

Industrial Systems Technology
Credential: Certificate in Electrical Controls
C5024010

This curriculum will provide students with knowledge of electricity and electrical controls. Students will learn AC/DC electricity, pilot devices, control relays, motor starters, and electromechanical devices. Upon completion, students will have the flexibility of pursuing a Diploma or an Associate in Applied Science Degree in Industrial Systems Maintenance Technology.

Entrance Standards: See General Admission Standards on page 7 (Gen. Info section).
 Academic Standards: See General Academic Standards on page 18 (Gen. Info section).
 Program Length: 2 semesters
 Career Pathway Options: AAS in Industrial Systems Technology (Higher entrance standards required); Diploma in Industrial Systems Technology (Higher entrance standards required); Certificate in Electrical Controls
 Program Sites: Lee Campus - Evening Program

Course Requirements for Electrical Controls Certificate

A. Required Subject Areas (5 SHC)	C-L-SHC
ELC 112 DC/AC Electricity	3-6-5

B. Other Major Hours Required for Graduation (7 SHC)	
ELC 117 Motors and Controls	2-6-4
ELN 231 Industrial Controls	2-3-3

Total Semester Hours Credit Required for Graduation: 12

Semester Curriculum for Electrical Controls Certificate

1st Semester (Fall)	
ELC 112 DC/AC Electricity	3-6-5

2nd Semester (Spring)	
ELC 117 Motors and Controls	2-6-4
ELN 231 Industrial Controls	2-3-3

Total Semester Hours Credit: 12

Industrial Systems Technology
Credential: Certificate in Industrial Hydraulics
C5024020

This curriculum will provide students with knowledge of hydraulics and pneumatics. Students will learn hydraulic and pneumatic blueprint reading, how to repair valves and pumps, and how to measure and troubleshoot systems. Upon completion, students will have the flexibility of pursuing a Diploma or an Associate in Applied Science Degree in Industrial Systems Technology.

Entrance Standards: See General Admission Standards on page 7 (Gen. Info section).
 Academic Standards: See General Academic Standards on page 18 (Gen. Info section).
 Program Length: 2 semesters
 Career Pathway Options: Associate in Applied Science in Industrial Systems Technology (Higher entrance standards required); Diploma in Industrial Systems Maintenance Technology (Higher entrance standards required); Certificate in Industrial Hydraulics
 Program Sites: Lee Campus - Evening Program

Course Requirements for Industrial Hydraulics Certificate

A. Required Major Core Courses (5 SHC)	C-L-SHC
HYD 110 Hydraulics/Pneumatics	2-3-3
MNT 110 Intro. to Maint. Procedures	1-3-2

B. Other Major Hours Required for Graduation (8 SHC)	
BPR 115 Elc Fluid Power Diagrams	1-2-2
HYD 121 Hydraulics/Pneumatics II	1-3-2
MNT 111 Maintenance Practices	2-2-3
MNT 230 Pumps & Piping Systems	1-3-2

Total Semester Hours Credit Required for Graduation: 14

Semester Curriculum for Industrial Hydraulics Certificate

1st Semester (Fall)		C-L-SHC
BPR 115 Electric/Fluid Power Diagr		1-2-2
HYD 110 Hydraulics/Pneumatics		2-3-3
MNT 110 Intro to Maint. Procedures		1-3-2
		4-8-7

2nd Semester (Spring)		
HYD 121 Hydraulics/Pneumatics II		1-3-2
MNT 111 Maintenance Practices		2-2-3
MNT 230 Pumps & Piping Systems		1-3-2
		3-9-6

Total Semester Hours Credit: 14

Industrial Systems Technology
Credential: Certificate in Programmable Logic
Controllers
C5024030

This curriculum will provide students with a knowledge of PLC's and PLC applications. In addition, students will become proficient in the use of PLC software, hardware, maintenance and troubleshooting, and programming. Upon completion, students will have the flexibility of pursuing a Diploma or an Associate in Applied Science Degree in Industrial Systems Technology.

Entrance Standards: See General Admission Standards on page 7 (Gen. Info section).
 Academic Standards: See General Academic Standards on page 18 (Gen. Info section).
 Program Length: 2 semesters
 Career Pathway Options: Associate in Applied Science in Industrial Systems Technology (Higher entrance standards required); Diploma in Industrial Systems Technology (Higher entrance standards required); Certificate in Programmable Logic Controllers
 Program Sites: Lee Campus - Evening Program

Course Requirements for Programmable Logic Controller Certificate

A. Required Subject Area Courses (5 SHC) C-L-SHC
 ELC 112 DC/AC Electricity 3-6-5

B. Other Major Hours Required for Graduation (11 SHC)
 ELC 128 Introduction to PLC 2-3-3
 ELC 228 PLC Applications 2-6-4
 ELN 229 Industrial Electronics 3-3-4

Total Semester Hours Credit Required for Graduation: 16

Semester Curriculum for Programmable Logic Controller Certificate

1st Semester (Fall) C-L-SHC
 ELC 112 DC/AC Electricity 3-6-5
 ELC 128 Introduction to PLC 2-3-3
 5-9-8

2nd Semester (Spring)
 ELC 228 PLC Applications 2-6-4
 ELN 229 Industrial Electronics 3-3-4
 5-9-8

Total Semester Hours Credit: 16

Industrial Systems Technology
 Credential: Certificate in Welding
 C5024040

The Welding certificate will provide students with knowledge of various types of welding processes and applications. Students will learn principles of welding, flame cutting, brazing, ARC, MIG, TIG, and safety procedures. Upon completion, students will have the flexibility of pursuing a diploma or an Associate in Applied Science Degree in Industrial Systems Technology.

Entrance Standards: See General Admission Standards on page 7 (Gen. Info section).
 Academic Standards: See General Academic Standards on page 18 (Gen. Info section).
 Program Length: 2 semesters
 Career Pathway Options: Associate in Applied Science in Industrial Systems Technology (Higher entrance standards required); Diploma in Industrial Systems Technology (Higher entrance standards required); Certificate in Welding
 Program Sites: Lee Campus - Evening Program

Course Requirements for Welding Certificate

A. Required Major Core Courses (5 SHC)		C-L-SHC
BPR 111	Blueprint Reading	1-2-2
ISC 112	Industrial Safety	2-0-2
	OR	
ISC 110	Workplace Safety	1-0-1
WLD 112	Basic Welding Processes	1-3-2

B. Other Major Hours Required for Graduation (7 SHC)
 WLD 115 SMAW (Stick) Plate 2-9-5
 WLD 212 Inert Gas Welding 1-3-2

Total Semester Hours Credit Required for Graduation: 12

Semester Curriculum for Welding Certificate

1st Semester (Fall)		C-L-SHC
BPR 111	Blueprint Reading	1-2-2
WLD 112	Basic Welding Processes	1-3-2
ISC	Safety Elective	1
		2-5-5

2nd Semester (Spring)
 WLD 115 SMAW (Stick) Plate 2-9-5
 WLD 212 Inert Gas Welding 1-3-2
 3-12-7

Total Semester Hours Credit: 12