

# **Apprenticeship and Industry Training**

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## **Floorcovering Installer Apprenticeship Course Outline**

**2909 (2009)**



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**Floorcovering Installer  
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**COURSE OUTLINE**

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## **Apprenticeship**

Apprenticeship is post-secondary education with a difference. Apprenticeship begins with finding an employer. Employers hire apprentices, pay their wages and provide on-the-job training and work experience. 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 – usually a college or technical institute.

To become certified journeypersons, apprentices must learn theory and skills, and they must pass examinations. Requirements for certification—including the content and delivery of technical training—are developed and updated by the Alberta Apprenticeship and Industry Training Board on the recommendation of Floorcovering Installer Provincial Apprenticeship Committee.

The graduate of the Floorcovering Installer apprenticeship program is a certified journeyperson 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**

### **Industry-Driven**

Alberta's apprenticeship and industry training system is an industry-driven system that ensures a highly skilled, internationally competitive workforce in more than 50 designated trades and occupations. This workforce supports the economic progress of Alberta and its competitive role in the global market. Industry (employers and employees) establishes training and certification standards and provides direction to the system through an industry committee network and the Alberta Apprenticeship and Industry Training Board. The Alberta government provides the legislative framework and administrative support for the apprenticeship and industry training system.

### **Alberta Apprenticeship and Industry Training Board**

The Alberta Apprenticeship and Industry Training Board provides a leadership role in developing Alberta's highly skilled and trained workforce. The board's primary responsibility is to establish the standards and requirements for training and certification in programs under the Apprenticeship and Industry Training Act. The board also provides advice to the Minister of Advanced Education and Technology on the needs of Alberta's labour market for skilled and trained workers, and the designation of trades and occupations.

The thirteen-member board consists of a chair, eight members representing trades and four members representing other industries. There are equal numbers of employer and employee representatives.

### **Industry Committee Network**

Alberta's apprenticeship and industry training system relies on a network of industry committees, including local and provincial apprenticeship committees in the designated trades, and occupational committees in the designated occupations. The network also includes other committees such as provisional committees that are established before the designation of a new trade or occupation comes into effect. All trade committees are composed of equal numbers of employer and employee representatives. The industry committee network is the foundation of Alberta's apprenticeship and industry training system.

## Local Apprenticeship Committees (LAC)

Wherever there is activity in a trade, the board can set up a local apprenticeship committee. The board appoints equal numbers of employee and employer representatives for terms of up to three years. The committee appoints a member as presiding officer. Local apprenticeship committees:

- monitor apprenticeship programs and the progress of apprentices in their trade, at the local level
- make recommendations to their trade's provincial apprenticeship committee (PAC) about apprenticeship and certification in their trade
- promote apprenticeship programs and training and the pursuit of careers in their trade
- make recommendations to the board about the appointment of members to their trade's PAC
- help settle certain kinds of disagreements between apprentices and their employers
- carry out functions assigned by their trade's PAC or the board

## Provincial Apprenticeship Committees (PAC)

The board establishes a provincial apprenticeship committee for each trade. It appoints an equal number of employer and employee representatives, and, on the PAC's recommendation, a presiding officer - each for a maximum of two terms of up to three years. Most PACs have nine members but can have as many as twenty-one. Provincial apprenticeship committees:

- Make recommendations to the board about:
  - standards and requirements for training and certification in their trade
  - courses and examinations in their trade
  - apprenticeship and certification
  - designation of trades and occupations
  - regulations and orders under the Apprenticeship and Industry Training Act
- monitor the activities of local apprenticeship committees in their trade
- determine whether training of various kinds is equivalent to training provided in an apprenticeship program in their trade
- promote apprenticeship programs and training and the pursuit of careers in their trade
- consult with other committees under the Apprenticeship and Industry Training Act about apprenticeship programs, training and certification and facilitate cooperation between different trades and occupations
- consult with organizations, associations and people who have an interest in their trade and with employers and employees in their trade
- may participate in resolving certain disagreements between employers and employees
- carry out functions assigned by the board

## Floorcovering Installer PAC Members at the time of publication.

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

## Alberta Government

Alberta Advanced Education and Technology works with industry, employer 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 employers
- coordinate technical training in collaboration with training providers
- certify apprentices and others who meet industry standards

## **Technical Institutes and Colleges**

The technical institutes and colleges are key participants in Alberta's apprenticeship and industry training system. They work with the board, industry committees and Alberta Advanced Education and Technology to enhance access and responsiveness to industry needs through the delivery of the technical training component of apprenticeship programs. They develop lesson plans from the course outlines established by industry and provide technical training to apprentices.

