

# Mechanical Maintenance

## Benefits of Training with Iowa Central

- Affordable Cost
- Experienced Trainers
- Flexible Training Facilities
  - We'll come to you for on-site training.
  - Access to Iowa Central's main campus facilities.
  - Training facilities at Iowa Central's East Campus.

Call us to get started!

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## Training Program

The Mechanical Maintenance training program is specialized in order to fit your business' needs. Select from any of the following areas for your training or we can customize classes to fit your needs.

- Blueprint Reading
- Technical Mathematics
- Shop Operations
- Precision Measurements
- Precision Alignment
- Industrial Pumps and Drives

View more details for each of these areas on the back of this sheet.

## Meet the Trainer: Matt Kraft



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Matt Kraft began teaching for Iowa Central Community College in 2012. He has an Associate's Degree from Iowa Central and has seven years of Maintenance and Manufacturing experience in industry. Matt's experience also includes spending 9 years in the Army where he conducted tactical network training and achieved the rank of Sergeant. Matt uses these experiences to provide solid Mechanical Maintenance training to credit and non-credit students alike. He has received additional training in Total Machinery Alignment and Centrifugal Pump Troubleshooting & Repair.

# Training Menu

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## Blueprint Reading

- Title Blocks
- Alphabet of lines
- Orthographic projection
- One view, two view, & three view drawings
- Auxiliary views
- Section views
- Assembly drawings
- Methods of dimensioning & tolerances
- Angular dimensions & tolerances
- Dimensioning holes
- Dimensioning circular hole patterns

## Technical Mathematics

- Teach basic mathematical skills
- Apply mathematical concepts

## Shop Operations

- Shop safety
- Basics of metal shop work
- Proper use of hand tools
- Maintenance of tools & equipment
- Fasteners

## Precision Measurements

- Scales
- Tolerances
- Dial caliper
- Micrometer
- Telescoping gauges

## Precision Alignment

- Alignment theory, vibration effects on bearing life, electrical usage
- Rough alignment techniques
- Rim & face alignment
- Reverse dial alignment with graphing
- V-belt alignment using the string method
- V-belt alignment using the straight edge method
- V- belt alignment using the laser method
- Ultrasonic & grease caddy lab

## Industrial Pumps & Drives

- Pump theory & pump curves
- Pump disassembly & inspection
- Measurement to include shaft run-out with dial indicators & bearing inspection & measurement
- Pump impeller inspection & design
- Pump re-assembly bearing installation, seal installation

## Customized Training

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