

Apprenticeship and Industry Training

Floorcovering Installer Curriculum Guide

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Apprenticeship
and Industry
Training

ALBERTA ADVANCED EDUCATION

Floorcovering installer : apprenticeship education program curriculum guide

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**Floorcovering Installer
Table of Contents**

Apprenticeship2
Apprenticeship and Industry Training System2
Apprenticeship Safety3
Technical Training.....3
Procedures for Recommending Revisions to the Curriculum Guide3
Apprenticeship Route toward Academic Credential4
Floorcovering Installer Training Profile5

CURRICULUM GUIDE

First Period Technical Training.....7
Second Period Technical Training.....12

Apprenticeship

Apprenticeship is post-secondary education with a difference. Apprenticeship begins with finding a sponsor. Sponsors guide apprentices, and support on-the-job learning through provision of mentorship. Approximately 80 per cent of an apprentice's time is spent on the job under the supervision of a certified journeyperson or qualified tradesperson. The other 20 per cent involves technical training provided at, or through, a post-secondary institution (PSI) – usually a college or technical institute.

To receive their post-secondary credential, apprentices must learn theory and skills, and they must pass examinations. Criteria for the program—including the content and delivery of technical training—are developed and updated by the Registrar.

The graduate of the Floorcovering Installer apprenticeship program is an individual who will be able:

- Use efficiently and safely all hand and power operated equipment used by the Journeyperson Floorcovering Installer.
- Read and interpret drawings in relation to the trade requirement. Estimate quantities of materials required and perform a proper layout.
- Skillfully handle, cut, fit and install all types of floorcovering and underlayment relevant to the trade.
- Replace, repair and alter floorcovering materials skillfully.
- Recognize the advantages and limitations of various floorcovering materials.
- Exercise good judgement and abide by the policies outlined by occupational health and safety.
- Understands the fundamentals of operating a small business.
- Perform assigned tasks in accordance with quality and production standards required by industry.

Apprenticeship and Industry Training System

Alberta's apprenticeship programs are supported by industry stakeholders that ensures a highly skilled, internationally competitive workforce in the province. The Registrar establishes the educational standards and provides direction to the system supported by industry and the PSI's. The Ministry of Advanced Education provides the legislative framework and administrative support for the apprenticeship and industry training system.

Special thanks are offered to the following industry members who contributed to the development of the standard:

Jo-Anne Teed Calgary
Fred Richardson Spruce Grove
Armand Corbiere Edmonton
Richard Wutzke Edmonton
Cory Parker Edson
Garrick Wiebe Red Deer
Wade Kalnicki Calgary
Russell Bosch Spruce Grove

Alberta Government

Alberta Advanced Education works with industry, sponsor and employee organizations and technical training providers to:

- facilitate industry's development and maintenance of training and certification standards
- provide registration and counselling services to apprentices and sponsors
- coordinate technical training in collaboration with training providers
- certify apprentices and others who meet industry standards

Apprenticeship Safety

Safe working procedures and conditions, incident/injury prevention, and the preservation of health are of primary importance in apprenticeship programs in Alberta. These responsibilities are shared and require the joint efforts of government, sponsors, employees, apprentices and the public. Therefore, it is imperative that all parties are aware of circumstances that may lead to injury or harm.

Safe learning experiences and healthy environments can be created by controlling the variables and behaviours that may contribute to or cause an incident or injury. By practicing a safe and healthy attitude, everyone can enjoy the benefit of an incident and injury free environment.

Occupational Health and Safety

Persons engaged in, or supporting an individual in an experiential learning environment are often exposed to more worksite hazards than in other forms of traditional post-secondary education and therefore should be familiar with and apply the Occupational Health and Safety Act, Regulations and Code when dealing with personal safety and the special safety rules that apply to all daily tasks.

Occupational Health and Safety-OHS (a division of Alberta Labour and Immigration) conducts periodic inspections of workplaces to ensure that safety regulations for industry are being observed.

