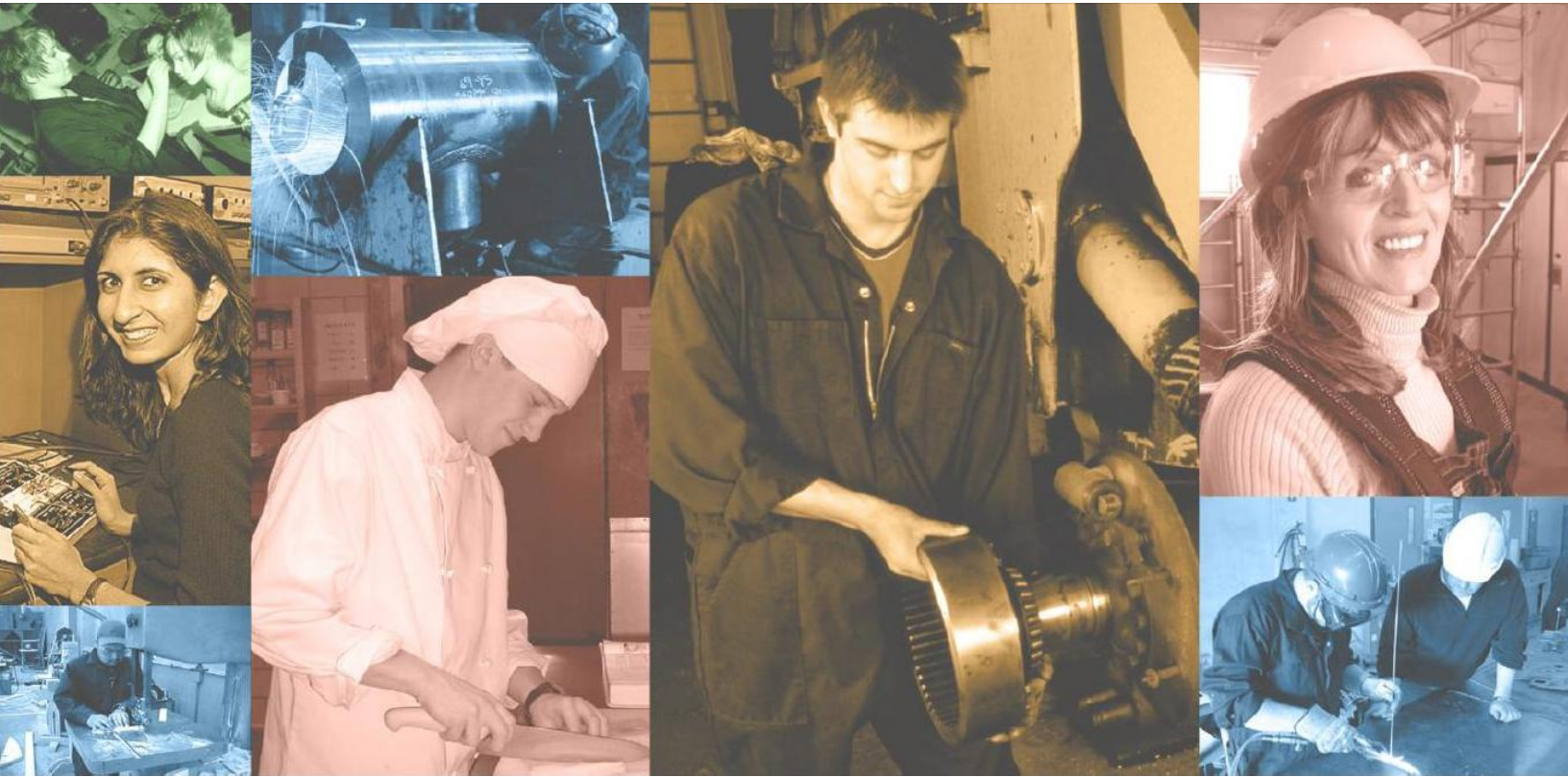

NL Curriculum Standard Auto Body and Collision Technician



Government of Newfoundland and Labrador
Department of Immigration, Skills and Labour
Apprenticeship and Trades Certification Division

March 2018

Preface

This NL curriculum standard is aligned with the 2010 National Occupational Analysis (NOA) and National Harmonization sequencing for the Auto Body and Collision Technician trade. It describes the curriculum content for the Auto Body and Collision Technician training program.

Acknowledgements

The Provincial Trade Advisory Committee (PTAC), industry representatives, instructors and apprenticeship staff provided valuable input to the development of this provincial plan of training. Without their dedication to quality apprenticeship training, this document could not have been produced.

We offer a sincere thank you.

Contact Information

Department of Immigration, Skills and Labour
Apprenticeship and Trades Certification Division
Tel: 709-729-2729 / 1-877-771-3737
Email: app@gov.nl.ca
Web: www.gov.nl.ca/isl/app/

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A. Profile Chart

OCCUPATIONAL SKILLS			
AB1610 Safety	AB1600 Trade Related Documents	AB1623 Tools and Equipment	AB1633 Fasteners and Adhesives
AB1643 Vehicle Construction	AB1653 Pre/Post-Repair Vehicle Inspection	AB1671 Cutting and Heating	AB1680 Gas Metal Arc Welding (GMAW)-MIG
AB1690 Resistance Spot Welding (RSW)	AB1783 Cleaning and Detailing	AB1793 Upholstery, Trim and Hardware	AB2940 Damage Analysis and Estimating Costs
AB2720 Position Arc Welding			
BODY AND STRUCTURAL COMPONENT REPAIR			
AB1660 Metallurgy	AB1703 Metal Working 1 (Mild Steel)	AB1713 Body Fillers and Abrasives	AB1733 Surface Preparation (Cleaning, Stripping and Masking)
AB1741 Non-Metal Repair	AB2740 Structural Components	AB2813 Non-Structural Components	AB2830 Damage Analysis of Conventional Frames and Unitized Bodies
AB2920 Unitized Body Repairs	AB2930 Conventional Frame Repair	AB2705 Metal Working 2 (Alternative Metals)	
REFINISHING			
AB1723 Corrosion Protection	AB1823 Primers, Surfacer and Sealers	AB1803 Refinishing 1	AB2800 Refinishing 2
MECHANICAL AND ELECTRICAL COMPONENTS			
AB2730 Restraint Systems	AB2711 Electrical Fundamentals	AB1811 Batteries	AB2821 Electrical and Electronic Repairs
AB2901 Mechanical Systems and Components	AB2910 Steering, Suspension and Braking Systems		
GLASS			
AB1753 Stationary Glass	AB1763 Moveable Glass and Hardware		

B. NOA Comparison Table

NOA 2010 Tasks		2018 POT	
Task 1 – Uses documentation.			
1.01	Uses manufacturer's specifications and repair procedures.	AB1620	Tools and Equipment
		AB2711	Electrical Fundamentals
		AB2830	Damage Analysis of Frames and Unitized Bodies
1.02	Interprets estimates.	AB1600	Trade Related Documents
1.03	Uses work orders.	AB1600	Trade Related Documents
1.04	Interprets safety and environmental regulations.	AB1610	Safety
Task 2 – Uses and maintains tools and equipment.			
2.01	Maintains hand tools.	AB1623	Tools and Equipment
2.02	Maintains power tools.	AB1623	Tools and Equipment
2.03	Maintains welding equipment.	AB1623	Tools and Equipment
		AB1671	Cutting and Heating
		AB1680	Gas Metal Arc Welding (GMAW) - MIG
		AB2720	Position Arc Welding (GMAW)
		AB1690	Resistance Spot Welding (RSW)
		AB1741	Non-Metal Repair
2.04	Maintains frame and unibody repair equipment.	AB1623	Tools and Equipment
		AB2930	Conventional Frame Repair
2.05	Uses lifting equipment.	AB1623	Tools and Equipment
2.06	Maintains measuring equipment.	AB1623	Tools and Equipment
		AB2830	Damage Analysis of Frames and Unitized Bodies
2.07	Maintains refinishing tools and equipment.	AB1623	Tools and Equipment
		AB1823	Primers, Surfacer and Sealers
		AB1803	Refinishing 1
2.08	Uses personal protective equipment (PPE).	AB1610	Safety
Task 3 – Organizes work.			
3.01	Follows safety procedures for alternate-fuel vehicles.	AB1610	Safety
		AB2740	Structural Components
		AB2813	Non-Structural Components
		AB2711	Electrical Fundamentals
		AB1811	Batteries
		AB2821	Electrical and Electronic Repairs
		AB2800	Refinishing 2
3.02	Prepares damage estimate.	AB1600	Trade Related Documents
		AB2940	Damage Analysis and Estimating Costs
3.03	Organizes replacement parts and materials.	AB1600	Trade Related Documents
3.04	Communicates with others.	CM2160	Communication Essentials

