

**KELLOGG COMMUNITY COLLEGE**  
**INDUSTRIAL WELDING**  
**COURSE OPTIONS**

**FALL 2024**

Certificate: 25 credits

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

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Module Subject Code and Number	Module Title	Credit	Contact Hours	Lab Fees	Tuition	Total Cost
<input type="checkbox"/> INWE C910-2201	WELDING ORIENTATION The orientation must be completed at the EAC in Albion prior to registration. Please call 517-630-8169 to verify available orientation times.		2	0.00	0.00	0.00
<b>UNIT 05 BASICS OF WELDING</b>						
<input type="checkbox"/> INWE 05010-2201	WELDING SHOP SAFETY RULES	0.17	4	4.00	46.50	50.50
<input type="checkbox"/> INWE 05020-2201	JOINTS WELDS POSITIONS	0.13	3	9.00	35.56	44.56
<input type="checkbox"/> INWE 05030-2201	RULES AND SQUARES	0.13	3	9.00	35.56	44.56
<b>UNIT TOTAL</b>		<b>0.43</b>	<b>10</b>	<b>22.00</b>	<b>117.62</b>	<b>139.62</b>
<b>UNIT 10 OXYACETYLENE WELDING</b>						
<input type="checkbox"/> INWE 10010-2201	OXY-FUEL WELDING TERMS	0.17	4	9.00	46.50	55.50
<input type="checkbox"/> INWE 10020-2201	SET UP OXY-FUEL WELD STAT	0.08	2	9.00	21.88	30.88
<input type="checkbox"/> INWE 10030-2201	RUN BEADS W/WO FILL	0.29	7	28.00	79.32	107.32
<input type="checkbox"/> INWE 10040-2201	WELD JOINTS FLAT POSITION	1.00	24	45.00	273.50	318.50
<b>UNIT TOTAL</b>		<b>1.54</b>	<b>37</b>	<b>91.00</b>	<b>421.20</b>	<b>512.20</b>
<b>UNIT 15 CUTTING PROCESSES</b>						
<input type="checkbox"/> INWE 15010-2201	BASIC CUTTING PRACTICES	0.13	3	9.00	35.56	44.56
<input type="checkbox"/> INWE 15020-2201	CUT FERROUS MET W OXY FUEL	0.33	8	31.00	90.26	121.26
<input type="checkbox"/> INWE 15030-2201	CUTTING METALS W PLASMA	0.33	8	33.00	90.26	123.26
<b>UNIT TOTAL</b>		<b>0.79</b>	<b>19</b>	<b>73.00</b>	<b>216.08</b>	<b>289.08</b>
<b>UNIT 20 BRAZING AND SOLDERING</b>						
<input type="checkbox"/> INWE 20010-2201	BRAZ JOINTS FLAT POSITION	0.33	8	41.00	90.26	131.26
<input type="checkbox"/> INWE 20020-2201	BRAZ V-GROOVE JOINTS	0.21	5	34.00	57.44	91.44
<input type="checkbox"/> INWE 20030-2201	SILVER BRAZ DISSIMILAR METALS	0.13	3	35.00	35.56	70.56
<input type="checkbox"/> INWE 20040-2201	LEAD SOLDERING SEAMS	0.25	6	35.00	68.38	103.38
<b>UNIT TOTAL</b>		<b>0.92</b>	<b>22</b>	<b>145.00</b>	<b>251.64</b>	<b>396.64</b>
<b>UNIT 25 SHIELDED METAL ARC WELDING</b>						
<input type="checkbox"/> INWE 25010-2201	SMAW TERMS DEFINITIONS	0.17	4	9.00	46.50	55.50
<input type="checkbox"/> INWE 25020-2201	ELECTRODES FOR SMAW	0.21	5	14.00	57.44	71.44
<input type="checkbox"/> INWE 25030-2201	STRIKE ARC RUN BEADS	0.67	16	45.00	183.25	228.25
<input type="checkbox"/> INWE 25040-2201	ANALYZE WELD CHARACTERISTICS	0.13	3	9.00	35.56	44.56
<input type="checkbox"/> INWE 25050-2201	MULTIPASS FILLET WELDS	0.50	12	45.00	136.75	181.75
<input type="checkbox"/> INWE 25060-2201	WELD SIZE WEAVE TECHNIQUE	0.50	12	29.00	136.75	165.75
<input type="checkbox"/> INWE 25070-2201	CORNER JOINT FLAT POSITION	0.67	16	29.00	183.25	212.25
<input type="checkbox"/> INWE 25080-2201	V-GROOVE BUTT W BACKING	0.50	12	64.00	136.75	200.75
<input type="checkbox"/> INWE 25090-2201	V-GROOVE BUTT WO BACKING	0.67	16	63.00	183.25	246.25
<b>UNIT TOTAL</b>		<b>4.02</b>	<b>96</b>	<b>307.00</b>	<b>1,099.50</b>	<b>1,406.50</b>
<b>UNIT 30 ADVANCED ARC WELDING</b>						
<input type="checkbox"/> INWE 30010-2201	TEE JOINTS VERTICAL UP	0.58	14	45.00	158.63	203.63
<input type="checkbox"/> INWE 30020-2201	BUTT W BACK VERTICAL UP	0.46	11	64.00	125.81	189.81
<input type="checkbox"/> INWE 30030-2201	BUTT WO BACK VERTICAL UP	0.75	18	63.00	205.13	268.13
<input type="checkbox"/> INWE 30040-2201	TEE JOINTS VERTICAL DOWN	0.29	7	29.00	79.32	108.32
<input type="checkbox"/> INWE 30050-2201	BUTT W BACK VERTICAL DOWN	0.42	10	64.00	114.87	178.87
<input type="checkbox"/> INWE 30060-2201	BUT WO BACK VERTICAL DOWN	0.33	8	63.00	90.26	153.26

