

ATMT-1950: FIELD EXPERIENCE

Cuyahoga Community College

Viewing: ATMT-1950 : Field Experience

Board of Trustees:

September 2025

Academic Term:

Fall 2025

Subject Code

ATMT - Appd Ind Tech-ManufacturingTec

Course Number:

1950

Title:

Field Experience

Catalog Description:

In person blended learning course with activities to align with technical concepts and real world manufacturing careers.

Credit Hour(s):

2

Lecture Hour(s):

2

Requisites

Prerequisite and Corequisite

ATMT-1100 Manufacturing Skills I or concurrent enrollment, and departmental approval: admission to Manufacturing Technology apprenticeship program.

Outcomes

Course Outcome(s):

A. Understand manufacturing/engineering drawings as a universal language.

Essential Learning Outcome Mapping:

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

Quantitative Reasoning: Analyze problems, including real-world scenarios, through the application of mathematical and numerical concepts and skills, including the interpretation of data, tables, charts, or graphs.

Objective(s):

1. Apply technical concepts and principle skills to work assignments or industrial drawings.
2. Work with employer assigned Journeyman or supplemental software to reinforce learning outcomes specific to employer needs.

Course Outcome(s):

B. Practice industrial communication practices used to prepare hard copy drawings and sketches.

Objective(s):

1. Work with employer assigned Journeyman or supplemental software to reinforce learning outcomes specific to industry needs.
2. Review job specifications and forecast a sequence of work activities related to assignments.

Course Outcome(s):

C. Demonstrate common elements used in machining standards and principals as well as their safe application.

Objective(s):

1. Practice with employer assigned Journeyman or supplemental software to reinforce learning outcomes.
2. ~~Understand safety-related practices to~~ ensure safety, health and welfare of those on the shop floor.

Course Outcome(s):

D. Demonstrate the characteristics and features of linear measurements and basic units of measurements.

Objective(s):

1. Engage employer assigned Journeyman or supplemental software to reinforce learning outcomes specific to employer.
2. Familiar with the industry units of measurement and rules relating them to each other.

Course Outcome(s):

E. Understand the required tooling and safe setup and machining procedure to produce a dimension-ally correct working part.

Objective(s):

1. Work with employer assigned Journeyman or supplemental software to reinforce learning outcomes.
2. Coordinate activities to align with employer assignments.

Methods of Evaluation:

1. Student evaluation: written evaluation of the field experience by the student.
2. Employer evaluation: written and/or oral evaluation of the student's on-the-job training (OJT) and progress; review OJT hours with the students prior to submitting hours for sponsored state registered apprenticeship program
3. Staff evaluation: evaluation by letter grade based upon the application of written and/or oral evaluation of on-the-job training provided by the employer, assessed value of the student's course assignments as determined by the instructor for the Manufacturing Trades Education Program.
4. Instructor to evaluate activities and progress of the student

Course Content Outline:

1. Discussion of job specifications
2. Plan sequence of work activities
3. Apply technical concepts and skills to work assignments
4. Report and measure outcomes for the semester
5. Have performance critiqued by the employer and instructor
6. In class assignments and projects closely aligned with the on-the-job work experience

A. Machine and tooling selection

1. Tooling selection
2. Machine setup and operation

B. Safety procedures

1. Proper personal protection equipment
2. Machine safety guards
3. Emergency procedures
4. Machine operation

C. Sizes and dimensions

1. In-process vs. finished dimensions
2. Measuring devices
3. Special dimension representations

D. Inspection

1. Operational dimensions
2. Precision, and simple measuring devices
3. Tolerancing

E. Blue Print calculations

1. Manipulating data details and assembly drawings
2. Tabulated dimensions
3. CNC and ordinate dimensions
4. Auxiliary views machining calculations

The Course Schedule is subject to change due to pedagogical needs, instructor discretion, parts of term, and unexpected events.

Additional Resources for the Instructor

1. The College or employer that sponsors each individual apprentice and trades journeymen.
2. The Apprenticeship Advisory Council for the Machine Trades.
3. The Manufacturing Trades Education Program staff at the College.
4. Employer to evaluate and recommend in class assignments

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