Plan of Training – Auto Body and Collision Technician

NOA 2010 Tasks		2018 POT	
		AB2940	Damage Analysis and Estimating Costs
3.05	Prepares work area.	AB1610	Safety
3.06	Maintains safe work environment.	AB1610	Safety
Task 4 – Applies corrosion protection material.			
4.01	Applies weld through primer.	AB1723	Corrosion Protection
		AB1823	Primers, Surfacer and Sealers
4.02	Applies corrosion protection for electrical components.	AB1723	Corrosion Protection
4.03	Applies corrosion inhibitors and sealers.	AB1723	Corrosion Protection
		AB2920	Unitized Body Repairs
Task 5 – Repairs and replaces trim, body seals and gaskets.			
5.01	Removes trim, body seals and gaskets.	AB1633	Fasteners and Adhesives
		AB1793	Upholstery, Trim and Hardware
5.02	Repairs trim.	AB1793	Upholstery, Trim and Hardware
5.03	Installs trim, body seals and gaskets.	AB1633	Fasteners and Adhesives
Task 6 – Performs final check.			
6.01	Inspects vehicle visually.	AB2830	Damage Analysis of Frames and Unitized Bodies
		AB1653	Pre/Post-Repair Vehicle Inspection
6.02	Performs final operational check.	AB1653	Pre/Post-Repair Vehicle Inspection
Task 7 – Prepares for repairs and replacement of structural components.			
7.01	Performs vehicle setup.	AB2920	Unitized Body Repairs
		AB2930	Conventional Frame Repair
7.02	Removes components for access.	AB1633	Fasteners and Adhesives
		AB2920	Unitized Body Repairs
		AB2930	Conventional Frame Repair
7.03	Identifies extent of damage.	AB2830	Damage Analysis of Frames and Unitized Bodies
		AB2920	Unitized Body Repairs
		AB2930	Conventional Frame Repair
		AB1653	Pre/Post-Repair Vehicle Inspection
Task 8 – Repairs and replaces structural components.			
8.01	Straightens structural components.	AB1660	Metallurgy
		AB2920	Unitized Body Repairs
		AB2930	Conventional Frame Repair
8.02	Removes structural components.	AB2920	Unitized Body Repairs
		AB2930	Conventional Frame Repair
8.03	Installs structural components.	AB1633	Fasteners and Adhesives
		AB2920	Unitized Body Repairs
		AB2930	Conventional Frame Repair

NOA 2010 Tasks		2018 POT	
Task 9 – Repairs panels.			
9.01	Prepares panels for repair.	AB1703	Metal Working 1 (Mild Steel)
		AB2705	Metal Working 2 (Alternative Metals)
		AB2740	Structural Components
		AB2813	Non-structural Components
		AB1741	Non-Metal Repair
		AB1680	Gas Metal Arc Welding (GMAW) - MIG
9.02	Reshapes panels.	AB1703	Metal Working 1 (Mild Steel)
		AB2705	Metal Working 2 (Alternative Metals)
		AB1741	Non-Metal Repair
		AB2740	Structural Components
		AB2813	Non-Structural Components
9.03	Aligns panels.	AB2740	Structural Components
		AB2813	Non-Structural Components
9.04	Applies repair materials.	AB1703	Metal Working 1 (Mild Steel)
		AB2705	Metal Working 2 (Alternative Metals)
		AB1713	Body Filler and Abrasives
		AB1741	Non-Metal Repair
9.05	Shapes repair materials.	AB1703	Metal Working 1 (Mild Steel)
		AB2705	Metal Working 2 (Alternative Metals)
		AB1713	Body Filler and Abrasives
		AB1741	Non-Metal Repair
Task 10 – Replaces panels.			
10.01	Removes panels.	AB2740	Structural Components
		AB2813	Non-Structural Components
10.02	Installs panels.	AB1633	Fasteners and Adhesives
		AB2740	Structural Components
		AB2813	Non-Structural Components
Task 11 – Replaces structural glass.			
11.01	Removes structural glass.	AB1753	Stationary Glass
11.02	Installs structural glass.	AB1753	Stationary Glass
Task 12 – Replaces non-structural glass.			
12.01	Removes non-structural glass.	AB1633	Fasteners and Adhesives
		AB1763	Moveable Glass and Hardware
12.02	Installs non-structural glass.	AB1633	Fasteners and Adhesives
		AB1763	Moveable Glass and Hardware
Task 13 – Repairs and replaces mechanical components.			
13.01	Removes mechanical components.	AB1633	Fasteners and Adhesives
		AB2901	Mechanical Systems and Components
		AB2910	Steering, Suspension and Braking Systems
13.02	Cleans mechanical components.	AB2901	Mechanical Systems and Components
13.03	Straightens mechanical components.	AB2901	Mechanical Systems and Components

Plan of Training – Auto Body and Collision Technician

NOA 2010 Tasks		2018 POT	
13.04	Installs mechanical components.	AB1633	Fasteners and Adhesives
		AB2901	Mechanical Systems and Components
		AB2910	Steering, Suspension and Braking Systems
Task 14 – Repairs and replaces electrical components.			
14.01	Repairs damaged wires and exterior coverings.	AB2711	Electrical Fundamentals
		AB2821	Electrical and Electronic Repairs
14.02	Cleans corroded components and connections.	AB1811	Batteries
		AB2821	Electrical and Electronic Repairs
14.03	Removes damaged electrical components.	AB1811	Batteries
		AB2821	Electrical and Electronic Repairs
14.04	Installs electrical components.	AB1811	Batteries
		AB2711	Electrical Fundamentals
		AB2821	Electrical and Electronic Repairs
Task 15 – Repairs and replaces interior components.			
15.01	Removes interior components.	AB1633	Fasteners and Adhesives
		AB1793	Upholstery, Trim and Hardware
15.02	Repairs interior components.	AB1793	Upholstery, Trim and Hardware
15.03	Installs interior components.	AB1633	Fasteners and Adhesives
		AB1793	Upholstery, Trim and Hardware
Task 16 – Replaces seat belt restraint systems.			
16.01	Removes seat belt restraint systems.	AB2730	Restraint Systems
16.02	Installs seat belt restraint systems.	AB2730	Restraint Systems
Task 17 – Replaces air bag systems.			
17.01	Removes air bags and related components.	AB2730	Restraint Systems
17.02	Installs air bags and related components.	AB2730	Restraint Systems
Task 18 – Prepares surfaces.			
18.01	Decontaminates area.	AB1723	Corrosion Protection
		AB1733	Surface Preparation (Cleaning, Stripping and Masking)
		AB1741	Non-Metal Repair
		AB1823	Primers, Surfacer and Sealers
18.02	Sands surfaces.	AB1713	Body Filler and Abrasives
		AB1733	Surface Preparation (Cleaning, Stripping and Masking)
		AB1823	Primers, Surfacer and Sealers
18.03	Masks off surrounding area.	AB1823	Primers, Surfacer and Sealers
Task 19 – Prepares and applies refinishing materials.			
19.01	Mixes refinishing materials.	AB1823	Primers, Surfacer and Sealers
		AB2800	Refinishing 2

Plan of Training – Auto Body and Collision Technician

NOA 2010 Tasks		2018 POT	
19.02	Performs final wash and tack.	AB1823	Primers, Surfacer and Sealers
		AB1803	Refinishing 1
19.03	Applies material to surface.	AB1823	Primers, Surfacer and Sealers
		AB2800	Refinishing 2
19.04	Removes masking.	AB1823	Primers, Surfacer and Sealers
		AB1733	Surface Preparation (Cleaning, Stripping and Masking)
Task 20 – Details exterior.			
20.01	Removes overspray.	AB1801	Refinishing 1
20.02	Polishes vehicle.	AB1801	Refinishing 1
		AB1783	Cleaning and Detailing
20.03	Washes vehicle.	AB1801	Refinishing 1
		AB1783	Cleaning and Detailing
Task 21 – Details interior.			
21.01	Cleans soft surfaces.	AB1783	Cleaning and Detailing
21.02	Cleans hard surfaces.	AB1783	Cleaning and Detailing

C. Program Structure

For each and every course, a formal assessment is required for which 70% is the pass mark. A mark of 70% must be attained in both the theory examination and the practical project assignment, where applicable.

The order of course delivery within each Level can be determined by the educational agency, as long as pre-requisite conditions are satisfied.

Level I				
Course No.	IPG No.	Course Name	Hours	Pre-Requisite(s)
AB1610	ABR-100	Safety	12	None
AB1600	ABR-105	Trade Related Documents	12	None
AB1623	ABR-115	Tools and Equipment	20	AB1610
AB1633	ABR-120	Fasteners and Adhesives	5	AB1610 AB1623
AB1643	ABR-125	Vehicle Construction	10	AB1610
AB1653	ABR-130	Pre/Post-Repair Vehicle Inspection	6	None
AB1660	ABR-135	Metallurgy	30	AB1643
AB1671	ABR-140	Cutting and Heating	30	AB1623
AB1680	ABR-145	Gas Metal Arc Welding (GMAW)-MIG	45	AB1623 AB1671
AB1690	ABR-155	Resistance Spot Welding (RSW)	15	AB1623 AB1671
AB1703	ABR-160	Metal Working 1 (Mild Steel)	30	AB1660
AB1713	ABR-165	Body Fillers and Abrasives	15	AB1703
AB1723	ABR-170	Corrosion Protection	15	AB1703
AB1733	ABR-175	Surface Preparation (Cleaning, Stripping and Masking)	30	AB1723
AB1753	ABR-185	Stationary Glass	20	AB1763

Level I				
Course No.	IPG No.	Course Name	Hours	Pre-Requisite(s)
AB1763	ABR-190	Moveable Glass and Hardware	15	AB1793
AB1823	ABR-195	Primers, Surfacers and Sealers	30	AB1723
AB1803	ABR-200	Refinishing 1	50	AB1823
AB1783	ABR-205	Cleaning and Detailing	10	AB1801
AB1793	ABR-210	Upholstery, Trim and Hardware	10	AB1623
AB1811	ABR-235	Batteries	10	AB1610
AB2813	ABR-225	Non-Structural Components	30	AB1643 AB1660
AM1240	-	MV Body Repair Math Fundamentals	30	AM1100
Total Hours			480	

Required Work Experience

Level II				
Course No.	IPG No.	Course Name	Hours	Pre-Requisite(s)
AB2711	ABR-230	Electrical Fundamentals	75	AB1811
AB2705	ABR-280	Metal Working 2 - Alternative Metals	45	AB1660
AB2720	ABR-145	Position Arc Welding (GMAW)	30	AB1623 AB1671
AB2730	ABR-215	Restraint Systems	30	AB2711 AB1811
AB2740	ABR-220	Structural Components	60	AB1643 AB1660
Total Hours			240	

Required Work Experience

Level III				
Course No.	IPG No.	Course Name	Hours	Pre-Requisite(s)
AB1741	ABR-180	Non-Metal Repair	60	AB1713
AB2821	ABR-240	Electrical and Electronic Repairs	60	AB2711
AB2800	ABR-275	Refinishing 2	75	AB2711
AB2830	ABR-255	Damage Analysis of Conventional Frames and Unitized Bodies	45	AB2740
Total Hours			240	

Required Work Experience

Level IV				
Course No.	IPG No.	Course Name	Hours	Pre-Requisite(s)
AB2901	ABR-245	Mechanical Systems and Components	68	Level I
SV1110	-	Ozone Depletion	7	None
AB2910	ABR-250	Steering, Suspension and Braking Systems	75	AB2901
AB2920	ABR-260	Unitized Body Repairs	30	AB2830
AB2930	ABR-265	Conventional Frame Repair	30	AB2830
AB2940	ABR-270	Damage Analysis and Estimating Costs	30	Level I
Total Hours			240	

Total Course Credit Hours	1200
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LEVEL 1

AB1610 Safety

Learning Outcomes:

- Demonstrate knowledge of types of safety equipment.
- Demonstrate knowledge of the applications and procedures for use of safety equipment.
- Demonstrate knowledge of safe work practices.
- Demonstrate knowledge of regulations pertaining to safety.

