

# Industrial Controls, Automation, and Robotics Technology - AAS

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Keokuk Campus

The Industrial Automation, Controls, and Robotics Technology program provides students with technical skills in maintaining and troubleshooting electrical and mechanical systems used in the industry. Mechanical and electrical theory are covered throughout the program, including how to troubleshoot and repair industrial systems. Instruction is delivered in an open lab format designed to be flexible and accommodating. This program is designed to prepare technicians to troubleshoot, repair, and service computerized control systems and robotic devices in manufacturing environments. Students will gain knowledge and apply skills in advanced electrical, electronic, and robotics systems. Students will apply networking skills, integral to working with automated equipment, encompassing robotic components, sensors, controllers and computers to support autonomous work.

The [Basic Electrical Maintenance Certificate](#) is awarded after successful completion of first semester courses.

The [Electrical Maintenance Technology Diploma](#) is awarded after successful completion of the first and second semesters.

Please view the [technical standards](#) for this course.

## **Instructor and Staff**

Paul Volkl

Instructor - Industrial Controls, Automation and Robotics

Technology

(319) 313-1937

pvolkl@scciowa.edu

## Keokuk Campus, and select courses online

### Program Requirements

First Semester		Credit
ELE-116	Blueprint Reading	1
ELE-310	Industrial Electricity	2
ELT-295	AC/DC Fundamentals	2
IND-212	Safety Practices	2
MFG-155	Industrial Machine Programming	3
ELE-195	Motor Controls	3
MAT-702	Introduction to Math Applications	3
Semester Total.....		16

Second Semester		Credit
EGT-174	Fluid Power	2
ELT-132	Motor Drives	1
ELT-263	Programmable Logic Controllers I	2
EGT-175	Fluid Power Control	2
IND-252	Powertrain and Pump Operation	3
EGT-147	Hydraulic Power Systems and Troubleshooting	1
<b>Take 1 of 2 courses:</b>		
PSY-102	Human and Work Relations	3
SOC-114	Conflict Resolution in the Workplace	3
Semester Total.....		14

Summer Semester		Credit
SPC-112	Public Speaking	3
HUM-287	Leadership Development Studies	3
Semester Total.....		6

Third Semester		Credit
ELT-264	Programmable Logic Controllers II	2
IND-179	Boiler Operation and Control	2
ELT-176	Instrumentation	3
ATR-118	Automation Systems	3
ELE-218	Motion Control	2
ENG-110	Writing for the Workplace	3
Semester Total.....		15

Fourth Semester		Credit
ELE-219	Supervisory Control and Data Acquisition	3
ELT-266	Safety Circuits and Devices	2
ATR-135	Advanced Automation and Robotics	3
ELE-127	Troubleshooting	1
ELT-265	PLC and System Integration	5
<b>Take WBL-110 as 1 Credit:</b>		
WBL-110	Employability Skills	1-3
Semester Total.....		15
Program Total.....		66