

KELLOGG COMMUNITY COLLEGE
INDUSTRIAL TECHNOLOGY
COURSE OPTIONS

SUMMER 2024

Certificate: 30 credits

Associate in Applied Science: 60 credits (combination of industrial technology, 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	Lab Fees	Tuition	Total Cost
<input type="checkbox"/> INT C910-7201	IND TECHNOLOGY ORIENTATION		2	0.00	0.00	0.00
The orientation must be completed at the RMTC in Battle Creek prior to registration. Please call 269.965.4137 to verify available orientation times.						
UNIT 05 MATHEMATICS						
<input type="checkbox"/> INT 05010-7201	PLANE GEOMETRY LINES ANGLES	0.58	14	6.00	156.31	162.31
<input type="checkbox"/> INT 05020-7201	PLANE GEOMETRY TRIANGLES	0.42	10	6.00	113.19	119.19
<input type="checkbox"/> INT 05030-7201	PLANE GEOMETRY CIRCLES	0.42	10	6.00	113.19	119.19
<input type="checkbox"/> INT 05040-7201	PLANE GEOMETRY CONSTRUCT REVIE	0.38	9	6.00	102.41	108.41
<input type="checkbox"/> INT 05050-7201	GEOMETRIC FIGURES AREAS	0.58	14	6.00	156.31	162.31
<input type="checkbox"/> INT 05060-7201	GEOMETRIC FIGURES VOLUMES	0.46	11	6.00	123.97	129.97
<input type="checkbox"/> INT 05070-7201	GEOMETRIC FIGURE AREAS VOLUMES	0.25	6	6.00	67.38	73.38
<input type="checkbox"/> INT 05080-7201	TRIG FUNCTIONS TRIANGLE CALC	0.58	14	6.00	156.31	162.31
<input type="checkbox"/> INT 05090-7201	TRIG MACHINE APPLICATIONS	0.42	10	6.00	113.19	119.19
<input type="checkbox"/> INT 05100-7201	SOLVING OBLIQUE TRIANGLES	0.50	12	6.00	134.75	140.75
<input type="checkbox"/> INT 05110-7201	TRIG ACHIEVEMENT REVIEW	0.33	8	6.00	88.94	94.94
UNIT TOTAL		4.92	118	66.00	1,325.95	1,391.95
UNIT 10 APPLIED SCIENCE AND MATERIALS						
<input type="checkbox"/> INT 10010-7201	PRINCIPLES OF FERROUS METALS	0.63	15	113.00	169.79	282.79
<input type="checkbox"/> INT 10020-7201	PRINCIPLES NON FERROUS METALS	0.63	15	83.00	169.79	252.79
<input type="checkbox"/> INT 10030-7201	PRINCIPLES OF PLASTICS	0.42	10	13.00	113.19	126.19
<input type="checkbox"/> INT 10040-7201	PRINCIPLES OF CERAMICS	0.42	10	13.00	113.19	126.19
<input type="checkbox"/> INT 10050-7201	PRINCIPLES OF COMPOSITES	0.42	10	13.00	113.19	126.19
<input type="checkbox"/> INT 10060-7201	STATICS AND DATA ACQUISITION	0.42	10	20.00	113.19	133.19
<input type="checkbox"/> INT 10070-7201	THERMODYN ENERGY HEAT TRANSFER	1.00	24	36.00	269.50	305.50
<input type="checkbox"/> INT 10080-7201	DYNAMICS FORCE AND MOTION	1.13	27	101.00	304.54	405.54
<input type="checkbox"/> INT 10090-7201	FLUIDS	0.33	8	10.00	88.94	98.94
UNIT TOTAL		5.40	129	402.00	1,455.32	1,857.32
UNIT 15 PRODUCT DESIGN ELEMENTS						
<input type="checkbox"/> INT 15010-7201	FUNDAMENTALS OF PRINT READING	0.92	22	77.00	247.94	324.94
<input type="checkbox"/> INT 15020-7201	MACHINE PRINTS	0.17	4	15.00	45.82	60.82
<input type="checkbox"/> INT 15030-7201	ELECTRICAL PRINTS	0.29	7	77.00	78.16	155.16
<input type="checkbox"/> INT 15040-7201	HYDRAULIC PNEUMATIC PRINT	0.29	7	17.00	78.16	95.16
<input type="checkbox"/> INT 15050-7201	WELDING PRINTS	0.08	2	17.00	21.56	38.56
<input type="checkbox"/> INT 15060-7201	PIPING PLUMBING PRINTS	0.21	5	17.00	56.60	73.60
<input type="checkbox"/> INT 15070-7201	AC REFRIGE SHEET METAL PRINT	0.21	5	17.00	56.60	73.60
<input type="checkbox"/> INT 15080-7201	BUILDING PRINTS	0.08	2	15.00	21.56	36.56
<input type="checkbox"/> INT 15090-7201	GEOMETRIC DIMENSION TOLERANCE	0.17	4	13.00	45.82	58.82
UNIT TOTAL		2.42	58	265.00	652.22	917.22
UNIT 20 STANDARDS AND REGULATIONS						
<input type="checkbox"/> INT 20010-7201	INTRO MANUFACTURING STANDARDS	0.13	3	111.00	35.04	146.04
<input type="checkbox"/> INT 20020-7201	OVERVIEW OF STANDARDS DEVELOP	0.33	8	3.00	88.94	91.94
<input type="checkbox"/> INT 20030-7201	STANDARDS LEGAL ISSUES	0.13	3	3.00	35.04	38.04
<input type="checkbox"/> INT 20040-7201	GOOD MANUFACTURING PRACTICE	0.21	5	103.00	56.60	159.60
UNIT TOTAL		0.80	19	220.00	215.62	435.62
UNIT 25 PROCESS APPLICATIONS AND OPERATIONS						
<input type="checkbox"/> INT 25010-7201	MFG PROCESS PRODUCTION BASIC	0.63	15	43.00	169.79	212.79

