

Industrial Controls and Instrumentation Certificate (ICIC)

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This hands-on training program is designed for the maintenance person who will install, calibrate, and troubleshoot industrial controls and instruments.

Students who successfully complete the certificate program are prepared to take the International Society of Automation Certified Controls Systems Technician exam.

For more information call the Workforce Development Center at (513) 569-1643 or toll-free (888) 569-1709.

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Semester 1		Lec	Lab	Credits
TPI 110	Process Control and Instrumentation 1: Pressure Control	2	1	2.5
Semester 2				
TPI 120	Process Control and Instrumentation 2: Temperature Control	2	1	2.5
Semester 3				
TPI 130	Process Control and Instrumentation 3: Level and Flow	2	1	2.5
Semester 4				
TPI 140	Process Control and Instrumentation 4: Final Control	2	1	2.5
Total		8	4	10
Credits:				

Courses

TPI 110 Process Control and Instrumentation 1: Pressure Control 2.5 Credits. 2 Lecture Hours. 1 Lab Hour.

A course on foundation concepts related to process controls and instrumentation. Topics include: controllers, transmitters, variable frequency drives (VFDs) and control valves, and automatic control techniques. Laboratory exercises include loop wiring, calibration, controller configuration, and troubleshooting.

Prerequisites: None

TPI 120 Process Control and Instrumentation 2: Temperature Control 2.5 Credits. 2 Lecture Hours. 1 Lab Hour.

A continuation of TPI 110. Topics include: control of temperature and pressure. Activities include laboratory exercises and computer simulations.

Prerequisites: TPI 110

TPI 130 Process Control and Instrumentation 3: Level and Flow 2.5 Credits. 2 Lecture Hours. 1 Lab Hour.

A continuation of TPI 120. Topics include: control of level and flow, installation, calibration, configuration, and troubleshooting. Activities include laboratory exercises.

Prerequisites: TPI 120

TPI 140 Process Control and Instrumentation 4: Final Control 2.5 Credits. 2 Lecture Hours. 1 Lab Hour.

A continuation of TPI 130. Topics include: industry use of final control units; and how to select, install, configure, and troubleshoot pneumatic control valves and variable frequency drives (VFDs). Activities include laboratory exercises.

Prerequisites: TPI 130

TPI 150 Process Control and Instrumentation 5: Analytical Control 2.5 Credits. 2 Lecture Hours. 1 Lab Hour.

A continuation of TPI 140. Topics include: control of analytical and measurement processes such as ORP, pH, conductivity, and chromatography. Activities include laboratory exercises.

Prerequisites: TPI 140