Course: HVAC113 Introduction to HVAC/R

Department: HVAC

Course Description: This course is an introductory course to the HVAC/Refrigeration field. The course covers the basic components of the compression refrigeration system, terminology, materials, and the cost estimating of components used to create a HVAC/R system. The course introduces the career fields and paths their career may take. Students are introduced to OSHA safety standards, the tools of the trade and proper tool usage.

The course is composed of two (2) hours lecture and two (2) hours lab per week.

Prerequisites: None

COURSE OUTCOMES	SAMPLE OUTCOMES ACTIVITIES	SAMPLE ASSESSMENT TOOLS
Upon successful completion of this course students are able to:	To achieve these outcomes students may engage in the following activities:	Student learning may be assessed by:
1. Identify the various careers and education levels involved. CCT, WC	• Research their career interests • Open discussions • Heighten awareness of student ambitions	• Evaluations of essays based on assignment rubric • Student resume writing • In-class workshops
2. Converse knowledgeably about the compression refrigeration system used in HVAC. CCT, IL, WC	• Regular and continued use of the Term, names and abbreviations used in HVAC/R	• Tests & Quizzes • In-class conversations • In-laboratory explanations
3. Identify the basic components of the HVAC system. IL, WC	• Textbook and on-line readings • Video presentations • HVAC/R Trainers • Classroom demonstrations	• Tests, quizzes • Classroom discussion • Laboratory work
4. Estimate the cost of an HVAC installation or equipment replacement	• Become familiar with the various HVAC/R equipment supply houses and distributors locally	• Tests, quizzes • Written assignments • Price spreadsheets

IL, WC	• Visit their local supply houses • Research cost and retail prices • Work with parts pricing catalogues	
5. Illustrate the working HVAC/R system CCT, IL, WC	• Textbook readings • Classroom demonstrations • Working on HVAC/R trainers • Connecting the HVAC/R components with free hand illustrations	• Tests, quizzes • Mechanical drawings • Homework assignments
6. Understand the operation of the HVAC main components IL, WC	• Textbook reading • Classroom presentations • Laboratory presentations • Video presentations • On-line working assignments	• Test, quizzes • Written assignments • Laboratory work
7. Understand the importance of safety and OSHA standards IL, WC	• Textbook readings • Classroom discussions • Collaborative learning • Walk through labs with OSHA safety equipment	• Tests quizzes • Written assignments • Laboratory applied OSHA regulations
8. Become familiar with the HVAC tools of the trade CCT, IL, WC	• Textbook reading • Laboratory common HVAC tools • Classroom collaborative learning • Laboratory use of tools	• Laboratory observations

This course includes the following core competencies: Critical and Creative Thinking (CCT), Information Literacy (IL), and Written Communication (WC).