

MECHANICAL ENGINEERING



ABOUT THE PROGRAM

This program moves beyond manufacturing and robotics to prepare students for the demands of real-world manufacturing facilities. Begin a pathway through skills-based education filled with the most up-to-date and relevant practices. Students will cover three main areas of curriculum: Electrical, Manufacturing Operations and Mechanics & Hydraulics.

ELECTRICAL

- Intro to Electrical Circuits
- Electrical Measurements
- Circuit Analysis
- Inductance & Capacitance
- Combination Circuits
- Transformers
- Intro to Motor Controls
- Control Transformers
- Intro to Troubleshooting
- Yaskawa/Motoman Robotics
- Fanuc Robotics
- Fanuc CNC Mill
- Fanuc CNC Lathe
- Manual Motor Controls & Overload Protection

MANUFACTURING OPERATIONS

- Autodesk Fusion 360
- Intro to Shop Equipment and LOTO
- Intro to Lathe Operations & Applications
- Intro to Welding Positions & Symbols
- Trimming Milling Machines
- Intro to Cutting Tools & Operations
- Gas Metal Arc Welding & Applications
- Shielded Metal Arc Welding & Applications
- Gas Tungsten Arc Welding & Applications
- Blueprint Reading (Industrial drawings; Lines & Symbols; Orthographic Projection; One-view & Two-View Drawings; Machining Symbols)

MECHANICAL & HYDRAULICS

- Intro to Mechanical Drive Systems and Key Fasteners
- Power Transmission Systems
- Introduction to V-belt Drives
- Couplings & Chain Drives
- Fluid Power (hydraulics & pneumatics)



Ashland County-West Holmes
**CAREER
CENTER**

MECHANICAL ENGINEERING

IS THIS PROGRAM FOR YOU?

Are you wanting have a diverse, multi-pathway educational experience?

Do you want to explore engineering concepts?

Do you have an interest in metal fabrication?

Are you a problem solver?

Are you an analytical thinker?

CAREER FOCUS

- CNC Operator/Programmer
- Welder
- Maintenance Technician
- Skilled Trades Apprentice
- Machinist
- Machine Repair person

With additional education or training:

- Tool and Die Maker
- Maintenance Supervisor
- Weld Engineer
- Manufacturing Engineer
- Mechanical Engineer
- Electrical Engineer

CERTIFICATIONS

Earn Ohio Department of Education (ODE) credential points toward graduation during your junior and senior years.

- Yaskawa/Motoman Robotic (6 points)
- Fanuc Robotic (6 points)
- Fanuc CNC Mill (4 points)
- Fanuc CNC Lathe (4 points)
- Parker Fluid Power (4 points)
- Parker Hydraulics (4 points)
- OSHA 10 (1 point)
- American Welding Society (minimum 36 points available)

Students may qualify for articulated college credits and the Tuition Freedom Scholarship at North Central State College. Direct pathways to an Associates Degree in Manufacturing Technology Operations Management or Mechanical Engineering Technology.

CAREERS OUTLOOK

- Beginning median salary of \$37,000; income growth potential with additional experience and/or education
- Immediate job openings - skill gaps due to evolving technology has left a shortage for employees; Graduates will have the skill set to enter the workforce or pursue college

Suggested credits earned prior to junior year for this program are: (2) Science, (2) Math, (2) English, (2) History



Learn more about what the program is doing by visiting their Instagram.



Ready to apply?

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