

KELLOGG COMMUNITY COLLEGE

INDUSTRIAL ELECTRICITY AND ELECTRONICS

COURSE OPTIONS

Certificate: 30 credits

Associate in Applied Science: 60 credits (combination of industrial electricity/electronics, technical electives, and general education credit requirements)

All costs are subject to change without notice. Please call 269-965-4137 to verify.

Module Subject Code and Number	Module Title	Credit	Contact Hours
<input type="checkbox"/> INEL C910-6250	ELECTRIC ELECTRONICS ORIENTAT		2
The orientation must be completed at the BACC in Coldwater prior to registration. Please call 517-279-5753 to verify available orientation times.			
UNIT 05 ELECTRICAL SAFETY			
<input type="checkbox"/> INEL 05010-6250	ELECTRICAL SAFETY	0.17	4
UNIT TOTAL		0.17	4
UNIT 10 MATHEMATICS FOR ELECTRICIANS			
<input type="checkbox"/> INEL 10010-6250	ELECTRICAL MATH 1	0.08	2
<input type="checkbox"/> INEL 10020-6250	ELECTRICAL MATH 2	0.25	6
<input type="checkbox"/> INEL 10030-6250	ELECTRICAL MATH 3	0.25	6
UNIT TOTAL		0.58	14
UNIT 15 ELECTRICAL THEORY			
<input type="checkbox"/> INEL 15010-6250	ELECTRICAL THEORY	0.25	6
<input type="checkbox"/> INEL 15020-6250	STATIC ELECTRICITY	0.25	6
<input type="checkbox"/> INEL 15030-6250	CALCULATORS AND ELECTRONICS	0.25	6
<input type="checkbox"/> INEL 15040-6250	DEVICES AND SYMBOLS	0.25	6
<input type="checkbox"/> INEL 15050-6250	MULTIMETER	0.33	8
<input type="checkbox"/> INEL 15060-6250	OHM'S LAW	0.33	8
<input type="checkbox"/> INEL 15070-6250	SERIES CIRCUITS	0.33	8
<input type="checkbox"/> INEL 15080-6250	PARALLEL CIRCUITS	0.33	8
<input type="checkbox"/> INEL 15090-6250	COMBINATION CIRCUITS	0.33	8
<input type="checkbox"/> INEL 15100-6250	MAGNETISM	0.25	6
<input type="checkbox"/> INEL 15110-6250	ALTERNATING CURRENT	0.25	6
<input type="checkbox"/> INEL 15120-6250	OSCILLOSCOPE	0.33	8
<input type="checkbox"/> INEL 15130-6250	INDUCTANCE	0.42	10
<input type="checkbox"/> INEL 15140-6250	CAPACITANCE	0.42	10
<input type="checkbox"/> INEL 15150-6250	RLC CIRCUITS	0.33	8
<input type="checkbox"/> INEL 15160-6250	CONDUCTION	0.33	8
<input type="checkbox"/> INEL 15170-6250	THEORY OVERVIEW	0.21	5
UNIT TOTAL		5.19	125
UNIT 20 ELECTRICAL MOTOR CONTROLS 1			
<input type="checkbox"/> INEL 20010-6250	ELECTRICAL MOTOR CONTROLS	0.42	10
<input type="checkbox"/> INEL 20020-6250	MANUAL MOTOR CONTROLS	0.50	12
<input type="checkbox"/> INEL 20030-6250	CONTROL TRANSFORMERS	0.42	10
<input type="checkbox"/> INEL 20040-6250	CONTROL LADDER LOGIC	0.67	16
<input type="checkbox"/> INEL 20050-6250	CONTROL RELAYS MOTOR STARTERS	0.50	12
<input type="checkbox"/> INEL 20060-6250	INTRODUCTION TROUBLESHOOTING	0.33	8
<input type="checkbox"/> INEL 20070-6250	SYSTEMS TROUBLESHOOTING	0.42	10
<input type="checkbox"/> INEL 20080-6250	AUTOMATIC INPUT DEVICES	0.42	10
<input type="checkbox"/> INEL 20090-6250	ELECTRONIC SENSORS	0.33	8
<input type="checkbox"/> INEL 20100-6250	BASIC TIMER CONTROL	0.33	8
<input type="checkbox"/> INEL 20110-6250	TIMERS AND COUNTERS	0.25	6