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UNIT 25 PROCESS APPLICATIONS AND OPERATIONS (CONTINUED)						
<input type="checkbox"/> INT 25020-7201	PRODUCTION MACHINE OPERATIONS	0.79	19	93.00	212.91	305.91
UNIT TOTAL		1.42	34	136.00	382.70	518.70
UNIT 30 ELECTRO-MECHANICAL DEVICES, EQUIPMENT, AND SAFETY						
<input type="checkbox"/> INT 30010-7201	MANUFACTURING SAFETY	1.00	24	43.00	269.50	312.50
<input type="checkbox"/> INT 30020-7201	OSHA 10	0.92	22	31.00	247.94	278.94
<input type="checkbox"/> INT 30030-7201	OSHA 30	1.79	43	196.00	482.41	678.41
<input type="checkbox"/> INT 30040-7201	ARC FLASH LOCKOUT TAGOUT	0.29	7	48.00	78.16	126.16
<input type="checkbox"/> INT 30050-7201	ELECTROMECHANICAL DEVICE EQUIP	1.08	26	88.00	291.06	379.06
<input type="checkbox"/> INT 30060-7201	INTRO TO POWER TRANSMISSIONS	0.13	3	6.00	35.04	41.04
<input type="checkbox"/> INT 30070-7201	COUPLINGS	0.17	4	11.00	45.82	56.82
<input type="checkbox"/> INT 30080-7201	CLUTCHES AND BRAKES	0.33	8	10.00	88.94	98.94
<input type="checkbox"/> INT 30090-7201	FLAT BELT DRIVES	0.25	6	10.00	67.38	77.38
<input type="checkbox"/> INT 30100-7201	V BELT DRIVES	0.25	6	11.00	67.38	78.38
<input type="checkbox"/> INT 30110-7201	CHAIN DRIVES	0.25	6	13.00	67.38	80.38
<input type="checkbox"/> INT 30120-7201	SPEED REDUCERS	0.25	6	10.00	67.38	77.38
<input type="checkbox"/> INT 30130-7201	GEARS	0.25	6	6.00	67.38	73.38
<input type="checkbox"/> INT 30140-7201	LUBRICANTS AND LUBRICATION	0.17	4	6.00	45.82	51.82
<input type="checkbox"/> INT 30150-7201	ADDITIVES LUB ACT BEARING LUB	0.08	2	3.00	21.56	24.56
<input type="checkbox"/> INT 30160-7201	OILS AND THEIR APPLICATIONS	0.08	2	3.00	21.56	24.56
<input type="checkbox"/> INT 30170-7201	GENERAL SPECIAL PURPOSE GREASE	0.17	4	3.00	45.82	48.82
<input type="checkbox"/> INT 30190-7201	LUBRICATING SYSTEMS METHODS	0.13	3	3.00	35.04	38.04
<input type="checkbox"/> INT 30200-7201	LUBRICANT STORAGE AND HANDLING	0.08	2	3.00	21.56	24.56
<input type="checkbox"/> INT 30210-7201	NOMENCLATURE TYPES OF BEARING	0.17	4	6.00	45.82	51.82
<input type="checkbox"/> INT 30220-7201	HANDLING AND STORING BEARINGS	0.08	2	3.00	21.56	24.56
<input type="checkbox"/> INT 30230-7201	BEARING INSTALLATION REMOVAL	0.50	12	8.00	134.75	142.75
<input type="checkbox"/> INT 30240-7201	BEARING LUBRICATION AND SEALS	0.25	6	8.00	67.38	75.38
<input type="checkbox"/> INT 30250-7201	TROUBLESHOOT BEARING FAILURE	0.21	5	8.00	56.60	64.60
<input type="checkbox"/> INT 30260-7201	RIGGING SAFETY WEIGHT ESTIMATE	0.13	3	17.00	35.04	52.04
<input type="checkbox"/> INT 30270-7201	RIGGING SAFETY WIRE ROPE SLING	0.13	3	17.00	35.04	52.04
<input type="checkbox"/> INT 30280-7201	RIG SAFETY FIBER ROPE SLINGS	0.38	9	17.00	102.41	119.41
<input type="checkbox"/> INT 30290-7201	RIGGING SAFETY CHAIN SLINGS	0.08	2	17.00	21.56	38.56
<input type="checkbox"/> INT 30300-7201	RIGGING SAFETY HOISTS CRANES	0.21	5	17.00	56.60	73.60
<input type="checkbox"/> INT 30310-7201	RIGGING SAFETY HAND SIGNALS	0.13	3	17.00	35.04	52.04
<input type="checkbox"/> INT 30320-7201	HAND AND POWER TOOLS	0.67	16	26.00	180.57	206.57
<input type="checkbox"/> INT 30330-7201	FORKLIFT SAFETY	0.17	4	33.00	45.82	78.82
UNIT TOTAL		10.78	258	698.00	2,905.32	3,603.32
UNIT 35 PROGRAMMING AND CONTROLS						
<input type="checkbox"/> INT 35010-7201	INTRODUCTION TO ROBOTICS	0.67	16	29.00	180.57	209.57
<input type="checkbox"/> INT 35020-7201	ROBOT PROGRAMMING	1.29	31	29.00	347.66	376.66
<input type="checkbox"/> INT 35030-7201	ROBOT PROGRAMMING FANUC	0.75	18	103.00	202.13	305.13
<input type="checkbox"/> INT 35035-7201	ROBOT PROGRAMMING MOTOMAN	1.67	40	140.00	450.07	590.07
<input type="checkbox"/> INT 35060-7201	ROBOT ONLINE PROGRAM DENSO	0.42	10	3.00	113.19	116.19
<input type="checkbox"/> INT 35070-7201	ROBOT OFFLINE PROGRAM FANUC	0.58	14	3.00	156.31	159.31
<input type="checkbox"/> INT 35080-7201	ROBOT OFFLINE PROGRAM DENSO	0.83	20	3.00	223.69	226.69
<input type="checkbox"/> INT 35085-7201	ROBOT OFFLINE PROGRAM MOTOMAN	1.00	24	8.00	269.50	277.50
<input type="checkbox"/> INT 35090-7201	ROBOTIC MAINT PM TROUBLESHOOT	1.04	25	43.00	280.28	323.28
<input type="checkbox"/> INT 35100-7201	ROBOTICS INTEGRATION WITH PLC	0.63	15	23.00	169.79	192.79
<input type="checkbox"/> INT 35105-7201	ETHERNET NETWORKING PROTOCOLS	0.50	12	35.00	134.75	169.75
<input type="checkbox"/> INT 35110-7201	ROBO WRKCELL INTEGRTE INTERFAC	1.00	24	28.00	269.50	297.50
<input type="checkbox"/> INT 35120-7201	MACHINE CENTER INTEGRATION	1.00	24	8.00	269.50	277.50
UNIT TOTAL		11.38	273	455.00	3,066.94	3,521.94