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<b>UNIT 30      ADVANCED ARC WELDING (CONTINUED)</b>						
<input type="checkbox"/> INWE 30070-2201	BUTT W BACK HORIZONTAL	0.50	12	64.00	136.75	200.75
<input type="checkbox"/> INWE 30080-2201	BUTT WO BACK HORIZONTAL	0.50	12	63.00	136.75	199.75
<input type="checkbox"/> INWE 30090-2201	TEE JOINTS OVERHEAD	0.50	12	29.00	136.75	165.75
<input type="checkbox"/> INWE 30100-2201	BUTT W BACK OVERHEAD	0.58	14	64.00	158.63	222.63
<input type="checkbox"/> INWE 30110-2201	BUTT WO BACK OVERHEAD	0.83	20	63.00	227.01	290.01
<b>UNIT TOTAL</b>		<b>5.74</b>	<b>138</b>	<b>611.00</b>	<b>1,546.95</b>	<b>2,157.95</b>
<b>UNIT 35      WELDING METALLURGY</b>						
<input type="checkbox"/> INWE 35010-2201	INTRO TO METALLURGY	0.46	11	9.00	125.81	134.81
<input type="checkbox"/> INWE 35020-2201	EXAMINE IDENTIFY METALS	0.13	3	14.00	35.56	49.56
<input type="checkbox"/> INWE 35030-2201	METALLURGY FUND CAST IRON	0.13	3	9.00	35.56	44.56
<input type="checkbox"/> INWE 35040-2201	METALLURGY FUND STAINLESS	0.13	3	9.00	35.56	44.56
<input type="checkbox"/> INWE 35050-2201	TESTING METALS	0.42	10	9.00	114.87	123.87
<b>UNIT TOTAL</b>		<b>1.27</b>	<b>30</b>	<b>50.00</b>	<b>347.36</b>	<b>397.36</b>
<b>UNIT 40      GAS METAL ARC WELDING</b>						
<input type="checkbox"/> INWE 40010-2201	EXPLAINING GMAW	0.29	7	34.00	79.32	113.32
<input type="checkbox"/> INWE 40020-2201	START ARC RUN BEADS GMAW	0.17	4	29.00	46.50	75.50
<input type="checkbox"/> INWE 40030-2201	GMAW FCAW WELD ALL POSITIONS	1.67	40	93.00	456.75	549.75
<input type="checkbox"/> INWE 40040-2201	GMAW OF ALUMINUM	0.67	16	73.00	183.25	256.25
<b>UNIT TOTAL</b>		<b>2.80</b>	<b>67</b>	<b>229.00</b>	<b>765.82</b>	<b>994.82</b>
<b>UNIT 45      GAS TUNGSTEN ARC WELDING</b>						
<input type="checkbox"/> INWE 45010-2201	EXPLAINING GTAW	0.42	10	30.00	114.87	144.87
<input type="checkbox"/> INWE 45020-2201	START ARC RUN BEADS GTAW	0.42	10	29.00	114.87	143.87
<input type="checkbox"/> INWE 45030-2201	GTAW ALUMINUM FLAT POSITION	1.25	30	73.00	341.88	414.88
<input type="checkbox"/> INWE 45040-2201	BASIC JOINTS STAINLESS	1.25	30	57.00	341.88	398.88
