

## Electro-Mechanical Technology Courses and Booklist

Electro-Mechanical Technology Courses and Booklist <i>Electrical and Electronic Assembler</i>					Prerequisite: None	
1st Trimester	Certificate: Electrical and Electronic Assembler					
COURSE NUMBER	BOOKS AND SUPPLIES	PUBLISHER	ISBN	COST	QTY	
ELM-0001 Worker Characteristics	None	None		\$0.00		
ELM-1011 Technology Foundations	None-Computer Based Instruction (Provided)	ACT WorkKeys		\$0.00		
ELM-1012 Orientation & Safety	OSHA 10 Voucher (must purchase from TCAT-H bookstore)	CareerSafe		\$32.00		
	Headphones			\$2.00		
ELM-1013 Customer Service	Customer Service Specialist Study Guide	ETA	1-891749-08-0	\$24.00		
	Customer Service Specialist Certification Exam Fee	ETA		\$80.00		
ELM-1014 Basic Math	None-Computer Based Instruction (Provided)	Nida		\$0.00		
ELM-1040 Computer Concepts I	Welcome to Computer Basics 2nd Ed.	Labyrinth Learning	978-1-64061-206-8	\$72.00		
	USB Flash Drive			\$6.00		
ELM-1050 DC Circuits I	EM1 DC Certification Study Guide (Download only from ETA)	ETA		\$25.00		
	Scientific Calculator (Casio fx-300MS or equivalent)	Casio		\$18.00		
	Digital Multimeter (Klein MM400 or equivalent)	Klein		\$68.00		
ELM-1060 Soldering Techniques/Tools	Safety Glasses			\$2.00		
	Pocket Pack Solder .031 DIA 5 oz.			\$3.00		
	Desoldering Braid			\$2.00		
	Lithium 3V Battery			\$1.00		
	Soldering Project Kit (96901410)	Nida		\$31.00		
	The Tingler Soldering Kit (C6740)	Chaney Electronics		\$16.00		
	Shaking Dice Soldering Kit (MK150)	Vellemen		\$18.00		
	Cables and Connectors Kit (96901459)	Nida		\$66.00		
ELM-1070 Electronics for Maintenance	None-Computer Based Instruction (Provided)	Nida				
ELM-1080 Worker Ethics & Ex. I	None	None				
ELM-1091 Integrated Projects I	None	None				
<b>432 Contact Hours</b>		<b>Trimester 1 Books, Tests, and Supplies Total</b>		<b>\$466.00</b>		

**Note: Prices are estimates and subject to change without notice; state sales tax will be added to certain items**

**Student is responsible for miscellaneous material (paper, pencils, tools, etc.)**

**revised 07/20/22**

**(effective Fall 2022)**

<b>Electro-Mechanical Technology Courses and Booklist <i>Electrician Helper</i></b>		<b>Prerequisite: Electrical and Electronic Assembler Certificate</b>				
<b>2nd Trimester</b>		<b>Certificate: Electrician Helper 864 Total Contact Hours</b>				
<b>COURSE NUMBER</b>	<b>BOOKS AND SUPPLIES</b>	<b>PUBLISHER</b>	<b>ISBN</b>	<b>COST</b>	<b>QTY</b>	
ELM-0002 Worker Characteristics	None	None		\$0.00		
ELM-2010 Commercial Wiring I	Modern Commercial Wiring Textbook 2020	Goodheart-Wilcox	978-1-63563-875-2	\$182.00		
	Modern Commercial Wiring Workbook 2020	Goodheart-Wilcox	978-1-63563-876-9	\$45.00		
ELM-2020 Commercial Wiring II	Model 9000 Commercial/Industrial Trainer Workbook	FutureTek		\$62.00		
	Ugly's Electrical Reference Pocket Handbook 2020 Ed.	Gardner Bender	978-1284194531	\$13.00		
ELM-2030 Commercial Wiring III	Model CWT300 Trainer Workbook	FutureTek	none	\$62.00		
	Ugly's Conduit Bending Pocket Handbook 2020 Ed.	Gardner Bender	978-1284201147	\$22.00		
ELM-2040 Intro. to Applied Technology	None-WorkKeys (provided by instructor)	ACT		\$0.00		
ELM-2050 Power Distribution	None-Computer Based Instruction (Provided)	Nida		\$0.00		
ELM-2060 Power Technology I	Investigations in Power Technology	Festo	978-2-89289-550-6	\$118.00		
ELM-2070 Worker Ethics & Ex. II	None	None		\$0.00		
ELM-2080 Integrated Projects II	EM1 DC Certification Exam Fee	ETA		\$30.00		
	DC CertTEC Certification Exam Fee	CertTEC		\$85.00		
<b>432 Contact Hours (864 Total Contact Hours)</b>		<b>Trimester 2 Books, Tests, and Supplies Total</b>			<b>\$619.00</b>	

