

**PICKENS TECH MASTER COURSE LIST - SCHOOL YEAR 2006-2007**

<b>Program Title: ELECTRONICS TECHNOLOGY</b>			<b>Emphasis: ANALOG ELECTRONICS</b>				<b>CIP Code: 47.0101 SEC FID # 20401 PS FID # 10791</b>		
<b>COURSE Prefix and Number</b>	<b>COURSE TITLE</b>	<b>THEORY</b>	<b>LAB: Vocational Technical</b>	<b>LAB: Academic Clinical</b>	<b>Field Instruction</b>	<b>Coop, Intern, etc.</b>	<b>Total Hours</b>	<b>Secondary Credit</b>	<b>Post Secondary Credit CCCOES Guidelines</b>
		<b>15:1</b>	<b>22.5:1</b>	<b>30:1</b>	<b>37.5:1</b>	<b>45:1</b>		<b>180:1</b>	
ELT106	Fundamentals of AC/DC	30	22.5				52.5	.29	3
ELT134	Solid State Devices I	30	22.5				52.5	.29	3
ELT136	Introduction to Transistors	15	22.5				37.5	.21	2
ELT163	Soldering	15	0				15	.08	1
ELT137	Advanced Transistors	30	22.5				52.5	.29	3
ELT215	Operational Amplifiers	15	45				60.0	.3	3
	ELECTIVE								
		15-180					15-180	.08-1	1-6

Updated: 11/16/06

<b>PROGRAM TOTALS:</b>	<b>REQUIRED</b>	270	1.50	15
	<b>ELECTIVE</b>	15-180	.08-1	1-6
	<b>TOTAL</b>	288-450	1.59-2.59	13-18

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<b>COURSE Prefix and Number</b>	<b>COURSE TITLE</b>	<b>COURSE DESCRIPTION</b>
ELT106	Fundamentals of AC/DC	Introduces the basic skills needed for many careers in electronics and related fields. Covers the operations and applications of basic DC and AC circuits consisting of resistors, capacitors, inductors, transformers and diodes. Emphasizes the use of common test instruments in troubleshooting.
ELT134	Solid State Devices I	Focuses on diode and transistor studies starting with a review of semiconductor materials. Emphasizes rectifier circuits, R-C and L-C filters, limiters and peak detectors, zener regulators, Schottky diodes, varactors/veristors, LED's bipolar transistors, transistor approximation, load-lines, biasing techniques, saturation, operating point, AC models including small-signal operation, h-parameters, and data sheet understanding and interpolation
ELT136	Introduction to Transistors	Introduces the operation and applications of bipolar transistors, JFETs and MOSFETs. Includes switching circuits, single-stage small-signal amplifiers and troubleshooting.
ELT163	Soldering	Covers the theory and practice of high reliability hand soldering in the electronics field. Includes soldering practice with wire and terminal soldering as well as PCB soldering of through-hole and surface-mount devices
ELT137	Advanced Transistors	Continues ELT 136 with specifications and additional applications of bipolar transistors, JFETs and MOSFETs. Covers voltage regulation, common-collector, and power amplifiers. Includes analyses of single and cascaded amplifier stages. Emphasizes troubleshooting.
ELT215	Operational Amplifiers	Focuses on a study of integrated operational amplifiers and their applications. Troubleshooting is emphasized.

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