below are examples of each area:

1. Skill Proficiency: Includes all shop and performance tests.
2. Related information (Theory): Includes written tests, quizzes, etc.

Midway through the trimester, the instructor will have a conference with the student, at which time the student will be advised of grades of all courses that a student has participated in. At any time, before or after midterm conference, a student may schedule a conference for their current standings or get scores on specific exams or work projects

An average of 60 or better is required to pass a course. The student must also maintain a 70 overall average for all coursework completed during the trimester to remain in good standing

- Note: some third-party testing exams may use different pass/fail scales for their metric. If this is the case, the metric used is written on the exam site, and that metric will be followed.
- In addition to items written in the syllabus, your instructor may have other hands-on work for you to complete. This extra work is required, and will be relevant to the HVAC field and your education.

## Classroom & Lab Policies:

1. No smoking or vaping on school premises
2. No eating or drinking (except when class is dismissed for break or lunch)
3. Personal Protective Equipment (PPE) will be used when working on or near a skills lab.
4. Be respectful of others
5. Be respectful of other people's property.
6. Care should be taken of all tools, trainers, and classroom materials

## Cell Phone Guideline:

Cellular Phones and mobile devices have been integrated as part of our daily lives, therefore they may be used for research, information gathering, and as a learning resource. That being said; this is a leaning institution, therefore, all personal calls, social media, etcetera is not in the best interest of learning. If an instructor asks you to put away your phone, please do so at once. If abused, this guideline may be changed or revoked at any time to suit the needs of the program.

## Course Layout & Exit Points:

<u>Course Code</u>	<u>Description</u>	<u>Hours</u>	<u>Award</u>
HVA-0001	Worker Characteristics	6	
HVA-1010	Technology Foundations	30	
HVA-1020	OSHA	10	
HVA-1030	Shop Safety	24	
HVA-1040	Refrigeration Fundamentals	100	
HVA-1050	Tools, Equipment, & Shop Practices	30	
HVA-1060	Electricity & Controls I	130	
HVA-1070	Installation	76	
HVA-1080	Green Awareness	14	
HVA-1090	Employment Readiness Exam	12	
		<b>432</b>	<b>HVAC Mechanic Assistant Certificate</b>
HVA-0002	Worker Characteristic	6	
HVA-2010	Introduction To System Service	134	
HVA-2020	Basic Automatic Controls	160	
HVA-2030	Motors	60	
HVA-2040	Domestic Appliances	30	
HVA-2050	E.P.A.	30	
HVA-2060	Employment Readiness Exam	12	
		<b>864</b>	<b>Domestic Unit Repairer Certificate</b>
HVA-0003	Worker Characteristic	6	
HVA-3010	Gas, Electric, & Heat	180	
HVA-3020	Air Conditioning (cooling)	72	
HVA-3030	Heat Pumps	108	
HVA-3040	Carbon Monoxide	36	
HVA-3050	All Weather Systems Exam	30	
		<b>1296</b>	<b>Heating, Ventilation, &amp; Air Conditioning Technician Diploma</b>
HVA-0004	Worker Characteristic	6	
HVA-4010	Electricity & Controls II	156	
HVA-4020	Commercial Refrigeration	252	
HVA-4030	Employment Readiness Exam	18	
		<b>1728</b>	<b>Heating, Ventilation, Air Conditioning, &amp; Refrigeration Technician Diploma</b>

## Course Layout & Exit Points (continued ) :

1. HVAC Mechanic Assistant **Certificate** = 432 hours
2. Domestic Unit Repairer **Certificate** = 864 hours
3. Heating, Ventilation, & Air Conditioning Technician **Diploma** = 1296 hours
4. Heating, ventilation, Air Conditioning, & Refrigeration Technician **Diploma** = 1728 hours

## Class Schedule:

Start Time-----7:45 AM

Break-----9:30 AM – 9:45 AM

Lunch-----12:00 PM– 12:45 PM

Ending Time-----2:30 PM

## Orientation to technology:

WIFI Connection #1

A. **Network:**\_\_\_\_\_

B. **Password:**\_\_\_\_\_

WIFI Connection#2

A. **Network**\_\_\_\_\_

B. **Password:**\_\_\_\_\_

### 1. Computers

A. **Username:** = **Student S#**\_\_\_\_\_

B. **Password** = **Student portal password**\_\_\_\_\_

C. Computer Storage & Charging

D. TCAT Livingston Website

1. Quick Links

2. Email

3. D2L

A. **Username:**\_\_\_\_\_

B. **Password:**\_\_\_\_\_

**Although we hope emergencies don't arise, we will plan and be prepared Just in case!**

## Emergencies/Evacuation

### A. Fire

1. Warning Signal: Continuous ringing heard over the horn system
2. Stop. Come to attention. Turn machines off.
3. Leave all tools & materials where they are being used.
4. Students will orderly exit through the classroom door & meet in the center of parking lot between two buildings, which is far enough away to allow emergency equipment and workers to work.
5. Instructor will then make sure all students are accounted for.

