COLLIN COLLEGE

COURSE SYLLABUS

Course Information

Course Number: HART 2431

Course Title: Advanced Electricity for HVAC

Course Description: Advanced electrical instruction and skill building in installation and servicing of air conditioning and refrigeration equipment including detailed instruction in motors and power distribution motors, motor controls, and application of solid state devices.

Course Credit Hours: 4
Lecture Hours: 2
Lab Hours: 4

Student Learning Outcomes:

- State Mandated Outcomes: Upon successful completion of the course, students will:
    1. Apply the principles and theory of power distribution; (SCANS: C19, F1)
    2. Describe the theory, operation, and protection of electric motors; (SCANS: F2, F6)
    3. Identify the application of solid state devices; (SCANS: F1, F2)
    4. Troubleshoot electric motors and controls. (SCANS: C18, C20)
- Additional Collin College Outcomes: Upon successful completion of this course, students will:
    1. Draw and read electrical schematics. (SCANS: F2)
    2. Perform troubleshooting using computer simulations. (SCANS: C20)
    3. Rewire a complete system. (SCANS: C19)

Secretary's Commission on the Acquisition of Necessary Skills (SCANS)- SCANS skills are a group of foundational skills and workplace competencies that the Secretary's Commission on the Acquisition of Necessary Skills established as vitally important for workplace success in the 21st century. In Collin's workforce programs, the SCANS skills are developed and reinforced throughout the curriculum to provide students with an opportunity to hone these skills/competencies in the context of their education. Over the course of an entire degree program, the successful student is expected to demonstrate all of the SCANS skills and competencies as part of their education. The SCANS Foundation Skills and Workplace Competencies are described at:
http://www.collin.edu/academics/programs/Workforce_SCANS_Skills_Syllabi_Code_Key.pdf

Withdrawal Policy: See the current *Collin Registration Guide* for last day to withdraw.

Collin College Academic Policies: See the current *Collin Student Handbook*

Americans with Disabilities Act Statement: Collin College will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to contact the ACCESS office, SCC-D140 or 972.881.5898 (V/TTD: 972.881.5950) to arrange for appropriate accommodations. See the current *Collin Student Handbook* for additional information.