

ATCT-1351: METAL STUDS AND DRY WALLS

Cuyahoga Community College

Viewing: ATCT-1351 : Metal Studs and Dry Walls

Board of Trustees:

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Academic Term:

Fall 2025

Subject Code

ATCT - Appld Indus Tech - Carpentry

Course Number:

1351

Title:

Metal Studs and Dry Walls

Catalog Description:

Introduction to the Interior Systems industry. Construction practices, materials, and equipment used to lay out, fabricate and install metal stud systems. Related blueprint reading skills, math concepts, soffits, door frames and hardware are also an integral part of this course. An emphasis on safety regulations as according to OSHA standards.

Credit Hour(s):

2

Lecture Hour(s):

2

Requisites

Prerequisite and Corequisite

Departmental approval: Admissions to Carpentry Technology apprenticeship program.

Outcomes

Course Outcome(s):

1. Interpret blueprints for information pertaining to the layout of metal stud systems, soffits, doors, and door frames.

Objective(s):

1. Recognize appropriate blueprint symbols.
2. Identify proper room layout.
3. Read scale references.
4. Explain Pythagorean Theorem.
5. Explain/identify arc scribing.

Course Outcome(s):

2. Layout, fabricate, and install metal stud partitions, soffits, doors, and door frames in accordance with OSHA guidelines and jobsite specifications.

Objective(s):

1. Fabricate and install various soffit types.
2. Apply OSHA Standards for safe work procedures.
3. Demonstrate proper use of scaffolds, ladders, and personal protective equipment.
4. Install hollow metal door frames, doors and hardware.
5. Identify the components of metal stud systems.

6. Safely operate and use hand, power, and powder actuated tools.
7. Fabricate metal stud partitions using light gauge steel components.

Course Outcome(s):

3. Layout and install drywall in accordance with OSHA Guidelines and jobsite specifications.

Objective(s):

1. Differentiate between a rip and butt cut.
2. Describe drywalling techniques for angles and curves.
3. Explain considerations when drywalling around openings.
4. OSHA Guidelines pertaining to drywall installation.
5. Identify proper personal protective equipment to be used during drywall installation.

Methods of Evaluation:

1. Quizzes
2. Exams
3. Classroom participation
4. Completion of assigned projects

Course Content Outline:

1. Concepts
 - a. Components of metal stud systems.
 - b. Door terminology
 - c. Door hardware installation techniques
 - d. Door frame installation techniques
 - e. Interior Systems Industry Construction Practices
 - f. OSHA Safety Regulations
 - g. Soffit construction techniques
 - h. Drywall Installation Techniques
 - i. Pythagorean Theorem.
 - j. Arc Scribing
 - k. Personal protective equipment use
2. Skills
 - a. Using hand tools, power tools, lasers, and powder actuated tools to fabricate metal stud system.
 - b. Reading blue prints to determine jobsite specifications.
 - i. Arc scribing.
 - ii. Apply Pythagorean theorem to layout materials
 - c. Operating metal stud benders
 - d. Operating rotozip
 - e. Operating Screw guns
 - f. Operating cutoff saws
 - g. Operating various laser tools
 - h. Operating various powder actuated tools
 - i. Fabricating metal stud wall and soffits on center spacing
 - j. Fabricating metal stud wall and soffits for/around rough openings.
 - k. Fabricating metal stud wall and soffits for intersecting walls
 - l. Fabricating metal stud wall and soffits with lateral bracing
 - m. Fabricating metal stud wall and soffits for/with backing.
 - n. Installing drywall on a straight wall
 - o. Making rip and butt cuts.
 - p. Accommodating openings when installing drywall.
 - q. Installing drywall on angled and curved walls.
 - r. Constructing unbraced soffits
 - s. Constructing braced soffits

- t. Constructing fixtures.
- u. Installing hollow metal door frames, including welded and K-D frames.
- v. Installing door and adjustment.
- w. Installing door hardware.
- x. Following OSHA standards for scaffold, ladder, personal protective equipment, eye and ear safety, and laser use.

3. Issues

- a. Metal vs. wood walls.
- b. Safety
- c. Scrapping/Salvaging material

Resources

Principals of Productive Metal Framing. Las Vegas, NV: Carpenters International Training Fund, 2021.

Carpenters International Training Fund. *Drywall Applications*. Las Vegas, NV: Carpenters International Training Fund, 2017.

Carpenter's International Training Fund. *Firestop Installation*. Las Vegas, NV: Carpenter's International Training Fund, 2017.

Resources Other

Carpenter's International Training Fund. <https://www.carpenters.org/citf-training/> . 2024.

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