## **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, employers, 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.

## **Alberta Apprenticeship and Industry Training Board Safety Policy**

The Alberta Apprenticeship and Industry Training Board fully supports safe learning and working environments and encourages the teaching of proper safety procedures both within trade specific training and in the workplace.

Trade specific safety training is an integral component of technical training, while ongoing or general non-trade specific safety training remains the responsibility of the employer and the employee as required under workplace health and safety legislation.

## **Workplace Responsibilities**

The employer is responsible for:

- training employees and apprentices in the safe use and operation of equipment
- providing and maintaining safety equipment, protective devices and clothing
- enforcing safe working procedures
- providing safeguards for machinery, equipment and tools
- observing all accident prevention regulations
- The employee and apprentice are responsible for:
  - working in accordance with the safety regulations pertaining to the job environment
  - working in such a way as not to endanger themselves, fellow employees or apprentices

## **Workplace Health and Safety**

A tradesperson is often exposed to more hazards than any other person in the work force 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.

Workplace Health and Safety (Alberta Employment, Immigration and Industry) conducts periodic inspections of workplaces to ensure that safety regulations for industry are being observed.

Additional information is available at [www.worksafely.org](http://www.worksafely.org)

## **Technical Training**

Apprenticeship technical training is delivered by the technical institutes and many colleges in the public post-secondary system throughout Alberta. The colleges and institutes are committed to delivering the technical training component of Alberta apprenticeship programs in a safe, efficient and effective manner. All training providers place great emphasis on safe technical practices that complement safe workplace practices and help to develop a skilled, safe workforce.

The following institutions deliver Floorcovering Installer apprenticeship technical training:  
Northern Alberta Institute of Technology

### **Procedures for Recommending Revisions to the Course Outline**

Advanced Education and Technology has prepared this course outline in partnership with the Floorcovering Installer Provincial Apprenticeship Committee.