Additional information is available at www.alberta.ca/occupational-health-safety.aspx

Technical Training

Apprenticeship technical training is delivered by the PSI's throughout Alberta. The PSI's are committed to delivering the technical training component of Alberta apprenticeship programs in a safe, efficient and effective manner. All PSI's place a strong emphasis on safety that complements safe workplace practices towards the development of a culture of safety for all professions.

The PSI's work with industry and Alberta Advanced Education to enhance access and responsiveness to industry needs through the delivery of the technical training component of apprenticeship programs across the province. They develop curriculum from the curriculum guides established by the Registrar in consultation with the PSI's and industry and provide the technical training to apprentices.

The following PSI's deliver Floorcovering Installer trade apprenticeship technical training:

Northern Alberta Institute of Technology

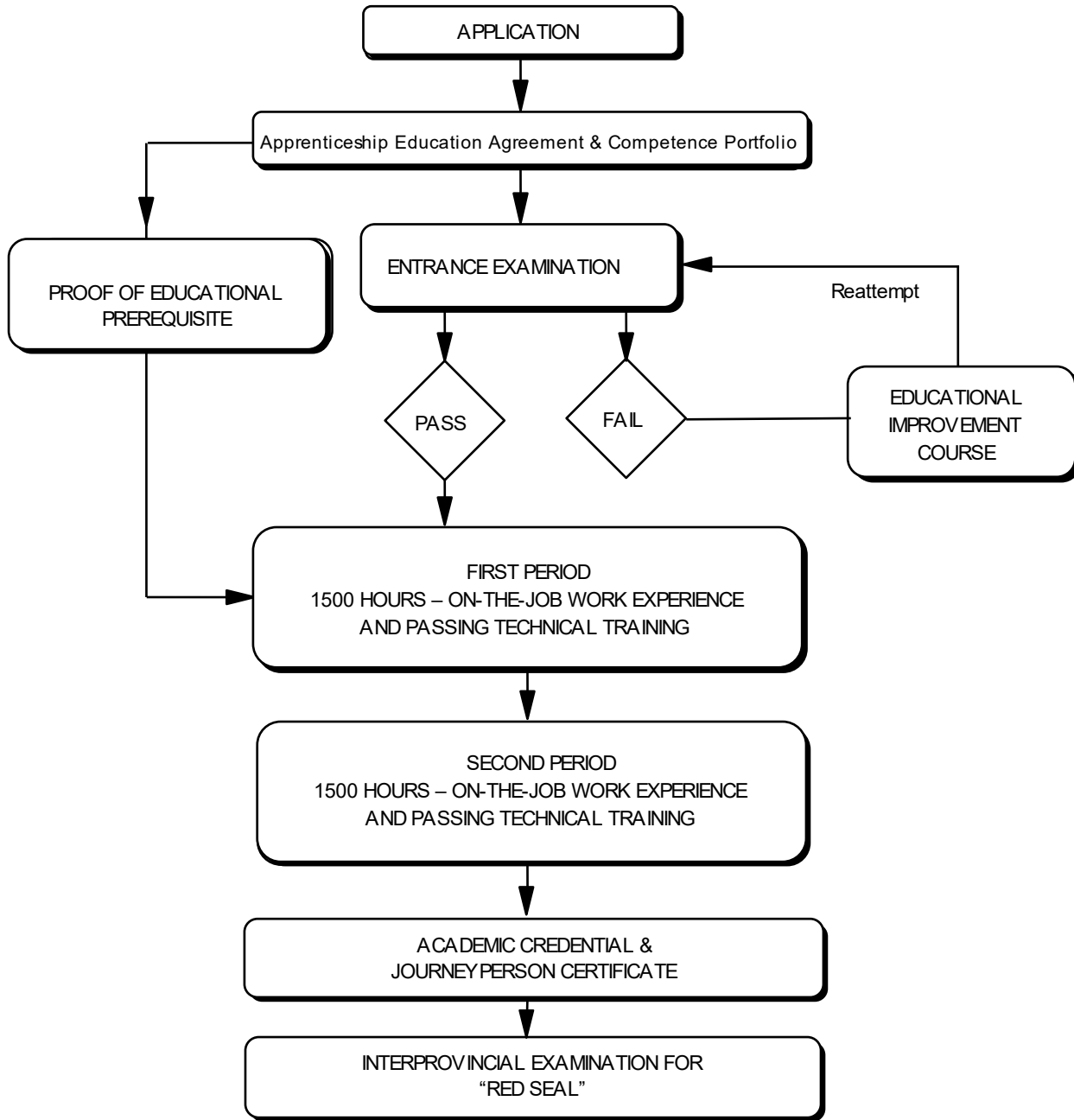
Procedures for Recommending Revisions to the Curriculum Guide

