



COURSE SYLLABUS

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COURSE: AHR 114 HEAT PUMP TECHNOLOGY

HOURS: Lecture: 2 Lab/Shop: 4 Work Exp/Clinical: 0 Credits: 4

COURSE DESCRIPTION:

This course covers the principles of air source and water source heat pumps. Emphasis is placed on safety, modes of operation, defrost systems, refrigerant charging, and system performance. Upon completion, students should be able to understand and analyze system performance and perform routine service procedures.

PREREQUISITE(S): AHR 110 or AHR 113

COREQUISITE(S): None

TEXTBOOK(S) & OTHER SPECIAL REQUIREMENTS:

Open Educational Resources (OER) are listed in the course Moodle.

STUDENT LEARNING OUTCOMES:

Upon successful completion of this course, the student will be able to:

1. Demonstrate safe practices and procedures with tools, materials, and industry accepted test equipment covered in the course.
2. Diagram refrigerant flow through a heat pump in both the heating and cooling mode identifying refrigerant conditions and pressures.
3. Explain the defrost cycle for air-to-air heat pumps.
4. Identify and troubleshoot electrical control system components for heat pumps.
5. Identify and troubleshoot refrigeration system components for heat pumps.
6. Identify and describe the different types of heat pumps in relation to their source of heat.

*****Please refer to the online version of the Richmond Community College Program & Course Catalog and the Student Handbook for current academic and general information.**