

ELECTROMECHANICAL TECHNOLOGY

Program Number: 10-620-1

Associate of Applied Science Degree

Campus: Fond du Lac

This program is eligible for financial aid (<http://www.morainepark.edu/financial-aid/>)

Turn your passion for problem-solving and working with your hands into an exciting career with an Electromechanical Technology associate degree from Moraine Park Technical College.

About the Program

Moraine Park's Electromechanical Technology program combines theories and applications in mechanical, electrical, and automated systems through motor control, fluid power, mechanical drives, robotics, and programmable logic controllers. A comprehensive understanding of how these technical skill areas are linked together to create a smart factory is developed through a hands-on project course that allows the learner to put together the various technologies into an automated work cell.

What You'll Learn

Electromechanical Technology students learn how to think critically and use technology to solve problems and program, use and maintain electromechanical and automated equipment.

Continue your education through Moraine Park's Industrial Mechanical Technician (<http://www.morainepark.edu/academics/programs/industrial-mechanical-technician/?school-year-override=2021-2022>) program and advance your career opportunities by extending courses into a third year to obtain two credentials.

Transfer Opportunities

Earn credits at MPTC and transfer to a four-year college to earn your bachelor's degree.

Visit the Transfer Opportunities (<https://www.morainepark.edu/academics/transfer-information/transfer-to-a-four-year-college/>) page for more information on credit transfer agreements between Moraine Park and four-year colleges, both public and private.

Admission Process

Standard Admissions (<http://www.morainepark.edu/admissions/new-student/how-to-apply-for-admissions/>) steps details

Credit for Prior Learning

Earn college credit outside the classroom through Moraine Park's Credit for Prior Learning (CPL) opportunities. Credit opportunities are available for:

- Previous college coursework from prior institutions
- Military training and experience
- Passing of MPTC or national exams
- Skills or knowledge developed on the job or through other life experiences

Visit MPTC's Credit for Prior Learning (<https://www.morainepark.edu/academics/transfer-information/credit-for-prior-learning/>) page for more information.

Approximate Costs

- \$141.00 per credit (resident)
- \$211.50 per credit (out-of-state resident)
- Online students are not charged out-of-state fees.
- Please refer to the MPTC Student Handbook (<http://www.morainepark.edu/studenthandbook/>) for additional enrollment fee information.

Financial Aid

Financial Aid is provided to aid eligible associate degree and technical diploma programs with 28 credits or more. Processing can take 6-8 weeks after a student's completed Free Application for Federal Student Aid (FAFSA (<https://studentaid.gov/h/apply-for-aid/fafsa/>)) is received. Visit the Financial Aid (<https://www.morainepark.edu/pay-for-college/financial-aid/>) page to learn more.

Course Requirements

Course	Title	Credits
Semester 1		
103-159	Computer Literacy - Microsoft Office	1
620-101	DC Circuits	3
620-102	AC Circuits	3
801-136	English Composition 1	3
804-195	College Algebra with Applications	3
890-101	College 101	2
Credits		15
Semester 2		
620-103	Semi-Conductor Devices	3
620-104	Digital Electronics	3
620-115	AC-DC Machinery and Motor Controls	4
804-196	Trigonometry with Applications	3
Behavioral Science Course (https://catalog.morainepark.edu/academic-programming/general-education/behavioral-social-science/)		3
Credits		16
Semester 3		
620-105	Industrial Hydraulics and Pneumatics 1	2
620-110	Integrated Manufacturing Planning - Electromechanical Technology	2
620-133	Data Acquisition and Control with LabVIEW	3
620-141	Mechanical Drives 1	3
620-135	Allen-Bradley PLCs and Ladder Logic	3
620-150	Data Communication and Protocols	3
Credits		16
Semester 4		
620-111	Integrated Manufacturing Production - Electromechanical Technology	2
620-136	Advanced Allen-Bradley PLCs and PanelVIEW	3
620-146 or 620-142	Instrumentation and Process Control or Mechanical Drives 2	3
620-151	Fanuc Robotics and Vision Systems	3
801-197	Technical Reporting	3
Social Science Course (https://catalog.morainepark.edu/academic-programming/general-education/behavioral-social-science/)		3
Credits		17
Total Credits		64

Program Outcomes

- Interpret technical drawings, schematics and diagrams as they relate to automated process control systems.
- Troubleshoot automated process control system components.
- Design and program logic controls and Human Machine Interface (HMI) as communication devices for automated process control system.
- Analyze the interaction between the various components of a system such as fluid power, mechanical, Servo and electrical/electronics to operate the system.
- Program and interface robotics devices, Vision System, Radio Frequency Identification (RFID) technology and Automated Guided Vehicle (AGV) in the automated process control system.
- Complete and maintain appropriate documentation for automated systems and processes.
- Students will obtain OSHA 10 certification as part of the program.

Career Opportunities

- Controls Engineer
- Electrical/Electronics Technician
- Field Engineer
- Mechatronics Technician
- Research and Development Technician

Statewide Median Salary for Recent Graduates

\$51,450