# INDUSTRIAL ROBOTICS CERTIFICATE

This curriculum is designed to provide training for persons interested in the installation and maintenance of electrical systems found in residential, commercial, and industrial facilities. Coursework, most of which is hands-on, will include such topics as AC/DC theory, basic wiring practices, programmable logic controllers, industrial motor controls, applications of the National Electric Code, and other subjects as local needs require.

Career Opportunities: Graduates should qualify for a variety of jobs in the electrical field as an on-the-job trainee or apprentice assisting in the layout, installation, and maintenance of electrical systems.

High School Career Cluster

Electrical Trades (ELTR)

### Prerequisite:

 IC 41 Electrical Trades I

#### Concentrator:

 IC 42 Electrical Trades II

# Nash Community College CCP Pathway

Industrial Robotics Certificate C35130DH

Total Hours: 14

Recommended Sequence of Courses:

#### Fall Term:

- ELN 260 Prog Logic Controllers (4 Credits)
- ATR 280 Robotic Fundamentals (4 Credits)

### Spring Term:

- ATR 281 Automation Robotics (4 Credits)
- ISC 112 Industrial Safety (2 Credits)

## Nash Community College Additional Certificates and Diploma

#### Electrical Wiring Certificate: C35130AH Total Hours: 15

- ELC 131 Circuit Analysis I (4 Credits)
- ELC 131A Circuit Analysis I Lab (1 Credit)
- ELC 113 Basic Wiring I (4 Credits)
- ELC 115 Industrial Wiring (4 Credits)
- EGR 125 Appl Software for Technology (2 Credits)

#### PLC Controls Certificate: C35130C Total Hours: 12

- ELN 260 Prog Logic Controllers (4 Credits)
- ELC 228 PLC Applications (4 Credits)
- PCI 264 Process Control with PLCs (4 Credits)

#### Instrumentation Certificate: C35130E Total Hours: 17

- ELC 131 Circuit Analysis I (4 Credits)
- ELC 13A Circuit Analysis I Lab (1 Credit)
   ELC 213 Instrumentation (4 Credits)
  - ELN 229 Industrial Electronics (4 Credits)
- ELN 260 Prog Logic Controllers (4 Credits)

#### Electrical Systems Technology Diploma: D35130 Total Hours: 39-40

- EGR 131 Intro to Electronics Tech (2 Credits)
- ELC 131 and ELC 131A Circuit Analysis and Lab (5 Credits)
- ELC 114 Basic Wiring I (1 Credit)
   ELC 113 Basic Wiring I (4 Credits)
   ENG 110 Freshman Composition (3 Credits)
   -or- ENG 111 Writing and Inquiry (3 Credits)
- MAT 121 Algebra/Trigonometry I (3 Credits) -or-MAT 171 Precalculus Algebra (4 Credits)
- ELC 115 Industrial Wiring (4 Credits)
- ELC 117 Motors and Controls (4 Credits)
- ELC 213 Instrumentation (4 Credits)
- ISC 112 Industrial Safety (2 Credits)
- ELN 260 Prog Logic Controllers (4 Credits)
- BUS 151 People Skills (3 Credits)
- BUS 240 Business Ethics (3 Credits)
- INT 110 International Business (3 Credits)

## Nash Community College Associate's Degree

#### Electrical Systems Technology A35130

#### Total Hours: 72

- ACA 122 College Transfer Success (1 Credit)
- EGR 125 Appl Software for Tech (2 Credits)
- ELC 131 Circuit Analysis I (4 Credits)
- ELC 131 A Circuit Analysis I Lab (1 Credit)
- ELC 113 Residential Wiring (4 Credits)
- ENG 110 Freshman Composition (3 Credits) -or- ENG 111 Writing and Inquiry (3 Credits)
- MAT 121 Algebra/Trigonometry I (3 Credits) -or- MAT 171 Precalculus Algebra (4 Credits)
- ELC 115 Industrial Wiring (4 Credits)
- ELC 117 Motors and Controls (4 Credits)
- ELC 213 Instrumentation (4 Credits)
- ELN 131 Analog Electronics I (4 Credits)
- ELN 260 Prog Log Controllers (4 Credits)
   Social/Behavioral Science Core Elective
- Social/Behavioral Science Core Electiv (3 Credits)
- ATR 280 Robotic Fundamentals (4 Credits)
- COM 110 Introduction to Communication (3 Credits) -or- COM 231 Public Speaking (3 Credits)
- ELC 228 PLC Applications (4 Credits)
- Humanities/Fine Arts Elective (3 Credits)
- HYD 110 Hydraulics/Pneumatics I (3 Credits)
- ATR 281 Automated Manufacturing (4 Credits)
- ELN 235 Data Communication Systems (4 Credits)
- ISC 112 Industrial Safety (2 Credits)
- PCI 264 Process Control with PLCs (4 Credits)

## Bachelor's Degree:

East Carolina University

Bachelor of Science in Industrial Technologies Transfer Program

https://cet.ecu.edu/te chsystems/undergra duate-programs/indu strial-technology-tran sfer/



