Course Objectives/Course Outline

**Spokane Community College**

**Course Title: solid state devices/circuits lab**

**Prefix and Course Number: ELECT 137**

**Learning/Performance Expectations (e.g., outcomes, performance objectives, competencies, etc.)**

AT THE COMPLETION OF THIS COURSE, A STUDENT SHOULD:

* Practice accepted personnel and equipment safety procedures and terminology
* Know and practice solid state devices and circuits operational practices and procedures
* Use solid-state devices and circuits troubleshooting terminology correctly
* Use solid-state devices and circuits troubleshooting and analysis hardware correctly
* Understand technology appropriate troubleshooting techniques and procedures
* Have the basic knowledge applicable to using and troubleshooting solid-state devices and circuits

**COURSE OUTLINE:**

1. Course Overview
   * 1. Professionalism
     2. Tool and Book List
     3. Course Outline
     4. Grading
2. Personal Safety
   * 1. Electrical Shock
     2. Eye Protection
3. Equipment Protection
   * 1. Static Electricity
     2. Liquids
     3. Cables
4. Diodes
   * 1. Standard
     2. Zener
     3. Diode Circuits
5. Transistors
   * 1. Bipolar
     2. FET
     3. Transistor Circuits
6. Special Devices
   * 1. Thyristors
     2. Special Device Circuits
7. Transistor Amplifiers
   * 1. Voltage
     2. Power
8. Power Supplies
   * 1. Shunt
     2. Series
     3. Switching
     4. DC-to-DC Converters
9. Troubleshoot Basic Solid State Circuits



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