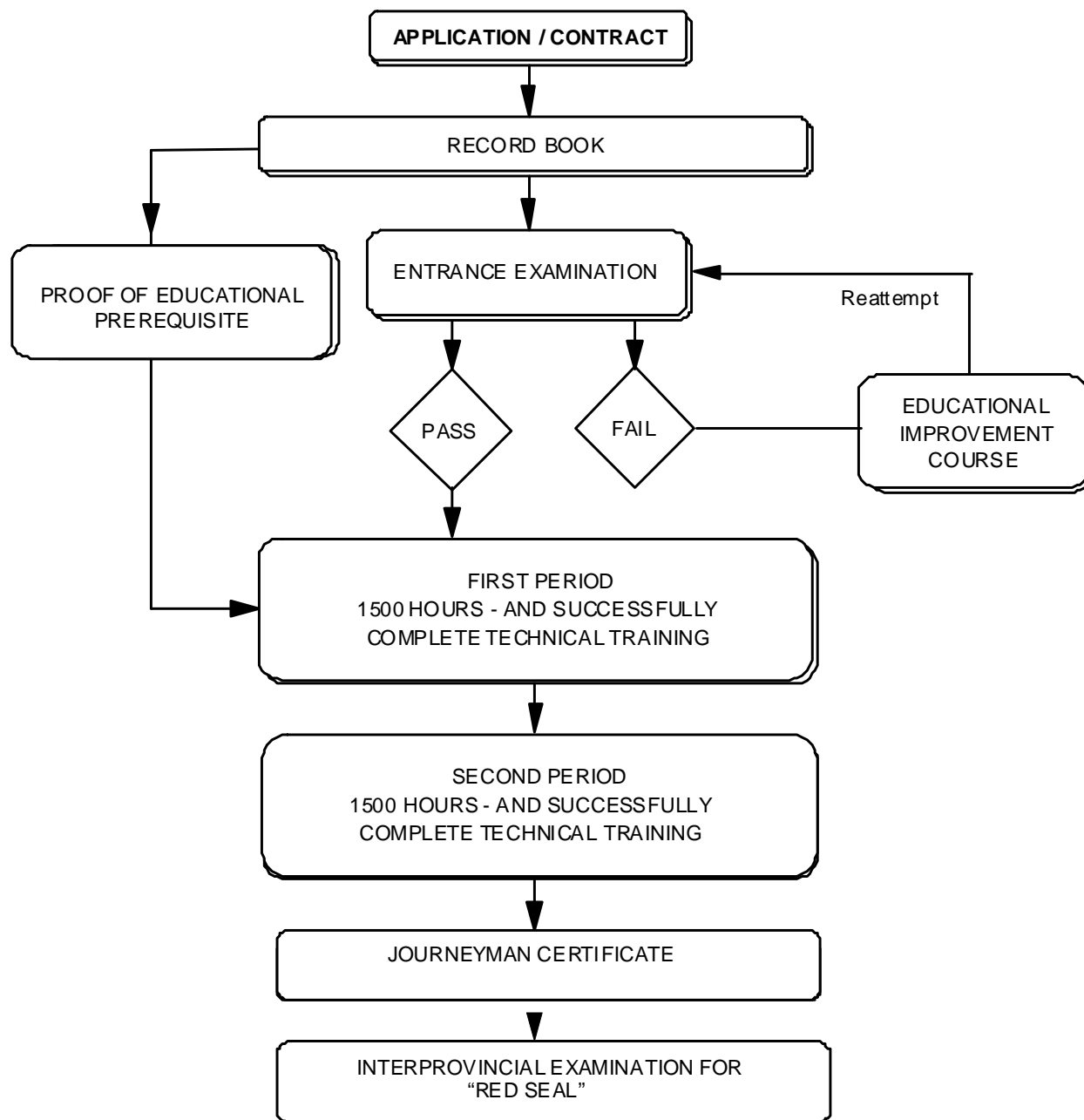
This course outline was approved on March 20, 2009 by the Alberta Apprenticeship and Industry Training Board on a recommendation from the Provincial Apprenticeship Committee. The valuable input provided by representatives of industry and the institutions that provide the technical training is acknowledged.

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

Floorcovering Installer Provincial Apprenticeship Committee  
c/o Industry Programs and Standards  
Apprenticeship and Industry Training  
Advanced Education and Technology  
10th 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. Recommendations for change will be placed on the agenda for regular meetings of the Floorcovering Installer Provincial Apprenticeship Committee.

