

PROFESSIONAL DEVELOPMENT



**Pennsylvania
College of Technology**
A Penn State Affiliate

INTRO-MECH



Intro-MECH is a one-year, entry-level training curriculum

of core mechatronics topics for employees hired or transitioning into positions in industrial maintenance. It is also appropriate for current technicians needing to expand their technical knowledge base. Intro-MECH is an ideal preparation course for technicians who may become candidates for Penn College's advanced four-year Mechatronics Technician apprenticeship program.

Intro-MECH is aligned to eight different NIMS Industrial Technology Maintenance (ITM) credentials. This training consists of 144 total hours of instruction covering four core mechatronics competencies: Mechanical Systems, Fluid Power – Hydraulics/Pneumatics, Electrical Systems, and Electrical Controls (PLCs & VFDs).



WHAT'S THE DIFFERENCE?

Intro-MECH

vs

Mechatronics Technician

Designed for employees entering or crossing over into maintenance positions or who have some production troubleshooting responsibilities

Designed to advance the technical knowledge and skill sets of full-time maintenance technicians

Introduction to and working knowledge of essential mechatronics topics

Comprehensive instruction leading to industry-recognized advanced mechatronics certifications

One year –
36 hours per topic

Four years –
144 hours per topic





Topics Covered

- ◇ Industrial Safety & OSHA
- ◇ Principals & Concepts of Maintenance
- ◇ Bearings & Power Transmissions
- ◇ Couplings, Alignment, & Lubrication
- ◇ Belt, Pulley, & Chain Drives
- ◇ Mechanical Troubleshooting Techniques
- ◇ Fluid Power Fundamentals
- ◇ Hydraulic & Pneumatics Systems Operation
- ◇ Fundamentals of Electricity
- ◇ Applying Ohm's & Kirchhoff's Law
- ◇ Transformers & Generators
- ◇ Electrical Troubleshooting
- ◇ Motor Controls
- ◇ Human-Machine Interfaces
- ◇ Programmable Logic Controllers (PLCs)
- ◇ Industrial Process Control
- ◇ Sensor & Variable Frequency Drives



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Workforce Development

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Penn College operates on a nondiscriminatory basis.

Penn College is approved by
the PA Department of Labor
& Industry as a sponsor of
apprenticeship programs.