Any concerned individual or group in the province of Alberta may make recommendations for change by writing to:

Registrar of Apprenticeship Programs
c/o Apprenticeship Delivery and Industry Support Services
Apprenticeship Delivery and Industry Support
Advanced Education
19th floor, Commerce Place
10155 102 Street NW
Edmonton AB T5J 4L5

It is requested that recommendations for change refer to specific areas and state references used.

Apprenticeship Route toward Academic Credential



**Floorcovering Installer Training Profile
FIRST PERIOD
(7 Weeks 30 Hours per Week – Total of 210 Hours)**

| | | | | |
|--|---|--------------------------------------|---------------------------------------|----------------------------------|
| SECTION ONE | | A | B | C |
| OCCUPATIONAL SKILLS ONE 24% | ⇒ | Safety 18% | Work Organization 12% | Tools 10% |
| | | D | E | |
| | | Basic Mathematics 30% | Basic Blueprint 30% | |
| SECTION TWO | | A | B | C |
| BASIC FLOOR PREPARATION 21% | ⇒ | Existing Floorcovering Removal 7% | Basic Substrate Preparation 33% | Underlayment Installation 34% |
| | | D | E | |
| | | Floor Assessment 13% | Grade Levels 13% | |
| SECTION THREE | | A | B | C |
| BASIC CARPET 21% | ⇒ | Basic Installation 40% | Basic Product Identification 44% | Stair Installation 9% |
| | | D | | |
| | | Accessory Installation 7% | | |
| SECTION FOUR | | A | B | C |
| BASIC RESILIENT FLOORING 24% | ⇒ | Basic Tile Installation 16% | Basic Sheet Goods Installation 28% | Product Identification 50% |
| | | D | | |
| | | Accessory Installation 6% | | |
| SECTION FIVE | | A | B | C |
| LAMINATE FLOORING 10% | ⇒ | Installation 40% | Servicing 10% | Product Identification 50% |

**Floorcovering Installer Training Profile
SECOND PERIOD
(7 Weeks 30 Hours per Week – Total of 210 Hours)**

| | | | | |
|--|---|--|--|------------------------------|
| SECTION ONE | | A | B | C |
| OCCUPATIONAL SKILLS TWO 21% | ⇒ | Floorcovering Apprenticeship Program Orientation 7% | Financial Management 13% | Advanced Blueprint 67% |
| | | D | | |
| | | Advanced Mathematics 13% | | |
| SECTION TWO | | A | B | C |
| ADVANCED FLOOR PREPARATION 10% | ⇒ | Advanced Substrate Preparation 20% | Moisture Testing 40% | New Technology 40% |
| SECTION THREE | | A | B | C |
| ADVANCED CARPET 24% | ⇒ | Advanced Installation 40% | Advanced Product Identification 40% | Specialized Procedures 8% |
| | | D | | |
| | | Servicing 12% | | |
| SECTION FOUR | | A | B | C |
| ADVANCED RESILIENT FLOORING 28% | ⇒ | Advanced Tile Installation 13% | Advanced Sheet Goods Installation 67% | Heat Welding 10% |
| | | D | | |
| | | Servicing 10% | | |
| SECTION FIVE | | A | B | C |
| PREFIINISHED HARDWOOD FLOORING 17% | ⇒ | Installation 69% | Product Identification 23% | Servicing 8% |

**FIRST PERIOD TECHNICAL TRAINING
FLOORCOVERING INSTALLER TRADE
CURRICULUM GUIDE**

UPON SUCCESSFUL COMPLETION OF THIS PROGRAM THE APPRENTICE SHOULD BE ABLE TO PERFORM THE FOLLOWING OUTCOMES AND OBJECTIVES.