### Apprenticeship Route toward Certification





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

**SECTION ONE**

**OCCUPATIONAL SKILLS ONE**  
**50 HOURS**



**A**

Safety  
9 Hours

**B**

Work Organization  
6 Hours

**C**

Tools  
5 Hours

**D**

Basic Mathematics  
15 Hours

**E**

Basic Blueprint  
15 Hours

**SECTION TWO**

**BASIC FLOOR PREPARATION**  
**45 HOURS**

**A**

Existing Floorcovering Removal  
3 Hours

**B**

Basic Substrate Preparation  
15 Hours

**C**

Underlayment Installation  
15 Hours

**D**

Floor Assessment  
6 Hours

**E**

Grade Levels  
6 Hours

**SECTION THREE**

**BASIC CARPET**  
**45 HOURS**

**A**

Basic Installation  
18 Hours

**B**

Basic Product Identification  
20 Hours

**C**

Stair Installation  
4 Hours

**D**

Accessory Installation  
3 Hours

**SECTION FOUR**

**BASIC RESILIENT FLOORING**  
**50 HOURS**

**A**

Basic Tile Installation  
8 Hours

**B**

Basic Sheet Goods Installation  
14 Hours

**C**

Product Identification  
25 Hours

**D**

Accessory Installation  
3 Hours

**SECTION FIVE**

**LAMINATE FLOORING**  
**20 HOURS**

**A**

Installation  
8 Hours

**B**

Servicing  
2 Hours

**C**

Product Identification  
10 Hours

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

<b>SECTION ONE</b> <b>OCCUPATIONAL SKILLS TWO</b> <b>45 HOURS</b>			
	⇒	<b>A</b> Floorcovering Apprenticeship Program Orientation 3 Hours	<b>B</b> Business Skills 6 Hours
		<b>C</b> Advanced Blueprint 30 Hours	
		<b>D</b> Advanced Mathematics 6 Hours	
<b>SECTION TWO</b> <b>ADVANCED FLOOR PREPARATION</b> <b>20 HOURS</b>			
		<b>A</b> Advanced Substrate Preparation 4 Hours	<b>B</b> Moisture Testing 8 Hours
		<b>C</b> New Technology 8 Hours	
<b>SECTION THREE</b> <b>ADVANCED CARPET</b> <b>50 HOURS</b>			
		<b>A</b> Advanced Installation 20 Hours	<b>B</b> Advanced Product Identification 20 Hours
		<b>C</b> Specialized Procedures 4 Hours	
		<b>D</b> Servicing 6 Hours	
<b>SECTION FOUR</b> <b>ADVANCED RESILIENT FLOORING</b> <b>60 HOURS</b>			
		<b>A</b> Advanced Tile Installation 8 Hours	<b>B</b> Advanced Sheet Goods Installation 40 Hours
		<b>C</b> Heat Welding 6 Hours	
		<b>D</b> Servicing 6 Hours	
<b>SECTION FIVE</b> <b>PREFIINISHED HARDWOOD FLOORING</b> <b>35 HOURS</b>			
		<b>A</b> Installation 12 Hours	<b>B</b> Product Identification 20 Hours
		<b>C</b> Servicing 3 Hours	

NOTE: The hours stated are for guidance and should be adhered to as closely as possible. However, adjustments must be made for rate of apprentice learning, statutory holidays, registration and examinations for the training establishment and Apprenticeship and Industry Training

**FIRST PERIOD TECHNICAL TRAINING  
FLOORCOVERING INSTALLER TRADE  
COURSE OUTLINE**

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

**SECTION ONE: ..... OCCUPATIONAL SKILLS ONE ..... 50 HOURS**

**A. Safety ..... 9 Hours**

**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 ..... 6 Hours**

**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, accessibility requirements and jobsite 11
3.     safety/ security.
4.     Discuss the potential problems such as obstruction and scheduling conflicts with other trades.
5.     Demonstrate the ability to plan a sequence of installation as it pertains to floorcovering operations and the time to complete each task.
6.     Demonstrate the ability to interpret work orders.
7.     Demonstrate the ability to document job readiness and environmental conditions.

**C. Tools ..... 5 Hours**

**Outcome:**     ***Identifies and demonstrates the ability to utilize and maintain hand tools, measuring tools, pneumatic tools and power tools.***

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

**D. Basic Mathematics.....15 Hours**

**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.....15 Hours**

**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..... 45 HOURS****A. Existing Floorcovering Removal.....3 Hours**

**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.....15 Hours**

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

1.     Identify various removal techniques such as scraping, sanding, and by chemical and mechanical means.
2.     Discuss the ability to prepare specialty substrates.
3.     Demonstrate the ability to identify and remove the different types of contaminants such as oil, ink, paint, dust, varnish, parting compound and adhesives.
4.     Demonstrate the ability to prevent damage to finished surfaces.
5.     Demonstrate the ability to prepare existing flooring to accept new floorcovering.

**C. Underlayment Installation .....15 Hours****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 .....6 Hours****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 construction principles.
3. Identify subfloor composition and possible deficiencies.
4. Identify the potential of asbestos containing products on existing substrates.
5. Discuss differing concrete floor compositions such as lightweight concrete and radiant heated slabs.

