Sheet Metal

MODULES
- All of the modules listed below are included in the Trainee Guide and the Instructor’s Guide. The following ISBN and pricing information is for ordering individual modules only.

Introduction to the Sheet Metal Trade (5 Hours)
- Trainee $20
- Instructor $20
- Module ID 04101-08

Introduction to Sheet Metal Layout and Processes (7.5 Hours)
- Trainee $20
- Instructor $20
- Module ID 04102-08

Trade Math One (20 Hours)
- Trainee $20
- Instructor $20
- ISBN 978-0-13-604835-0
- Module ID 04104-08

Fabrication One – Parallel Line Development (22.5 Hours)
- Trainee $20
- Instructor $20
- Module ID 04105-08

Installation of Ductwork (15 Hours)
- Trainee $20
- Instructor $20
- Module ID 04106-08

Installation of Air Distribution Accessories (5 Hours)
- Trainee $20
- Instructor $20
- Module ID 04107-08

Insulation (7.5 Hours)
- Trainee $20
- Instructor $20
- Module ID 04108-08

Architectural Sheet Metal (15 Hours)
- Trainee $20
- Instructor $20
- Module ID 04109-08

Trade Math Two (20 Hours)
- Trainee $20
- Instructor $20
- Module ID 04201-08

Curriculum Notes
- 175 Hours (Includes 72.5 hours of Core Curriculum, which is a prerequisite for Level 1 completion and must be purchased separately. See p. 14 for ordering information.)
- NATE Recognized Training Provider
- Downloadable instructor resources that include module tests, PowerPoints®, and performance profile sheets are available at www.nccer.org/irc.

PAPERBACK
- Trainee Guide: $67
- Instructor’s Guide: $67

To Order Call: 1-800-922-0579 www.nccer.org/instructors

NATE CERTIFICATION
NCCER is an officially recognized training provider for North American Technician Excellence (NATE), an independent, third-party certification body for HVAC/R technicians. NATE-certified technicians can use module completions through NCCER-accredited training providers for the continuing education hours required for recertification through NATE. For details and lists of available NATE-recognized training, visit www.natex.org. For more information regarding NATE recertification, please contact NCCER Customer Service at 1-888-622-3720.
Sheet Metal Level 2 (continued)

Basic Piping Practices (7.5 Hours)
Trainee $20  Instructor $20  
(Module ID 04208-08) Reviews the methods for measuring, cutting, and joining selected types of pipe using fittings, hangers, and supports. Also reviews pipe materials and applications.

Fiberglass Duct (20 Hours)
Trainee $20  Instructor $20  
(Module ID 04209-08) Describes fiberglass duct layout and fabrication methods. Also discusses closure, hanging, and support methods. Explains how to repair major and minor damage to fiberglass duct.

Comprehensive Plan and Specification
Reading (30 Hours)
Trainee $20  Instructor $20  
(Module ID 04305-09) Provides a case-study approach to learning how to use building plans and specifications to lay out, fabricate, and install HVAC systems. Allows trainees to proceed through the module as if they were working on an actual building project. Includes construction drawings.

Fabrication Three – Triangulation (47.5 Hours)
Trainee $20  Instructor $20  
(Module ID 04306-09) Describes the principles of triangulation and how it can be used to measure ductrun fittings. Provides a variety of tasks to practice developing, laying out, and fabricating selected ductrun fittings.

Advanced Architectural Sheet Metal (12.5 Hours)
Trainee $20  Instructor $20  
(Module ID 04307-09) Provides trainees with the opportunity to practice layout, fabrication, and installation of various architectural pieces.

Introduction to Welding, Brazing and Cutting (25 Hours)
Trainee $20  Instructor $20  
(Module ID 04403-09) Introduces the techniques and proper operation of equipment used for welding, brazing, and cutting. Emphasizes safety and awareness of hazards involved. Trainees practice welds in a variety of positions and perform a basic braze.

Fume and Exhaust System Design (25 Hours)
Trainee $20  Instructor $20  
(Module ID 04404-09) Reviews the codes and specifications pertaining to fume and exhaust system design for safe workspaces. Provides instruction in selecting the appropriate materials for fume or exhaust system components and to identify the different types of hoods and applications for each.

Fabrication Four – Comprehensive Review (40 Hours)
Trainee $20  Instructor $20  
(Module ID 04405-09) Provides a review of parallel line, radial line, and triangulation development methods for laying out sheet metal patterns. Trainees practice laying out and fabricating selected sheet metal fittings using these methods.

Introductory Supervisory Skills (20 Hours)
Trainee $20  Instructor $20  
(Module ID 04406-09) Teaches skills required to supervise personnel, including leadership, team building, communication and motivation. Discusses gender and cultural issues. Emphasizes principles of project planning and management, including problem solving and decision making. Presents case studies for student participation.

Level 3: Sheet Metal

Curriculum Notes
• 157.5 Hours
• Revised: 2009, Third Edition
• NATE-Recognized Training Provider
• Downloadable instructor resources that include module tests, PowerPoints®, and performance profile sheets are available at www.nccer.org/irc.

PAPERBACK  ISBN
Trainee Guide: $97  978-0-13-609962-8

Module 1
Trade Math Three – Field Measuring and Fitting (15 Hours)
Trainee $20  Instructor $20  
(Module ID 04301-09) Describes the techniques used for field measuring and layout of ductruns and fittings. Also provides practice in solving field measuring problems.

Module 2
Air Systems (10 Hours)
Trainee $20  Instructor $20  
(Module ID 04302-09) Reviews the operating principles, components, and applications of common air systems. Discusses constant volume systems, variable volume systems, variable temperature (VVT) systems, variable air volume (VAV) systems, and dual VAV systems.

Module 3
Principles of Airflow (22.5 Hours)
Trainee $20  Instructor $20  
(Module ID 04303-09) Explains the basic principles of airflow and reviews how airflow is affected by duct size, shape, and fittings. Also reviews the components of an air distribution system.

Module 4
Louvers, Dampers, and Access Doors (20 Hours)
Trainee $20  Instructor $20  
(Module ID 04304-09) Discusses the different types of louvers, dampers, and access doors used in air distribution systems and reviews the standards that apply to them.

Level 4: Sheet Metal

Curriculum Notes
• 150 Hours
• Revised: 2009, Third Edition
• NATE-Recognized Training Provider
• Downloadable instructor resources that include module tests, PowerPoints®, and performance profile sheets are available at www.nccer.org/irc.

PAPERBACK  ISBN
Instructor’s Guide: $97  978-0-13-609965-9

Module 1
Shop Production and Organization (15 Hours)
Trainee $20  Instructor $20  
(Module ID 04401-09) Introduces the production, organization, planning, and control functions that occur in a sheet metal shop. Emphasizes optimization of processes and accurate estimating for competitive bidding. Discusses project planning techniques, principles of efficient shop layout and materials flow, the critical path method, and the roles and relationships of shop personnel.

Module 2
Air Testing and Balancing (25 Hours)
Trainee $20  Instructor $20  
(Module ID 04402-09) Explains how to balance an air distribution system so that the right amount of air is correctly distributed at the proper velocities and returned to the heating and cooling units. Reviews the tools and techniques used for adjusting fans, volume dampers, registers, and grilles. Provides proper techniques for duct leakage testing.