

# ATMW-1600: ROTATING EQUIPMENT

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## Cuyahoga Community College

### Viewing: ATMW-1600 : Rotating Equipment

**Board of Trustees:**

2007-05-24

**Academic Term:**

Spring 2019

**Subject Code**

ATMW - Appld Ind Tech - Millwrighting

**Course Number:**

1600

**Title:**

Rotating Equipment

**Catalog Description:**

Study of rotating equipment. Topics include precision equipment and tools and terminology, bearing type installation and application, math concepts, shaft alignment, reverse dial alignments, laser alignment application and interpretation, and safety measures.

**Credit Hour(s):**

2

**Lecture Hour(s):**

2

## Requisites

**Prerequisite and Corequisite**

Acceptance to any Applied Industrial Technology program, and ATCT-1301 Introduction to Carpentry or concurrent enrollment; or departmental approval.

## Outcomes

**Course Outcome(s):**

Work safely, effectively, and efficiently with rotating equipment on a job site.

**Objective(s):**

1. 1. Identify precision equipment, tools, and terminology used in rotating machines applications.
2. 2. Identify bearing type installation techniques and applications.
3. 3. Apply appropriate math concepts.
4. 4. Demonstrate ability to perform shaft alignment using reverse dial techniques.
5. 5. Demonstrate shaft alignment using laser alignment techniques.
6. 6. Use all applicable safety precautions.
7. 7. Use laser alignment methods for setup, operation, correction, and final reading.

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**Methods of Evaluation:**

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

**Course Content Outline:**

A. Concepts

1. Precision equipment
2. Rotating machine applications: terminology

- 3. Rotating machine applications: tools
- 4. Rotating machine applications: equipment
- 5. Bearing types
- 6. Bearing applications
- 7. Bearing installation techniques
- 8. Math concepts
- 9. Math concept application
- 10. Shaft alignment
- 11. Reverse dial techniques
- 12. Laser alignment methods: setup
- 13. Laser alignment methods: safety
- 14. Laser alignment methods: operation
- 15. Laser alignment methods: correction
- 16. Laser alignment methods: final reading
- 17. Safety precautions
- 18. Graphing methods
- 19. Algebraic methods

B. Skills

- 1. Identifying, explaining, and applying knowledge of precision equipment used in rotating machine applications
- 2. Identifying, explaining, and applying knowledge of tools used in rotating machine applications
- 3. Identifying, explaining, and applying knowledge of terminology used in rotating machine applications
- 4. Identifying, explaining, and applying knowledge of bearing type installation techniques and applications
- 5. Applying appropriate math concepts
- 6. Performing shaft alignment using reverse dial techniques
- 7. Performing shaft alignment using laser alignment techniques
- 8. Using all applicable safety precautions
- 9. Using correct graphing techniques
- 10. Using algebraic method
- 11. Using laser alignment methods for setup, operation, correction, and final reading

C. Issues

- 1. Safety
- 2. Professional demeanor to promote credibility of the trade
- 3. Communication skills to promote effective interpersonal skills

**Resources**

Basaraba, Bruce. *Industrial Trades Training Manual*. Alberta: IPT Publishing, 1986.

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Kemp, Albert. *Industrial Mechanics*. Homewood, IL: American Technology Publishing, 1986.

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United Brotherhood of Carpenters. *Instructional Materials for the Millwright*. Washington: United Brotherhood of Carpenters, 1976.

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