<input type="checkbox"/> INWE 45050-2201	GTAW ALUMINUM OUT POSITION	1.67	40	83.00	456.75	539.75
<b>UNIT TOTAL</b>		<b>5.01</b>	<b>120</b>	<b>272.00</b>	<b>1,370.25</b>	<b>1,642.25</b>
<b>UNIT 50      PIPE WELDING</b>						
<input type="checkbox"/> INWE 50010-2201	IDENTIFYING PIPE WELDING	0.21	5	14.00	57.44	71.44
<input type="checkbox"/> INWE 50020-2201	2G FIXED POSITION	0.83	20	71.00	227.01	298.01
<input type="checkbox"/> INWE 50030-2201	5G FIXED VERTICAL UP	1.25	30	66.00	341.88	407.88
<input type="checkbox"/> INWE 50040-2201	5G FIXED VERTICAL DOWN	1.04	25	71.00	284.44	355.44
<input type="checkbox"/> INWE 50050-2201	6G FIXED POSITION	1.04	25	73.00	284.44	357.44
<b>UNIT TOTAL</b>		<b>4.37</b>	<b>105</b>	<b>295.00</b>	<b>1,195.21</b>	<b>1,490.21</b>
<b>UNIT 55      SPECIAL APPLICATIONS</b>						
<input type="checkbox"/> INWE 55010-2201	WELDING BLUEPRINT READING	0.17	4	9.00	46.50	55.50
<input type="checkbox"/> INWE 55020-2201	FABRICATING A PROJECT	0.50	12	60.00	136.75	196.75
<input type="checkbox"/> INWE 55030-2201	CAST IRON REPAIR	0.17	4	28.00	46.50	74.50
<input type="checkbox"/> INWE 55040-2201	HARDSURFACING	0.17	4	28.00	46.50	74.50
<input type="checkbox"/> INWE 55050-2201	TOOL AND DIE WELDING	0.67	16	53.00	183.25	236.25
<b>UNIT TOTAL</b>		<b>1.68</b>	<b>40</b>	<b>178.00</b>	<b>459.50</b>	<b>637.50</b>

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<b>TOTAL</b>		<b>28.57</b>	<b>718</b>	<b>3,157.00</b>	<b>7,814.09</b>	<b>10,087.09</b>

**SPECIAL PROJECT MODULES**

(These modules cannot be articulated. Students must have instructor approval to register.)

<input type="checkbox"/> *INWE C710-2201	BASIC WELDING PROJECT		2	70.00	0.00	70.00
<input type="checkbox"/> *INWE C720-2201	INTERMEDIATE WELDING PROJECT		4	140.00	0.00	140.00
<input type="checkbox"/> *INWE C730-2201	ADVANCED WELDING PROJECT		6	210.00	0.00	210.00

\*Module(s) cannot be paid for using certain types of financial aid. Please direct all inquiries to the staff at the EAC registration desk.

**FOR OFFICE USE ONLY**

Instructor Approval \_\_\_\_\_ Date \_\_\_\_\_

Total Credit \_\_\_\_\_ Total Contact \_\_\_\_\_ Total Cost \_\_\_\_\_