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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