**E. Grade Levels .....6 Hours****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 .....45 HOURS****A. Basic Installation .....18 Hours****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 .....20 Hours****Outcome:**     ***Identifies the types of cushions, carpets and adhesive products used in carpet installation.***

1. Identify the types of cushions and their physical properties.
2. Identify the various methods of carpet construction.
3. Identify the various styles of carpet.

4. Identify the different grades and types of carpet adhesives.

**C. Stair Installation .....4 Hours**

**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 Installation .....3 Hours**

**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. Demonstrate the ability to use various fastening methods for trims and accessories.

**SECTION FOUR: ..... BASIC RESILIENT FLOORING ..... 50 HOURS**

**A. Basic Tile Installation .....8 Hours**

**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 .....14 Hours**

**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. Basic Product Identification .....25 Hours**

**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 history of resilient floorcovering and manufacturing processes.
4. Discuss the handling, storage, and acclimatization of resilient flooring materials.

**D. Accessory Installation.....3 Hours**

**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.....20 HOURS**

**A. Installation .....8 Hours**

**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 .....2 Hours**

**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.
3. Demonstrate the ability to remove and replace trims and accessories.

**C. Product Identification .....10 Hours**

**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  
COURSE OUTLINE**

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

**SECTION ONE:..... OCCUPATIONAL SKILLS TWO ..... 45 HOURS**

**A. Floorcovering Apprenticeship Program Orientation ..... 3 Hours**

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

1.        Describe the apprenticeship training system in Alberta.
2.        Explain the Floorcovering Installer course outline learning outcomes and objectives.
3.        Identify residential and commercial fields that provide employment opportunities for Floorcovering Installers.
4.        Describe the roles and responsibilities of the PAC.

**B. Business Skills ..... 6 Hours**

**Outcome:**        ***Discusses the essential skills in order to successfully operate a small business.***

1.        Discuss Alberta Apprenticeship's Blue Seal program for small business.
2.        Discuss small business financial management.
3.        Introduce the basics of hiring employees.
4.        Demonstrate the ability to develop an estimate for work to be performed.
5.        Define the difference between the titles of proprietorship, partnership, and corporation.

**C. Advanced Blueprint..... 30 Hours**

**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 irregularities.
4.        Demonstrate the ability to estimate using pattern materials.

**D. Advanced Mathematics..... 6 Hours**

**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 m<sup>2</sup> for varying width and length of flooring materials.



**SECTION TWO: .....ADVANCED FLOOR PREPARATION ..... 20 HOURS**

**A. Advanced Substrate Preparation ..... 4 Hours**

**Outcome:** *Prepares specialty substrates to receive floorcoverings.*

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

**B. Moisture Testing ..... 8 Hours**

**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.
5. Demonstrate the ability to interpret various test results.
6. Demonstrate the ability to perform bond tests.

**C. New Technology ..... 8 Hours**

**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 ..... 50 HOURS**

**A. Advanced Installation ..... 20 Hours**

**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 ..... 20 Hours**

**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.

**C. Specialized Procedures ..... 4 Hours**

**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..... 6 Hours**

**Outcome**      *Services existing carpet installations.*

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

**SECTION FOUR: ..... ADVANCED RESILIENT FLOORING ..... 60 HOURS**

**A. Advanced Tile Installation ..... 8 Hours**

**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.
4. Demonstrate the ability to install tile on the diagonal.

**B. Advanced Sheet Goods Installation ..... 40 Hours**

**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. Identify and 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 ..... 6 Hours**

**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.....6 Hours**

**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 ..... 35 HOURS**

**A. Installation..... 12 Hours**

**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.     Demonstrate the ability to select and install hardwood accessories and trims.
6.     Demonstrate the ability to undercut jambs and trims.

**B. Product Identification.....20 Hours**

**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.
5.     Be able to communicate on multiple levels as it pertains to customer and employer relations.

**C. Servicing.....3 Hours**

**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.     Demonstrate the ability to remove and replace trims and accessories.



*Excellence through training and experience*

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