

KELLOGG COMMUNITY COLLEGE

INDUSTRIAL ROBOTICS

2011-2012

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

Unit / Module	Number	Packet Title	Credit	Contact Hours	Lab Fees	Tuition	Total Cost
UNIT 1 INTRO COMPUTER INTEGRATED MFG							
<input type="checkbox"/>	INRO 1A	GENERAL SAFETY FOR CIM	0.17	4	7.00	26.44	33.44
<input type="checkbox"/>	INRO 1B	FUNDAMENTALS OF CIM	0.50	12	7.00	77.75	84.75
<input type="checkbox"/>	INRO 1C	ROBOT VS DEDICATED AUTOMATION	0.17	4	7.00	26.44	33.44
<input type="checkbox"/>	INRO 1D	PURPOSE & APPLICA OF ROBOTS	0.33	8	7.00	51.32	58.32
<input type="checkbox"/>	INRO 1E	MOBILE VS FIXED ROBOTS	0.08	2	7.00	12.44	19.44
UNIT TOTAL			1.25	30	35.00	194.39	229.39
UNIT 2 FUNDAMENTALS OF ROBOTICS							
<input type="checkbox"/>	INRO 2A	ROBOTICS VS ROBOT	0.08	2	7.00	12.44	19.44
<input type="checkbox"/>	INRO 2B	TERMINOLOGY & DEFINITIONS	0.42	10	7.00	65.31	72.31
<input type="checkbox"/>	INRO 2C	ROBOT ANATOMY	0.08	2	8.00	12.44	20.44
<input type="checkbox"/>	INRO 2D	ROBOT GEOMETRY	0.17	4	8.00	26.44	34.44
<input type="checkbox"/>	INRO 2E	INTRO TO ROBOT POW & DRIV SYS	0.33	8	8.00	51.32	59.32
<input type="checkbox"/>	INRO 2F	ROBOT CLASSIFICATION	0.17	4	7.00	26.44	33.44
<input type="checkbox"/>	INRO 2G	INTRO TO ROBOT FEEDBACK SYS	0.17	4	7.00	26.44	33.44
<input type="checkbox"/>	INRO 2H	INTRO TO WORKPLACE LAYOUT	0.17	4	7.00	26.44	33.44
<input type="checkbox"/>	INRO 2J	INTRO TO MATCH ROBOT TO APPLI	0.25	6	7.00	38.88	45.88
<input type="checkbox"/>	INRO 2K	SAFEGUARDING DEVICES	0.17	4	7.00	26.44	33.44
UNIT TOTAL			2.01	48	73.00	312.59	385.59
UNIT 3 POWER & DRIVE SYSTEMS							
<input type="checkbox"/>	INRO 3A	ELECTRICAL SYSTEMS	0.50	12	10.00	77.75	87.75
<input type="checkbox"/>	INRO 3B	HYDRAULIC SYSTEMS	0.50	12	10.00	77.75	87.75
<input type="checkbox"/>	INRO 3C	PNEUMATIC SYSTEMS	0.50	12	10.00	77.75	87.75
<input type="checkbox"/>	INRO 3D	DRIVES	0.42	10	10.00	65.31	75.31
<input type="checkbox"/>	INRO 3E	MOTORS	0.42	10	10.00	65.31	75.31
<input type="checkbox"/>	INRO 3F	BRAKES	0.21	5	5.00	32.66	37.66
<input type="checkbox"/>	INRO 3G	OSHA REQUIREMENTS	0.17	4	7.00	26.44	33.44
UNIT TOTAL			2.72	65	62.00	422.97	484.97
UNIT 4 CONTROLS & SENSORS							
<input type="checkbox"/>	INRO 4A	FEEDBACK SYSTEMS	0.62	15	10.00	96.41	106.41
<input type="checkbox"/>	INRO 4B	TYPES OF CONTROLS	0.62	15	10.00	96.41	106.41
<input type="checkbox"/>	INRO 4C	SENSORS	0.62	15	10.00	96.41	106.41
<input type="checkbox"/>	INRO 4D	INTRO TO TROUBLESHOOTING	0.42	10	8.00	65.31	73.31
<input type="checkbox"/>	INRO 4E	INTRO TO MAINTENANCE	0.42	10	8.00	65.31	73.31
UNIT TOTAL			2.70	65	46.00	419.85	465.85
UNIT 5 PROGRAMMING ROBOTS							
<input type="checkbox"/>	INRO 5A	PROGRAMMING SAFETY	0.21	5	2.00	32.66	34.66
<input type="checkbox"/>	INRO 5B	ONLINE PROGRAMMING	1.25	30	30.00	194.38	224.38
<input type="checkbox"/>	INRO 5C	OFFLINE PROGRAMMING	0.62	15	10.00	96.41	106.41
<input type="checkbox"/>	INRO 5D	JOINT CONTROL PROGRAMMING	0.21	5	8.00	32.66	40.66