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Module Subject Code and Number	Module Title	Credit	Contact Hours
UNIT TOTAL		4.59	110
UNIT 35	NATIONAL ELECTRICAL CODE (NEC)		
<input type="checkbox"/>	INEL 35010-6250 GENERAL WIRING FUNDAMENTALS	0.25	6
<input type="checkbox"/>	INEL 35020-6250 WIRE RACEWAY AND BOX SIZING	0.33	8
<input type="checkbox"/>	INEL 35030-6250 BRANCH CIRCUITS	0.33	8
<input type="checkbox"/>	INEL 35040-6250 SERVICE FEEDER CALCULATIONS	0.25	6
<input type="checkbox"/>	INEL 35050-6250 GROUNDING AND BONDING	0.33	8
<input type="checkbox"/>	INEL 35060-6250 OVERCURRENT PROTECTION	0.33	8
<input type="checkbox"/>	INEL 35070-6250 MOTOR CIRCUIT WIRING	0.25	6
<input type="checkbox"/>	INEL 35080-6250 TRANSFORMERS	0.25	6
<input type="checkbox"/>	INEL 35090-6250 GENERAL HAZARDOUS LOCATIONS	0.25	6
<input type="checkbox"/>	INEL 35100-6250 HEALTH CARE FACILITIES	0.25	6
<input type="checkbox"/>	INEL 35110-6250 EMERGENCY POWER SYSTEMS	0.33	8
<input type="checkbox"/>	INEL 35120-6250 INDUSTRIAL APPLICATIONS	0.33	8
<input type="checkbox"/>	INEL 35130-6250 SPECIAL APPLICATION WIRING	0.25	6
<input type="checkbox"/>	INEL 35140-6250 NEC REVIEW	0.17	4
UNIT TOTAL		3.90	94
UNIT 40	POWER DISTRIBUTION SYSTEMS		
<input type="checkbox"/>	INEL 40010-6250 POWER GENERATION DISTRIBUTION	0.33	8
<input type="checkbox"/>	INEL 40020-6250 ELECTRICAL WIRING TECHNIQUES	0.33	8
<input type="checkbox"/>	INEL 40030-6250 WIRING SYSTEM INSTALLATION	0.42	10
<input type="checkbox"/>	INEL 40040-6250 INTRODUCTION TO RACEWAYS	0.42	10
<input type="checkbox"/>	INEL 40050-6250 BASIC CONDUIT BENDING	0.25	6
<input type="checkbox"/>	INEL 40060-6250 ADVANCED RACEWAYS	0.25	6
<input type="checkbox"/>	INEL 40070-6250 CONDUCTOR OVERCURRENT PROTECT	0.25	6
<input type="checkbox"/>	INEL 40080-6250 CONDUIT SIZING WIRE PULLING	0.33	8
UNIT TOTAL		2.58	62
UNIT 45	FACILITY MAINTENANCE		
<input type="checkbox"/>	INEL 45010-6250 PLANS AND SITE WORK	0.25	6
<input type="checkbox"/>	INEL 45020-6250 INDUSTRIAL POWER SYSTEMS	0.42	10
<input type="checkbox"/>	INEL 45030-6250 SIGNALING SYSTEMS	0.25	6
<input type="checkbox"/>	INEL 45040-6250 MOTORS CONTROLLERS INSTALLATIO	0.33	8
<input type="checkbox"/>	INEL 45050-6250 SPECIAL EQUIPMENT & HVAC	0.33	8
<input type="checkbox"/>	INEL 45060-6250 INDUSTRIAL HAZARDOUS LOCATIONS	0.25	6
<input type="checkbox"/>	INEL 45070-6250 SINGLE PHASE TRANSFORMERS	0.33	8
<input type="checkbox"/>	INEL 45080-6250 3 PHASE TRANSFORMERS	0.50	12
<input type="checkbox"/>	INEL 45090-6250 NEC TRANSFORMER REQUIREMENTS	0.25	6
<input type="checkbox"/>	INEL 45100-6250 EMERGENCY ELECTRICAL SYSTEMS	0.25	6
UNIT TOTAL		3.16	76
UNIT 50	ELECTRICAL CONTROL WIRING		
<input type="checkbox"/>	INEL 50010-7201 ELECTRICAL CONTROL WIRING	0.42	10

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<input type="checkbox"/> INEL 50020-7201	ELECTRICAL CONTROL SYSTEMS	1.00	24
UNIT TOTAL		1.42	34
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UNIT 55	INDUSTRIAL ELECTRONICS		
<input type="checkbox"/> INEL 55010-6250	USING THE OSCILLOSCOPE	0.67	16
<input type="checkbox"/> INEL 55020-6250	METERS FOR ELECTRONICS	0.33	8
<input type="checkbox"/> INEL 55030-6250	ELECTRONIC SOLDERING	0.25	6
<input type="checkbox"/> INEL 55040-6250	SOLDERING PRINTED CIRCUIT BOAR	0.25	6
<input type="checkbox"/> INEL 55050-6250	DIODES	0.25	6
<input type="checkbox"/> INEL 55060-6250	POWER SUPPLIES	0.50	12
<input type="checkbox"/> INEL 55070-6250	PHOTO DEVICES	0.33	8
<input type="checkbox"/> INEL 55080-6250	SOLID STATE DEVICES	0.83	20
<input type="checkbox"/> INEL 55090-6250	ELECTRONIC TIMING	0.33	8
<input type="checkbox"/> INEL 55100-6250	AMPLIFIERS	0.83	20
<input type="checkbox"/> INEL 55110-6250	DIGITAL LOGIC FUNDAMENTALS	0.50	12
<input type="checkbox"/> INEL 55120-6250	DIGITAL LOGIC APPLICATIONS	0.42	10
<input type="checkbox"/> INEL 55130-6250	PROXIMITY SWITCHING	0.17	4
<input type="checkbox"/> INEL 55140-6250	PHOTOELECTRIC DEVICES	0.17	4
<input type="checkbox"/> INEL 55150-6250	FIBER OPTIC FUNDAMENTALS	0.33	8
<input type="checkbox"/> INEL 55160-6250	FIBER OPTIC LAB	0.25	6
UNIT TOTAL		6.41	154
TOTAL		28.00	675

FOR OFFICE USE ONLY

Instructor Approval _____ Date _____

Total Credit _____ Total Contact _____ Total Cost _____