Course Prefix and Number: ETR 203          Credits: 3

Course Title: Electronic Devices I

Course Description (including lecture hours, lab hours, total contacts)
Studies active devices and circuits such as diodes, power supplies, transistors, amplifiers and others.
Prerequisite: Knowledge of D.C. and A.C. theory. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

General Course Purpose
This is a required course in the Electronics Technology Career Studies Certificate program.

Course Prerequisites/Corequisites (Entry-level competencies required for enrollment)
Prerequisites: Knowledge of D.C. and A.C. theory; ETR 113 or equivalent.

Course Objectives
Upon successful completion of the course, the student will be able to:
   a. describe basic semiconductor properties.
   b. analyze and troubleshoot power supply circuits.
   c. analyze and troubleshoot special diode circuits.
   d. analyze and troubleshoot BJT amplifier circuits.
   e. analyze and troubleshoot JFET and MOSFET amplifier circuits.
   f. analyze and troubleshoot power amplifiers.

Major Topics to be Included
   a. Semiconductor principles
   b. Rectifier diodes and circuits
   c. Operation and circuits for Zener diodes and other special purpose diodes
   d. Clippers and clampers using diodes
   e. BJT operation, biasing and amplification
   f. JFET operation, biasing and amplification
   g. MOSFET operation, biasing and amplification
   h. Power amplifiers and cascaded stages
   i. Troubleshooting basics

Effective Date of Course Content Summary: May 2009