INDUSTRIAL MAINTENANCE TECHNICIAN
Industrial Systems Technology (A50240)

The Industrial Systems Technology curriculum is designed to prepare or upgrade individuals to safely service, maintain, repair, or install equipment. Instruction includes theory and skill training needed for inspecting, testing, troubleshooting, and diagnosing industrial systems.

Students will learn multi-craft technical skills in blueprint reading, mechanical systems maintenance, electricity, hydraulics/pneumatics, welding, machining or fabrication, and includes various diagnostic and repair procedures. Practical application in these industrial systems will be emphasized and additional advanced course work may be offered.

Upon completion of this curriculum, graduates should be able to individually, or with a team, safely install, inspect, diagnose, repair, and maintain industrial process and support equipment. Students will also be encouraged to develop their skills as life-long learners.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

				Class	Lab	Work/ Clinical	Credit
A. General Education Courses							
1. Required Courses							
	ENG	111	Writing and Inquiry	3	0	0	3
	COM	231	Public Speaking	3	0	0	0
	or						
	ENG	112	Writing/Research in the Disciplines	3	0	0	3
	MAT	143	Quantitative Literacy	2	2	0	3
			Humanities/Fine Arts Elective*	3	0	0	3
			Social/Behavioral Sciences Elective*	3	0	0	3
B. Major Courses							
1. Core Courses							
To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.							
	BPR	111	Print Reading	1	2	0	2
	ELC	112	DC/AC Electricity	3	6	0	5
	ELC	117	Motors and Controls	2	6	0	4
	ELC	120	Introduction to Wiring	2	2	0	3
	ELC	128	Introduction to PLC	2	3	0	3
	HYD	110	Hydraulics/Pneumatics I	2	3	0	3
	ISC	112	Industrial Safety	2	0	0	2
	MEC	111	Machine Processes I	1	4	0	3

	MEC	130	Mechanisms	2	2	0	3
	MNT	110	Intro to Maintenance Procedures	1	3	0	2
	WLD	112	Basic Welding Processes	1	3	0	2
2.	Other Major Courses						
	AHR	120	HVACR Maintenance	1	3	0	2
	CIS	110	Introduction to Computers	2	2	0	3
	ELC	125	Diagrams and Schematics	1	2	0	2
	ELN	229	Industrial Electronics	3	3	0	4
	MNT	230	Pumps & Piping Systems	1	3	0	2
	MNT	240	Industrial Equipment Troubleshooting	1	3	0	2
	WBL	111	Work-Based Learning I	0	0	10	1
	WBL	115	Work-Based Learning Seminar I	1	0	0	1
C.	**Other Required Courses**						
	ACA	122	College Transfer Success	0	2	0	1

Total Credit Hours **65**

*Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE
INDUSTRIAL SYSTEMS TECHNOLOGY

			Class	Lab	Work/ Clinical	Credit
		First Year – Fall Semester				
ACA	122	College Transfer Success	0	2	0	1
CIS	110	Introduction to Computers	2	2	0	3
ENG	111	Writing and Inquiry	3	0	0	3
ISC	112	Industrial Safety	2	0	0	2
MAT	143	Quantitative Literacy	2	2	0	3
MNT	110	Intro to Maintenance Procedures	1	3	0	2
			10	9	0	14
		First Year – Spring Semester				
BPR	111	Print Reading	1	2	0	2
COM	231	Public Speaking	3	0	0	3
or						
ENG	112	Writing/Research in the Disciplines	3	0	0	3
ELC	112	DC/AC Electricity	3	6	0	5
ELC	125	Diagrams and Schematics	1	2	0	2
HYD	110	Hydraulics/Pneumatics I	2	3	0	3
			13	13	0	15
		First Year – Summer				
AHR	120	HVACR Maintenance	1	3	0	2
		Humanities/Fine Arts Elective*	3	0	0	3
			4	3	0	5

		Second Year – Fall Semester				
ELC	120	Introduction to Wiring	2	2	0	3
ELN	229	Industrial Electronics	3	3	0	4
MEC	111	Machine Processes I	1	4	0	3
MEC	130	Mechanisms	2	2	0	3
MNT	230	Pumps & Piping Systems	1	3	0	2
WLD	112	Basic Welding Processes	1	3	0	2
			10	17	0	17
		Second Year – Spring Semester				
ELC	117	Motors and Controls	2	6	0	4
ELC	128	Introduction to PLC	2	3	0	3
MNT	240	Industrial Equipment Troubleshooting	1	3	0	2
WBL	111	Work-Based Learning I	0	0	10	1
WBL	115	Work-Based Learning Seminar I	1	0	0	1
		Social/Behavioral Sciences Elective*	3	0	0	3
			9	12	10	14

Total Credit Hours **65**

*Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE
INDUSTRIAL SYSTEMS TECHNOLOGY (DIPLOMA) (D50240) (EVENING)

			Class	**Lab**	**Work/ Clinical**	**Credit**
		First Year – Fall Semester				
ACA	122	College Transfer Success	0	2	0	1
BPR	111	Print Reading	1	2	0	2
ELC	112	DC/AC Electricity	3	6	0	5
			4	10	0	8
		First Year – Spring Semester				
ELC	125	Diagrams and Schematics	1	2	0	2
ISC	112	Industrial Safety	2	0	0	2
MEC	111	Machine Processes I	1	4	0	3
MNT	110	Intro to Maintenance Procedures	1	3	0	2
			5	9	0	9
		First Year – Summer Semester				
ENG	111	Writing and Inquiry	3	0	0	3
		Social/Behavioral Sciences Elective*	3	0	0	3
			6	0	0	6

		Second Year – Fall Semester				
HYD	110	Hydraulics/Pneumatics I	2	3	0	3
MEC	130	Mechanisms	2	2	0	3
WLD	112	Basic Welding Processes	1	3	0	2
			5	8	0	8
		Second Year – Spring Semester				
ELC	117	Motors and Controls	2	6	0	4
ELC	128	Introduction to PLC	2	3	0	3
			4	9	0	7
		Total Credit Hours				**38**

SEMESTER SCHEDULE
INDUSTRIAL SYSTEMS TECHNOLOGY (CERTIFICATE) (C50240)

			Class	**Lab**	**Work/ Clinical**	**Credit**
		First Year – Fall Semester				
BPR	111	Print Reading	1	2	0	2
ELC	112	DC/AC Electricity	3	6	0	5
or						
MEC	111	Machine Processes I	1	4	0	3
WLD	112	Basic Welding Processes	1	3	0	2
			3-5	9-11	0	7-9
		First Year – Spring Semester				
HYD	110	Hydraulics/Pneumatics I	2	3	0	3
ISC	112	Industrial Safety	2	0	0	2
MNT	110	Intro to Maintenance Procedures	1	3	0	2
			5	6	0	7
		Total Credit Hours				**14-16**