Duration: 12 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Identify types of personal protective equipment (PPE) and describe their applications.
 - i. clothing
 - ii. equipment
2. Describe the procedures used to care for and maintain personal protective equipment.
3. Identify workplace hazards and describe safe work practices.
 - i. personal
 - ii. workplace
 - ventilation/fumes
 - electrical/grounding
 - fire
 - chemical/gas
 - iii. environmental
 - discharge/spills
4. Identify and describe workplace safety and health regulations.
 - i. federal
 - ii. provincial/territorial
 - iii. municipal (awareness of)
5. Identify PPE and describe safe work practices for hybrid/alternate-fuel vehicles.

Practical Requirements:

1. Conduct a safety inspection of the shop; including fire exits, identifying location and expiry dates of fire extinguishers, MSDS sheets, eye wash stations.
2. Demonstrate proper care of personal protective equipment.
3. Demonstrate knowledge of signage used in the shop.

AB1600 Trade Related Documents

Learning Outcomes:

- Demonstrate knowledge of trade documents.
- Demonstrate knowledge of preparing and interpreting trade documents.
- Demonstrate knowledge of ordering and organizing parts and materials.

Duration: 12 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Identify sources of related information.
2. Identify and interpret information found on the vehicle.
 - i. VIN
 - ii. paint code
 - iii. production date
 - iv. make and model
3. Identify types of documents and describe the procedures used to interpret them.
 - i. manufacturers' specifications
 - ii. codes and standards
 - iii. equipment maintenance schedules
 - iv. equipment maintenance records
 - v. manuals and bulletins
 - vi. work orders
4. Identify types of written reporting and describe their purpose and applications.
 - i. time and material records
 - ii. apprentice training logs
 - iii. estimates
5. Describe procedures for organizing/storing parts and materials.

Practical Requirements:

1. Retrieve vehicle identification number and all other necessary information as specified by the Instructor for a specific job.

AB1623 Tools and Equipment

Learning Outcomes:

- Demonstrate knowledge of tools and equipment, their applications, maintenance and procedures for use.

Duration: 20 Hours

Pre-Requisite(s): AB1610

Objectives and Content:

1. Identify types of hand tools and describe their applications and procedures for use.
2. Identify types of basic measuring equipment and describe their applications and procedures for use.
 - i. basic
 - ii. trade specific
3. Identify types of specialized measuring equipment and describe their applications.
4. Identify types of testing/diagnostic equipment and describe their applications.
5. Identify types of power tools and describe their applications and procedures for use.
 - i. electric
 - ii. pneumatic
 - iii. hydraulic
6. Identify types of shop equipment and describe their applications.
 - i. cleaning
 - ii. lifting
7. Identify types of welding and cutting equipment and describe their applications.
 - i. electric
 - ii. gas

8. Identify types of straightening equipment and describe their applications.
9. Identify types of refinishing and detailing tools and equipment and describe their applications.
10. Identify and describe care and maintenance procedures relating to tools and equipment.

Practical Requirements:

1. Demonstrate the use of various hand tools.
2. Demonstrate the use of various measuring equipment.
3. Demonstrate the use of various testing/diagnostic equipment.
4. Demonstrate the use of various power tools.
 - i. electric
 - ii. pneumatic
 - iii. hydraulic
5. Demonstrate the use of shop equipment used for cleaning and lifting.
6. Demonstrate care and maintenance of tools and equipment.

AB1633 Fasteners and Adhesives

Learning Outcomes:

- Demonstrate knowledge of fasteners and adhesives, their applications and safety considerations.

Duration: 5 Hours

Pre-Requisite(s): AB1610, AB1623

Objectives and Content:

1. Define terminology associated with fasteners and adhesives.
2. Identify and describe safety considerations and procedures relating to fasteners and adhesives.
 - i. personal
 - ii. vehicle
3. Identify types of fasteners and describe their applications.
4. Describe the procedures to remove and install fasteners.
5. Identify types of adhesives used in fastening applications and describe their characteristics.
6. Identify the considerations when applying and removing adhesives.

Practical Requirements:

None.

AB1643 Vehicle Construction

Learning Outcomes:

- Demonstrate knowledge of vehicle construction.
- Demonstrate knowledge of vehicle components.

Course Duration: 10 Hours

Pre-Requisite(s): AB1610

Objectives and Content:

1. Define terminology associated with vehicle construction.
2. Identify types of vehicle construction and describe their characteristics.
 - i. conventional frames
 - ii. unitized bodies
 - iii. space frames
3. Identify body sections and describe their components.
4. Identify and describe structural and non-structural components.
 - i. hinges and panel alignment
 - ii. latches and striker plates
5. Identify and describe the types of materials used in vehicle construction.

Practical Requirements:

None.

AB1653 Pre/Post-Repair Vehicle Inspection

Learning Outcomes:

- Demonstrate knowledge to perform a visual inspection.
- Demonstrate knowledge of vehicle component operation.

Duration: 6 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Define terminology associated with pre-repair and post-repair vehicle inspection.
2. Identify hazards and describe safe work practices pertaining to pre-repair and post-repair vehicle inspection.
3. Identify and describe the procedures used to perform a visual inspection of the vehicle before and after repairs.
4. Identify and record any damage on the vehicle that is unrelated to the required repair.
5. Identify and record associated damage in the repair area.
6. Identify vehicle components requiring operational checks.
7. Describe the procedures used to perform vehicle component operational checks.
8. Identify the purpose and procedures for conducting a vehicle road test.

Practical Requirements:

1. Complete a pre and post-repair vehicle inspection checklist.

AB1660 Metallurgy

Learning Outcomes:

- Demonstrate knowledge of various metals and their characteristics.
- Demonstrate knowledge of metallurgic principles and their applications to control, expansion, contraction and distortion.

Duration: 30 Hours

Pre-Requisite(s): AB1643

Objectives and Content:

1. Define and explain terms associated with metallurgy.
2. Identify hazards and describe safe work practices pertaining to working metals.
3. Identify types of metals and describe their characteristics.
4. Identify and describe procedures associated with working metals.
 - i. forming
 - ii. shearing
 - iii. punching
 - iv. drilling
 - v. cutting
 - vi. welding
 - vii. heating
 - viii. shrinking
5. Describe the effects metal working has on metallurgic properties.
 - i. stress
 - ii. contraction
 - iii. expansion
 - iv. distortion
 - v. work hardening
 - vi. shrinking
6. Describe the procedures to prevent or correct problems that occur when working metals.

Practical Requirements:

1. Measure, cut, and form panels.

AB1671 Cutting and Heating

Learning Outcomes:

- Demonstrate knowledge of cutting and heating equipment, their applications, maintenance and procedures for use.

Duration: 30 Hours

Pre-Requisite(s): AB1623

Objectives and Content:

1. Define terminology associated with cutting and heating.
2. Identify and describe cutting and heating equipment and components.
 - i. oxy-fuel
 - ii. plasma arc
3. Identify the applications for oxy-fuel cutting and heating.
4. Identify the application for plasma arc cutting and heating.
5. Describe safety considerations when using cutting and heating equipment.
 - i. personal
 - ii. shop/facility
 - iii. equipment
 - iv. vehicle
6. Describe the procedures to set-up, maintain, and shut-down oxy-fuel equipment.
7. Describe the procedures to set-up, maintain, and shut-down plasma arc cutting equipment.
8. Describe the procedures used to cut with oxy-fuel equipment.
9. Describe the procedures used to cut with plasma arc cutting equipment.

10. Describe the procedures used to heat with oxy-fuel equipment.

Practical Requirements:

1. Set-up oxy-fuel equipment.
2. Perform heating using oxy-fuel equipment.
3. Cut mild steel using oxy-fuel equipment.
4. Use plasma arc equipment to cut metal.

AB1680 Gas Metal Arc Welding – GMAW (MIG)

Learning Outcomes:

- Demonstrate knowledge of gas metal arc welding equipment, its applications, maintenance and procedures for use.
- Demonstrate knowledge of weld defects, their causes and the procedures to prevent and correct them.