SECTION ONE: OCCUPATIONAL SKILLS ONE 24%

A. Safety 18%

Outcome: ***Applies Occupational Health and Safety Regulations and safe work practices in the workplace.***

1. Interpret Occupational Health and Safety Regulations and safe work practices as it relates to the Floorcovering Installer industry.
2. Describe requirements related to Personal Protective Equipment (PPE) and safety measures.
3. Demonstrate the ability to select, inspect and maintain PPE.
4. Demonstrate the ability to use Workplace Hazardous Materials Information System (WHMIS).
5. Identify the potential for asbestos containing products.

B. Work Organization 12%

Outcome: ***Communicates with others. Assesses jobsite conditions and requirements. Plans sequence of installation. Uses documentation.***

1. Discuss various methods to communicate on multiple levels as it pertains to customer and employer relations.
2. Discuss the methods of jobsite readiness checklist, accessibility requirements and jobsite safety/security.
3. Demonstrate the ability to plan a sequence of installation as it pertains to a critical path to floor covering operations.
4. Demonstrate the ability to interpret work orders.
5. Demonstrate the ability to document job readiness and environmental conditions.

C. Tools 10%

Outcome: ***Identifies and demonstrates the correct safety procedures when utilizing and maintaining hand tools, measuring tools, pneumatic tools and power tools.***

1. Identify and demonstrate the use of hand tools.
2. Identify and demonstrate the use of power tools.
3. Identify and demonstrate the use of pneumatic tools.
4. Identify and demonstrate the use of measuring, marking, laying-out, aligning and squaring tools.

D. Basic Mathematics..... 30%

Outcome: *Demonstrates the ability to use applied math concepts to solve trade-related calculations.*

1. Describe basic math concepts and demonstrate the use of order of operations.
2. Describe the metric (SI) and imperial measurement systems.
3. Describe the various calculations (add, subtract, multiply, divide, etc.) involving fractions, decimals and percentages.
4. Identify and use formulas dealing with perimeter and areas as it relates to various shapes.

E. Basic Blueprint..... 30%

Outcome: *Demonstrates the ability to read and work with blueprints and drawings.*

1. Demonstrate the ability to interpret and scale blueprints.
2. Demonstrate the ability to read job specifications.
3. Demonstrate the ability to interpret finish schedule.
4. Demonstrate the ability to draw a sketch.

SECTION TWO:BASIC FLOOR PREPARATION..... 21%

A. Existing Floorcovering Removal7%

Outcome: *Removes wall base and trims, carpet, resilient flooring, wood and laminate flooring, and underlayment.*

1. Identify the various types of wall base, trims and the variety of fasteners used for application.
2. Identify prior installation methods of existing resilient flooring and understanding jurisdictional regulations regarding removal and disposal of asbestos containing products.
3. Identify floorcovering removal techniques such as chipping, heating, stripping manually and by machine.
4. Demonstrate the ability to avoid damage to wall finishes, existing wall base, and trims for reinstallation.
5. Demonstrate the ability to remove existing floorcoverings and underlayment to prevent damage to finished surfaces.

B. Basic Substrate Preparation..... 33%

Outcome: *Removes contaminants and prepares concrete floors, wood floors, and existing floors to accept new floorcovering.*

1. Discuss the ability to prepare specialty substrates.
2. Demonstrate the ability to identify and remove the different types of flooring contaminants by means of scraping, sanding, and chemical procedures.
3. Demonstrate the ability to prevent damage to finished surfaces.
4. Demonstrate the ability to prepare existing resilient flooring to accept new floorcovering.

C. Underlayment Installation 34%

Outcome: *Installs trowelled underlayment and rigid underlayment panels.*

1. Discuss the various manufacturers' recommendations regarding the use of trowelled underlayment and patching compounds.

2. Identify Manufacturers' recommendations regarding types of underlayment panels and the fastening techniques used.
3. Demonstrate the ability to follow recommended mixing and application procedures and apply primers, sealers and bonding agents.
4. Demonstrate the ability to measure, cut, and fit underlayment panels.

