

# KELLOGG COMMUNITY COLLEGE

## INDUSTRIAL PIPEFITTING

SPRING 2019

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Module Subject Code and Number	Module Title	Credit	Contact Hours	Lab Fees	Tuition	Total Cost
<input type="checkbox"/> INPF C910	PIPEFITTING ORIENTATION The orientation must be completed at the RMTC in Battle Creek prior to registration. Please call 269.965.4137 to verify available orientation times.		2	0.00	0.00	0.00
<b>UNIT 05 SAFETY</b>						
<input type="checkbox"/> INPF 05011	PIPEFITTING SAFETY	1.00	24	19.00	215.00	234.00
<b>UNIT TOTAL</b>		<b>1.00</b>	<b>24</b>	<b>19.00</b>	<b>215.00</b>	<b>234.00</b>
<b>UNIT 10 PIPEFITTING SCIENCE</b>						
<input type="checkbox"/> INPF 10011	PIPEFITTING SCIENCE	0.25	6	17.00	53.75	70.75
<b>UNIT TOTAL</b>		<b>0.25</b>	<b>6</b>	<b>17.00</b>	<b>53.75</b>	<b>70.75</b>
<b>UNIT 15 BLUEPRINT READING</b>						
<input type="checkbox"/> INPF 15011	INTRO TO BLUEPRINT READING	0.33	8	13.00	70.95	83.95
<input type="checkbox"/> INPF 15021	IDENTIFYING PIPING SYMBOLS	0.25	6	11.00	53.75	64.75
<input type="checkbox"/> INPF 15031	READ INTERPRET PIPING BLUEPRI	0.25	6	11.00	53.75	64.75
<input type="checkbox"/> INPF 15041	TROUBLESHOOTING BLUEPRINTS	0.08	2	6.00	17.20	23.20
<b>UNIT TOTAL</b>		<b>0.91</b>	<b>22</b>	<b>41.00</b>	<b>195.65</b>	<b>236.65</b>
<b>UNIT 20 INTRODUCTION TO PIPEFITTING</b>						
<input type="checkbox"/> INPF 20011	PIPEFITTING TOOLS MATERIALS	0.25	6	23.00	53.75	76.75
<input type="checkbox"/> INPF 20021	TYPES OF PIPING	0.42	10	17.00	90.30	107.30
<input type="checkbox"/> INPF 20031	SPECIALTY PIPING	0.33	8	6.00	70.95	76.95
<input type="checkbox"/> INPF 20041	PIPE FITTINGS & PRESSURE LOSS	0.25	6	19.00	53.75	72.75
<input type="checkbox"/> INPF 20051	PIPING CONNECTIONS	0.33	8	21.00	70.95	91.95
<input type="checkbox"/> INPF 20061	PIPE CUTTING AND THREADS	0.17	4	6.00	36.55	42.55
<input type="checkbox"/> INPF 20071	PIPING FLANGES	0.42	10	21.00	90.30	111.30
<input type="checkbox"/> INPF 20081	PIPING STAINLESS	0.33	8	36.00	70.95	106.95
<b>UNIT TOTAL</b>		<b>2.50</b>	<b>60</b>	<b>149.00</b>	<b>537.50</b>	<b>686.50</b>
<b>UNIT 25 MATHEMATICS FOR PIPEFITTING</b>						
<input type="checkbox"/> INPF 25012	PIPEFITTING MATH 1	0.17	4	24.00	36.55	60.55
<input type="checkbox"/> INPF 25022	PIPEFITTING MATH 2	0.25	6	24.00	53.75	77.75
<input type="checkbox"/> INPF 25032	PIPEFITTING MATH 3	0.63	15	84.00	135.45	219.45
<input type="checkbox"/> INPF 25042	PIPEFITTING MATH 4	0.25	6	24.00	53.75	77.75
<input type="checkbox"/> INPF 25052	PIPEFITTING MATH 5	0.25	6	24.00	53.75	77.75
<input type="checkbox"/> INPF 25062	PIPEFITTING MATH 6	0.83	20	84.00	178.45	262.45
<input type="checkbox"/> INPF 25072	PIPEFITTING MATH 7	0.25	6	24.00	53.75	77.75
<b>UNIT TOTAL</b>		<b>2.63</b>	<b>63</b>	<b>288.00</b>	<b>565.45</b>	<b>853.45</b>
<b>UNIT 30 PIPEFITTING</b>						
<input type="checkbox"/> INPF 30011	BASIC RATIO PIPE CAPACITIES	0.25	6	35.00	53.75	88.75
<input type="checkbox"/> INPF 30021	VALVES MANUAL	0.42	10	32.00	90.30	122.30
<input type="checkbox"/> INPF 30031	VALVES SELF CONTAINED	0.29	7	16.00	62.35	78.35
<input type="checkbox"/> INPF 30041	PIPING SUPPORT	0.25	6	36.00	53.75	89.75
<input type="checkbox"/> INPF 30051	PVC PIPING	0.29	7	24.00	62.35	86.35
<input type="checkbox"/> INPF 30061	PIPING COMPRESSION	0.25	6	6.00	53.75	59.75