Duration: 45 Hours

Pre-requisite(s): AB1623, AB1671

Objectives and Content:

1. Define and explain terminology associated with gas metal arc welding.
2. Describe gas metal arc welding and its applications.
3. Identify safety precautions relating to gas metal arc welding.
 - i. personal
 - ii. equipment
 - iii. vehicle
 - iv. shop/facility
4. Identify and describe gas metal arc welding equipment and accessories.
5. Describe the procedures to set-up, operate and shut-down gas metal arc welding equipment.
6. Describe the procedures used to maintain and troubleshoot gas metal arc welding equipment.
7. Identify the types of welds performed using gas metal arc welding equipment.
 - i. plug
 - ii. continuous fillet

- iii. stitch
 - iv. tack
8. Describe the procedures used to weld various substrates using the gas metal arc welding process.
- i. steel
 - ii. aluminum
9. Describe the weld defects, their causes and the procedure to prevent and
- i. correct them

Practical Requirements:

- 1. Disassemble and reassemble GMAW welding system.
- 2. Fillet weld flat (GMAW): “t” joint and lap joint in steel and aluminum.
- 3. Fillet weld horizontal (GMAW): “t” joint and lap joint in steel and aluminum.
- 4. Butt weld flat (GMAW): square butt joint and single vee butt joint in steel and aluminum.

AB1690 Resistance Spot Welding (RSW)

Learning Outcomes:

- Demonstrate knowledge of resistance spot welding and its applications.
- Demonstrate knowledge of resistance spot welding procedures.

Duration: 15 Hours

Pre-requisite(s): AB1623, AB1671

Objectives and Content:

1. Define terminology associated with resistance spot welding (RSW) and squeeze type resistance spot welding (STRSW)
2. Describe Resistance Spot Welding (RSW) and Squeeze Type Resistance Spot Welding (STRSW) and their applications.
3. Identify safety precautions relating to resistance spot welding and squeeze type resistance spot welding.
 - i. personal
 - ii. equipment
 - iii. vehicle
 - iv. shop/facility

Practical Requirements:

1. Perform welds using STRSW equipment.

AB1703 Metal Working 1 (Mild Steel)

Learning Outcomes:

- Demonstrate knowledge of metal working procedures for sheet metal repair.

Duration: 30 Hours

Pre-Requisite(s): AB1660

Objectives and Content:

1. Define terminology associated with working with mild steel sheet metal.
2. Identify hazards and describe safe work practices pertaining to working mild steel sheet metal.
 - i. personal
 - ii. equipment
 - iii. vehicle
 - iv. shop/facility
3. Identify the types of automotive sheet metal.
 - i. steel
 - ii. aluminum
4. Identify and describe types of damage to mild steel sheet metal.
 - i. direct
 - ii. indirect
5. Identify considerations when performing metal work on mild steel sheet metal.
 - i. tool selection
 - ii. repair sequence
 - iii. protection of adjacent panels
 - iv. panel preparation
 - v. corrosion protection

6. Identify the types of panels and their associated repair procedures.
 - i. accessible
 - hammer and dolly
 - shrinking (hot or cold)
 - ii. limited access
 - prybar
 - pick
 - dent puller
 - uni-spotter
7. Describe the methods used to detect surface irregularities.
8. Describe the procedures used to rough out and align damaged mild steel sheet metal.
9. Describe the procedures used to prepare mild steel sheet metal for finishing.

Practical Requirements:

1. Retrieve information on different types of metals used, where they are located on a vehicle and identify any special procedures to be followed.
2. Unlock and shape metal to contour.
3. Shrink metal.
4. Pick and file metal.

AB1713 Body Fillers and Abrasives

Learning Outcomes:

- Demonstrate knowledge of abrasives, their applications, safety considerations and procedures for use.
- Demonstrates knowledge of types of body fillers, their applications, safety considerations and procedures for use.

Duration: 15 Hours

Pre-Requisite(s): AB1703

Objectives and Content:

1. Define terminology associated with body fillers and abrasives.
2. Identify the types of abrasives and describe their characteristics and applications.
3. Describe the procedures and techniques for using abrasives.
4. Identify the types of body fillers and describe their characteristics and applications.
5. Identify safety considerations when working with body fillers and abrasives.
6. Describe the procedures to apply body fillers.
 - i. tools
 - ii. surface preparation
 - iii. mixing
 - iv. application techniques
7. Describe the procedures for shaping and finishing body fillers.
 - i. grit selection
 - ii. tool selection
 - iii. sanding techniques

- iv. detect surface irregularities
 - visual
 - guide coat
 - tactile (touch)

Practical Requirements:

1. Demonstrate techniques for using abrasives.
2. Demonstrate body filler application.
3. Demonstrate the procedures for shaping and finishing body fillers.

AB1723 Corrosion Protection

Learning Outcomes:

- Demonstrate understanding of corrosion and its causes.
- Demonstrate knowledge of the effects of corrosion on metal.
- Demonstrate knowledge of types of corrosion protection, their characteristics and application procedures.

Duration: 15 Hours

Pre-Requisite(s): AB1703

Objectives and Content:

1. Define terminology associated with corrosion.
2. Interpret documentation pertaining to corrosion protection.
 - i. OEM specifications
3. Identify hazards and describe safe work practices pertaining to corrosion and corrosion protection.
4. Identify the types of corrosion and describe their causes.
 - i. oxidation
 - ii. galvanic action
5. Identify environmental and atmospheric conditions that influence the rate of corrosion.
6. Identify and describe the types of corrosion protection.
 - i. OEM application
 - ii. undercoats and topcoats
 - iii. anti-corrosion compounds
7. Describe the procedures used to inspect for corrosion related damage.

8. Identify corrosion protection materials used during repair procedures.
 - i. undercoats (primers)
 - ii. seam sealers
 - iii. anti-corrosion compounds
9. Identify the methods and tools used to restore corrosion protection.
10. Describe the procedures to restore corrosion protection to Original Equipment Manufacturer (OEM) specifications.
 - i. documentation
11. Describe the procedures to restore corrosion protection to electrical components.

Practical Requirements:

1. Use various types of corrosion protection.
2. Inspect for corrosion related damage.
3. Demonstrate the procedure used to restore corrosion protection to original equipment manufacturers specifications.
4. Demonstrate the procedure used to restore corrosion protection to electrical components.

AB1733 Surface Preparation (Cleaning, Stripping and Masking)

Learning Outcomes:

- Demonstrate knowledge of surface cleaning procedures.
- Demonstrate knowledge of surface preparation using abrasives.
- Demonstrate knowledge of stripping equipment and products, their applications, safety precautions and procedures for use.
- Demonstrate knowledge of masking techniques.

Duration: 30 Hours

Pre-Requisite(s): AB1723

Objectives and Content:

1. Define terminology associated with surface preparation.
2. Identify hazards and describe safe work practices for surface preparation.
 - i. personal
 - ii. shop/facility
 - iii. equipment
 - iv. environmental
3. Identify products used to clean surfaces, their applications and procedures for use.
4. Identify substrate types and describe the procedures and considerations for evaluating their condition.
5. Identify topcoats and undercoats and describe the procedures and considerations for evaluating their condition.
6. Identify preparation procedures for non-metal panel substrates.
 - i. sanding
 - ii. adhesion promoters
 - iii. fillers
 - iv. mould release agents

7. Identify the methods used to strip topcoats and undercoats, their applications and safety or environmental considerations.
 - i. sanding
 - ii. chemical strippers
 - iii. media blasting
 - iv. mechanical
8. Describe the procedures used to strip paint.
9. Describe the procedures used to prepare surfaces using abrasives.
10. Identify the materials used in masking.
11. Describe the procedures and techniques used to mask surfaces.
12. Describe the procedures and techniques to remove masking from surfaces.

Practical Requirements:

1. Mark off areas using masking technique.
2. Strip paint using chemicals and blasting equipment.
3. Remove grease and dirt from surfaces to be painted.
4. Prepare paint booth (clean and drain air line system).
5. Sand surfaces using hand and power techniques.

AB1753 Stationary Glass

Learning Outcomes:

- Demonstrate knowledge of the types of stationary glass, its characteristics and importance to vehicle structure.
- Demonstrate knowledge of the procedures to replace stationary glass to industry standards.

Duration: 20 Hours

Pre-Requisite(s): AB1763

Objectives and Content:

1. Define terminology associated with stationary glass.
2. Identify hazards and describe safe work practices pertaining to stationary glass.
3. Identify the types of stationary glass and describe their characteristics.
4. Describe stationary glass and its importance to the vehicle structure/integrity.
5. Describe the procedures to determine if stationary glass can be repaired or if replacement is necessary.
6. Identify the fastening methods for stationary glass and describe the associated components.
 - i. mechanical
 - ii. gasket mounted
 - iii. bonded
7. Identify components and accessories associated with stationary glass.
8. Identify tools and equipment used in stationary glass replacement and their procedures for use.

9. Describe materials used for stationary glass replacement, their characteristics and procedures for use.
10. Describe the procedures and precautions for removal and installation of stationary glass and its related components.
11. Describe the procedures used to detect and repair leaks around stationary glass.

Practical Requirements:

1. Demonstrate fastening methods for stationary glass.
2. Demonstrate methods to check, detect and repair leaks around stationary glass.

AB1763 Moveable Glass and Hardware

Learning Outcomes:

- Demonstrate knowledge of types of moveable glass and their characteristics.
- Demonstrate knowledge of hardware and attachments associated with moveable glass.
- Demonstrate knowledge of procedures to replace moveable glass and repair or replace its associated hardware and attachments.

Duration: 15 Hours

Pre-Requisite(s): AB1793

Objectives and Content:

1. Define terminology associated with moveable glass and hardware.
2. Identify hazards and describe safe work practices pertaining to moveable glass and hardware.
3. Identify tools and equipment relating to moveable glass and describe their applications and procedures for use.
4. Identify the types of moveable glass and describe their characteristics.
5. Describe moveable glass related hardware.
 - i. motors
 - ii. regulators
 - iii. channels
6. Identify the fastening methods for moveable glass and describe the associated components.
 - i. mechanical
 - ii. pressure
 - iii. bonded

7. Describe the procedures and considerations for inspecting moveable glass and its associated hardware.
8. Describe the procedures used to remove and install moveable glass.
9. Describe the procedures used to detect and repair leaks.
10. Describe the procedures used to service and adjust moveable glass.