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UNIT 40 MAINTENANCE SYSTEMS DESIGN AND DEVELOPMENT						
<input type="checkbox"/> INT 40010-7201	PRODUCTION PRODUCT HANDLING	0.58	14	113.00	156.31	269.31
<input type="checkbox"/> INT 40020-7201	IND MAINTENANCE TROUBLESHOOTIN	0.92	22	138.00	247.94	385.94
<input type="checkbox"/> INT 40030-7201	PREVENTIVE PREDICTIVE MAINTEN	1.25	30	46.00	336.88	382.88
<input type="checkbox"/> INT 40040-7201	FUNDAMENTALS HYDRAULIC CIRCUIT	0.33	8	13.00	88.94	101.94
<input type="checkbox"/> INT 40050-7201	HYDRAULIC FLUIDS	0.33	8	23.00	88.94	111.94
<input type="checkbox"/> INT 40060-7201	CONTROL VALVES	0.33	8	23.00	88.94	111.94
<input type="checkbox"/> INT 40070-7201	FLOW CONTROL VALVES CIRCUITS	0.33	8	16.00	88.94	104.94
<input type="checkbox"/> INT 40080-7201	ACTUATORS	0.33	8	16.00	88.94	104.94
<input type="checkbox"/> INT 40090-7201	VALVES	0.33	8	13.00	88.94	101.94
<input type="checkbox"/> INT 40100-7201	HYDRAULIC CIRCUITS	0.33	8	23.00	88.94	111.94
<input type="checkbox"/> INT 40110-7201	REMOTE CONTROL FILTRATION TRBL	0.33	8	33.00	88.94	121.94
<input type="checkbox"/> INT 40120-7201	FACTS ABOUT AIR	0.33	8	23.00	88.94	111.94
<input type="checkbox"/> INT 40130-7201	AIR PREPARATION	0.33	8	13.00	88.94	101.94
<input type="checkbox"/> INT 40140-7201	AIR PIPING	0.33	8	23.00	88.94	111.94
<input type="checkbox"/> INT 40150-7201	PNEUMATIC ACTUATORS	0.33	8	13.00	88.94	101.94
<input type="checkbox"/> INT 40160-7201	PNEUMATIC VALVES	0.33	8	13.00	88.94	101.94
<input type="checkbox"/> INT 40170-7201	PNEUMATIC CYLINDER SPEED CNTRL	0.33	8	13.00	88.94	101.94
<input type="checkbox"/> INT 40180-7201	PNEUMATIC TROUBLESHOOTING	0.33	8	13.00	88.94	101.94
UNIT TOTAL		7.70	186	568.00	2,075.23	2,643.23
UNIT 45 QUALITY AND LEAN MANUFACTURING						
<input type="checkbox"/> INT 45010-7201	INTRODUCTION TO QUALITY	1.71	41	23.00	460.85	483.85
<input type="checkbox"/> INT 45020-7201	COSTS AND TOOLS OF QUALITY	1.71	41	33.00	460.85	493.85
<input type="checkbox"/> INT 45030-7201	QUALITY SYSTEMS LEAN MFG	0.67	16	123.00	180.57	303.57
<input type="checkbox"/> INT 45040-7201	5S SYSTEM	0.33	8	73.00	88.94	161.94
<input type="checkbox"/> INT 45050-7201	TPM POKA YOKE AND LEAN THEORY	0.45	11	93.00	121.28	214.28
<input type="checkbox"/> INT 45060-7201	LEAN VISUAL WORKPLACE KAIZEN	0.29	7	43.00	78.16	121.16
<input type="checkbox"/> INT 45070-7201	VALUE STREAM MAPPING SETUP RED	0.38	9	73.00	102.41	175.41
<input type="checkbox"/> INT 45080-7201	METROLOGY	0.29	7	13.00	78.16	91.16
<input type="checkbox"/> INT 45090-7201	MACHINE VISION	1.38	33	173.00	371.91	544.91
UNIT TOTAL		7.21	173	647.00	1,943.13	2,590.13
TOTAL		52.03	1250	3,457.00	14,022.43	17,479.43

