Custom Lab Manual Worksheet

- Place a check mark in column **A** next to each experiment you want in your custom lab manual.
- In column **B**, number your chosen experiments in the desired sequence.

	Suggested Title	Estimated Student Time (hr) ⇩	Check Experiments Wanted A ⇩	Choose Desired Sequence B ⇩
DC Lab Experiments	Component Identification	1		
	Scale Interpolation	1		
	Circuit Breadboarding	1		
	DC Resistance Measurements	2		
	DC Voltage Measurements	2		
	DC Current Measurements	2		
	Ohm's Law	2		
	Series DC Circuits	2		
	Parallel DC Circuits	2		
	Troubleshooting DC Circuits	2		
	Series-Parallel DC Circuits	2		
	Troubleshooting Series-Parallel Circuits	2		
	Voltmeter & Ammeter Loading	2		
	Voltage Divider Circuits	2		
	Voltage & Current Sources	2		
	Thévenin's Theorem	1.5		
	Norton's Theorem	1.5		
	Superposition Theorem	1.5		
	Mesh Analysis	1		
	Maximum Power Transfer Theorem	1		
	The Wheatstone Bridge	2		
	DC Characteristics of Capacitors	1		
	RC Transient Circuits	1		
	DC Characteristics of Inductors	1		
AC Lab Experiments	Oscillators & AC Meters	1		
	Oscilloscope Familiarization	1		
	Oscilloscope Voltage Measurements	2		
	Oscilloscope Time & Frequency Measurements	2		
	Oscilloscope Phase Measurements	2		
	AC Characteristics of Capacitors & Inductors	2		
	AC Series RC Circuits	2		
	AC Series RL Circuits	2		
	AC Series RLC Circuits	2		
	AC Parallel RC Circuits	2		
	AC Parallel RL Circuits	2		
	AC Parallel RLC Circuits	2		
	RC & RL Frequency Response	3		
	Transformer Characteristics	2		
	Series Resonant Circuits	2		
	Bandwidth & Q Measurements	2		
	Parallel Resonant Circuits	2		
	Bode Plots	2		
	Low Pass & High Pass Filters	2		
	Band Pass & Band Reject Filters	2		
Device Expts	A System Example *	1		
	Waveforms *	1		
	Diode Biasing	1		
	Other Diodes	1		
	Diode Rectifiers	1.5		
	Power Supply Filters	1		

	Suggested Title	Estimated Student Time (hr) ⇩	Check Experiments Wanted A ⇩	Choose Desired Sequence B ⇩
Device Lab Experiments	Diode Regulators	1		
	DC Transistor Characteristics	1		
	BJT Switching	2		
	Amplifier Basics	2		
	Common-Emitter Amplifiers	2		
	Emitter-Follower Amplifiers	2		
	BJT Amplifier Troubleshooting	3		
	Amplifier Frequency Response	2		
	Multistage Amplifiers	1		
	Power Amplifiers	1		
	FET Biasing	2		
	FET Amplifiers	2		
	MOSFET Switching	1.5		
	DC Differential Amplifiers	1		
	Common-Mode Rejection	3		
	Balanced Modulator/Demodulator	1.5		
	Bar Graph Display	1		
	Three-Terminal Regulators	1.5		
	Multi-Layer Devices	1		
	Relay Operation	1.5		
	H-Bridge Operation	2		
Op Amp Lab Experiments	Basic Op Amp Circuits	1		
	Op Amp Characteristics	2		
	Comparators & Multivibrators	1		
	Triggering Circuits	1		
	Op Amp Integrators	1		
	The 555 Timer	1		
	Active Filters	2		
	Op Amp Oscillators	1.5		
	Inverting Summer	1.5		
	Butterworth Filters	2		
	Difference Amplifiers	1		
	Bessel, Butterworth & Chebyshev Filters	3		
	Offset Compensation	1		
	Gain-Bandwidth Product	2		
	Sample and Hold Circuit	2		
	Single-Supply Op Amps	2		
		Pages		
Appendix Items	Electronic Symbols	4		
	Course Formula Sheet (DC/AC Studies)	1		
	Course Formula Sheet (Device Studies)	2		
	Rules of SI Notation	2		
	AWG Wire Tables	1		
	Resistivity Data Table	1		
	Permittivity Data Table	1		
	Network Theorem Rules	1		
	Resistor and Capacitor Color Code (color)	1		
	Capacitor Photo Identification (color)	1		

Note * These two experiments are designed to promote student interest in solid-state devices and are intended to be completed without any prior solid-state instruction.

◆	Title Wanted (will be used for ISBN, etc.)			
◆	Student copies required		◆ Cover	Choose from A B C D E F G H
◆	Staff copies required		◆ Colors	Describe desired colors for cover