Practical Requirements:

1. Replace fixed glass (rubber mounted).
2. Replace fixed glass (adhesive mounted).
3. Install moveable glass.
4. Service and adjust moveable glass.
5. Perform checks for wind noise and water leaks.

AB1823 Primers, Surfacers and Sealers

Learning Outcomes:

- Demonstrate knowledge of primers, surfacers and sealers, their applications, and procedures for use.
- Demonstrate knowledge of primers, surfacers and sealer materials, their characteristics and mixing procedures.
- Demonstrate knowledge of equipment used in applying primers, surfacers and sealers, their set-up, maintenance and procedures for use.

Duration: 30 Hours

Pre-Requisite(s): AB1723

Objectives and Content:

1. Define terminology associated with primers, surfacers and sealers.
2. Identify hazards and describe safe work practices pertaining to primers, surfacers and sealers.
 - i. personal
 - ii. shop/facility
 - iii. environment
3. Interpret codes and regulations pertaining to the use of primers, surfacers and sealers.
4. Identify types of primers, surfacers and sealers, and describe their characteristics and applications.
5. Identify tools and equipment relating to primers, surfacers and sealers and describe their applications and procedures for use.
6. Describe the procedures used to set-up, adjust, care for and maintain equipment used in applying primers, surfacers and sealers.

7. Describe the procedures used to prepare substrate prior to applying primers, surfacers and sealers.
8. Describe the procedures used for mixing primers, surfacers and sealers.
9. Identify primer, surfacer and sealer application techniques.
10. Describe the procedures used to apply primers, surfacers and sealers.
11. Identify primer, surfacer and sealer defects and describe their causes and procedures used to prevent or correct them.
12. Describe the procedures for the use of ultraviolet primers in a production based industry.
13. Describe the procedures used to prepare primers, surfacers and sealers for topcoat.

Practical Requirements:

1. Set-up, adjust, and maintain equipment used in applying primers, surfacers and sealers.
2. Demonstrate the procedures used to prepare substrate prior to applying primers, surfacers and sealers.
3. Demonstrate the procedures for mixing primers, surfacers and sealers.
4. Demonstrate techniques and procedures used for applying primers, surfacers and sealers.
5. Demonstrate procedures to prevent and correct primer, surfacer and sealer defects.
6. Demonstrate how to prepare primers, surfacers and sealers for topcoat.
7. Demonstrate the application and curing procedures used for ultraviolet primers.

AB1803 Refinishing 1

Learning Outcomes:

- Demonstrate knowledge of refinishing materials and their characteristics.
- Demonstrate knowledge of refinishing equipment, its applications, maintenance and procedures for use.

Duration: 50 Hours

Pre-Requisite(s): AB1823

Objectives and Content:

1. Define terminology associated with refinishing.
2. Describe safety considerations relating to refinishing.
 - i. personal
 - ii. shop/facility
 - iii. environment
3. Describe the surface preparation procedures for refinishing.
4. Identify refinishing equipment and its applications.
5. Describe the procedures used to set-up, operate, adjust, and maintain refinishing equipment.
6. Identify types of topcoat finishes and describe their characteristics.
 - i. single-stage
 - ii. multistage
 - solvent
 - water
 - iii. clear

Practical Requirements:

1. Prepare surface for refinishing and blending.
2. Set-up, operate, adjust, and maintain refinishing equipment.
3. Apply single-stage finishes.
4. Apply basecoat/clearcoat finishes.

AB1783 Cleaning and Detailing

Learning Outcomes:

- Demonstrate knowledge of cleaning and detailing equipment and products.
- Demonstrate knowledge of cleaning and detailing practices and procedures.

Duration: 10 Hours

Pre-Requisite(s): AB1801

Objectives and Content:

1. Define terminology associated with cleaning and detailing.
2. Identify hazards and describe safe work practices pertaining to cleaning and detailing
3. Identify equipment used in detailing vehicle exterior.
4. Identify equipment used in detailing vehicle interior.
5. Identify products used in vehicle detailing and their related safety considerations.
6. Describe techniques for correcting topcoat defects.
 - i. polishing
 - ii. buffing
7. Describe the procedures to remove overspray.
8. Describe the procedures used to polish vehicle exterior.
9. Describe the procedures used to clean vehicle interior.
10. Describe the procedures used to wash vehicle exterior.
11. Describe the procedures used to clean un-painted plastic exterior components.

Practical Requirements:

1. Perform final clean-up for customer delivery:
 - i. remove overspray
 - ii. wash and polish vehicle exterior
 - iii. clean vehicle interior

2. Perform water sanding and buffing techniques.

AB1793 Upholstery, Trim and Hardware

Learning Outcomes:

- Demonstrate knowledge of types of trim, their applications and characteristics.
- Demonstrate knowledge of procedures to repair and replace upholstery, trim and hardware.
- Demonstrate knowledge of procedures to detect and repair noises and leaks contributed to trim and hardware.

Course Duration: 10 Hours

Pre-Requisite(s): AB1623

Objectives and Content:

1. Define terminology associated with upholstery, trim and hardware.
2. Identify hazards and describe safe work practices pertaining to upholstery, trim and hardware.
3. Identify and describe exterior trim and hardware.
4. Identify and describe interior upholstery, trim and hardware.
5. Describe fasteners and adhesives used in the installation of upholstery, trim and hardware.
6. Describe the procedures used to repair or replace exterior trim.
7. Describe the procedures used to remove and apply pin stripes and decals.
8. Describe the procedures used to inspect interior upholstery, trim and hardware for collision related damage.
9. Describe the procedures used to repair or replace interior trim.
10. Describe the procedures used to repair or replace upholstery.

11. Describe the procedures used to detect leaks related to interior and exterior trim and hardware.
12. Describe the procedures used to repair leaks related to interior and exterior trim and hardware.
13. Describe the procedures used to locate noises related to interior and exterior trim and hardware.
14. Describe the procedures used to repair noises related to interior and exterior trim and hardware.

Practical Requirements:

1. Remove and re-install exterior trim.
2. Remove and install pin stripes and decals.
3. Inspect interior upholstery, trim and hardware for collision damage.
4. Remove and re-install interior trim.
5. Remove and re-install upholstery.

AB1811 Batteries

Learning Outcomes:

- Demonstrate knowledge of batteries, their operation and associated safety considerations.
- Demonstrate knowledge of procedures to test and charge batteries.
- Demonstrate knowledge of procedures to remove and replace batteries.

Duration: 10 Hours

Pre-Requisite(s): AB1610

Objectives and Content:

1. Define terminology associated with batteries.
2. Identify the types of batteries and describe their purpose, location, construction, operation and ratings.
 - i. lead acid
 - ii. hybrid/alternate fuel
3. Identify safety precautions relating to batteries.
 - i. PPE
 - ii. Conventional
 - handling
 - storage
 - disposal and recycling
 - iii. hybrid/alternate fuel
4. Describe the procedures used to test batteries.
5. Describe the procedures used to charge batteries.
6. Describe the procedures used to remove and replace batteries.

Practical Requirements:

1. Remove and re-install batteries while maintaining memories.
2. Load test an automotive battery.
3. Charge an automotive battery.
 - i. slow charge
 - ii. fast charge

AB2813 Non-Structural Components

Learning Outcomes:

- Demonstrate knowledge of non-structural component repair and replacement procedures.
- Demonstrate knowledge of procedures to align and adjust non-structural components.

Duration: 30 Hours

Pre-Requisite(s): AB1643, AB1660

Objectives and Content:

1. Define terminology associated with non-structural components.
2. Identify hazards and describe safe work practices pertaining to repairing and replacing non-structural components.
3. Identify and describe non-structural components.
4. Identify and describe safety considerations when repairing or replacing non-structural components.
5. Describe the procedures used to inspect non-structural components.
 - i. corrosion
 - ii. collision
6. Identify and describe tools and equipment used to repair or replace non-structural components.
7. Describe the procedures used to repair non-structural components.
 - i. original equipment manufacturer (OEM) recommendations
 - ii. industry accepted standards
8. Describe the procedures used to remove and re-install non-structural components.

9. Describe the procedures used to replace non-structural components.
 - i. full replacement
 - ii. sectioning
10. Describe the procedures used to adjust and align non-structural components.
11. Describe the procedures and techniques used to protect electrical and electronic systems and components during repair.
 - i. hybrid/alternate fuel vehicles
 - ii. conventional fuel vehicles

Practical Requirements:

1. Inspect non-structural components for:
 - i. corrosion
 - ii. collision
2. Use tools and equipment to repair and replace non-structural components.
3. Repair non-structural components.
4. Remove and re-install non-structural components.
5. Adjust and align non-structural components such as doors, hinges, etc.

AM1240 MV Body Repair Math Fundamentals

Learning Outcomes:

- Demonstrate knowledge of mathematical concepts in the performance of trade practices.
- Demonstrate knowledge of mathematics as a critical element of the trade environment.
- Demonstrate knowledge of solving mathematical word problems.
- Demonstrate knowledge of mathematical principles for the purposes of problem solving, job and materials estimation, measurement, calculation, system conversion, diagram interpretation and scale conversions, formulae calculations, and geometric applications.

Duration: 30 Hours

Pre-Requisite(s): AM1100

Objectives and Content:

The instructor is required to use trade specific examples to reinforce the course objectives.

1. Employ percent/decimal/fraction conversion and comparison in trade specific situations.
2. Apply ratios and proportions to trade specific problems.
3. Use the Imperial Measurement system in trade specific applications.
4. Use the Metric Measurement system in trade specific applications.
5. Complete Imperial/Metric conversions in trade specific situations.
 - i. convert between imperial and metric measurements
 - ii. convert to another unit within the same measurement system

6. Manipulate formulas using cross multiplication, dividing throughout, elimination, and substitution to solve trade specific problems, such as:
 - i. right angle triangles
 - ii. area
 - iii. volume
 - iv. perimeter

7. Perform calculations involving geometry that are relevant to the trade, such as:
 - i. angle calculations
 - ii. circle calculations

8. Use practical math skills to complete administrative trade tasks.
 - i. material estimation
 - ii. material costing
 - iii. time & labour estimates
 - iv. taxes & surcharges
 - v. markup & projecting revenue

Practical Requirements:

1. To emphasize or further develop specific knowledge objectives, students will be asked to complete practical demonstrations which confirm proper application of mathematical theory to job skills.