<b>Electro-Mechanical Technology Courses and Booklist <i>Maintenance Associate Diploma</i></b>			<b>Prerequisite: Electrician Helper Certificate</b>			
<b>3rd Trimester</b>			<b>Diploma: Maintenance Associate 1296 Total Contact Hours</b>			
<b>COURSE NUMBER</b>	<b>BOOKS AND SUPPLIES</b>	<b>PUBLISHER</b>	<b>ISBN</b>	<b>COST</b>	<b>QTY</b>	
ELM-0003 Worker Characteristics	None	None		\$0.00		
ELM-3010 Pneumatics I	Pneumatic Fundamentals	Festo	978-2-89289-383-0	\$59.00		
	Industrial Pneumatic Technology (supplied)	Parker	978-155769-014-2	\$0.00		
ELM-3020 Principles of PLC's	CM-284-L1 Workbook	TII		\$120.00		
	Programmable Logic Controllers Connect Access Card 6e	McGraw-Hill	9781264446759	\$129.00		
ELM-3030 AC Motors	None-Computer Based Instruction (Provided)	Nida		\$0.00		
ELM-3040 AC Drive Fundamentals	SM PF-40 Drive Student Lab Manual	Future Tek		\$62.00		
ELM-3050 Professional Development	Connect to Your Career 3rd Ed.	Good-Heart Willcox	978-1-64564-747-8	\$66.00		
ELM-3060 Robotics I	Mechatronics Training Guide (Provided by Instructor)	Festo		\$0.00		
ELM-3070 Worker Ethics & Ex. III	None	None		\$0.00		
ELM-3080 Integrated Projects III	SM-L24-SAS-SIM-V32 Student Lab Manual	Future Tek		\$62.00		
<b>432 Contact Hours (1296 Total Contact Hours)</b>			<b>Trimester 3 Books, Tests, and Supplies Total \$498.00</b>			

<b>Electro-Mechanical Technology Courses and Booklist <i>Maintenance Electrician Diploma</i></b>			<b>Prerequisite: Maintenance Associate Diploma</b>			
<b>4th Trimester</b>			<b>Diploma: Maintenance Electrician 1728 Total Contact Hrs.</b>			
<b>COURSE NUMBER</b>	<b>BOOKS AND SUPPLIES</b>	<b>PUBLISHER</b>	<b>ISBN</b>	<b>COST</b>	<b>QTY</b>	
ELM-0004 Worker Characteristics	None	None		\$0.00		
ELM-4010 Industrial Sensors	Principles and Applications of Industrial Sensors	TII		\$24.00		
ELM-4020 Intermediate PLC Progr.	SM-L24-SIM Student Lab Manual	Future Tek		\$62.00		
	SM-PanelView Plus 7 Student Lab Manual	Future Tek		\$62.00		
	Automation and Robotics-FMS (Provided by Instructor)	Festo		\$0.00		
ELM-4030 Advanced Pneumatics	Electrical Controls of Pneumatic Systems	Festo	978-2-89289-410-3	\$53.00		
ELM-4040 Control of Industrial Motors	Control of Industrial Motors	Festo	978-2-89289-143-3	\$47.00		
ELM-4050 Integrated Projects IV	Model 7100 ICST (Provided by Instructor)	Future Tek		\$0.00		
ELM-4060 Worker Ethics & Ex. IV	Connect to Your Career 3rd Ed. (Purchased in 3rd Trimester)	Good-Heart Willcox	978-1-64564-747-8	\$0.00		
<b>432 Contact Hours (1728 Total Contact Hours)</b>			<b>Trimester 4 Books, Tests, and Supplies Total \$248.00</b>			

Electro-Mechanical Technology Courses and Booklist <i>Electro-Mechanical Tech.Diploma</i>		Prerequisite: Maintenance Electrician Diploma			
5th Trimester		Diploma:Electro-Mechanical Tech. 2160 Total Contact Hrs.			
COURSE NUMBER	BOOKS AND SUPPLIES	PUBLISHER	ISBN	COST	QTY
ELM-0005 Worker Characteristics	None	None		\$0.00	
ELM-5010 Hydraulics I	Explorer II Hydraulics	TII		\$77.00	
ELM-5020 Hydraulics II/III	Explorer II Hydraulics	TII		\$0.00	
ELM-5030 Machining/Fab. Fund.	Precision Machining Technology (Provided by Instructor)	Cengage Learning	978-1285444543	\$0.00	
ELM-5040 Basic Air Cond./Refridger.	4210 HVAC Troubleshooting Trainer (Provided by Instructor)	Future Tek		\$0.00	
ELM-5050 Basic Welding Procedures	Welding Skills (Provided by Instructor)	ATP	978--0-8269-3084-2	\$0.00	
	Welding Helmet			\$37.00	
	Welding Gloves			\$16.00	
	Cutting Goggles			\$17.00	
ELM-5060 Mechanical Systems	Amatrol (Provided by Instructor)			\$0.00	
<b>432 Contact Hours (2160 Total Contact Hours)</b>		<b>Trimester 5 Books, Tests, and Supplies Total</b>			<b>\$147.00</b>

**Course Books and Supplies Totals**

Electrical and Electronic Assembler Certificate Books and Supplies Total	<b>\$466.00</b>
Electrician Helper Certificate Books and Supplies Total	<b>\$619.00</b>
Maintenance Associate Diploma Books and Supplies Total	<b>\$498.00</b>
Maintenance Electrician Diploma Books and Supplies Total	<b>\$248.00</b>
Electro-Mechanical Technician Diploma Books and Supplies Total	<b>\$147.00</b>
<b><i>Electro-Mechanical Technology Program Books and Supplies Total</i></b>	<b>\$1978.00</b>
<b><i>Electro-Mechanical Technology Program Tuition Total</i></b>	<b>\$6680.00</b>
<b><i>Electro-Mechanical Technology Total Program Cost</i></b>	<b>\$8658.00</b>