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<b>UNIT 30 PIPEFITTING (continued)</b>						
<input type="checkbox"/> INPF 30071	SOLDERING AND BRAZING	0.63	15	21.00	135.45	156.45
<input type="checkbox"/> INPF 30081	TUBE BENDING	0.29	7	34.00	62.35	96.35
<input type="checkbox"/> INPF 30091	PRESSURE TAP & TRACING	0.42	10	41.00	90.30	131.30
<input type="checkbox"/> INPF 30101	VICTAULIC	0.33	8	6.00	70.95	76.95
<input type="checkbox"/> INPF 30111	FIBERGLASS REINFORCED PIPE	0.08	2	41.00	17.20	58.20
<input type="checkbox"/> INPF 30121	GREENTHREAD	0.08	2	6.00	17.20	23.20
<input type="checkbox"/> INPF 30131	CPVC PIPING	0.08	2	31.00	17.20	48.20
<b>UNIT TOTAL</b>		<b>3.66</b>	<b>88</b>	<b>329.00</b>	<b>786.90</b>	<b>1115.90</b>
<b>UNIT 35 PLUMBING</b>						
<input type="checkbox"/> INPF 35011	PURPOSE OF THE PLUMBING CODE	0.17	4	12.00	36.55	48.55
<input type="checkbox"/> INPF 35021	FIXTURES & APPLIANCES	0.17	4	12.00	36.55	48.55
<input type="checkbox"/> INPF 35031	POTABLE WATER PROTECTION	0.42	10	42.00	90.30	132.30
<input type="checkbox"/> INPF 35041	SEWAGE SYSTEMS	0.21	5	12.00	45.15	57.15
<input type="checkbox"/> INPF 35051	DRAINS	0.21	5	12.00	45.15	57.15
<input type="checkbox"/> INPF 35061	TRAPS INTERCEPTORS BACKWATER	0.42	10	12.00	90.30	102.30
<input type="checkbox"/> INPF 35071	STACKS & ROUGH-IN SHEETS	0.17	4	12.00	36.55	48.55
<input type="checkbox"/> INPF 35081	PURPOSE OF ASME CODE	0.08	2	6.00	17.20	23.20
<input type="checkbox"/> INPF 35091	USING THE ASME CODE	0.17	4	6.00	36.55	42.55
<input type="checkbox"/> INPF 35101	IMPORTANCE OF SAFETIES	0.08	2	53.00	17.20	70.20
<input type="checkbox"/> INPF 35111	PRESSURE TEST AND LEAK TEST	0.29	7	6.00	62.35	68.35
<input type="checkbox"/> INPF 35121	VENTING DRAINAGE SYSTEMS	0.21	5	6.00	45.15	51.15
<input type="checkbox"/> INPF 35131	INSTALLING WATER HEATERS	0.17	4	6.00	36.55	42.55
<b>UNIT TOTAL</b>		<b>2.77</b>	<b>66</b>	<b>197.00</b>	<b>595.55</b>	<b>792.55</b>
<b>UNIT 40 FIRE PROTECTION</b>						
<input type="checkbox"/> INPF 40011	NFPA 13 CODE BOOK	0.29	7	26.00	62.35	88.35
<input type="checkbox"/> INPF 40021	SPRINKLER HEADS	0.21	5	6.00	45.15	51.15
<input type="checkbox"/> INPF 40031	WET FIRE PROTECTION SYSTEM	0.21	5	11.00	45.15	56.15
<input type="checkbox"/> INPF 40041	DRY FIRE PROTECTION SYSTEM	0.21	5	11.00	45.15	56.15
<input type="checkbox"/> INPF 40051	DELUGE & FOAM FIRE PROTECTION	0.21	5	6.00	45.15	51.15
<b>UNIT TOTAL</b>		<b>1.13</b>	<b>27</b>	<b>60.00</b>	<b>242.95</b>	<b>302.95</b>
<b>UNIT 45 THERMODYNAMICS OF HEAT</b>						
<input type="checkbox"/> INPF 45011	FORCE AND MOTION	0.08	2	8.00	17.20	25.20
<input type="checkbox"/> INPF 45021	LAWS OF MOTION	0.08	2	8.00	17.20	25.20
<input type="checkbox"/> INPF 45031	CONSERVATION OF MOMENTUM	0.08	2	8.00	17.20	25.20
<input type="checkbox"/> INPF 45041	GRAVITY	0.08	2	8.00	17.20	25.20
<input type="checkbox"/> INPF 45051	ATOMS AND MOLECULES	0.08	2	8.00	17.20	25.20
<input type="checkbox"/> INPF 45061	SOLIDS	0.08	2	8.00	17.20	25.20
<input type="checkbox"/> INPF 45071	LIQUIDS AND GASES	0.08	2	8.00	17.20	25.20
<input type="checkbox"/> INPF 45081	TEMPERATURE AND HEAT	0.08	2	8.00	17.20	25.20
<input type="checkbox"/> INPF 45091	CHANGE OF STATE	0.08	2	8.00	17.20	25.20
<b>UNIT TOTAL</b>		<b>0.72</b>	<b>18</b>	<b>72.00</b>	<b>154.80</b>	<b>226.80</b>

