

Industrial Systems Technology

Manufacturing Technologies

Certificate of Achievement

The industrial systems technology certificate is a program designed to provide training and technical job skills to students seeking employment and/or skill upgrades as a technician responsible for the support and maintenance of industrial systems including computer-controlled electrical and mechanical production equipment, material processing and handling equipment, general maintenance, and facility support systems. The program is competency-based, requiring students to complete a variety of hands-on learning exercises ranging from building and testing of equipment controls to troubleshooting of advanced electronic and mechanical systems.

Certificate Outcomes

Students completing the certificate will:

- Troubleshoot and repair components commonly used in industrial operations.
- Practice safety in all aspects of task performance.
- Develop the ability to communicate technical issues.

General Education Requirements

Communications 3 credits

Human Relations 3 credits

Recommended: CE 201

Quantitative Reasoning 3 credits

Recommended: MATH 108 or higher

(Human Relations and Quantitative Reasoning skills may be embedded in other required courses for a certificate rather than required as specific general education courses.)

Total General Education Requirements 9 Credits

Emphasis Requirements

AIT 110	General Industrial Safety.....	1
DFT 110	Print Reading for Industry.....	3
ELM 127	Introduction to AC Controls.....	3
ELM 129	Electric Motors and Drives.....	3
ELM 134	Programmable Logic Controllers I.....	4
ENRG 110	Basic Electricity.....	3

Total Emphasis Requirements 17 Credits

Elective Requirements

Choose two courses from the following:

AC 121	Sheet Metal.....	(3)
ELM 233	Introduction to Instrumentation.....	(3)
MT 109	Small Engine Operation and Maintenance.....	(3)
MT 111	Pneumatic Systems.....	(2)
MT 160	Hydraulic Power.....	(3)
MT 290	Internship in Mechanical Technology.....	(2-3)
WELD 101	Basic Metals.....	(3)

Total Elective Requirements 5-6 Credits

Total Certificate Requirements 31-32 Credits

Suggested Course Sequence

First Year	Course #	Title	Credits
1st Semester			
Elective		Choose from list	3
Emphasis	AIT 110	General Industrial Safety	1
Emphasis	DFT 110	Print Reading for Industry	3
Emphasis	ENRG 110	Basic Electricity	3
Quantitative Reasoning	MATH 108	Math for Technicians	3
			Total 13
2nd Semester			
Elective		Choose from list	2-3
Human Relations	CE 201	Workplace Readiness	3
Emphasis	ELM 127	Introduction to AC Controls	3
Communications	ENG 107	Technical Communications I	3
			Total 11-12
Second Year	Course #	Title	Credits
3rd Semester			
Emphasis	ELM 129	Electric Motors & Drives	3
Emphasis	ELM 134	Programmable Logic Controllers I	4
			Total 7
			Certificate Total 31-32