

Los Angeles Valley College
Course Level Student Learning Outcomes (SLO)

Course Name and Number: Electronics Circuits IIIB; EL-24B

Course Objectives: (List the course objectives as they appear in the course outline of record.)

The third course in the circuit design and analysis sequence. This class provides instruction in electronic circuits including; analog and digital solid state switching; oscillation and wave shaping and control circuits; and computer interfacing circuits, sensors, and transducers. Virtual instrumentation data acquisition and control with LabVIEW and microcontroller applications are also included.

Demonstrate the ability to construct and evaluate the performance of switching, control, and interfacing circuits. Complete a minimum of 15 assigned experiments.

Gain ability to set-up, calibrate, and interface four different types of sensors and/or transducers.

Gain skills and ability to use computer applications in modern data acquisition and control systems.

Establish 1–2 course level student learning outcomes and indicate how each SLO will be assessed.

Course Level Student Learning Outcome	Assessment Measure
Compile various sources to extract component and circuit data to construct, test, and troubleshoot advanced discrete and IC solid-state circuits.	Using at least five pieces of standard test equipment found in the electronics lab, the student will complete a variety of experiments in the construction, testing, and troubleshooting of the following advanced discrete and IC solid-state electronic components and circuits: <ul style="list-style-type: none">• Thyristor and circuit control applications.• Proximity detection and conditional sensors.• Velocity and rate sensors.• Angular and linear displacement sensors.• Advance op-amps.• PCL integrated circuit function and applications.• Data acquisition control circuits using LabVIEW.

	<ul style="list-style-type: none">• Temperature control circuits and single conditioning with LabVIEW.