QUALITY AND ADVANCED MANUFACTURING TECHNOLOGY

Program Number: 10-623-8
Associate of Applied Science Degree
Campus: Fond du Lac, some courses available at the West Bend campus
This program is eligible for financial aid (http://www.morainepark.edu/financial-aid/)

The Quality and Advanced Manufacturing Technology degree will prepare you to work with automated systems to improve efficiencies and quality in a manufacturing environment.

About the Program

Today's high-tech manufacturers are using smart technologies and automation to revolutionize their processes. They need a highly skilled workforce trained in manufacturing processes, quality planning, data collection, data analysis and the integration of these functions.

What You'll Learn

The Quality and Advanced Manufacturing Technology program utilizes high-tech labs to expose you to the latest technologies used in manufacturing and prepares you to adapt to change in an ever-changing environment. Applications in problem solving, teamwork and automated manufacturing technologies are emphasized.

Transfer Opportunities

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

Visit the Transfer to a Four-Year College (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

Tuition

Occupational

- $146.20 per credit (resident)
- $219.30 per credit (out-of-state resident)

Associate of Arts/Associate of Science

- $188.90 per credit (resident)
- $283.35 per credit (out-of-state resident)

Online students are not charged out-of-state fees.

Student Fees

- $4.50 minimum per course Material Fee
- $12.50 per-credit Supplemental Fee for Undergraduate courses
- $10 minimum per credit Online Course Fee (Fee suspended for 2023-2024)
- $4.50 per term mandatory Student Accident Insurance Fee

Please refer to Tuition & Fee Information (https://catalog.morainepark.edu/admissions-registration/tuition-fee-information/) for additional enrollment fee information.

Financial Aid

Financial Aid is available for associate degree and technical diploma programs (those that are 2 semesters in length and typically with 28 credits or more). Processing can take 4-5 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.

While attending Moraine Park during the 2023-24 school year, your estimated cost of attendance for one full year includes tuition of $4,375 (15 credits for fall and spring semester), fees of $338, food and housing of $4,052 (if living with parents, $9,614 if living on your own), books and supplies of $2,061, personal expenses of $2,245, and transportation of $2,007 for a total of $15,161. Your direct costs (those costs paid directly to the college) include tuition & fees. The indirect costs (costs not paid to the college) can vary from individual to individual and your own personal needs.

Course Requirements

Course	Title	Credits
Semester 1		
103-159	Computer Literacy - Microsoft Office	1
623-110	Technical Print Reading	2
623-162	Manufacturing Processes	3
664-110	Introduction to Mechatronics	2
801-136	English Composition 1	3
804-107 or 804-195	College Mathematics or College Algebra with Applications	3
890-101	College 101	2
	Credits	**16**
Semester 2		
617-112 or 617-114	CAD 3-D, Creo Parametric or CAD 3-D SolidWorks	3
623-191	Basic Metrology	2

628-136	Statistical Process Control	3
664-100	Introduction to Industrial Control Systems	2
Communication Course (https://catalog.morainepark.edu/academic-programming/general-education/communications/)		3
Mathematics Course (https://catalog.morainepark.edu/academic-programming/general-education/mathematics/) or Natural Science Course (https://catalog.morainepark.edu/academic-programming/general-education/natural-science/)		3
	Credits	**16**
Semester 3		
623-111	Integrated Manufacturing Planning - Manufacturing Technology	2
623-118 or 628-122	Gage Calibration and Testing or Basic CNC Programming and Operation	3
623-166	Lean Process and Quality Planning	3
623-196	Geometric Dimensioning and Tolerancing	3
664-105	Introduction to Industrial Robotics	2
Social Science Course (https://catalog.morainepark.edu/academic-programming/general-education/behavioral-social-science/)		3
	Credits	**16**
Semester 4		
623-106 or 628-132	Quality Tools or Advanced CNC Programming and Operation	3
623-112	Integrated Manufacturing Production - Manufacturing Technology	2
623-134 or 628-142	Basic CMM Programming and Operation or Computer-Aided Manufacturing	3
623-168 or 664-115	ISO 9001 and Auditing or Robotics and Vision Systems	2
664-120	Introduction to Industrial Internet of Things	2
Behavioral Science Course (https://catalog.morainepark.edu/academic-programming/general-education/behavioral-social-science/)		3
	Credits	**15**
	Total Credits	**63**

Program Outcomes

- Develop manufacturing processes for a product or part
- Solve manufacturing problems
- Apply lean manufacturing principles
- Develop a quality control plan
- Design a product or prototype

Pathways

- Quality and Advanced Manufacturing Technology Associate Degree (p. 1)
  - Automated Manufacturing Technician Technical Diploma (https://catalog.morainepark.edu/programs/automated-manufacturing-technician/)
  - Computer Numerical Control Certificate (https://catalog.morainepark.edu/programs/computer-numerical-control-certificate/)
  - Manufacturing Fundamentals Certificate (https://catalog.morainepark.edu/programs/manufacturing-fundamentals-certificate/)
  - Quality/Supervision Certificate (https://catalog.morainepark.edu/programs/quality-supervision-certificate/)

Earn certificates, a technical diploma and an associate degree along this pathway. Start with some courses for entry-level employment, and continue with additional courses for higher wages and job advancement.

Career Opportunities

- Continuous Improvement Technician
- Quality Assurance Technician
- Process Engineering Technician
- Manufacturing Engineering Technician
- CNC Programmer
- Robotics and Material-Handling Technician
- Industrial Engineering Technician

Statewide Median Salary for Recent Graduates

$53,537