

# ATPT-2350: ADVANCED SPRAY AND INDUSTRIAL PAINTING

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## Cuyahoga Community College

**Viewing: ATPT-2350 : Advanced Spray and Industrial Painting**

**Board of Trustees:**

2001-04-26

**Academic Term:**

Spring 2019

**Subject Code**

ATPT - Appld Indus Tech - Painting

**Course Number:**

2350

**Title:**

Advanced Spray and Industrial Painting

**Catalog Description:**

Advanced instruction in spray and industrial painting techniques and procedures including equipment terminology, conventional air spray systems, electrostatic spray systems, HVLP turbine spray systems, and safety for spray painting.

**Credit Hour(s):**

2

**Lecture Hour(s):**

2

## Requisites

**Prerequisite and Corequisite**

ATPT-2330 Spray & Industrial Painting, or departmental approval.

## Outcomes

**Course Outcome(s):**

N/A

**Objective(s):**

1. Define and identify terms and equipment used in conventional air, electrostatic, and HVLP turbine spray systems.
2. Operate a conventional air spray system using various techniques.
3. Operate an electrostatic spray system.
4. Operate an HVLP turbine spray system.
5. Identify and use safe spray painting procedures.

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**Methods of Evaluation:**

1. Quizzes
2. Exams
3. Classroom participation
4. Demonstration of project assignments

**Course Content Outline:**

1. Review Spray and Industrial Painting
  - a. Various spray systems
  - b. Conventional system
  - c. Airless spray gun
2. Conventional air spray systems

- a. Technical information
    - i. principles of compressed air
    - ii. compressed air in spray painting
    - iii. the air compressor
    - iv. compressed air controls and cleaners
    - v. separators, extractors
    - vi. air regulators
    - vii. pressure tanks
    - viii. air and paint hoses
  - b. The spray gun
    - i. technical information
    - ii. airbrush
    - iii. lane marking equipment
  - c. Operation of the conventional air spray system
  - d. Spray gun techniques
    - i. corners
    - ii. surfaces
    - iii. open work
    - iv. door and box shapes
    - v. large areas
  - e. Trouble shooting and maintenance
3. Electrostatic spray systems
- a. Technical information
  - b. Safety precautions
  - c. Electrostatic spray gun techniques
    - i. spraying distance
    - ii. spray gun triggering
    - iii. painting tubes or cylinders
    - iv. painting recessed areas
4. High volume low pressure (HVLV) turbine spray systems
- a. HVLV spray systems
    - i. comparison with conventional systems
    - ii. application
  - b. Equipment
  - c. Turbine HVLV spray system
  - d. Spray techniques
5. Spray painting safety awareness
- a. Introduction
  - b. Hazards in using spray equipment
    - i. fire and explosion
    - ii. skin injection
    - iii. over-pressurization and unexpected pressure release
    - iv. moving parts
    - v. toxicity
    - vi. electric shock
  - c. Personal protective equipment

## Resources

International Brotherhood of Painters and Allied Trades Joint Apprenticeship and Training Fund. *Conventional Air Spray Systems*. Revised 1999. Washington, DC:International Brotherhood of PaintersAllied Trades Joint ApprenticeshipTrainingFund, 1976.

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International Brotherhood of Painters Allied Trades Joint Apprenticeship Training Fund. *Electrostatic Spray Systems*. Revised 1999. Washington,DC:Internat'l Brotherhood of Painters Allied Trades Joint ApprenticeshipTrainingFund, 1976.

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International Brotherhood of Painters Allied Trades Joint Apprenticeship and Training Fund. *HVLV Turbine Spray Systems*. Revised 1999. Washington, DC:Internat'l brotherhood of Painters Allied Trades Joint ApprenticeshipTraining Fund, 1976.

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International Brotherhood of Painters Allied Trades Joint Apprenticeship and Training Fund. *Spray Painting Safety Awareness*. Washington, DC: Internat'l Brotherhood of Painters Allied Trades Joint Apprentiship Training Fund, 1999.

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International Brotherhood of Painters Allied Trades Joint Apprenticeship Fund. "Conventional Air Spray Systems"

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