SYLLABUS/COURSE OUTLINE

DIVISION: Business, Engineering & Industrial Technologies REVISED: 1/09/2014 CURRICULUM: Air Conditioning & Refrigeration COURSE NUMBER AND TITLE: AIR 199-01, HVAC Electronics Survey INSTRUCTOR: Teresa P. Toler ttoler@dcc.vccs.edu 434-797-8425 CREDITS: 2 HOURS/WK LECTURE: 1 HOURS/WK LAB: 2

I. CATALOG DESCRIPTION:

Studies electronics and it applications in the HVAC field. Covers computers, programmable controllers, and microprocessors in the HVAC industry.

II. RELATIONSHIP OF THE COURSE TO CURRICULUM OBJECTIVES:

The objective of this course is to give the student an overview of the use of electronics in the HVAC field.

III. REQUIRED BACKGROUND/PREREQUISITES/COREQUISITES:

None

IV. COURSE CONTENT:

The student will become familiar with the operation, application and interpretation of the following:

Electronic Component Identification Typical Power Supply Circuits Soldering Printed Circuit Boards Computers Basic Robotics

V. THE FOLLOWING GENERAL EDUCATION OBJECTIVES WILL BE ADDRESSED IN THIS COURSE:

• Communications

1.1 understand and interpret complex materials;1.3 use standard English;1.5 use listening skills

• Critical Thinking

2.4 weigh evidence and decide if generalizations or conclusions based on the given data are warranted;

2.5 determine whether certain conclusions or consequences are supported by the information provided; and

2.6 use problem solving skills.

• Quantitative Reasoning

6.1 use logical and mathematical reasoning within the context of various disciplines;

6.2 interpret and use mathematical formulas;

VI. LEARNER OUTCOMES :

VII. EVALUATION:

 Demonstrate the knowledge and awareness of the damage that can caused by static, how to control th static and damage to equipment a components. 	Evaluation methods: Written quizzes and tests be Homework and labs ne and
• Demonstrate the ability to identify Electronic components and how to installed on the circuit board.	y Evaluation methods: hey are Written quizzes and tests Homework and labs
 Demonstrate the ability to identify hard ware located in the computer Identify main components on the motherboard. 	y all the Evaluation methods: er. Written quizzes and tests Homework and labs
 Identify the purpose of various typ computer preventive maintenanc products and procedures and who use them 	pes of Evaluation methods: e Written quizzes and tests en to Homework and labs
 Demonstrate a knowledge of elect quantities, units, abbreviations, a meters 	rical Evaluation methods: nd Written quizzes and tests Homework and labs
 Demonstrate an understanding of Diodes, transformers and transist 	f Evaluation methods: tors. Written quizzes and tests Homework and labs
 Demonstrate an understanding of power supplies 	f typical Evaluation methods: Written quizzes and tests Homework and labs
• Design and construct a basic VEX for competition in class.	robot Evaluation methods: Written quizzes and tests Homework and labs

INSTRUCTOR:	Teresa P. Toler
OFFICE:	Hill 110 (Back of classroom)
PHONE:	434-797-8425
E-MAIL ADDRESS:	ttoler@dcc.vccs.edu
OFFICE HOURS:	Posted on office door
TEXTBOOK:	No Textbook required
SEMESTER:	Spring 2014

COURSE CONTENT:

The student will become familiar with the operation, application and interpretation of the following:

Electronic Component Identification Typical Power Supply Circuits Soldering Printed Circuit Boards Computers Basic Robotics

REQUIREMENTS:

Regular attendance is necessary for successful completion of this course. You are expected to be here on time, each time the class meets. Students that are absent 25 percent of the lab will receive a failing grade according to DCC policy. Quizzes given during class cannot be made up. **No exceptions will be made.** Labs can be made up on your own time and it is your responsibility to get all material that you missed during an absence. My office hours are posted below.

COLLEGE ATTENDANCE POLICY:

When absence from a class becomes necessary, it is the responsibility of the student to inform the instructor prior to the absence, whenever possible. The student is responsible for making up all work missed during an absence. It is the philosophy of Danville Community College that student and faculty interactions are critical to the learning process. Class attendance enhances this process. Regular attendance is thus expected of students. Students missing twenty-five percent (25%) or more of the total time allocated for classes and or labs may be administratively withdrawn from the class upon recommendation of the instructor. Students who are administratively withdrawn prior to completion of 60% of the class will be issued a grade of "W." After that point, students who are administratively withdrawn will be issued a grade of "F."

OFFICE HOURS:

Monday	Tuesday	Wednesday	Thursday	Friday
10:00AM-	1:00PM-	10:00AM-	3:00PM-4:00PM	
11:30AM	3:00PM	11:30AM		
2:30PM-6:30PM				
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GRADING PROCEDURES: The grade will be based on performance on various lab problems assigned and homework. In addition, there will be several quizzes and test.

1.	Grading System:	Daily Grade (attendance) & Homework Test Grades, Lab assignments	50% 50%
2.	Letter Grades:	A = 100-91B = 90-81C = 80-71D = 70-61F = 60 or below	

COMPUTER LITERACY: Students will be expected to use e-mail to communicate with the instructor about absence as well as completing a few Internet-based assignments.

Academic Honesty: You are expected to be honest in all that you do in the class. Any student caught being dishonest will automatically receive an F in the class and will be referred to the Vice President of Academic and Student services for further action.

STUDENTS WITH SPECIAL NEEDS:

- ✓ If you are a student with special medical needs, please inform me as to how I can best assist you. All information will be considered confidential.
- ✓ If you are a student who needs special ADA-related accommodations, please inform the DCC ADA Coordinator at 434-797-8572. All information will be considered confidential.
- NOTE: The syllabus and course outline are subject to change at the discretion of the instructor.