ASSESSMENTS

<input type="checkbox"/> *INT C410-7201	MSSC CERTIFIED PRODUCTION TEC		6	280.00	0.00	280.00
<input type="checkbox"/> *INT C420-7201	MSSC SAFETY ASSESSMENT		1.5	80.00	0.00	80.00
<input type="checkbox"/> *INT C430-7201	MSSC QUALITY ASSESSMENT		1.5	80.00	0.00	80.00
<input type="checkbox"/> *INT C440-7201	MSSC MFG PROCESSES ASSESSMENT		1.5	80.00	0.00	80.00
<input type="checkbox"/> *INT C450-7201	MSSC MAINTENANCE ASSESSMENT		1.5	80.00	0.00	80.00
<input type="checkbox"/> *INT C460-7201	ASQ QUALITY INSPECTOR CERT		4	250.00	0.00	250.00
<input type="checkbox"/> *INT C470-7201	ASQ QUALITY PROCESS ANALYST		4	250.00	0.00	250.00
<input type="checkbox"/> *INT C480-7201	ASQ QUALITY IMPROVEMENT ASSOC		3	250.00	0.00	250.00
<input type="checkbox"/> *INT C490-7201	SME CMFGT PRE-TEST		3	280.00	0.00	280.00
<input type="checkbox"/> *INT C500-7201	SME CMFGT CERTIFICATION		3	320.00	0.00	320.00

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

FOR OFFICE USE ONLY

Instructor Approval _____ Date _____

Total Credit _____ Total Contact _____ Total Cost _____