Course: HVAC System Controls HVAC224

Department: HVAC

Course Description: This course explores the principles of electric, electronic, and pneumatic systems control. An examination of current practices regarding application and design of commercial systems is studied. Discussions include energy savings through computer application in building automation systems. In the laboratory, students investigate the principles, applications, and troubleshooting techniques of these circuits. Students also develop computer-generated control drawings

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. Recognize the categories and functions of HVAC controlled systems IT, WC, TS	• Classroom discussion • Textbook reading • Laboratory testing	• Assigned text readings • Class and lab workshops • Tests and quizzes
2. Describe the functions of the HVAC controlled system to deliver air-conditioning to commercial buildings IT, IL, WC	• Textbook and on-line readings • Video presentations • Classroom discussions • Laboratory demonstrations	• Tests & Quizzes • In-class conversations • Laboratory evaluations
3. Comprehend the movement of heat when satisfying commercial buildings IT, WC, OC	• Textbook and on-line readings • ASHRAE Worksheets • Video presentations • Classroom demonstrations	• Tests, quizzes • Homework assignments • Classroom discussions • Laboratory work
4. Design and draw a CAD system using controllers for the HVAC system IT, IL, WC, TS, OC	• Textbook and on-line readings • CAD demonstrations • Class and Laboratory discussions • Classroom presentations	• Tests and quizzes • Written assignments • Homework assignments • Laboratory assignments

5. Describe the various types of controls used in conjunction with a controller for commercial buildings	• Textbook readings • Video presentations • Classroom collaborative learning • Classroom discussions	• Tests and quizzes • Written assignments • Homework assignments • Laboratory assignments
6. Realize the career fields this course opens for employment IT, IL, WC, OC		• Test quizzes • Homework assignments

This course includes the following core competencies: Information Literacy (IL), Information Technology (IT), Technical Skills (TS), Written Communication (WC)