

# ATSM-2790: SHEET METAL FOREMAN TRAINING

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## Cuyahoga Community College

### Viewing: ATSM-2790 : Sheet Metal Foreman Training

**Board of Trustees:**

March 2020

**Academic Term:**

Fall 2020

**Subject Code**

ATSM - Applied Ind Tech- Sheetmetal

**Course Number:**

2790

**Title:**

Sheet Metal Foreman Training

**Catalog Description:**

Covers the qualifications and characteristics required for sheet metal foremanship in the construction industry. Required attributes, the management processes, job planning, workforce scheduling, material tracking, and coordination skills discussed. Also includes worker motivation and evaluation techniques and other skills needed to be an effective sheet metal foreman.

**Credit Hour(s):**

1

**Lecture Hour(s):**

1

## Requisites

**Prerequisite and Corequisite**

Departmental approval: admission to Sheet Metal Worker's apprenticeship program.

## Outcomes

**Course Outcome(s):**

Discuss the qualifications and characteristics of foremanship for the Sheet Metal industry including common attributes and process of managing and leading a crew.

**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.

**Objective(s):**

1. Develop a general overview of the foreman and identify the roles and responsibilities of the position.
2. List and define the terms related to foremanship.
3. Identify and explain the basic qualifications of foremanship
4. List the characteristics required of foremanship and evaluate self- motivation for leadership.
5. Identify the role of the decision maker and discuss the required attributes.
6. Discuss managing and leading processes and implementing solutions.

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**Course Outcome(s):**

Discuss the importance of jobsite management including project planning and scheduling, material and equipment tracking and coordination of the working trades.

**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.

**Objective(s):**

1. Review project plans and specifications to verify related applications with respect to site conditions.
  2. Establish project phases to determine workforce requirement, tooling and delivery schedules.
  3. Review project Gantt chart to establish time line for sheet metal applications.
  4. Coordinate projected cost analysis with respect to jobsite conditions and applications.
  5. Identify attainable project goals related to established working time line.
  6. Explain the relationship of trade coordination to on time and on budget project expectations.
  7. Maintain accurate job records including daily logs and request for information (RFI's) required for efficient job completion and legal concerns.
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**Course Outcome(s):**

III Discuss leadership and managerial skills needed for foremanship including team and individual motivation, labor assessment for the worksite, and worker evaluation including conflict resolution and mediation.

**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.

**Objective(s):**

1. Develop motivational skills for the worker to assist with increased production and customer satisfaction through contract procurement and setting team goals.
  2. Assess workplace crew to determine individual skills and abilities to maximize productivity.
  3. Provide worker evaluation fairly and accurately to identify strengths and weaknesses and discuss methods of improvement.
  4. Discuss conflict resolution and mediation issues on a jobsite to identify and define the conflict and evaluate potential solutions
  5. Develop problem-solving techniques to deal with personal jobsite issues to include defining respective complaints, identifying consequences and resolving situations to avoid formal grievances.
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**Methods of Evaluation:**

1. Quizzes
2. Tests
3. Class participation

**Course Content Outline:**

1. Foremanship
  - a. Overview and roles and responsibilities
    - i. Roles
      1. leadership
        - a. effective terms
        - b. lead by example
      2. Planning
        - a. Daily activity
        - b. Material, tools, and equipment
      3. Scheduling
        - a. Task
        - b. Crew assignments
    - ii. Responsibilities
      1. Team grouping
      2. Time management
      3. Communication
        - a. Crew
        - b. Owners
        - c. Project manager
        - d. Trades
        - e. Supervision
      4. Problem solving
      5. Documentation

- a. Daily report
  - b. RFI's request for information
  - c. Safety
  - d. Time
  - e. Third party contracts
- 6. Agreement enforcement
  - a. Job contracts
  - b. Employer policies
  - c. Collective bargaining agreements
- b. Terminology
  - i. Foremanship
  - ii. Ethics
  - iii. Leadership
  - iv. Respect
  - v. Diplomacy
  - vi. Integrity
  - vii. Reliability
  - viii. Time management
  - ix. Motivation
  - x. Confidence
  - xi. Organizational skill
  - xii. Trustworthy
  - xiii. Focus
- c. Foreman qualifications
  - i. Journeyman
  - ii. Basic reading, writing, and math skills
  - iii. First Aid certification
  - iv. OSHA 30 qualification Occupational Safety and Health Administration
  - v. Industry familiarization
- d. Characteristics
  - i. People skills
  - ii. Communication
  - iii. Responsible
  - iv. Organized
  - v. Trustworthy
  - vi. Dedicated
  - vii. Focused
  - viii. Trainer
- e. Self-motivation and evaluation
  - i. Self-motivation
    - 1. Goal driven
    - 2. Personal satisfaction
    - 3. Pride
  - ii. Self-evaluation
    - 1. Improvement
    - 2. Challenge
  - iii. Positive thinking
- f. Decision maker
  - i. Attributes
    - 1. Trustworthy
    - 2. Accountability
    - 3. Decisive
  - ii. Open minded
- g. Managing, leading, and solutions
  - i. Managing
    - 1. Motivating
    - 2. Allocating
    - 3. Delegating