D. Floor Assessment..... 13%

Outcome: Identifies subfloor types to determine floor preparation required.

1. Identify different types of subfloor such as concrete, wood, metal and ceramic
2. Identify the different basic floor construction principles.
3. Identify subfloor composition and possible deficiencies.
4. Discuss differing concrete floor compositions such as lightweight concrete and radiant heated slabs.

E. Grade Levels..... 13%

Outcome: Identifies grade levels as it applies to product compatibility.

1. Discuss the effects of grade level on various floorcoverings.
2. Determine manufacturers' recommendations regarding grade level.
3. Identify and define above-grade, on-grade, and below-grade subfloors.

SECTION THREE: BASIC CARPET 21%

A. Basic Installation 40%

Outcome: Installs, cuts, fits, and seams carpet by various methods (conventional stretching, direct glue down and double glue).

1. Demonstrate the ability to install carpet by conventional stretch-in method using a power stretcher.
2. Demonstrate the ability to install carpet by direct glue-down and double glue-down method.
3. Demonstrate the ability to cut, and fit carpet.
4. Demonstrate the ability to prepare and finish seams in carpet.
5. Demonstrate the ability to install tackless strip and cushion.

B. Basic Product Identification 44%

Outcome: Identifies the types of cushions and adhesive products used in carpet installation.

1. Identify the types of cushions and their physical properties.
2. Identify the different types of tackless strips.
3. Identify the various styles of carpet.
4. Identify the different grades and types of carpet adhesives.

C. Stair Installation9%

Outcome: Installs carpet on stairs by conventional and glue down method.

1. Identify and discuss the installation procedure by conventional stretching method.
2. Identify and discuss the installation procedure by glue-down and double glue-down method.

3. Identify the different types of stair construction.
4. Demonstrate the ability to install carpet on standard stringers and stairs.

D. Accessory Installation7%

Outcome: *Selects and installs trims and accessories.*

1. Identify the different types of trims and accessories.
2. Demonstrate the ability to select and install the specified trims and accessories.
3. Identify the various fastening methods for trims and accessories.

SECTION FOUR: BASIC RESILIENT FLOORING 24%

A. Basic Tile Installation 16%

Outcome: *Demonstrates the ability to establish grid lines and install resilient floor tile.*

1. Identify different types of pressure sensitive adhesives.
2. Discuss the ability to follow wet lay procedures.
3. Discuss and demonstrate the ability to interpret specified patterns and lay direction.
4. Demonstrate the ability to cut and fit material along straight walls and irregular objects.
5. Demonstrate the basic ability to layout gridlines by using Pythagorean Theorem (3-4-5 method).
6. Demonstrate the ability to balance tile installation.

B. Basic Sheet Goods Installation 28%

Outcome: *Identifies and demonstrates the ability to implement all five methods of fitting and various methods of seaming.*

1. Identify the various types of adhesive and their compatibility with various resilient flooring products.
2. Define the adhesive terms, “open time”, “working time” and “curing time”.
3. Discuss and demonstrate the various methods of seaming.
4. Demonstrate the ability to layout and place sheet goods.
5. Demonstrate the ability to apply all five methods of fitting (measuring, knifing, pattern scribe, direct scribe, & templating).

C. Product Identification 50%

Outcome: *Discusses the history of floorcovering materials and identifies the different types of resilient flooring.*

1. Identify different types of resilient flooring such as vinyl composite tile (VCT), linoleum, sheet vinyl, conductive flooring and rubber.
2. Identify the various wear layers, backings, and gauges.
3. Discuss the advancements of resilient floorcovering and manufacturing processes.
4. Discuss the handling, storage, and acclimatization of resilient flooring materials.

D. Accessory Installation.....6%

Outcome: *Demonstrates the ability to identify and install trims, accessories, treads, risers, nosings and stringer material.*

1. Identify the different resilient accessories and trims.
2. Demonstrate the ability to utilize various fastening methods for resilient trims and accessories.

