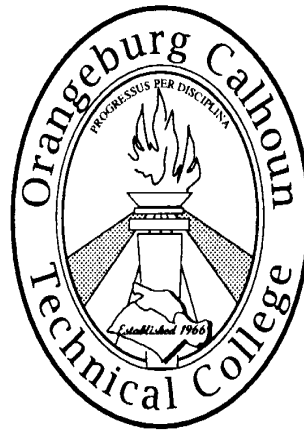


ENGINEERING GRAPHICS TECHNOLOGY COMPETENCY PROFILE



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INDUSTRIAL ELECTRONICS TECHNOLOGY COMPETENCY PROFILE

An INDUSTRIAL ELECTRONICS TECHNICIAN troubleshoots, repairs, installs, sets up, and selects electronic equipment. With a strong math and reading background, an Industrial Electronics Technician is able to:

A. PRACTICE INDUSTRIAL SAFETY	A-1 FOLLOW/ADHERE TO PSM REGULATIONS	A-2 DOCUMENT SAFETY, AHS/OSHA NOTATIONS	A-3 FOLLOW LOCK-OUT, TAG-OUT PROCEDURES		A-4 FOLLOW MFG'S SAFETY REGULATIONS		
	A-5 TAKE RESPONSIBILITY FOR INDIVIDUAL SAFETY CLOTHING & EQUIPMENT		A-6 PROMOTE SAFETY AMONG CO-WORKERS		A-7 DEVELOP AWARENESS OF MAN/MACHINE SAFEGUARD		A-8 MONITOR FOR POTENTIAL HAZARDS
	A-9 ADVISE APPROPRIATE SOURCE OF POTENTIAL HAZARDS		A-10 POST PROPER WARNING SIGNS	A-11 MAINTAIN CLEAN, NEAT WORK ENVIRONMENT			
B. PRACTICE PROFESSION- ALISM	B-1 ADHERE TO WORK RULES & REGULATIONS	B-2 EXHIBIT INTEGRITY IN DEALING WITH OTHERS	B-3 DEVELOP AN UNDERSTANDING & APPRECIATION OF WORKPLACE DIVERSITY		B-4 COMPLETE ASSIGNED TASKS	B-5 PROJECT A NEAT, CLEAN APPEARANCE	B-6 SHARE KNOWLEDGE
	B-7 KEEP ABREAST OF CURRENT TECHNOLOGY	B-8 ACCEPT NEW TECHNOLOGICAL TASKS	B-9 GIVE & RECEIVE CONSTRUCTIVE CRITICISM	B-10 MAINTAIN CLEAN, NEAT WORK ENVIRONMENT	B-11 DEAL COURTEOUSLY WITH OTHERS	B-12 DISPLAY ENTHUSIASM FOR WORK	B-13 PROJECT A POSITIVE ATTITUDE
C. COMMUNICATE	C-1 * LISTEN EFFECTIVELY	C-2 * ASK QUESTIONS FOR UNDERSTANDING	C-3 * COMMUNICATE MESSAGE AT LEVEL OF RECIPIENT		C-4 * WORK AS A TEAM	C-5 * READ & INTERPRET WORK ORDERS & REQUESTS	
	C-6 MAINTAIN COMPLETE, ACCURATE & UP-TO-DATE RECORDS TO INCLUDE PREVENTATIVE MAINTENANCE DATA			C-7 MAKE ORAL REPORTS		C-8 PROVIDE TECHNICAL ADVICE/ INFORMATION TO MANAGERS	
	C-9 PREPARE TECHNICAL REPORTS		C-10 PREPARE STATUS REPORTS			C-11 USE INTERNET E-MAIL FOR MESSAGES	
D. INTERPRET SCHEMATICS	D-1 BE FAMILIAR WITH DIFFERENT TYPES OF BLUEPRINTS		D-2 * READ & INTERPRET TECHNICAL LITERATURE		D-3 RECOGNIZE ELECTRONIC/PNEUMATIC & HYDRAULIC SYMBOLS		
	D-4 INTERPRET LADDER LOGIC		D-5 INTERPRET TRUTH TABLES		D-6 READ & INTERPRET DRAWINGS AS PER ANSI & ISO STANDARDS <i>(Instruments, Electrical, Pipe, & Mechanical)</i>		

