

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

<b>Program Title: ELECTRONICS TECHNOLOGY</b>			<b>Emphasis: DIGITAL ELECTRONICS /PRE-ENGINEERING</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  15:1</b>	<b>LAB: Vocational Technical  22.5:1</b>	<b>LAB: Academic Clinical  30:1</b>	<b>Field Instruction  37.5:1</b>	<b>Coop, Intern, etc.  45:1</b>	<b>Total Hours</b>	<b>Secondary Credit  180:1</b>	<b>Post Secondary Credit CCCOES Guidelines</b>
ELT147	Digital Devices I	30	22.5				52.5	.29	3
ELT148	Digital Devices II	30	22.5				52.5	.29	3
ELT265	Microcontrollers	30	0				30	.17	2
ELT261	Microprocessors	45	0				45	.25	3
ELT258	Programmable Logic Devices	0	67.5				67.5	.38	3
ELT267	Introduction to Robotics	0	22.5				22.5	.12	1
	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>
ELT147	Digital Devices I	Introduces the operation and application of gates, flip-flops, counters, shift registers, encoders-decoders and LED displays. Covers binary numbers, Boolean algebra and troubleshooting
ELT148	Digital Devices II	Continues ELT 147 with emphasis on the operation and application of programmable logic devices, synchronous counters, multiplexers, liquid crystal displays, ROM and RAM. Includes specifications of ICs, display multiplexing, and design and minimization of circuits. Troubleshooting is emphasized.
ELT265	Microcontrollers	Provides the necessary software and hardware knowledge and skills to develop a microcontroller system. Incorporates programming tools and development software
ELT261	Microprocessors	Focuses on basic operation and applications of microprocessors. Enables the student to write machine and assembly language programs, interface microprocessors to various devices, and troubleshoot microprocessor-based systems.
ELT258	Programmable Logic Devices	Covers the fundamentals of programmable logic controllers (PLCs) as they are applied in robotics and automation. Includes history, terminology, typical applications, hardware, and software. Incorporates lab and project activities that address operating, monitoring, programming, troubleshooting, and repairing PLC controlled lab trainers as well as actual industrial equipment
ELT267	Introduction to Robotics	Introduces basic robotics. Enables the student to program a robot in a higher-level language to perform various tasks. Covers building and interfacing of sensor circuits.

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