Note:

This course has been designated as NON-TRANSFERABLE to other trades programs, and NOT ELIGIBLE FOR PRIOR LEARNING ASSESSMENT. Students completing training in this trade program are required to complete this math course.

LEVEL 2

AB2711 Electrical Fundamentals

Learning Outcomes:

- Demonstrate knowledge of electrical theory and its application.
- Demonstrate knowledge of equipment and procedures used to test electrical and electronic components.
- Demonstrate knowledge of safety precautions relating to electrical and electronic components.
- Demonstrate knowledge of electrical schematics, their applications and interpretation.

Duration: 75 Hours

Pre-Requisite(s): AB1811

Objectives and Content:

1. Describe the basic electrical theory.
2. Identify and define trade related terminology associated with electrical and electronic components.
3. Identify and describe safety precautions relating to electrical and electronic components.
 - i. personal
 - ii. vehicle
 - hybrid/alternate fuel
4. Identify and describe basic electrical and electronic components and their operation.
5. Identify instruments used to test electrical and electronic circuits and components and their procedures for use.

6. Identify and describe electrical schematics and their use in the trade.
7. Describe the procedures used to interpret electrical schematics in the repair of electrical systems and electronic components.
 - i. original equipment manufacturer (OEM) recommendations
8. Describe the procedures used to test electrical and electronic circuits and components.

Practical Requirements:

1. Interpret an electrical schematic.
2. Demonstrate the use of Multi-meters.
3. Use OHMS law to calculate values in a parallel series circuit.

AB2705 Metal Working 2 - Alternative Metals

Learning Outcomes:

- Demonstrate knowledge of metal working procedures for alternate sheet metal repair.

Duration: 45 Hours

Pre-Requisite(s): AB1660

Objectives and Content:

1. Define terminology associated with aluminum, magnesium, and boron steel panel repair.
2. Identify hazards and describe safe work practices pertaining to alternate metal panel repair.
 - i. personal
 - ii. equipment
 - iii. vehicle
 - iv. shop/facility
3. Identify the series of alternate metals.
4. Identify and describe types of damage to alternate sheet metals.
 - i. direct
 - ii. indirect
5. Identify considerations when performing metal work on alternate sheet metals.
 - i. tool selection
 - ii. repair sequence
 - iii. protection of adjacent panels
 - iv. panel preparation
 - v. corrosion protection
6. Identify the types of panels and their associated repair procedures.
 - i. accessible
 - hammer and dolly
 - shrinking (hot or cold)

- ii. limited access
 - prybar
 - pick
 - dent puller
- 7. Describe the procedures used to rough out and align damaged alternate sheet metals.
- 8. Describe the procedures used to prepare alternate sheet metals for finishing.

Practical Requirements:

1. Unlock and shape metal to contour.
2. Prepare alternate sheet metal for finishing.

AB2720 Position Arc Welding (GMAW)

Learning Outcomes:

- Demonstrate knowledge required for welding light metal structures with respect to various codes and standards.
- Demonstrate safety practices in potentially harmful situations.

Duration: 30 Hours

Pre-Requisite(s): AB1623, AB1671

Objectives and Content:

1. Describe the procedures to perform Gas Metal Arc Welding (GMAW)
 - i. Fillet weld vertical
 - ii. Fillet weld overhead
 - iii. Butt weld horizontal
 - iv. Butt weld vertical
 - v. Butt weld overhead
2. Describe silicon bronze fusion welding (low temperature brazing).

Practical Requirements:

1. Fillet weld light metals vertical (GMAW).
 - i. describe the GMAW process used on the vertical position such as work and travel angle, gun manipulation, defects commonly encountered and effects of welding variables
 - ii. run stringer beads in vertical position on m.s.
 - iii. weld in vertical position
 - “T” joint
 - lap joint
2. Fillet weld light metals overhead (GMAW).
 - i. describe the overhead position, the necessary position, the necessary safety, positioning of the joint, common defects encountered, gun manipulation, effects of welding variables on weld characteristics
 - ii. run stringer beads on overhead position
 - iii. weld in the overhead position
 - “T” joint
 - lap joint
3. Butt weld light metals horizontal (GMAW).

- i. describe horizontal butt welds, joint design, joint fit up, common defects, work and travel angles, gun manipulation, welding variables and characteristics
 - ii. weld butt joint
 - square butt joint
 - singles “V” joint
 - iii. perform guided bend test
4. Butt weld light vertical (GMAW).
- i. describe the vertical position butt weld joint design and fit up, common defects, work and travel angles, gun manipulation, effects of weld in vertical position
 - square butt
 - single vee
 - ii. perform guided bend test
5. Butt weld light metals overhead (GMAW).
- i. describe the butt weld in the overhead position, joint design and fit up, common defects, work and travel angles, gun manipulation, effects of welding variables and characteristics
 - ii. weld butt joint
 - square butt joint
 - single “v” joint
 - iii. perform guided bend test
6. Perform silicon bronze fusion welding (low temperature brazing).

AB2730 Restraint Systems

Learning Outcomes:

- Demonstrate knowledge of types of restraint systems, their components and operation.
- Demonstrate knowledge of procedures to replace restraint systems.
- Demonstrate knowledge of safety considerations relating to restraint systems.

Duration: 30 Hours

Pre-Requisite(s): AB2711, AB1811

Objectives and Content:

1. Define terminology associated with restraint systems.
2. Identify the types of restraint systems and their components and operation.
 - i. active
 - ii. passive
3. Identify and interpret documentation relating to servicing restraint systems.
 - i. service manuals
 - ii. original equipment manufacturer (OEM) recommendations
4. Identify safety considerations relating to restraint systems and their components.
 - i. handling
 - ii. storage
 - iii. disposal
5. Describe the procedures used to remove seat belt restraint systems and their components.
6. Describe the procedures used to inspect seat belt restraint systems and their components.
7. Describe the procedures used to install seat belt restraint systems and their components.
8. Describe the procedures used to remove air bags and their related components.
9. Describe the procedures used to install air bags and their related components.
10. Describe the procedures used to perform operation check of restraint systems.

Practical Requirements:

1. Inspect seat belts.
2. Locate and identify Safety Restraint Systems (SRS).
3. Locate and retrieve restraint related codes.
4. Remove and re-install air bags.

AB2740 Structural Components

Learning Outcomes:

- Demonstrate knowledge of the procedures to repair and replace structural components.
- Demonstrate knowledge of procedures to adjust and align structural components.

Duration: 60 Hours

Pre-Requisite(s): AB1643, AB1660

Objectives and Content:

1. Define terminology associated with structural components.
2. Identify hazards and describe safe work practices pertaining to repairing or replacing structural components.
3. Identify and describe structural components.
4. Identify and explain safety considerations when repairing or replacing structural components.
5. Describe the procedures used to inspect structural components for:
 - i. corrosion
 - ii. collision
6. Identify and describe tools and measuring equipment used to repair or replace structural components.
7. Describe the procedures used to repair structural components.
 - i. original equipment manufacturer (OEM) recommendations
 - ii. industry accepted standards
8. Describe the procedures used to remove and re-install structural components.
9. Describe the procedures used to replace structural components.
 - i. full replacement
 - ii. sectioning
10. Describe the procedures used to adjust and align structural components.

11. Describe the procedures and techniques used to protect electrical and electronic systems and components during repair.
 - i. hybrid/alternate fuel vehicles
 - ii. conventional fuel vehicles

Practical Requirements:

1. Inspect structural components for corrosion and collision.
2. Use tools and equipment to repair and replace structural components.
3. Repair structural components.
4. Remove and re-install structural components.
5. Adjust and align structural components.

LEVEL 3

AB1741 Non-Metal Repair

Learning Outcomes:

- Demonstrate knowledge of non-metal materials, their applications and associated repair procedures.

Duration: 60 Hours

Pre-Requisite(s): AB1713

Objectives and Content:

1. Define terminology associated with non-metal repair.
2. Identify hazards and describe safe work practices pertaining to non-metal repairs.
3. Identify non-metal materials and describe their characteristics and applications.
 - i. Plastics
 - ii. composites (fiberglass, carbon fibre, reinforced plastics)
4. Identify products and material used in non-metal repair.
 - i. ISO codes (International Organization for Standardization)
 - ii. adhesives
 - iii. back pads
 - iv. plastic adhesion promoters
5. Describe the procedures used for non-metal repairs of:
 - i. plastics
 - iii. composites (fiberglass, carbon fibre, reinforced plastics)
6. Identify plastic welding equipment and the associated set-up and shut-down procedures.

Practical Requirements:

1. Perform plastic welding and bonding procedures.
2. Repair composite (fiberglass, carbon fibre, reinforced plastics) compounds.
3. Fill damaged area with plastic filler.

AB2821 Electrical and Electronic Repairs

Learning Outcomes:

- Demonstrate knowledge of procedures for diagnosing and determining damage to electrical and electronic systems and components.
- Demonstrate knowledge of procedures for diagnosing electrical and electronic systems and components.
- Demonstrate knowledge of procedures to repair and replace electrical and electronic components.
- Demonstrate knowledge of safety procedures while diagnosing and repairing electrical and electronic components.