SECTION FIVE:.....LAMINATE FLOORING..... 10%

A. Installation 40%

Outcome: *Demonstrates the ability to install laminate flooring, trims and accessories.*

1. Discuss and demonstrate the ability to install vapour barrier and laminate cushions.
2. Discuss the various fastening systems for laminate flooring.
3. Identify and install the different laminate flooring trims and accessories.
4. Demonstrate the ability to undercut jambs and trims to the required heights.
5. Demonstrate the ability to use various cutters and saws for fitting material.
6. Demonstrate the ability to establish layout lines and balance the installation.

B. Servicing 10%

Outcome: *Demonstrates repair and replacement techniques for laminate flooring and accessories.*

1. Demonstrate the ability to remove and replace individual laminate flooring planks.
2. Demonstrate the ability to repair chips and blemishes in laminate flooring planks.

C. Product Identification 50%

Outcome: *Identifies the various types of laminate flooring and accessories.*

1. Identify and discuss the various laminate dimensions and styles.
2. Discuss the various manufacturing processes and their characteristics.
3. Discuss the different types of vapour barriers, sound barriers and cushions.
4. Indentify the various trims and accessories for laminate flooring.

**SECOND PERIOD TECHNICAL TRAINING
FLOORCOVERING INSTALLER TRADE
CURRICULUM GUIDE**

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SECTION ONE:..... OCCUPATIONAL SKILLS TWO 21%

A. Floorcovering Apprenticeship Program Orientation 7%

Outcome: *Describes the responsibilities and opportunities in the Floorcovering Installer trade.*

1. Describe the apprenticeship training system in Alberta.
2. Identify residential and commercial fields that provide employment opportunities for Floorcovering Installers.

B. Financial Management 13%

Outcome: *Discuss the essential skills in order to manage personal finances.*

1. Discuss Alberta Apprenticeship's Blue Seal program.
2. Discuss personal financial management.
3. Introduce the basics of hiring employees.
4. Define the difference between the titles of proprietorship, partnership, and corporation.

C. Advanced Blueprint..... 67%

Outcome: *Demonstrates the ability to read and estimate from blueprints.*

1. Demonstrate the ability to interpret job specifications.
2. Demonstrate the ability to interpret flooring manufacturers' product specifications and recommendations.
3. Demonstrate the ability to document jobsite conditions.
4. Demonstrate the ability to estimate using pattern materials.
5. Demonstrate the ability to develop an estimate for work to be performed.

D. Advanced Mathematics..... 13%

Outcome: *Further demonstrates advanced math concepts that are related to the floorcovering trade.*

1. Identify and discuss the standard widths of materials in both metric and imperial measures.
2. Determine numbers of imperial and metric size tiles and border widths.
3. Discuss profit margins and percentages when estimating a project.
4. Calculate imperial and metric tile border width for both square and diagonal layout.
5. Calculate square yards or m² for varying width and length of flooring materials.

SECTION TWO:.....ADVANCED FLOOR PREPARATION 10%

A. Advanced Substrate Preparation..... 20%

Outcome: Prepares specialty substrates to receive floorcoverings.

1. Discuss the mixing and installation of self-levelling and specialty troweled underlayments.
2. Discuss the preparing of substrates to receive floorcovering material.

B. Moisture Testing..... 40%

Outcome: Assesses floor and conducts moisture tests.

1. Discuss the types of moisture tests such as calcium chloride, mat test and meters.
2. Describe the various alkalinity tests (pH).
3. Discuss the common indicators of potential moisture problems.
4. Demonstrate the ability to perform temperature readings on concrete floor system.
5. Demonstrate the ability to interpret various test results.
6. Demonstrate the ability to perform bond tests.

C. New Technology 40%

Outcome: Discuss the new trends, products and installation techniques in the Floorcovering Industry.

1. Discuss the importance of industry seminars and trade publications.
2. Discuss new product and installation resources on the internet.
3. Discuss new removal and installation tools.
4. Discuss the lead program as well as “green” methods and products.

SECTION THREE: ADVANCED CARPET 40%

Outcome: Identifies and demonstrates advanced carpet installation techniques.

1. Discuss manufacturer’s tolerances regarding skewing, bowing, and pattern run-off.
2. Discuss the installation of carpet borders in woven and tufted materials.
3. Demonstrate the ability to use advanced upholstery techniques.
4. Demonstrate the ability to identify and correct pattern defects.
5. Demonstrate the ability to match patterns.

