Virginia Western Community College
AIR 111
Air Conditioning and Refrigeration Controls I

Prerequisites
None.

Course Description
Presents electron theory, magnetism, Ohm's Law, resistance, current flow, instruments for electrical measurement, A.C. motors, power distribution controls and their application. Part I of II. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

Semester Credits: 3 **Lecture Hours: 2** **Lab/Clinical/Internship Hours: 2**

Required Materials

Textbook:
Essentials Skills for HVACR, Theory & Labs**,** 2nd edition, ISBN 979-8-88817-488-3

Other Required Materials:
Safety glasses must be provided by the student and are required to be worn at all times while in the lab.

Course Outcomes

At the completion of this course, the student should be able to: Students upon completion of course will have a general working knowledge of common faults and common remedies for several types of HVAC systems, including air conditioning and heating including electric, gas, heat pumps.

This will include the following:
Theory and sequence of operation.
Identification, nomenclature and location or recognition of basic components.
Typical system construction or layout.
Use of associated tools and test equipment.
Measurement and/or calculation of operating condition.
Recognition and troubleshooting of common faults.

Topical Description

Week 1- Introduction to the class, go over syllabus, get to know the students and let them get to know you, assign chapter 1 and review questions for home work.

Week 2- go over chapter l homework; do power point and lecture, go to lab and show how to use lock out tag out equipment and other safety devices, assign chapter 2 and review questions for home work.

Week 3- go over chapter 2 homework, do power point and lecture, go to lab and work on lab worksheets

Week 4- some more lecture, lab worksheets and practice, assign chapter 3 and review questions for homework

Week 5- go over homework, do power point and lecture, do lab and lab worksheets

Week 6- some more lecture, go to lab and do lab worksheets, assign chapter 4 and review questions for homework

Week 7- go over homework, do power point and lecture, go do lab, assign chapters and review questions for homework

Week 8- go over homework, do power point and lecture, assign chapter 6 and review questions for homework

Week 9- go over homework, do the power point and lecture, do lab worksheets, assign chapter 7 and review questions for homework

Week 10- go over homework, do the power point and lecture, do the lab worksheets

Week 11- do the power point for chapter 8 and lecture, assign chapter 8 and review questions for homework, lab

Week 12- more lecture on chapter 8, go to lab and work on lab worksheets, assign chapter 9 and review questions for homework

Week 13- go over the homework, do the power point and lecture, go to lab and do lab worksheets

Week 14- more lecture on chapter 9, go to lab

Week 15- catch up on anything that was missed and review for the final

Week 16- finals

Notes to Instructors

ADA Statement (PDF)

Title IX Statement (PDF)