- 4. Evaluating
- 5. Mentoring
- ii. Leadership
  - 1. Goal setting
  - 2. Responsibility
- iii. Solutions
  - 1. Conflict resolution
  - 2. Personal issue resolution
  - 3. Fairness
  - 4. Integrity
- 1. Jobsite management
  - a. Plans and specifications
    - i. Plans
      - 1. Interpretation
      - 2. Trade coordination
      - 3. Material requirements
      - 4. Equipment/device schedule
    - ii. Specifications
      - 1. Material types
      - 2. Installation guidelines
      - 3. References
        - a. Manufacturer
        - b. Industry
      - 4. Sub trade applications
  - b. Project phases
    - i. Workforce requirements
      - 1. Skill sets
      - 2. Crew size
      - 3. Specialty personnel
    - ii. Tooling
      - 1. Power tools
      - 2. Equipment
        - a. Lifting
        - b. Material positioning
        - c. Work access
        - d. Welders
      - 3. Material handling
    - iii. Delivery schedules
      - 1. Shop delivery
      - 2. Unit
      - 3. Hardware
      - 4. Equipment
  - c. Time line
    - i. Gantt chart
      - 1. Project schedule
      - 2. Mechanical operations
    - ii. Daily
    - iii. Weekly
    - iv. Personnel
    - v. Equipment
    - vi. Meetings
      - 1. Jobsite
      - 2. Safety
  - d. Cost analysis
    - i. Jobsite conditions
      - 1. Weather
      - 2. Communication
      - 3. Safety and accidents
      - 4. Trade conflicts

- ii. Applications
  1. High work conditions
  2. Overhead
    - a. Management
    - b. Shop
  3. Trade conflicts
  4. Personalities
- e. Project goals
  - i. Timeline
  - ii. Crew management
  - iii. Meeting schedules
  - iv. Profit
  - v. Safety
  - vi. Completion
- f. Trades coordination
  - i. Meeting
  - ii. Accessibility
  - iii. Conflicts
  - iv. Equipment
  - v. Job readiness
- g. Records
  - i. Daily log
    1. Crew size
    2. Weather conditions
    3. Conflicts
    4. Delays
    5. Deliveries
      - a. Material
      - b. Equipment
    6. Sub- contractor report
    7. Daily completion
    8. Goal accomplishment
    9. Jobsite visitation
      - a. Architect
      - b. Inspectors
      - c. Safety supervisor
      - d. Owner
  - ii. RFI's
    1. Design discrepancies
    2. Trade conflicts
    3. Specification clarification
    4. Scope of work
    5. Change order
  - iii. Legal
    1. Safety violations
    2. Policies
    3. Harassment
    4. Code violations
    5. Manufacture specifications
    6. Warranties
    7. Diversity requirements
- 2. Leadership and managerial duties
  - a. Motivation
    - i. Productivity
      1. Individual
      2. Job planning
      3. Task completion
    - ii. Customer satisfaction

1. Professionalism
2. Appearance
3. Communication
- iii. Contract procurement
  1. Timely
  2. On budget
  3. Workmanship
  4. Safety
- iv. Goal setting
  1. Realistic
  2. Future
- b. Labor assessment
  - i. Skills
    1. Existing
    2. Knowledge and experience
  - ii. Abilities
  - iii. Potential
- c. Worker evaluation
  - i. Fair
  - ii. Accurate
  - iii. Honest
  - iv. Strength and weakness identification
  - v. Improvement methods
    1. Retraining
    2. Listening
    3. Focus
- d. Mediation and conflict resolution
  - i. Define conflict
  - ii. Evaluate solutions
    1. Mediation
    2. Implementation
    3. Follow-up
  - iii. Mediation
    1. Interview
    2. Investigation
    3. Referral
      - a. Employer assistance program
      - b. Counsel
      - c. Member assistance program
- e. Personal issues
  - i. Listening
    1. Personal concern
    2. Problem understanding
    3. Communication
  - ii. Facts/defined complaint
    1. Identify
    2. Immediate resolution
    3. Work related
    4. Contractual
    5. Guidance
  - iii. Record keeping
    1. Tape
    2. Signature
    3. Verification
    4. Departmental file
    5. Personal file
  - iv. Resolution

**Resources**

International Training Institute. *Foreman Training*. current edition. International Training Institute, Fairfax, VA, , 2017.

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International Training Institute. *Supervisory Training Program*. current. International Training Institute, Fairfax, VA, 2008.

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International Training Institute. *Project Management, 2000*. current. International Training Institute, Fairfax, VA, 2000.

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**Resources Other**

[www.eeoc.gov](http://www.eeoc.gov)

[www.osha.gov](http://www.osha.gov)

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