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<b>UNIT 50 EXPANSION</b>						
<input type="checkbox"/> INPF 50011	EXPANSION JOINTS	0.08	2	6.00	17.20	23.20
<b>UNIT TOTAL</b>		<b>0.08</b>	<b>2</b>	<b>6.00</b>	<b>17.20</b>	<b>23.20</b>
<b>UNIT 55 PUMPS</b>						
<input type="checkbox"/> INPF 55011	CENTRIFUGAL PUMPS	0.42	10	6.00	90.30	96.30
<input type="checkbox"/> INPF 55021	POSITIVE DISPLACEMENT PUMPS	0.42	10	26.00	90.30	116.30
<b>UNIT TOTAL</b>		<b>0.84</b>	<b>20</b>	<b>32.00</b>	<b>180.60</b>	<b>212.60</b>
<b>UNIT 60 FLOW CONTROL</b>						
<input type="checkbox"/> INPF 60011	CONTROL THEORY 1	0.33	8	17.00	70.95	87.95
<input type="checkbox"/> INPF 60021	CONTROL THEORY 2	0.13	3	17.00	27.95	44.95
<input type="checkbox"/> INPF 60031	CONTROL THEORY 3	0.33	8	17.00	70.95	87.95
<input type="checkbox"/> INPF 60041	CONTROL VALVES	0.25	6	6.00	53.75	59.75
<input type="checkbox"/> INPF 60051	REGULATORS	0.25	6	6.00	53.75	59.75
<input type="checkbox"/> INPF 60061	PRESSURE REDUCING VALVES	0.67	16	6.00	144.05	150.05
<input type="checkbox"/> INPF 60071	ELECTROMECHANICAL CONTROLS	0.25	6	6.00	53.75	59.75
<input type="checkbox"/> INPF 60081	PNEUMATIC CONTROLS	0.67	16	6.00	144.05	150.05
<input type="checkbox"/> INPF 60091	FLOW MEASUREMENT	0.29	7	6.00	62.35	68.35
<b>UNIT TOTAL</b>		<b>3.17</b>	<b>76</b>	<b>87.00</b>	<b>681.55</b>	<b>768.55</b>
<b>UNIT 65 COMPRESSED AIR</b>						
<input type="checkbox"/> INPF 65011	TYPES OF AIR COMPRESSORS	0.13	3	21.00	27.95	48.95
<input type="checkbox"/> INPF 65021	SUPPORTING COMPONENTS	0.25	6	21.00	53.75	74.75
<b>UNIT TOTAL</b>		<b>0.38</b>	<b>9</b>	<b>42.00</b>	<b>81.70</b>	<b>123.70</b>
<b>UNIT 70 STEAM</b>						
<input type="checkbox"/> INPF 70011	STEAM SAFETY	0.13	3	6.00	27.95	33.95
<input type="checkbox"/> INPF 70021	FUNDAMENTALS OF STEAM	0.25	6	6.00	53.75	59.75
<input type="checkbox"/> INPF 70031	STEAM TRAPS	0.67	16	6.00	144.05	150.05
<input type="checkbox"/> INPF 70041	WATER HAMMER	0.08	2	6.00	17.20	23.20
<input type="checkbox"/> INPF 70051	STEAM COILS AND RADIATORS	0.33	8	6.00	70.95	76.95
<input type="checkbox"/> INPF 70061	VACUUM BREAKERS	0.17	4	6.00	36.55	42.55
<input type="checkbox"/> INPF 70071	STEAM HEAT EXCHANGERS	0.42	10	6.00	90.30	96.30
<b>UNIT TOTAL</b>		<b>2.05</b>	<b>49</b>	<b>42.00</b>	<b>440.75</b>	<b>482.75</b>
<b>UNIT 75 BOILERS</b>						
<input type="checkbox"/> INPF 75011	FUNDAMENTALS OF BOILERS	0.17	4	21.00	36.55	57.55
<input type="checkbox"/> INPF 75021	HOT WATER BOILERS	0.42	10	12.00	90.30	102.30
<input type="checkbox"/> INPF 75031	AIR TRAPS	0.08	2	6.00	17.20	23.20
<input type="checkbox"/> INPF 75041	LOW PRESSURE BOILERS	0.29	7	12.00	62.35	74.35
<input type="checkbox"/> INPF 75051	HIGH PRESSURE BOILERS	0.54	13	15.00	116.10	131.10
<input type="checkbox"/> INPF 75061	BOILER CONTROLS	0.25	6	85.00	53.75	138.75
<input type="checkbox"/> INPF 75071	BOILER SAFETIES	0.08	2	6.00	17.20	23.20

