



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.
- To become a student or to register, visit cpcc.edu/getstarted.
- If you have program-specific questions, contact Jami.Dale@cpcc.edu (Program Chair) or Eric.Easton@cpcc.edu (Senior Program Coordinator).

**Earn AAS
Degree**



**Enter
Workforce**



**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 | |
| ELECTIVE | Humanities/Fine Arts Elective | Check the College Catalog for electives | 3 | |
| Fall 2 Total Credit Hours | | | 16 | |
| 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 | |
| Spring 2 Total Credit Hours | | | 13 | |
| Total Semester Credit Hours in Program | | | 68 | |