### B. Emergency Evacuation

1. Same as Fire Drill

### C. Tornado

1. Warning Signal: Continuous ring heard over the horn system.
2. When ring is heard, take cover in the Building Construction restroom
3. Instructor will then verify students are accounted for

### D. Lockdown

1. In case of an emergency requiring the class to be locked down, your instructor will direct you to quickly & quietly, go to a safe place out of sight from anyone who may be outside.
2. Instructor will then verify students are accounted for.
3. Students and Staff will remain in a lockdown location until they get an all clear.
6. Leave all tools & materials where they are being used.
7. Students will orderly exit through the classroom door & meet in the center of parking lot between two buildings, which is far enough away to allow emergency equipment and workers to work.

- E. Instructors will always make sure all students are accounted for, so please group together if it is deemed safe.

## Dress Code:

- No extremely loose-fitting clothing
- No shorts
- No Pajama pants
- No neck ties
- Non-break-away key/ID lanyards are forbidden in Lab area
- No open-toed shoes or slides
- No inappropriate words and/or images on clothing
- Failure to comply with above stated rules will result in being ineligible for participation or will result in being sent home to obtain appropriate attire.

## Classroom rules:

- Use of computers is for learning/research materials only
- The only time for food and/or drinks is during break and lunch
- Attendance is very important! Be in the classroom at or before 7:45 AM every morning for roll call. Tardies will be accounted for and recorded on attendance roll.
- No disruptive behavior
- No abusive behavior will be tolerated. EVER. We will show everyone respect.
- Cell phone and mobile devices are subject to the aforementioned "Cell phone guidelines."
- Foul and/or offensive speech and gestures are strictly forbidden.

## Lab and Jobsite expectations

- Conduct must of a professional manner
- Wear **safety glasses** and /or other **appropriate PPE** at all times when working on a lab project or doing live work
- No cellular phones or mobile device usage in lab or jobsites
- Foul and/or offensive speech and gestures are strictly forbidden
- Be **productive with allotted time**, and work in a safe, timely manner
- Follow the direction and guidance of instructor or jobsite foreman
- All safety procedures must be closely followed
- In the event of an emergency or accident, promptly notify: instructor, supervisor, and/or jobsite foreman.

## Suicide Prevention Plan:

As part of the College's Culture of Care & Support we provide campus resources to create access for you to maintain your safety, health, and well-being. We understand that as a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug concerns, depression, difficulty concentrating &/or a lack of motivation.

These stressful moments can impact academic performance or reduce your ability to engage.

The college offers services to assist you with addressing these or **ANY** other concerns you may be experiencing. If you, or someone you know are suffering from any challenges, you should reach out for support. You can seek confidential mental health services available on campus in Student Services Office. Another helpful resource is **TN Suicide** Prevention Network at: [www.tspn.org](http://www.tspn.org)

**If you are reading this, you are one step closer to an exciting career!**

- If ever in your HVAC student career you have a question, please feel free to ask.
- TCAT staff and faculty ARE HERE TO HELP AND SERVE THE NEEDS OF STUDENTS.
- We cannot help you, if you don't reach out and convey your needs.
- Please, I urge you to let us know if you don't understand the curriculum, rules, policies, or anything else. Don't sit in the dark, when the first step to understanding is so attainable.
- Please use your time wisely. You will get out of this class what you put in.
- We want you here and value your presence. Please attend and engage in HVAC/R. Whether it be discussion, Lab projects, or theory work, YOUR CONTRIBUTION is appreciated.
- We want you to succeed in attaining your goals in HVAC/R, and we will help any way we can.
- The network of friends and contacts you meet here can be a valuable networking resource for you to take throughout your HVAC/R career, so I encourage you to engage with your peers and share knowledge and ideas regarding HVAC/R.
- You are home here. Please respect your home.
- Welcome to HVAC/R!!!!

- Billy Bowman  
HVAC/R Instructor  
TCAT Livingston



## **Student HVAC/R Handbook information:**

- **Introduction to HVAC/R**
- **Safety**
- **Testing & Grading Procedures**
- **Certificate & Diploma Exit Points**
- **Class Schedule**
- **Media Station & Location of Facilities**
- **Conduct & Attitude**
- **Classroom Rules**
- **Lab/Jobsite Rules**
- **Tools & Equipment**
- **Emergency Evacuations & Contingency Plans**
- **Use of the Syllabus/Program Guide**
- **Student Tools & Textbooks**
- **Suicide Prevention Plan**

I understand, have read, and have been verbally explained about each one of the abovementioned checklist items.

**Student Signature:**\_\_\_\_\_

**Date :**\_\_\_\_\_