Duration: 60 Hours

Pre-Requisite(s): AB2711

Objectives and Content:

1. Identify electrical systems, electronic systems and accessories.
 - i. vehicle management systems
 - ii. electrical generation and distribution systems
 - iii. lighting systems
 - iv. personal comfort systems
 - v. hybrid/electric propulsion systems
2. Identify tools and equipment used in electrical and electronic repairs and adjustments and describe their applications and procedures for use.
3. Identify and describe safety considerations associated with electrical and electronic systems during repairs.
 - i. personal
 - ii. vehicle
4. Describe the procedures to protect electrical and electronic systems during repairs.
 - i. hybrid/alternate-fuel vehicles
 - ii. conventional vehicles
5. Describe electrical and electronic damage associated with collisions.
6. Describe the procedures used to diagnose electrical or electronic systems and components.

7. Describe the procedures used to repair, adjust and replace electrical and electronic systems and components.

Practical Requirements:

1. Align headlights as per manufacturer's specifications.
2. Diagnose and repair a lighting circuit.
3. Diagnose and repair:
 - i. power window circuit
 - ii. power lock circuit
 - iii. horn circuit
 - iv. wiper/washer circuit
 - v. rear defrost circuit

AB2800 Refinishing 2

Learning Outcomes:

- Demonstrate knowledge of refinishing materials, their characteristics and mixing procedures.

Duration: 75 Hours

Pre-Requisite(s): AB2711

Objectives and Content:

1. Describe colour theory.
2. Describe the procedures used for colour matching.
3. Describe the procedures for mixing and applying single stage finishes.
 - i. spot
 - ii. panel
 - iii. complete
4. Describe the procedures for mixing and applying basecoat/clearcoat, tri-coat and four-stage finishes.
 - i. spot
 - ii. panel
 - iii. complete
5. Describe the application and curing procedures for waterborne based finishes.
 - i. surface preparation
 - ii. color matching
 - iii. wet beds
 - iv. blending
6. Describe the procedures used to refinish plastic parts.
 - i. interior
 - ii. exterior
7. Describe the procedures used to blend top coats.
 - i. single- stage
 - ii. multi-stage
8. Identify topcoat defects that occur during application and describe the procedures used to prevent or correct them.

9. Identify the considerations and requirements for determining curing cycles for alternate fuel vehicles.
 - i. OEM specifications

Practical Requirements:

1. Demonstrate the procedure for:
 - i. colour matching
 - ii. application of waterborne paints
 - iii. for mixing and applying single stage finishes
 - i. for mixing and applying basecoat, clearcoat, tri-coats and four stage finishes.
 - iv. refinishing plastic parts
 - v. to correct and prevent topcoat defects

AB2830 Damage Analysis of Conventional Frames and Unitized Bodies

Learning Outcomes:

- Demonstrate knowledge of tools and equipment used to analyze damage to conventional frames and unitized bodies.
- Demonstrate knowledge of procedures to analyze damage to conventional frames and unitized bodies.

Duration: 45 Hours

Pre-Requisite(s): AB2740

Objectives and Content:

1. Define terminology associated with the damage analysis of conventional frames and unitized bodies.
2. Identify hazards and describe safe work practices pertaining to the damage analysis of conventional frames and unitized bodies.
3. Identify energy management zones in conventional frames and unitized bodies as per manufacturing specifications.
4. Identify and describe measuring tools and equipment used to analyze damage to conventional frames and unitized bodies, their applications and procedures for use.
5. Identify and describe the procedures and considerations for analyzing damage to unitized bodies.
6. Identify and describe the procedures and considerations for analyzing damage to conventional frames.

Practical Requirements:

1. Identify and locate energy management zones in conventional frames and unitized bodies.
2. Perform damage analyses on both a conventional frame and a unitized body vehicle.

LEVEL 4

AB2901 Mechanical Systems and Components

Learning Outcomes:

- Demonstrate knowledge of procedures for inspecting and determining damage to mechanical systems and components.
- Demonstrate knowledge of procedures to repair and replace mechanical systems and components.

Duration: 68 Hours

Pre-Requisite(s): Level I

Objectives and Content:

1. Describe terminology associated with mechanical systems and components.
2. Identify mechanical components.
 - i. drive train
 - ii. exhaust system
 - iii. fuel system
 - iv. heating/cooling system
 - v. accessories
 - vi. window regulators
 - vii. door latches
3. Identify and describe safety considerations relating to servicing mechanical systems and components.
 - i. personal
 - ii. shop/facility
 - iii. equipment
 - iv. environment
4. Identify and describe safety regulations and documentation relating to servicing mechanical systems.
 - i. jurisdictional regulations
 - ii. federal regulations
5. Identify tools and equipment used to service mechanical systems and components.
6. Describe the procedures to inspect mechanical systems for collision related damage.

7. Describe the procedures used to remove and re-install mechanical components in order to perform collision repairs.
8. Describe the procedures used to clean, repair and replace mechanical systems components.
9. Describe the procedures used to perform operational check of mechanical system and components.

Practical Requirements:

1. Perform an inspection of the mechanical systems on a vehicle for collision damage.
2. Remove, clean, repair, and re-install mechanical components of a vehicle.

SV1110 Ozone Depletion

Learning Outcomes:

- Upon successful completion of this unit, the apprentice will be able to write an exam covering the regulation of ozone-depleting substances with a pass of 75%.

Duration: 7 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Describe procedures for handling ozone-depleting substances (refrigerants) used in motor vehicles as per regulations.
2. Identify the Act relating to ozone-depletion substances regulations.

AB2910 Steering, Suspension and Braking Systems

Learning Outcomes:

- Demonstrate knowledge of procedures for inspecting and determining damage to steering, suspension and braking systems and components.
- Demonstrate knowledge of the procedures used to determine damage to steering, suspension and braking systems and components.
- Demonstrate knowledge of procedures to repair and replace steering, suspension and braking systems and components.

Duration: 75 Hours

Pre-Requisite(s): AB2901

Objectives and Content:

1. Identify types of steering and suspension systems and their components.
2. Identify and explain terminology associated with steering, suspension and braking systems and components.
3. Define and explain terminology associated with steering, suspension and braking systems and components.
4. Identify and describe regulations and documentation relating to servicing steering, suspension and braking systems.
5. Identify and describe safety considerations relating to servicing steering, suspension and braking systems and components.
 - i. personal
 - ii. shop/facility
 - iii. environment
 - iv. liability
6. Identify tools and equipment used to service steering, suspension and braking systems components.
7. Describe the procedures to identify damaged or worn steering and suspension system components.
8. Describe the procedures used to remove and re-install steering, suspension and braking components in order to perform collision repairs.
9. Describe the procedures used to service steering and suspension components.

10. Identify the alignment process and its importance in the repair of steering and suspension system components.
11. Describe the procedures used to service and replace braking system components.
12. Describe the procedures used to perform operational check of steering, suspension and braking system and components.

Practical Requirements:

1. Inspect and repair tires.
2. Remove tires from rims.
3. Replace tires.
4. Balance wheel and tire assemblies.
5. Clean, inspect and repack serviceable wheel bearing.
6. Identify and locate different types of suspension systems.
7. Locate and identify steering linkage systems.
8. Identify and locate various braking systems (drum and disc).
9. Identify and locate ABS brake components.
10. Retrieve ABS trouble codes.
11. Remove and re-install steering, suspension and braking components.
12. Replace steering components.
13. Perform power-steering pressure tests.

AB2920 Unitized Body Repairs

Learning Outcomes:

- Demonstrate knowledge of equipment used to repair unitized bodies, their applications and procedures for use.
- Demonstrate knowledge of procedures used to repair unitized bodies.
- Demonstrate knowledge of anchoring and pulling techniques and procedures.

Duration: 30 Hours

Pre-Requisites: AB2830

Objectives and Content:

1. Define and explain terminology relating to repairing unitized bodies.
2. Identify and describe safety precautions relating to straightening and repairing unitized bodies.
 - i. personal
 - ii. shop/facility
 - iii. vehicle
 - iv. liability
3. Identify measuring equipment and describe its application and procedures for use.
4. Identify the type of damage and determine the appropriate repair procedure.
5. Identify straightening equipment and describe its applications and procedures for use.
6. Identify anchoring techniques and procedures used for unitized body repair.
7. Describe the procedures used to repair unitized bodies.
 - i. original equipment manufacturer (OEM) specification
8. Explain technician liability and responsibility for proper repair.

Practical Requirements:

1. Set-up and use measuring equipment used in repairing unitized bodies.
2. Set-up and use straightening equipment used in repairing unitized bodies.

3. Demonstrate anchoring techniques and procedures used for repairing unitized bodies.

AB2930 Conventional Frame Repair

Learning Outcomes:

- Demonstrate knowledge of equipment used to repair and align frames, their applications and procedures for use.
- Demonstrate knowledge of procedures used to repair and align frames.
- Demonstrate knowledge of sectioning procedures for frames.
- Demonstrate knowledge of anchoring and pulling techniques and procedures.

Duration: 30 Hours

Pre-Requisite(s): AB2830

Objectives and Content:

1. Define and explain terminology relating to repairing conventional frames.
2. Identify and describe safety precautions relating to repairing and aligning conventional frames.
 - i. personal
 - ii. shop/facility
 - iii. vehicle
 - iv. liability
3. Identify and describe types of conventional frame construction.
4. Identify measuring equipment and describe its application and procedures for use.
5. Describe the procedures to identify the type of damage and determine the appropriate repair procedure.
6. Identify straightening equipment and describe its applications and procedures for use.
7. Identify anchoring techniques and procedures used for conventional frame repair.
8. Describe the procedures used to repair conventional frames.
 - i. original equipment manufacturer (OEM) specifications
9. Describe the procedures used to section a conventional frame.
 - i. original equipment manufacturer (OEM) specifications
10. Explain technician liability and responsibility for repair.

11. Identify anchoring and pulling techniques used for conventional frame repair and describe their applications and procedures for use.

