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**COURSE SYLLABUS**

**DIVISION:** Workforce Services

**REVISED:** January 2015

**CURRICULA IN WHICH COURSE IS TAUGHT:** Electrical-Electronics Engineering Technology

**COURSE NUMBER AND TITLE:** ETR 123, Electronics Applications 1

**CREDIT HOURS:** 2

**HOURS/WEEK LECTURE:** 1

**HOURS/WEEK LAB:** 2

**LECTURE/LAB COMBINATION:** 3

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**I. CATALOG DESCRIPTION:**

The course provides laboratory and shop assignments/jobs as applied to fundamental principles of electronics with an emphasis on measurements and evaluation of electronic components, devices, and circuits. The course may require preparation of a lab report as an out-of-class activity.

**II. RELATIONSHIP OF THE COURSE TO CURRICULA OBJECTIVES:**

The course allows the student to explore the concepts of electronics and understand fundamental electronic circuits by building on the background of basic electricity.

**III. REQUIRED BACKGROUND/PREREQUISITIES:**

Completion of AC/DC Theory and Electrical Calculations I and/or equivalent with previous electrical experiences and permission of the instructor is required to enroll in the class. ETR 141 is a prerequisite or co-requisite for the course.

**IV. COURSE CONTENT:**

The student will develop skills and reinforce electrical-electronic skills and knowledge (to recognize, identify, and test devices and circuits), construct and evaluate basic electronic power supplies, DC, and small signal amplifiers.

1. Component identification and testing
2. Diode characteristics
3. Rectifier circuit construction and testing
4. Power supplies
5. Filter circuits
6. DC distribution and regulation
7. Active devices used as amplifiers
8. Classifications of amplifiers
9. Audio transducers
10. DC and small signal amplifiers

**V.LEARNER OUTCOMES****VII. EVALUATION**

Identify, test a diode using both digital and analog multi-meter.	Lab exercises Written test and quizzes Oral and written reports Homework and projects
Construct a simple test circuit to explore the function of a diode in a DC circuit.	
Construct half wave, full wave and bridge power supply	
Demonstrate and measure the effects of filter capacitors in a power supply	
Demonstrate the measurements of a power supply using an oscilloscope, including the ripple	
Identify, measure and test BJTs	
Construct various circuits using BJT including amplifiers and switching circuits	

**VII. The course supports the following general education goals/objectives:**DCC Educational Objectives

- Communication
- Critical Thinking
- Information Literacy
- Quantitative Reasoning

**VIII. DCC Title IX (Sexual Harassment and Misconduct): Your Rights and How to Make a Report**

Consistent with its mission, Danville Community College is committed to providing a learning and working environment that emphasizes the dignity and worth of every member of its community. Sexual misconduct, which encompasses a range of behavior used to obtain sexual gratification against another's will or at the expense of another in any form will not be tolerated. Sexual misconduct includes sexual harassment, sexual assault, sexual exploitation, and sexual violence. Sexual harassment is unwelcome conduct of a sexual nature, which can include unwelcome sexual advances, requests for sexual favors, or other verbal, nonverbal, or physical conduct of a sexual nature. Thus, sexual harassment prohibited by Title IX can include conduct such as touching of a sexual nature; making sexual comments, jokes, or gestures; writing graffiti or displaying or distributing sexually explicit drawings, pictures, or written materials; calling students sexually charged names; spreading sexual rumors; rating students on sexual activity or performance; gender-based stalking or bullying; conditioning a benefit on submitting to sexual advances; or circulating, showing, or

creating e-mails or websites of a sexual nature. Under Title IX, this constitutes sexual misconduct and includes rape or sexual assault.

If you have been the victim of sexual harassment or other sexual misconduct, you have certain rights under Title IX. For additional information regarding your rights, please consult the DCC Title IX website at [http://www.dcc.vccs.edu/News/Title\\_IX/Title\\_IX\\_and\\_Sexual\\_Misconduct.htm](http://www.dcc.vccs.edu/News/Title_IX/Title_IX_and_Sexual_Misconduct.htm).

In accordance with College policy and federal law, all faculty and staff members are required to report incidents of sexual harassment including sexual violence to one of the individuals below whose responsibility it is to investigate all complaints. In addition, you can contact these individuals for a complaint against a Danville Community College faculty or staff member for sexual harassment, sexual assault, sex discrimination, or other forms of sexual misconduct:

	Title IX Coordinator Mr. Howard Graves Wyatt Building, Room 108 434.797.8443 <a href="mailto:titleix@dcc.vccs.edu">titleix@dcc.vccs.edu</a> or <a href="mailto:hgraves@dcc.vccs.edu">hgraves@dcc.vccs.edu</a>
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## IX. **Medical Conditions**

Danville Community College is committed to meeting the needs of all students and providing access for persons with disabilities. Reasonable accommodations are available to those students with diagnosed disabilities. Students with diagnosed disabilities wishing to receive specific accommodations must be registered with the Disability Services. For more information, please contact Dr. Carl Amos, Counselor and ADA Coordinator, at 797-8572 or [camos@dcc.vccs.edu](mailto:camos@dcc.vccs.edu).