

# ATMW-2120: SHAFT ALIGNMENT

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## Cuyahoga Community College

**Viewing: ATMW-2120 : Shaft Alignment**

**Board of Trustees:**

2007-05-24

**Academic Term:**

Fall 2025

**Subject Code**

ATMW - Appld Ind Tech - Millwrighting

**Course Number:**

2120

**Title:**

Shaft Alignment

**Catalog Description:**

In-depth study of concepts related to shaft alignment. Topics include rim and face alignment procedures, indicator set up and use, soft foot identification and elimination, correction methods, mathematical alignment concepts, and coupling installation and application.

**Credit Hour(s):**

2

**Lecture Hour(s):**

2

## Requisites

**Prerequisite and Corequisite**

Acceptance to Millwrighting Technology apprenticeship program, and ATCT-1301 Introduction to Carpentry; or departmental approval.

## Outcomes

**Course Outcome(s):**

Work effectively and efficiently on a job site where shaft alignment occurs:

**Objective(s):**

1. Use appropriate terminology to explain the rim and face alignment process.
2. Apply various procedures involving indicator set up and use.
3. Identify soft foot conditions and make corrections in accordance with accepted tolerances.
4. Calculate required alignment specifications by applying mathematical concepts.
5. Identify coupling types, explain their respective uses, and apply knowledge by successfully aligning adjacent shafts.

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**Methods of Evaluation:**

1. Quizzes
2. Exams
3. Classroom participation
4. Demonstration of assigned projects

**Course Content Outline:**

1. Concepts
  - a. Indicator setup
  - b. Identification and elimination

- c. Soft foot conditions
  - d. Accepted tolerances
  - e. Alignment specifications and concepts
  - f. Adjacent shafts
  - g. Mounting devices
  - h. Readings
    - i. Coupling
    - j. Magnetics
  - k. Chain mounts
    - l. Starrett mounting kit
  - m. Validity rule
  - n. Correction methods
  - o. Ratio and proportion
  - p. Algebraic application
2. Skills
- a. Setting up indicator via various procedures
  - b. Identifying and correcting soft foot conditions in accordance with accepted tolerances
  - c. Calculating required alignment specifications
  - d. Aligning adjacent shafts
  - e. Using mounting devices
  - f. Interpreting readings
  - g. Following proper coupling procedures
  - h. Using magnetics
    - i. Using chain mounts
    - j. Using starrett mounting kit
  - k. Using mathematical alignment concepts
3. Issues
- a. Safety
  - b. Inability to identify problem
  - c. Applying concepts
  - d. Troubleshooting
  - e. Professional demeanor to promote credibility of the trade
  - f. Communication skills to promote effective interpersonal skills

## Resources

Carpenters International Training Fund. *Shaft Alignment*. Las Vegas, NV: Carpenters International Training Fund, 2023.

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## Resources Other

Carpenter's International Training Fund. <https://www.carpenters.org/citf-training/> . 2024.

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