COURSE TITLE: Refrigeration Theory 2
COURSE NUMBER: HVAC0102
CREDIT HOURS: 1
INSTRUCTOR: Departmental Syllabus
OFFICE LOCATION: Departmental Syllabus
OFFICE HOURS: Departmental Syllabus
TELEPHONE: Departmental Syllabus
EMAIL: KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITES: General Safety. Math Level 3 Recommended

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, http://www.kckccbookstore.com/, for the required texts for your particular class.

COURSE DESCRIPTION:
This part of this course will cover basic safety, shop safety, equipment safety, tool safety, and electrical safety.

METHOD OF INSTRUCTION:
A variety of instructional methods may be used depending on content area. They may include but are not limited to lecture, multimedia, cooperative/collaborative learning, demonstrations, labs, on-the-job, internships, and other learning experiences outside the classroom. Methodology will be selected to best meet student needs.
COURSE OUTLINE:

I. Heat
   A. The use of heat
   B. Solder
   C. Very hot weather

II. Cold
   A. Cold weather
   B. Liquid refrigerant

III. Refrigerants in your breathing space
   A. Vapors
   B. Leak detectors
   C. ASHRAE

IV. Tools
   A. Power
   B. Hand

V. Fire extinguishers
   A. Chemicals
   B. Water

EXPECTED LEARNER OUTCOMES:

A. The student will be able to demonstrate the proper and safe use of hand tools.
B. The student will be able to demonstrate the proper use of and location of fire extinguishers.
C. The student will be able to demonstrate the proper use and safety of power tools.
D. The student will be able to demonstrate a list the rules for personal safety.

COURSE COMPETENCIES:

Upon successful completion of this course:

The student will be able to demonstrate the proper and safe use of hand tools.

1. The student will be able to pass a competency test on use and handling of oxygen/acetylene torches.
2. The student will be able to demonstrate proper and safe use of screwdrivers and nut-drivers.
3. The student will be able to demonstrate proper and safe use of air condition gages.
4. The student will be able to demonstrate ladder safety class. OSHA 10

The student will be able to demonstrate the proper use of and location of fire extinguishers.

5. The student will be able to demonstrate the location of fire extinguishers and fire exit doors.
6. The student will be able to explain the fire triangle: Fuel, Heat, Oxygen.
7. The student will be able to explain the use of fire extinguishers:
8. The student will be able to explain the use of pressurized water extinguishers.
9. The student will be able to explain the use of Carbon Dioxide, CO2 extinguishers.
10. The student will be able to explain the use of Dry Chemical extinguishers.
11. The student will be able to explain the use of Foam extinguishers.

The student will be able to demonstrate the proper use and safety of power tools.
12. The student will be able to demonstrate the safe use of drills, cordless drills, recovery pumps, voltmeter and vacuum pump.
13. The student will be able to demonstrate the proper use of electric heat gun.
14. The student will be able to demonstrate the proper use of programmable charging scale.

The student will be able to list the rules for personal safety.
15. The student will be able to demonstrate if you turn it on, turn it off.
16. The student will be able to demonstrate if you unlock it, lock it.
17. The student will be able to demonstrate if you break it, repair it.
18. The student will be able to demonstrate if you can’t fix it, call someone who can.
19. The student will be able to demonstrate if you use it, take care of it.
20. The student will be able to demonstrate if you make a mess, clean it up.
21. The student will be able to demonstrate if you don’t know how to operate it, leave it alone.
22. The student will be able to demonstrate if it doesn’t concern you, mind your own business.

ASSESSMENT OF LEARNER OUTCOMES:
Student progress is evaluated by means that include, but are not limited to, exams, written assignments, and class participation.

SPECIAL NOTES:
This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

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