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<b>UNIT 75 BOILERS (CONTINUED)</b>						
<input type="checkbox"/> INPF 75081	BOILER VALVES	0.17	4	12.00	36.55	48.55
<input type="checkbox"/> INPF 75091	BOILER BLOWDOWN	0.08	2	15.00	17.20	32.20
<input type="checkbox"/> INPF 75101	CONDENSATE RETURN	0.50	12	6.00	107.50	113.50
<input type="checkbox"/> INPF 75111	BOILER FEED WATER	0.25	6	12.00	53.75	65.75
<input type="checkbox"/> INPF 75121	TROUBLESHOOTING BOILERS	0.25	6	6.00	53.75	59.75
<input type="checkbox"/> INPF 75131	BOILER PREVENTATIVE MAINT INS	0.25	6	6.00	53.75	59.75
<b>UNIT TOTAL</b>		<b>3.33</b>	<b>80</b>	<b>214.00</b>	<b>715.95</b>	<b>929.95</b>
<b>UNIT 80 PIPING MAINTENANCE</b>						
<input type="checkbox"/> INPF 80011	PIPING MAINTENANCE	0.50	12	6.00	107.50	113.50
<b>UNIT TOTAL</b>		<b>0.50</b>	<b>12</b>	<b>6.00</b>	<b>107.50</b>	<b>113.50</b>
<b>PROGRAM TOTAL</b>		<b>25.92</b>	<b>624</b>	<b>1601.00</b>	<b>5572.80</b>	<b>7173.80</b>

**FOR OFFICE USE ONLY**

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

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