B. Advanced Product Identification 40%

Outcome: Identifies carpet quality, types of fibers and dyeing processes.

1. Identify carpet properties such as fibres, yarns and weights.
2. Identify the various carpet dyeing processes.
3. Identify the difference between staple and continuous fibres.
4. Describe the difference between natural and synthetic fibres.
5. Discuss carpet quality using pile height and fibre density.
6. Identify the various methods of carpet construction.

C. Specialized Procedures 8%

Outcome: *Performs custom carpet finishing procedures.*

1. Demonstrate the ability to construct a sewn carpet seam.
2. Discuss the various carpet finishing techniques such as serging, binding, tucking, and bevelling.
3. Demonstrate the ability to install custom insets.

D. Servicing..... 12%

Outcome *Services existing carpet installations.*

1. Discuss how to establish realistic customer expectations.
2. Discuss how to re-stretch and re-seam loose carpet.
3. Demonstrate the ability to repair damaged carpet areas.
4. Demonstrate the ability to patch carpet.
5. Discuss how to repair and replace trims and accessories.

SECTION FOUR: ADVANCED RESILIENT FLOORING 28%

A. Advanced Tile Installation 13%

Outcome: *Demonstrates the ability to layout and install tile on a diagonal.*

1. Demonstrate the ability to layout diagonal grid lines.
2. Demonstrate the ability to balance a diagonal installation.
3. Demonstrate the ability to scribe and cut border tile on a diagonal installation to straight and irregular surfaces.

B. Advanced Sheet Goods Installation 67%

Outcome: *Performs coving and heat welding procedures on linoleum and sheet vinyl.*

1. Discuss and identify the difference between flashing and flash coving
2. Identify and demonstrate border coving and self coving procedures.
3. Demonstrate pattern and direct scribe techniques.
4. Demonstrate the ability to install boot plugs and v plugs on outside corners.
5. Demonstrate the ability to underscribe seams.

C. Heat Welding 10%

Outcome: *Performs various heat welding operations on linoleum, vinyl floors and walls.*

1. Demonstrate the ability to heat weld seams in linoleum.
2. Discuss the differences between linoleum and vinyl heat welding.
3. Demonstrate the ability to heat weld seams in sheet vinyl.
4. Demonstrate the ability to heat weld coved corners.

D. Servicing..... 10%

Outcome: *Repairs or patches linoleum and sheet vinyl.*

1. Demonstrate the ability to remove burns and blemishes from linoleum and vinyl sheet goods.

2. Demonstrate the ability to repair faulty heat welds.
3. Demonstrate the ability to patch linoleum and vinyl sheet goods.
4. Demonstrate the ability to repair and replace trims and accessories.

SECTION FIVE:PREFINISHED HARDWOOD FLOORING 17%

A. Installation 69%

Outcome: *Identifies and demonstrates the ability to install prefinished hardwood flooring.*

1. Discuss the function of expansion gaps.
2. Discuss the requirements for acclimatization of hardwood flooring.
3. Demonstrate the ability to install engineered hardwood flooring using various fastening methods
4. Demonstrate the ability to install solid prefinished hardwood flooring.
5. Discuss how to select and install hardwood accessories and trims.
6. Demonstrate the ability to undercut jambs and trims.

B. Product Identification 23%

Outcome: *Identifies and discusses the various styles, species and grain patterns of engineered hardwood flooring.*

1. Identify and discuss the difference between engineered and hardwood flooring.
2. Discuss the procedure of moisture testing.
3. Discuss the different grade levels with regard to hardwood flooring.
4. Discuss and identify the characteristics of grain orientation.

C. Servicing 8%

Outcome: *Demonstrates repair and replacement techniques for prefinished hardwood flooring and accessories.*

1. Demonstrate the ability to remove and replace individual prefinished hardwood flooring planks.
2. Demonstrate the ability to repair chips and blemishes in prefinished hardwood flooring planks.
3. Discuss how to remove and replace trims and accessories.



Apprenticeship and Industry Training

Alberta Trades. World Ready.