



# Mechatronics Engineering Technology

degree and certificate programs

The Mechatronics Engineering Technology curriculum prepares students to use basic engineering principles and technical skills in developing and testing automation systems including, electrical, electronic, servo, mechanical, fluid power, and other electromechanical systems. Courses emphasize instruction in prototype testing, manufacturing and operational testing, systems analysis and maintenance procedures with an emphasis on automated systems startup, maintenance, and troubleshooting at the systems level.

## Study Options

- Mechatronics Engineering Technology A.A.S. Degree (A40350)
- Automation Certificate (C40350A)
- Maintenance Certificate (C40350M)

## Program Outcomes

Graduates should be able to:

- Install, maintain and troubleshoot automated systems
- Communicate effectively in the work place
- Maintain a safe work environment

Transfer opportunities are available at:

- Western Carolina University
- Eastern Carolina University

## Possible Careers

Graduates should qualify for employment as an engineering technician in a variety of industries as a:

- Electro-mechanical technician
- Mechanical systems technician
- Electronic systems technician
- Control systems technician
- Computer controlled systems technician

## Learn More

**Lee Troutman**, Mechatronics Engineering Technology/AIMS Lab Program Coordinator  
(704) 878-3327  
ltroutman@mitchellcc.edu

## College Admissions

[admissions@mitchellcc.edu](mailto:admissions@mitchellcc.edu)

**Statesville Campus** | Eason Student Services Center, Room 208 | (704) 978-5493  
**Mooreville Campus** | Mooreville Campus Building A | (704) 978-5415  
**Continuing Education Center** | Room 1 | (704) 878-3220

# Degree and Certificate Requirements

## Mechatronics Engineering Technology

A.A.S. Degree [A40350]

Certificate Options [C40350A and C40350M]

### A.A.S. Degree [A40350]

#### General Education Required Courses

##### Required Courses

ENG 111	Writing and Inquiry	3
HUM 115	Critical Thinking	3
MAT 171	Precalculus Algebra	4
PSY 150	General Psychology	3

##### Communication (3 credits)

Take one (1) course from:

COM 110	Introduction to Communication	3
COM 120	Intro to Interpersonal Communication	3
COM 231	Public Speaking	3

**Total General Education Required Hours .....16**

#### Major Required Courses

ATR 112	Introduction to Automation	3
ATR 214	Advanced PLCs	4
CIS 110	Introduction to Computers	3
DFT 170	Engineering Graphics	3
ELC 117	Motor and Controls	4
ELC 131	Circuit Analysis I	4
ELC 133	Circuit Analysis II	4
ELC 213	Instrumentation	4
ELC 215	Electrical Maintenance	3
ELN 133	Digital Electronics	4
ELN 260	Programmable Logic Controllers	4
HYD 110	Hydraulics/Pneumatics I	3
ISC 112	Industrial Safety	2
MEC 111	Machine Processes	3
MEC 130	Mechanisms	3
PHY 151	College Physics	4

**Total Major Required Hours.....55**

**Total Credit Hours Required for A.A.S. Degree.....71**

### Certificate Options

#### Automation Certificate [C40350A]

ATR 112	Intro To Automation	3
ELC 117	Motors and Controls	4
ELN 260	Programmable Logic Controllers	4
ATR 214	Advanced PLCs	4
HYD 110	Hyd/Pneumatics	3

**Total Credit Hours Required for Certificate Program .....18**

#### Maintenance Certificate [C40350M]

MEC 111	Machine Processes	3
ELC 131	Circuit Analysis	4
ELC 117	Motors and Controls	4
HYD 110	Hyd/Pneumatics	3
ELC 215	Electrical Maintenance	3

**Total Credit Hours Required for Certificate Program .....17**

## Job Outlook

From the U.S. Bureau of Labor Statistics:

#### Quick Facts: Electro-mechanical Technicians

- 2018 Median Pay
  - \$57,790 per year
  - \$27.78 per hour
- Typical Entry-Level Education
  - Associate degree



Statesville Campus | 500 West Broad Street | Statesville, NC 28677 | (704) 878-3200  
Mooresville Campus | 219 North Academy Street | Mooresville, NC 28115 | (704) 663-1923  
Continuing Education Center | 701 West Front Street | Statesville, NC 28677 | (704) 878-3220

**mitchellcc.edu**     
Equal Opportunity College/Universidad de igualdad de oportunidades