

Apprenticeship Core Competence Statements

Roofer



Apprenticeship
and Industry
Training

Alberta 



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Core competence statements

Apprenticeship and Industry Training (AIT) defines the core competences as the capabilities needed for each profession. AIT works with subject matter experts from across Alberta, including individuals from industry, associations, trade organizations and post-secondary institutions, to identify the core competences for each designated trade.

Breakdown of core competence statements

Core competence statements

These are a catalogue of specific undertakings, requiring essential skills, knowledge, activities or functions for a person to be deemed proficient in their trade.

Section title

Each section's heading has a title that provides a heading and overview of the content. It is crafted from tasks found within a trade's Board Order.

Competence statement

An observable major task, work activity or outcome that an entry-level journey person performs.

Competences

The skills and knowledge demonstrated on-the-job and in classroom instruction that supports achievement of the competence statement by an apprentice or journey person in their skilled trade.

Profile

A profile for an apprenticeship education program in Alberta outlines the specific skills, knowledge, abilities and behaviours necessary to work in a profession. The profile consists of a set of core competence statements, a curriculum guide, a record book and supporting documents.

NOTE: These documents are available on the Apprenticeship and Industry Training website tradesecrets.alberta.ca.



Roofer trade

Roofers prepare and apply protective coverings to flat and sloped roof surfaces in accordance with construction plans and specifications. Roofers may also:

- inspect problem roofs to determine the best procedures for repairing them;
- estimate materials required and quote costs;
- repair older roofs;
- waterproof roofs, basements, foundations, plaza decks or parkades;
- install green/vegetated roof components; and
- incorporate new future roofing technology (i.e. conventional and non-conventional solar roofing technology).

Core competences

Roofer Core Competences:

1. Foundational Skills, Job Responsibilities and Procedures
2. Blueprints, Drawings and Calculations
3. Steep Slope Roof Systems
4. Low Slope Roof Systems
5. Waterproofing and Environmentally Sustainable Roof Systems
6. Roof Assessment, Maintenance and Repair

Core Competence 1: Foundational Skills, Job Responsibilities and Procedures

Core Competence Statement:



Apply foundational skills essential to convey and receive critical training and workplace information.

Competences:

- Apply legislation, regulations and practices ensuring safe work in the Roofer trade.
- Manage an apprenticeship to earn journeyman certification and Red Seal endorsement.
- Select, use, and maintain hand and power tools.
- Utilize roofing equipment.
- Identify roof deck materials.
- Describe roof deck loading procedures.
- Identify roofing crew dynamics.

Core Competence 2: Blueprints, Drawings and Calculations

Core Competence Statement:



Demonstrate knowledge, understanding and proficiency when interpreting blueprints, drawings and calculating mathematical problems.

Competences:

- Demonstrate numeracy.
- Utilize and interpret blueprints and drawings.
- Interpret drawings and specifications.
- Perform steep slope material calculations.
- Perform low slope material calculations.

Core Competence 3: Steep Slope Roof Systems

Core Competence Statement:

Demonstrate knowledge, understanding and proficiency when installing steep slope roof systems.

Competences:

- Identify steep slope roof structures.
- Install asphalt shingles
- Install softwood shakes and shingles.
- Install composite roofing.
- Describe concrete tile installation.
- Describe metal tile installation.
- Apply metal roofing.
- Describe steep slope roof insulation requirements.
- Describe steep slope roof ventilation requirements.
- Describe steep slope drainage requirements.
- Describe photovoltaic roof materials.

Core Competence 4: Low Slope Roof Systems

Core Competence Statement:

Demonstrate knowledge, understanding, and proficiency when installing low slope roof systems.

Competences:

- Demonstrate torch safety.
- Install modified bitumen roof systems.
- Describe BUR roof systems (Built Up Roofing).
- Identify low slope roofing structures.
- Apply liquid membrane flashing.
- Describe single ply tools and equipment.
- Install thermoset materials.
- Install thermoplastic materials.
- Describe low slope roof insulation requirements.
- Describe low slope roof ventilation requirements.
- Describe low slope roof drainage requirements.
- Identify vapour retarders.
- Interpret wind uplift tables.
- Fabricate and install metal flashing and flanged accessories.

Core Competence 5: Waterproofing and Environmentally Sustainable Roof Systems**Core Competence Statement:**

Demonstrate knowledge, understanding, and proficiency when installing waterproofing systems and environmentally sustainable roof systems.

Competences:

- Describe waterproofing / damp proofing materials.
- Describe sustainable roof systems.
- Describe photovoltaic roof materials.

Core Competence 6: Roof Assessment, Maintenance and Repair

Core Competence Statement:



Demonstrate knowledge, understanding, and proficiency when assessing, maintaining and repairing roofing systems.

Competences:

- Describe cause of steep slope roof failure.
- Describe cause of low slope roof failure.
- Perform re-roofing procedures.

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