

Sheet Metal Worker – Online Upgrading

A Guide to Course Content

Sheet Metal Workers use metal of 10 gauge or lighter to make and repair products and buildings.

Training Requirements:

All candidates applying for upgrading training must be eligible to challenge the Sheet Metal Worker Interprovincial Journeyman examination.

This program is designed to prepare individuals to challenge the Sheet Metal Worker Interprovincial Journeyman examination.

The upgrading program encompasses the scope of the trade. Completion of all assignments will aid in success.

As there is no practical component to the upgrading training program, additional study and practice is recommended in areas where individuals have minimal on-the-job experience.

Important Notes:

The courses will begin at the end of August, with the enrollment for the courses closing December 31st. This program course has an end date for the technical training year and students must complete the entire course by May 31st.

Participants will be required to complete self-assessment reviews (quizzes) as they appear in sequential order throughout the course. The course is set up in five (5) Blocks of training which is reflective of how the trade is outlined in the Red Seal Occupational Standard (RSOS) document. At the end of each training block in the course, there is a timed Block End Final exam which is delivered in multiple choice format. The score of each of these Block Final examinations will count towards your final grade.

Computers used by participants for this program must meet certain minimum technical requirements. This information will be provided upon successful application to this program.

Interested candidates must contact SATCC, not Saskatchewan Polytechnic, when applying for this program.

This document briefly summarizes the training delivered in the upgrading program.

The content of the technical training components is subject to change without notice.

A - PERFORMS COMMON OCCUPATIONAL SKILLS

- **A-1 PERFORMS SAFETY-RELATED FUNCTIONS**
 - Uses personal protective equipment (PPE) and safety equipment
 - Maintains a safe work environment
 - Performs lock out and tag out procedures

- **A-2 USES AND MAINTAINING TOOLS AND EQUIPMENT**
 - Uses hand and portable power tools
 - Uses shop tools and equipment
 - Uses gas metal arc welding (GMAW) equipment
 - Uses resistance spot welding equipment
 - Uses gas tungsten arc welding (GTAW) equipment
 - Uses shielded metal arc welding (SMAW) equipment
 - Uses oxy-fuel and plasma arc cutting equipment
 - Uses soldering and brazing equipment
 - Uses measuring and layout equipment
 - Uses testing and inspection devices
 - Uses stationary and mobile work platforms
 - Uses hoisting, rigging and positioning equipment

- **A-3 ORGANIZES WORK**
 - Uses trade-related documentation
 - Interprets drawings
 - Organizes materials and equipment for project
 - Performs basic design and field modifications

- **A-4 USES COMMUNICATION AND MENTORING TECHNIQUES**
 - Uses communication techniques
 - Uses mentoring techniques

B – PERFORMS FABRICATION

- **B-5 PERFORMS PATTERN DEVELOPMENT**
 - Develops patterns using simple and straight line layout
 - Develops patterns using parallel line method
 - Develops patterns using radial line method
 - Develops patterns using triangulation method
 - Uses computer technology for pattern development

- **B-6 FABRICATES SHEET METAL COMPONENTS FOR AIR AND MATERIAL HANDLING SYSTEMS**

- Cuts ductwork, fittings and components
- Forms ductwork, fittings and components
- Insulates ductwork, fittings and components
- Assembles ductwork, fittings and components
- Fabricates dampers
- Fabricates hanger systems, supports and bases

- **B-7 FABRICATES FLASHING, ROOFING, SHEETING AND CLADDING**

- Cuts metal for flashing, roofing, sheeting and cladding
- Forms flashing roofing, sheeting and cladding

- **B-8 FABRICATES SPECIALTY PRODUCTS**

- Cuts material for specialty products
- Forms specialty products
- Assembles specialty products
- Finishes specialty products

C – INSTALLS AIR AND MATERIAL HANDLING SYSTEMS

- **C-9 PREPARES INSTALLATION SITE**

- Performs on-site measurements
- Performs demolitions for renovations
- Installs penetrations and sleeves
- Installs supports and bases
- Installs hangers, cables, braces and brackets

- **C-10 INSTALLS AND CONNECTS CHIMNEYS, BREECHING AND VENTING TO EXHAUST APPLIANCES AND MECHANICAL EQUIPMENT**

- Installs chimney
- Connects appliances or mechanical equipment to chimney and breeching
- Installs high efficiency appliances and mechanical equipment

- **C-11 INSTALLS AIR HANDLING SYSTEM COMPONENTS**

- Installs air handling equipment
- Installs sheet metal ducts and fittings
- Installs dampers
- Installs fire and fire/smoke dampers
- Installs registers, grilles, diffusers and louvers
- Installs terminal boxes
- Installs coils
- Installs system component accessories
- Installs plenums

- **C-12 INSTALLS MATERIAL HANDLING SYSTEM COMPONENTS**
 - Installs pneumatic and gravity material handling system components
 - Installs mechanized material handling system components
- **C-13 APPLIES THERMAL INSULATION, LAGGING, CLADDING AND FLASHING**
 - Applies thermal insulation to components
 - Applies lagging and cladding to components
 - Applies flashing to components
- **C-14 PERFORMS LEAK TESTING, AIR BALANCING AND COMMISSIONING**
 - Performs leak tests
 - Performs testing, adjusting and balancing (TAB)
 - Participates in the commissioning of air and material handling systems

D – INSTALLS ROOFING AND SPECIALTY PRODUCTS

- **D-15 INSTALLS METAL ROOFING AND CLADDING/SIDING SYSTEMS**
 - Lays out roof and walls
 - Installs insulation, isolation material and building envelope components
 - Installs roofing and cladding/siding system components
 - Seals exposed joints
 - Installs decking
- **D-16 INSTALLS EXTERIOR COMPONENTS**
 - Prepares surface
 - Fastens exterior components
- **D-17 INSTALLS SPECIALTY PRODUCTS**
 - Installs stainless steel specialty products
 - Installs non-stainless steel specialty products

E – PERFORMS MAINTENANCE AND REPAIR

- **E-18 PERFORMS SCHEDULED MAINTENANCE**
 - Performs maintenance inspections
 - Services components
- **E-19 REPAIRS FAULTY SYSTEMS AND COMPONENTS**
 - Diagnoses system faults
 - Repairs worn or faulty components

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