NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY
AIR 232 – CIRCUITS AND CONTROL V (3 CR.)

Course Description

Presents application and design of wiring and schematic diagrams of commercial refrigeration systems. Teaches fundamentals of operation and applications of pneumatic controls including basic pneumatic control circuits. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

General Course Purpose

To develop in the student an ability to understand the application, read, design wiring and schematic diagrams of commercial refrigeration systems, air conditioning systems and heat pump systems.

Course Prerequisites/Corequisites

Prerequisite: AIR 231.

Course Objectives

Upon completing the course, the student will be able to:

1. Diagnose, troubleshoot and address issues related to thermostats, pressure switches, and other electronic control devices.
2. Install and operate controls used in complex residential air condition control systems.
3. Troubleshoot modern refrigeration, heating, and air conditioning control systems, including the diagnosis of electrical components and use of a variety of troubleshooting tools.

Major Topics to be Included

A. Electrical Control Devices
B. Heating Control Devices
C. Residential Air Conditioning and Control Systems
D. Commercial and Industrial Air Conditioning Control Systems
E. Troubleshooting Electric Control Devices
F. Troubleshooting Modern Refrigeration, Heating and Air-Conditioning Circuitry and Systems