

KELLOGG COMMUNITY COLLEGE

RENEWABLE ENERGY

Certificate: 25 credits

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"/> INRE C910-7201	RENEWABLE ENERGY ORIENTATION		2
<input type="checkbox"/> INEL C910-7201	ELECTRIC ELECTRONICS ORIENTATION		2
The orientations must be completed at the RMTC in Battle Creek prior to registration. Please call 269.965.4137 to verify available orientation times.			
UNIT 05 ELECTRICAL SAFETY			
<input type="checkbox"/> INEL 05010-7201	ELECTRICAL SAFETY	0.17	4
UNIT TOTAL		0.17	4
UNIT 10 MATHEMATICS FOR ELECTRICIANS			
<input type="checkbox"/> INEL 10020-7201	ELECTRICAL MATH 2	0.25	6
<input type="checkbox"/> INEL 10030-7201	ELECTRICAL MATH 3	0.25	6
UNIT TOTAL		0.50	12
UNIT 15 ELECTRICAL THEORY			
<input type="checkbox"/> INEL 15010-7201	ELECTRICAL THEORY	0.25	6
<input type="checkbox"/> INEL 15020-7201	STATIC ELECTRICITY	0.25	6
<input type="checkbox"/> INEL 15030-7201	CALCULATORS AND ELECTRONICS	0.25	6
<input type="checkbox"/> INEL 15040-7201	DEVICES AND SYMBOLS	0.25	6
<input type="checkbox"/> INEL 15050-7201	MULTIMETER	0.33	8
<input type="checkbox"/> INEL 15060-7201	OHM'S LAW	0.33	8
<input type="checkbox"/> INEL 15070-7201	SERIES CIRCUITS	0.33	8
<input type="checkbox"/> INEL 15080-7201	PARALLEL CIRCUITS	0.33	8
<input type="checkbox"/> INEL 15090-7201	COMBINATION CIRCUITS	0.33	8
<input type="checkbox"/> INEL 15100-7201	MAGNETISM	0.25	6
<input type="checkbox"/> INEL 15110-7201	ALTERNATING CURRENT	0.25	6
<input type="checkbox"/> INEL 15120-7201	OSCILLOSCOPE	0.33	8
<input type="checkbox"/> INEL 15130-7201	INDUCTANCE	0.42	10
<input type="checkbox"/> INEL 15140-7201	CAPACITANCE	0.42	10
<input type="checkbox"/> INEL 15150-7201	RLC CIRCUITS	0.33	8
<input type="checkbox"/> INEL 15160-7201	CONDUCTION	0.33	8
<input type="checkbox"/> INEL 15170-7201	THEORY OVERVIEW	0.21	5
UNIT TOTAL		5.19	125
UNIT 35 NATIONAL ELECTRICAL CODE (NEC)			
<input type="checkbox"/> INEL 35010-7201	GENERAL WIRING FUNDAMENTALS	0.25	6
<input type="checkbox"/> INEL 35020-7201	WIRE RACEWAY AND BOX SIZING	0.33	8
<input type="checkbox"/> INEL 35030-7201	BRANCH CIRCUITS	0.33	8
<input type="checkbox"/> INEL 35040-7201	SERVICE FEEDER CALCULATIONS	0.25	6
<input type="checkbox"/> INEL 35050-7201	GROUNDING AND BONDING	0.33	8
<input type="checkbox"/> INEL 35060-7201	OVERCURRENT PROTECTION	0.33	8
<input type="checkbox"/> INEL 35130-7201	SPECIAL APPLICATION WIRING	0.25	6
UNIT TOTAL		2.07	50
UNIT 40 POWER DISTRIBUTION SYSTEMS			
<input type="checkbox"/> INEL 40010-7201	POWER GENERATION DISTRIBUTION	0.33	8
<input type="checkbox"/> INEL 40020-7201	ELECTRICAL WIRING TECHNIQUES	0.33	8

