

# Electronics

*Program not accepting new students for 2021-2022.  
Consult with an advisor for options.*

## THE PROGRAM

Students in Electronics focus on three types of equipment: electrical, electronic, and computers. Electrical equipment provides power to machinery while electronic equipment controls a machine by monitoring the systems and providing feedback to the Programmable Logic Controller (PLC) or desktop computer and the operator. The Electronics Program combines theoretical classroom instruction and plenty of hands-on work.

The Electronics Program is part of the Manufacturing Career Cluster: Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering. For more information, visit [www.careertech.org/career-clusters/](http://www.careertech.org/career-clusters/).

## CAREER OPPORTUNITIES

Students of Electronics find rewarding careers in areas such as computer repair, industrial automation, residential and commercial wiring, copier and office equipment repair, and engineering.

## INDUSTRIAL AUTOMATION

### *Curriculum No. 431 - pending approval*

This certificate is designed for students to explore how industrial automatic system operate, including how to install, program and troubleshoot an industrial automation system. Students will learn about Programmable Logic Controllers and the basics of Industrial robotics. Requires 21 credit hours. Gainful employment information for certificates in the Electronics program can be found at [www.kish.edu/electronics](http://www.kish.edu/electronics).

ONE YEAR PROGRAM			
Fall Semester			
ELE 104	DC Fundamentals Lecture		(2)
ELE 121	DC Fundamentals Lab		(1)
ELE 113	Electrical Wiring & Safety		(2)
ELE 114	Robotic Principles		(1)
ELE 130	Introduction to PLC Systems		(3)
Spring Semester			
ELE 103	AC Fundamentals Lecture		(2)
ELE 123	AC Fundamentals Lab		(1)
ELE 110	Solid State Circuits		(3)
ELE 210	Advanced PLC Systems		(3)
ELE 214	Industrial Robotics		(3)

## INDUSTRIAL ELECTRICITY

### *Curriculum No. 435*

A certificate program created to prepare students with marketable skills in electricity and to provide the industries of the district with skilled electrical workers. Requires 18 credit hours. Gainful employment information for certificates in the Electronics program can be found at [www.kish.edu/electronics](http://www.kish.edu/electronics).

REQUIRED COURSES			
ELE 104	DC Fundamentals Lecture		(2)
ELE 121	DC Fundamentals Lab		(1)
ELE 103	AC Fundamentals		(2)
ELE 123	AC Fundamentals Lab		(1)
ELE 113	Electrical Wiring & Safety		(2)
ELE 130	Intro to PLC Systems		(3)
ELE 211	Industrial Motor Controls		(3)
MT 153	Machine Shop Math		(4)

## INDUSTRIAL ELECTRONICS

### *Curriculum No. 439*

A certificate program designed to prepare students for employment in the field of electronics and industrial automation. Students that complete this certificate will have mastered solid state and digital circuitry and have automation skills involving circuits that are controlled by Programmable Logic Controller and desktop computers. Requires 31 credit hours. Gainful employment information for certificates in the Electronics program can be found at [www.kish.edu/electronics](http://www.kish.edu/electronics).

FIRST YEAR			
Fall Semester			
ELE 104	DC Fundamentals Lecture		(2)
ELE 121	DC Fundamentals Lab		(1)
ELE 102	PC Maintenance and Repair <b>OR</b>		
ELE 114	Robotic Principles		(1)
ELE 113	Electrical Wiring & Safety		(2)
ELE 211	Industrial Motor Controls		(3)
MT 153	Machine Shop Math		(4)
Spring Semester			
ELE 103	AC Fundamentals Lecture		(2)
ELE 123	AC Fundamentals Lab		(1)
ELE 110	Solid State Circuits		(3)
ELE 130	Introduction to PLC Systems		(3)
ELE 212	Digital Circuits		(3)
SECOND YEAR			
Fall Semester			
ELE 206	Amplifier/Operational Amplifier Circuits		(3)
ELE 210	Advanced PLC Systems		(3)

## *Additional Sources of Information:*

### DEPARTMENT

Chase Budziak, Dean of Instruction  
815-825-1708 • [cbudziak@kish.edu](mailto:cbudziak@kish.edu)

### STUDENT SERVICES

Advising  
815-825-9375