continued

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UNIT 5 PROGRAMMING ROBOTS (continued)							
<input type="checkbox"/>	INRO 5E	PRIMITIVE MOTION PROGRAMMING	0.21	5	8.00	32.66	40.66
<input type="checkbox"/>	INRO 5F	TASK-ORIENTED PROGRAMMING	0.21	5	8.00	32.66	40.66
<input type="checkbox"/>	INRO 5G	STRUCTURAL PROGRAMMING	0.62	15	7.00	96.41	103.41
<input type="checkbox"/>	INRO 5H	LANGUAGE PROGRAMMING-BASICS	0.42	10	8.00	65.31	73.31
UNIT TOTAL			3.75	90	81.00	583.15	664.15
UNIT 6 INTERFACING & WORK CELL							
<input type="checkbox"/>	INRO 6A	TYPES OF WORK CELLS	0.50	12	7.00	77.75	84.75
<input type="checkbox"/>	INRO 6B	LAYOUT OF WORK CELLS	0.50	12	8.00	77.75	85.75
<input type="checkbox"/>	INRO 6C	ANALYZING PERIPHERAL EQUIPMENT	0.33	8	7.00	51.32	58.32
<input type="checkbox"/>	INRO 6D	INTERFACING TECHNIQUES	0.50	12	10.00	77.75	87.75
UNIT TOTAL			1.83	44	32.00	284.57	316.57
UNIT 7 MAINT, REPAIR, TROUBLESHOOTING							
<input type="checkbox"/>	INRO 7A	MAINTENANCE SAFETY	0.25	6	7.00	38.88	45.88
<input type="checkbox"/>	INRO 7B	ANSI SYMBOLS	0.08	2	7.00	12.44	19.44
<input type="checkbox"/>	INRO 7C	INTERPRETING SCHEMATICS	0.17	4	7.00	26.44	33.44
<input type="checkbox"/>	INRO 7D	HYDRAULIC REPAIR	0.33	8	8.00	51.32	59.32
<input type="checkbox"/>	INRO 7E	PNEUMATIC REPAIR	0.33	8	8.00	51.32	59.32
<input type="checkbox"/>	INRO 7F	ELECTRICAL REPAIR	0.33	8	8.00	51.32	59.32
<input type="checkbox"/>	INRO 7G	DRIVE REPAIR	0.25	6	8.00	38.88	46.88
<input type="checkbox"/>	INRO 7H	PERIPHERAL EQUIPMENT	0.25	6	8.00	38.88	46.88
<input type="checkbox"/>	INRO 7J	ROBOT INSTALLATION	0.25	6	8.00	38.88	46.88
<input type="checkbox"/>	INRO 7K	ROBOT RELOCATION	0.25	6	8.00	38.88	46.88
UNIT TOTAL			2.49	60	77.00	387.24	464.24
PROGRAM TOTAL			16.75	402	406.00	2604.76	3010.76

FOR OFFICE USE ONLY

Instructor Approval _____ Date _____

Total Credit _____ Total Contact _____ Total Cost _____