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<input type="checkbox"/> INEL 40030-7201	WIRING SYSTEM INSTALLATION	0.42	10
<input type="checkbox"/> INEL 40040-7201	INTRODUCTION TO RACEWAYS	0.42	10
<input type="checkbox"/> INEL 40050-7201	BASIC CONDUIT BENDING	0.25	6
<input type="checkbox"/> INEL 40060-7201	ADVANCED RACEWAYS	0.25	6
<input type="checkbox"/> INEL 40070-7201	CONDUCTOR OVERCURRENT PROTECT	0.25	6
<input type="checkbox"/> INEL 40080-7201	CONDUIT SIZING WIRE PULLING	0.33	8
UNIT TOTAL		2.58	62
UNIT 05	ENERGY USE		
<input type="checkbox"/> INRE 05010-7201	MODERN ENERGY SOURCES	0.25	6
<input type="checkbox"/> INRE 05020-7201	PERSONAL ENERGY USE	0.67	16
<input type="checkbox"/> INRE 05030-7201	INDUSTRIAL ENERGY USE	0.50	12
<input type="checkbox"/> INRE 05040-7201	TRADITIONAL ENERGY SOURCES	0.33	8
<input type="checkbox"/> INRE 05050-7201	EXOTIC ENERGY PRODUCTION	0.33	8
UNIT TOTAL		2.08	50
UNIT 10	PHOTOVOLTAIC THEORY		
<input type="checkbox"/> INRE 10010-7201	INTRO TO PHOTOVOLTAIC SYSTEMS	0.50	12
<input type="checkbox"/> INRE 10020-7201	SOLAR RADIATION	0.50	12
UNIT TOTAL		1.00	24
UNIT 15	PV COMPONENTS		
<input type="checkbox"/> INRE 15010-7201	CELLS MODULES AND ARRAYS	0.88	21
<input type="checkbox"/> INRE 15020-7201	INVERTERS	0.25	6
<input type="checkbox"/> INRE 15030-7201	BATTERIES CHARGE CONTROLLERS	0.33	8
<input type="checkbox"/> INRE 15040-7201	BALANCE OF SYSTEM	0.25	6
<input type="checkbox"/> INRE 15050-7201	SYSTEM TYPES	0.67	16
UNIT TOTAL		2.38	57
UNIT 20	PHOTOVOLTAIC INSTALLATION		
<input type="checkbox"/> INRE 20010-7201	PHOTOVOLTAIC SAFETY	0.21	5
<input type="checkbox"/> INRE 20020-7201	ELECTRICAL NEC REQUIREMENTS	0.75	18
<input type="checkbox"/> INRE 20030-7201	SITE EVALUATION AND SIZING	0.67	16
<input type="checkbox"/> INRE 20040-7201	CONSTRUCT COMMISSIONING TROUBL	0.75	18
<input type="checkbox"/> INRE 20050-7201	PHOTOVOLTAIC SYSTEM PROJECT	1.00	24
UNIT TOTAL		3.38	81
UNIT 25	WIND THEORY		
<input type="checkbox"/> INRE 25010-7201	WIND SYSTEM INTRODUCTION	0.33	8
<input type="checkbox"/> INRE 25020-7201	HISTORY OF WIND	0.42	10
<input type="checkbox"/> INRE 25030-7201	METEOROLOGY AND GEOGRAPHY	0.33	8
<input type="checkbox"/> INRE 25040-7201	MECHANICS OF THE WIND	0.33	8
UNIT TOTAL		1.41	34
UNIT 30	WIND COMPONENTS		

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<input type="checkbox"/> INRE 30010-7201	TURBINE TECHNOLOGY	0.67	16
<input type="checkbox"/> INRE 30020-7201	DC GENERATION PRINCIPLES	0.58	14
<input type="checkbox"/> INRE 30030-7201	AC GENERATION PRINCIPLES	0.42	10
<input type="checkbox"/> INRE 30040-7201	TOWERS	0.25	6
UNIT TOTAL		1.92	46
UNIT 35	WIND INSTALLATION		
<input type="checkbox"/> INRE 35010-7201	WIND SAFETY	0.33	8
<input type="checkbox"/> INRE 35020-7201	WIND APPLICATION	0.33	8
<input type="checkbox"/> INRE 35030-7201	BUYING A WIND SYSTEM	0.50	12
<input type="checkbox"/> INRE 35040-7201	SITING	0.58	14
<input type="checkbox"/> INRE 35050-7201	SYSTEM INSTALLATION	0.67	16
<input type="checkbox"/> INRE 35060-7201	SYSTEM OPERATION	0.33	8
UNIT TOTAL		2.74	66
TOTAL		25.42	615

FOR OFFICE USE ONLY

Instructor Approval _____ Date _____

Total Credit _____ Total Contact _____ Total Cost _____