E. OPERATE TEST EQUIPMENT (READ & INTERPRET)	E-1 READ & INTERPRET TECHNICAL LITERATURE	E-2 TAKE APPROPRIATE SAFETY PRECAUTIONS	E-3 USE MULTIMETER <i>(Digital & Analog)</i>	E-4 USE OSCILLOSCOPE	E-5 USE FREQUENCY COUNTERS	E-6 USE TESTERS: TRANSISTORS, DIODE, CAPACITORS, SCR, IC, INDUCTANCE, REACTANCE, STROBE, ETC.	
	E-7 PERFORM CALIBRATIONS	E-8 USE COMPUTERIZED CALIBRATIONS	E-9 USE PROGRAMMABLE POWER SUPPLIES	E-10 OPERATE CHART RECORDERS	E-11 USE SIGNAL/PULSE GENERATOR	E-12 OPERATE PNEUMATIC & HYDRAULIC TESTERS	
	E-13 OPERATE METERS, FLOW, TEMPERATURE, PRESSURE, PH, DENSITY, HUMIDITY		E-14 USE LOGIC PROBES & LOGIC ANALYZERS				
F. REPAIR ELECTRONIC EQUIPMENT & SYSTEMS	F-1 * READ & INTERPRET TECHNICAL LITERATURE	F-2 TAKE APPROPRIATE SAFETY PRECAUTIONS		F-3 INTERPRET SCHEMATICS	F-4 SELECT & USE BASIC HAND TOOLS	F-5 ISOLATE & LOCALIZE PROBLEM	F-6 * USE LOGICAL TROUBLE SHOOTING TECHNIQUES
	F-7 SELECT & OPERATE TEST EQUIPMENT	F-8 IDENTIFY REPEATED FAILURES	F-9 IDENTIFY DISCRETE COMPONENTS	F-10 ADJUST OR REPLACE BOARDS OR COMPONENTS AS NECESSARY		F-11 USE PROPER SOLDERING & REWORK TECHNIQUES	
	F-12 READ & USE CROSS REFERENCES AND CATALOGS TO ACQUIRE PARTS		F-13 CALIBRATE EQUIPMENT AS NECESSARY	F-14 PERFORM OPERATIONAL ACCEPTABILITY TEST			
G. CALIBRATE EQUIPMENT	G-1 READ & INTERPRET TECHNICAL LITERATURE	G-2 TAKE APPROPRIATE SAFETY PRECAUTIONS <i>(Personal/Process Equipment)</i>		G-3 ADHERE TO CALIBRATION/ PM SCHEDULES	G-4 PERFORM PREDICTIVE MAINTENANCE	G-5 SELECT & USE PROPER TEST EQUIPMENT & TOOLS	G-6 FOLLOW STANDARDS
	G-7 DETERMINE REFERENCE VALUES	G-8 COORDINATE CALIBRATION WITH PROCESS SYSTEM OPERATION		G-9 PERFORM FIELD/SYSTEM CALIBRATION PROCEDURES	G-10 PERFORM BENCH CALIBRATION PROCEDURES	G-11 PERFORM OPERATIONAL ACCEPTABILITY TEST	G-12 MAINTAIN CALIBRATION DATA AS REQUIRED

H. OPERATE COMPUTERS (MICRO- PROCESSORS, PROGRAMMABLE CONTROLLERS)	H-1 READ & INTERPRET TECHNICAL LITERATURE	H-2 RECOGNIZE BASIC PROGRAMMING STRUCTURES/FLOW	H-3 INTERPRET LADDER & BOOLEAN LOGIC	H-4 START UP & OPERATE SOFTWARE (BOOT-UP)			
	H-5 MANIPULATE OPERATING SYSTEMS -DOS & WINDOWS		H-6 OPERATE DIAGNOSTIC PROGRAMS	H-7 INTERPRET DATA FROM SYSTEM			
	H-8 FOLLOW ORDERLY SHUT DOWN PROCEDURES		H-9 ANALYZE ROBOTICS	H-10 LOAD & DOWN LOAD COMPUTER PROGRAMS		H-11 USE PC FOR COMPUTERIZED REPORTING; <i>i.e., Technical Reports, Work Summaries, etc.</i>	
	H-12 USE IN-PUT, OUT-PUT MANIPULATIONS		H-13 KNOWLEDGE OF COMPUTER NETWORKING				
I. MOTION CONTROL	I-1 EXAMINE CNC	I-2 INTERFACE OPTICAL SENSORS	I-3 USE FEEDBACK DEVICES <i>(e.g., Encoder/ Resolver)</i>		I-4 SET UP/ADJUST AC/DC DRIVES	I-5 SET UP/ADJUST ROBOTICS	I-6 SET UP NEW DRIVES
	I-7 PRACTICE FIBER OPTIC PROCESSES/PROCEDURES		I-8 SPLICE, ENCODE & DECODE FIBER OPTICS		I-9 INTERFACE OPTICS		
J. KNOWLEDGE	J-1 COMMUNICATIONS <i>(e.g., Microwave, Video, Radio)</i>		J-2 MATH: ARITHMETIC, TRIG. & ALGEBRA		J-3 ISO PURPOSE & WHERE/HOW TO SEARCH FOR SPECIFIC REGULATIONS		

* Identifies critical skills and attributes.

THIS DACUM WAS CONDUCTED ON MARCH 13, 2002, AT ORANGEBURG-CALHOUN TECHNICAL COLLEGE, 3250 ST. MATTHEWS RD., ORANGEBURG, SC 29118

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