

ATIW-2360: ORNAMENTAL APPLICATIONS

Cuyahoga Community College

Viewing: ATIW-2360 : Ornamental Applications

Board of Trustees:

June 2020

Academic Term:

Fall 2020

Subject Code

ATIW - Appld Indus Tech - Ironworking

Course Number:

2360

Title:

Ornamental Applications

Catalog Description:

Procedures for and installation of ornamental applications, including rolling service doors, sloped walls, metal and ship ladders, toilet partitions, vanity supports, relief angles, flagpoles, and chain link fences.

Credit Hour(s):

2

Lecture Hour(s):

2

Requisites

Prerequisite and Corequisite

ATIW-2350 Ornamental Systems and Railings or concurrent enrollment, or departmental approval.

Outcomes

Course Outcome(s):

A. Plan the installation of sliding doors and sliding mall fronts.

Objective(s):

1. Analyze installation plans for sliding doors and sliding mall fronts.
2. Install a sliding door in accordance with job specifications.
3. Install a sliding mall front in accordance with job specifications.

Course Outcome(s):

B. Plan the installation of revolving doors.

Objective(s):

1. Interpret how revolving doors operate.
2. Install a revolving door in accordance with job specifications.

Course Outcome(s):

C. Plan the installation of rolling service doors.

Objective(s):

1. Analyze the types of rolling service doors.
 2. Install a rolling service door in accordance with job specifications.
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Course Outcome(s):

D. Plan the installation of adhesive and mechanical anchoring systems.

Objective(s):

1. Follow general safety precautions when installing anchoring systems.
 2. Interpret types of adhesive anchoring systems.
 3. Install an adhesive anchoring system in accordance with job specifications.
 4. Install a mechanical anchoring system in accordance with job specifications.
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Course Outcome(s):

E. Plan the installation of stairs and ladders.

Objective(s):

1. Interpret stair terminology.
 2. Analyze the major components of a stair system.
 3. Install drop-in stairs and railings in accordance with job specifications.
 4. Install an ornamental stair in accordance with job specifications.
 5. Install ladders in accordance with job specifications.
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Course Outcome(s):

F. Plan the installation of catwalks and grating.

Objective(s):

1. Install a catwalk in accordance with job specifications.
 2. Install grating in accordance with job specifications.
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Course Outcome(s):

G. Plan the installation of various types of fence and guard rail.

Objective(s):

1. Analyze types of fences and guard rails.
 2. Lay out and install chain link post and rails in accordance with job specifications.
 3. Install chain link fabric in accordance with job specifications.
 4. Install a gate in a chain link fence in accordance with job specifications.
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Course Outcome(s):

H. Interpret various detention systems.

Objective(s):

1. Analyze types of detention systems.
 2. Evaluate detention cell prints and schedules.
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Course Outcome(s):

I. Plan the erection of a space frame.

Objective(s):

1. Analyze the structure of a space frame.
 2. Erect a space frame in accordance with job specifications.
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Course Outcome(s):

J. Plan the installation of miscellaneous architectural and ornamental work.

Objective(s):

1. Install an attachment system in accordance with job specifications.
 2. Erect a canopy in accordance with job specifications.
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Methods of Evaluation:

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

Course Content Outline:

1. Rolling service doors
 - a. Procedure for erection
 - b. Components
 - i. Guide mounting
 - ii. Curtain attachment
 - iii. Bracket attachment
 - iv. Hood installation
 - c. Tension
 - d. Troubleshooting
2. Sloped walls
 - a. Components
 - i. Sill can
 - ii. Head can
 - iii. Mullions
 - iv. Glass
 - v. End caps
 - vi. Covers
 - vii. Dutchman clips
 - viii. Pressure plate
 - b. Splice joints
 - c. Caulking and can fillers
 - d. Glazing material
 - e. Structural joints
3. Metal ladders
4. Ship ladders
5. Toilet partitions
6. Vanity supports
7. Relief angles
8. Flagpoles
 - a. Types
 - i. Conventional
 - ii. Surface mounted
 - iii. Tilting
 - iv. Nautical
 - v. Roof mounted
 - vi. Two or three piece
 - b. Hardware
9. Chain link fences
 - a. Components
 - i. Posts
 1. Terminal
 2. Anchor
 3. Concrete
 - ii. Framework

- b. Hanging gate
- c. Barbed wire

Resources

Salmon, Charles G. *Steel Structures: Design and Behavior: Emphasizing Load and Resistance Factor Design*. 5th ed. New York, NY: Harper Collins College Publishers, 2008.

International Association of Bridge, Structural and Ornamental Iron Workers. *ArchitctrlOrnmntl Trnng Mnl Irnwrkrs:Rllng Srv Doors-Slpd Walls,Stairs-Rail Glass Rail, Wall Handrails-Ladders, Toilet Partitions-Vanity Supports, Relief Angles-Flagpoles, Install Chain Link Fences*. Volume 1. Washington, D.C.: AFL-CIO, 2018.

International Association of Bridge, Structural and Ornamental Iron Workers. *ArchitctrlOrnmntl Trnng Mnl Irnwrkrs:Rllng Srv Doors-Slpd Walls,Stairs-Rail Glass Rail, Wall Handrails-Ladders, Toilet Partitions-Vanity Supports, Relief Angles-Flagpoles, Install Chain Link Fences*. Volume 5. Washington, D.C.: AFL-CIO, 1999.

National Center for Construction Education and Research. *Ironworking Training Guide*. 2nd edition. National Center for Construction Education and Research, 2017.

Aghayere, Abi O. and Jason Vigil. *Structural Steel Design*. 3rd ed. . Dulles, VA: Mercury Learning and Information, 2020.

Resources Other

American Institute of Steel Construction. <https://www.aisc.org/technical-resources/> . 2020.

International Association of Bridge, Structural and Ornamental Iron Workers. <http://www.ironworkers.org/>. 2011.

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