

# ATGL-2350: CURTAINWALL FABRIC & INSTALL

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## Cuyahoga Community College

**Viewing: ATGL-2350 : Curtainwall Fabric & Install**

**Board of Trustees:**

March 2020

**Academic Term:**

Fall 2020

**Subject Code**

ATGL - Appld Indus Tech - Glazing

**Course Number:**

2350

**Title:**

Curtainwall Fabric & Install

**Catalog Description:**

Instruction in curtainwall principles and methods including standard layout practices and tolerances; curtainwall systems and erection procedures for I-beam Stick and Truss-wall construction.

**Credit Hour(s):**

2

**Lecture Hour(s):**

2

## Requisites

**Prerequisite and Corequisite**

ATPT-1300 Introduction to Painting, Drywall Finishing and Glazing, and ATGL-1330 Hand Tools for Glaziers; or departmental approval.

## Outcomes

**Course Outcome(s):**

Identify and select appropriate curtain wall design for specified job.

**Objective(s):**

1. Identify and use various curtainwall methods/designs.
2. Identify and use various testing standards including, air infiltration, water penetration and structural test.
3. Identify and demonstrate safe work practices.
4. Discuss proper storage and handling techniques.

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**Course Outcome(s):**

Employ specific tools to layout precise reference points and control lines, and establish and maintain workable curtainwall tolerances.

**Objective(s):**

1. Identify and use the appropriate tools for layout of a curtain wall.
2. Establish reference points and control lines for curtain wall.
3. Calculate and maintain workable curtain wall tolerances for building dimensions.

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**Course Outcome(s):**

Discuss procedures for assembling and installing a curtain wall.

**Objective(s):**

1. Recognize basic erection procedures associated with I-Beam Wall, Stickwall, and Trusswall.
  2. Differentiate between a standard curtainwall system and a custom design system.
  3. Discuss the advantages of factory fabrication.
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**Methods of Evaluation:**

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

**Course Content Outline:**

1. Curtain wall designs
  - a. Types and Methods
    - i. Stick system
    - ii. Unit system
    - iii. Unit and mullion system
    - iv. Panel system
    - v. Front set
  - b. Testing
    - i. Air filtration
    - ii. Water penetration
    - iii. Structural
  - c. Safe work practices
    - i. Hard hats
    - ii. Safety glasses
    - iii. Gloves
    - iv. Gauntlets
    - v. Ear plugs
    - vi. Boots
  - d. Storage and handling
    - i. Protection
    - ii. Properly stacked
    - iii. Keep glass out of sunlight
    - iv. Proper un-packing
    - v. Keep in warm dry area
    - vi. Inspection of materials
2. Layout
  - a. Reference points
    - i. Axis
    - ii. Control lines
    - iii. Intersect points
    - iv. Segment
    - v. Running dimensions
    - vi. Benchmark
  - b. Tolerances
    - i. Precision
    - ii. Specifications
    - iii. Allowances
    - iv. Placement
    - v. Provisions
    - vi. Components
  - c. Tools
    - i. Squares
    - ii. Chalk lines
    - iii. Straight edges
    - iv. Tape measure

- v. Laser
  - vi. Levels
  - vii. Writing instruments
  - viii. Plumb bobs
3. Erection and design
- a. Basic erection
    - i. Layout
    - ii. Placement
    - iii. Specs
    - iv. Procedures
    - v. Proper order sequence
    - vi. Safety
    - vii. Proper tools
  - b. Standard and custom
    - i. Factory made
    - ii. Easy access
    - iii. Easy installation
    - iv. Longer lead times
    - v. Custom finishes
    - vi. Finish dates
    - vii. Mistakes cause longer lead times
  - c. Advantages in factory fabrication
    - i. Controlled environment
    - ii. Better conditions
    - iii. Easier to work in
    - iv. Faster completion
    - v. Multiple of people
    - vi. Assembly line features

## Resources

International Brotherhood of Painters & Allied Trades Joint Apprenticeship & Training Fund. "Introduction to Curtain Wall" 1st ed.

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International Brotherhood of Painters & Allied Trades Joint Apprenticeship & Training Fund. *High Rise and High Span Curtainwall Construction*. 1st ed. Hanover, MD: Finishing Trades Institute,

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International Brotherhood of Painters & Allied Trades Joint Apprenticeship & Training Fund. *Curtain Wall layout*. 1st ed. Hanover, MD: Finishing Trades Institute,

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