



## Mechatronics Engineering Technology

Associate in  
Applied Science  
Degree (A40350)

### Mechatronics

Mechatronics is the combination of studies in electrical, mechanical, and computer engineering technology, specializing in automation and robotics.

### About this program

The Mechatronics Engineering Technology program focuses on workforce development allowing graduates to attain a job or acquire new skills to add value to their current job. This program is not designed to transfer to a four-year institution after completion.

Students gain knowledge in various engineering areas: automation and robotics, electrical, electronics, mechanical, in addition to pneumatic and hydraulic systems. This program introduces students to Industry 4.0, a current manufacturing trend, which includes cyber-physical systems, automation, cloud computing, cognitive computing, and the Internet of Things; together they create a smart factory.

Choose Mechatronics Engineering Technology, if you want to:

- Enter the workforce after earning your AAS Degree
- Use your hands in practical application
- Assist in design
- Apply Algebra and Trigonometry
- Provide solutions to technical problems
- Have the option to gain real-world experience
- Experience the “flipped classroom” approach to learning
- Network with local advanced manufacturing companies

### Degree Awarded

The Associate in Applied Science Degree in Mechatronics Engineering Technology is awarded upon success completion.

### Third-party Industry Recognized Certificates & Certifications

Graduates should qualify to sit for the:

- Occupational Safety and Health Administration (OSHA) 30 certificate
- Packaging Machinery Manufactures Institute (PMMI) Mechatronics Level 1 certification includes: Industrial Electricity 1, Mechanical Components 1, Fluid Power 1, and Programmable Logic Controllers 1.
- Siemens Mechatronics Systems Certification Program (SMSCP) Levels 1 and 2

### Resources

- To learn more about this program, visit [cpcc.edu/et/mechatronics](http://cpcc.edu/et/mechatronics).
- To become a student or to register, visit [cpcc.edu/getstarted](http://cpcc.edu/getstarted).
- If you have program-specific questions, contact [Jami.Dale@cpcc.edu](mailto:Jami.Dale@cpcc.edu) (Program Chair) or [Eric.Easton@cpcc.edu](mailto:Eric.Easton@cpcc.edu) (Senior Program Coordinator).

**Earn AAS  
Degree**



**Enter  
Workforce**



**CENTRAL PIEDMONT  
COMMUNITY COLLEGE**

**Required  
Math**



**Algebra  
Trigonometry**

# Mechatronics Engineering Technology (A40350) Recommended Course Sequence\*

## 2018 – 2019 Catalog

\* Other course sequence options are available; please contact the Program Chair or the Senior Program Coordinator for advisement.

Note 1: Each student should check his/her Program Evaluation through [MyCollege](#) for specific required course information.

Note 2: **Financial Aid Recipients/Veterans:** benefits will **not** be awarded for courses not listed in the declared program of study.

Note 3: Some courses may only be offered during specific semesters; please contact the Program Chair for details.

Note 4: All information is subject to change without notice.

Fall 1				
Course	Course Title	Prerequisite/ Corequisite	Credit	Notes
ENG 111	Writing and Inquiry	Placement Test or Multiple Measures	3	
MAT 121	Algebra/Trigonometry I	Placement Test or Multiple Measures	3	
ELC 131	Circuit Analysis I	Corequisite: MAT 121	4	
ISC 112	Industrial Safety	None	2	
EGR 125	Appl Software for Tech	None	2	
Fall 1 Total Credit Hours			14	
Spring 1				
Course	Course Title	Prerequisite/ Corequisite	Credit	Notes
PHY 131	Physics-Mechanics	Prerequisite: MAT 121	4	
ATR 112	Introduction to Automation	None	3	
ELC 130	Advanced Motors and Controls	Prerequisite: ELC 131	3	
ISC 212	Metrology	None	2	
DFT 154 or DFT 151	Intro to Solid Modeling CAD I	None	3	
Spring 1 Total Credit Hours			15	
Summer 1				
Course	Course Title	Prerequisite/ Corequisite	Credit	Notes
ELC 213	Instrumentation	Prerequisite: ELC 130	4	
ENG 114	Professional Research & Reporting	Prerequisite: ENG 111	3	
COM 110	Introduction to Communication	Prerequisite: ENG 111	3	
Summer 1 Total Credit Hours			10	
Fall 2				
Course	Course Title	Prerequisite/ Corequisite	Credit	Notes
ELN 260	Prog Logic Controllers	Prerequisite: ELC 213	4	
MEC 265	Fluid Mechanics	Prerequisite: PHY 131	3	
MEC 130	Mechanisms	None	3	
ECO 251	Principles of Microeconomics	Prerequisite: MAT 121	3	
MEC 110	Introduction to CAD/CAM	None	2	
Fall 2 Total Credit Hours			15	
Spring 2				
Course	Course Title	Prerequisite/ Corequisite	Credit	Notes
PCI 173	Programmable Systems	Prerequisite: ELN 260	4	
MEC 210	Applied Mechanics	Prerequisite: PHY 131	3	
MEC 180	Engineering Materials	Prerequisite: ENG 114	3	
MEC 161	Manufacturing Processes I	None	3	
<b>ELECTIVE</b>	Humanities/Fine Arts Elective	Check the College Catalog for electives	3	
Spring 2 Total Credit Hours			16	
Total Semester Credit Hours in Program			70	