Practical Requirements:

1. Set-up and use measuring equipment used for repairing conventional frames.
2. Demonstrate the use of straightening equipment.
3. Demonstrate anchoring techniques and procedures used for conventional frame repair.

AB2940 Damage Analysis and Estimating Costs

Learning Outcomes:

- Demonstrate knowledge of the procedures used to perform damage analysis.
- Demonstrate knowledge of the procedures used to prepare estimate documentation.

Course Duration: 30 Hours

Pre-Requisites: Level I

Objectives and Content:

1. Define terminology associated with damage analysis and estimate documentation.
2. Describe the importance of effective communication relating to preparing estimates.
 - i. customers
 - ii. co-workers
 - iii. appraisers
 - iv. insurance adjusters
3. Identify the sources of information used in the preparation of estimates.
4. Describe the procedures used to perform estimates.
5. Describe the procedures used to prepare estimate documentation.

Practical Requirements:

1. Locate and list all of the necessary sources of information from the vehicle and applicable databases.
2. Perform estimate and prepare estimate documentation.

D. Conditions Governing Apprenticeship Training

1.0 General

The following general conditions apply to all apprenticeship training programs approved by the Provincial Apprenticeship and Certification Board (PACB) in accordance with the *Apprenticeship Training and Certification Act (1999)*. If an occupation requires additional conditions, these will be noted in the specific Plan of Training for the occupation. In no case should there be a conflict between these conditions and the additional requirements specified in a certain Plan of Training. All references to Memorandum of Understanding will also apply to Letter of Understanding (LOU) agreements.

2.0 Entrance Requirements

2.1 Entry into the occupation as an apprentice requires:

Indenturing into the occupation by an employer who agrees to provide the appropriate training and work experiences as outlined in the Plan of Training.

2.2 Notwithstanding the above, each candidate must have successfully completed a high school program or equivalent, and in addition may be required to have completed certain academic subjects as specified in a particular Plan of Training. Mature students, at the discretion of the Director of Apprenticeship and Trades Certification, may be registered. A mature student is defined as one who has reached the age of 19 and who can demonstrate the ability and the interest to complete the requirements for certification.

2.3 At the discretion of the Director of Apprenticeship and Trades Certification, credit toward the apprenticeship program may be awarded to an apprentice for previous work experience and/or training as validated through prior learning assessment.

2.4 An Application for Apprenticeship form must be duly completed along with a Memorandum of Understanding as applicable to be indentured into an Apprenticeship. The Memorandum of Understanding must contain signatures of an authorized employer representative, the apprentice and an official representing the Provincial Apprenticeship and Certification Board to be valid.

2.5 A new Memorandum of Understanding must be completed for each change in an employer during the apprenticeship term.

3.0 Probationary Period

The probationary period for each Memorandum of Understanding will be six months or 900 employment credit hours. Within that period the memorandum may be terminated by either party upon giving the other party and the PACB one week notice in writing.

4.0 Termination of a Memorandum of Understanding

After the probationary period referred to in Section 3.0, the Memorandum of Understanding may be terminated by the PACB by mutual consent of the parties involved, or cancelled by the PACB for proper and sufficient cause in the opinion of the PACB, such as that stated in Section 14.

5.0 Apprenticeship Progression Schedule, Wage Rates and Advanced Training Criteria

Progression Schedule

Auto Body and Collision Technician - 7200 Hours			
Apprenticeship Level and Wages			
Level	Level	Level	Level
1 st	60 %	<ul style="list-style-type: none"> ▪ Completion of Level 1 training ▪ Pass Level 1 exam ▪ Minimum 1800 hours of combined relevant work experience and training 	2 nd Year
2 nd	70%	<ul style="list-style-type: none"> ▪ Completion of Level 2 training ▪ Pass Level 2 exam ▪ Minimum 3600 hours of combined relevant work experience and training 	3 rd Year
3 rd	80%	<ul style="list-style-type: none"> ▪ Completion of Level 3 training ▪ Pass Level 3 exam ▪ Minimum 5400 hours of combined relevant work experience and training 	4 th Year
4 th	90%	<ul style="list-style-type: none"> ▪ Completion of Level 4 training ▪ Pass Level 4 exam ▪ Minimum 7200 hours of combined relevant work experience and training ▪ Sign-off of all workplace skills in apprentice logbook ▪ Pass certification exam 	Journeyman Certification
<p>Wage Rates</p> <ul style="list-style-type: none"> ▪ Rates are percentages of the prevailing journeyman's wage rate in the place of employment of the apprentice. ▪ Rates must not be less than the wage rate established by the Labour Standards Act (1990), as now in force or as hereafter amended, or by other order, as amended from time to time replacing the first mentioned order. ▪ Rates must not be less than the wage rate established by any collective agreement which may be in force at the apprentice's workplace. ▪ Employers are free to pay wage rates above the minimums specified. <p>Level Exams</p> <ul style="list-style-type: none"> ▪ This program may not currently contain level exams, in which case this requirement will be waived until such time as Level Exams are available. 			

Auto Body and Collision Technician - 7200 Hours		
Class Calls (After Apprenticeship Registration)		
Call Level	Requirements for Class Call	Hours awarded for In-School Training
Direct Entry Apprentice, Level I	<ul style="list-style-type: none"> ▪ Minimum of 1500 hours of relevant work experience 	480
Level II	<ul style="list-style-type: none"> ▪ Minimum of 3000 hours of relevant work experience and training 	240
Level III	<ul style="list-style-type: none"> ▪ Minimum of 5000 hours of relevant work experience and training 	240
Level IV	<ul style="list-style-type: none"> ▪ Minimum of 7000 hours of relevant work experience and training 	240
<p>Class Calls at Minimum Hours</p> <ul style="list-style-type: none"> ▪ Class calls may not always occur at the minimum hours indicated. Some variation is permitted to allow for the availability of training resources and apprentices. 		

6.0 Tools

Apprentices shall be required to obtain their own hand tools applicable for the designated occupation of registration or tools as specified by the PACB.

7.0 Periodic Examinations and Evaluation

- 7.1 Every apprentice shall submit to such occupational tests and examinations as the PACB shall direct. If after such occupational tests and examinations the apprentice is found to be making unsatisfactory progress, his/her apprenticeship level and rate of wage shall not be advanced as provided in Section 5 until his/her progress is satisfactory to the Director of Apprenticeship and Trades Certification and his/her date of completion shall be deferred accordingly. Persistent failure to pass required tests shall be a cause for revocation of his/her Memorandum of Understanding.
- 7.2 Upon receipt of reports of accelerated progress of the apprentice, the PACB may shorten the term of apprenticeship and advance the date of completion accordingly.
- 7.3 For each and every course, a formal assessment is required for which 70% is the pass mark. A mark of 70% must be attained in both the theory examination and the practical project assignment, where applicable as documented on an official transcript.
- 7.4 Course credits may be granted through the use of a PACB approved matrix which identifies course equivalencies between designated trades and between current and historical Plans of Training for the same trade.

8.0 Granting of Certificates of Apprenticeship

Upon the successful completion of apprenticeship, the PACB shall issue a Certificate of Apprenticeship.

9.0 Hours of Work

Any hours employed in the performance of duties related to the designated occupation will be credited towards the completion of the term of apprenticeship. Appropriate documentation of these hours must be provided.

10.0 Copies of the Registration for Apprenticeship

The Director of Apprenticeship and Trades Certification shall provide copies of the Registration for Apprenticeship form to all signatories to the document.

11.0 Ratio of Apprentices to Journeypersons

Under normal practice, the ratio of apprentices to journeypersons shall not exceed two apprentices to every one journeyperson employed. Other ratio arrangements would be determined and approved by the PACB.

12.0 Relationship to a Collective Bargaining Agreement

Where applicable in Section 5 of these conditions, Collective Agreements take precedence.

13.0 Amendments to a Plan of Apprenticeship Training

A Plan of Training may be amended at any time by the PACB.

14.0 Employment, Re-Employment and Training Requirements

- 14.1 The Plan of Training requires apprentices to regularly attend their place of employment.
- 14.2 The Plan of Training requires apprentices to attend training for that occupation as prescribed by the PACB.
- 14.3 Failure to comply with Sections 14.1 and/or 14.2 will result in cancellation of the Memorandum of Understanding. Apprentices may have their MOUs reinstated by the PACB but would be subject to a commitment to complete the entire program as outlined in the General Conditions of Apprenticeship. Permanent cancellation in the said occupation is the result of non-compliance.
- 14.4 Cancellation of the Memorandum of Understanding to challenge journeyperson examinations, if unsuccessful, would require an apprentice to serve a time penalty of two (2) years before reinstatement as an apprentice or qualifying to receive a class call to training as a registered Trade Qualifier. Cancellation must be mutually agreed upon by the employer and the apprentice.

- 14.5 An employer shall ensure that each apprentice is under the direct supervision of an approved journeyman supervisor who is located at the same worksite as the apprentice, and that the apprentice is able to communicate with the journeyman with respect to the task, activity or function that is being supervised.
- 14.6 Under the Plan of Training the employer is required to keep each apprentice employed as long as work is available, and if the apprentice is laid off due to lack of work, to give first opportunity to be hired before another is hired.
- 14.7 The employer will permit each apprentice to attend training programs as prescribed by the PACB.
- 14.8 Apprentices who cannot acquire all the workplace skills at their place of employment will have to be evaluated in a simulated work environment at a PACB authorized training institution and have sign-off done by instructors to meet the requirements for certification.

15.0 Appeals to Decisions Based on Conditions Governing Apprenticeship Training

Persons wishing to appeal any decisions based on the above conditions must do so in writing to the Minister of Immigration, Skills and Labour within 30 days of the decision.

E. Requirements for Red Seal Endorsement

1. Evidence the required work experiences outlined in this Plan of Training have been obtained. This evidence must be in a format clearly outlining the experiences and must be signed by an appropriate person or persons attesting that these experiences have been obtained to the level required.
2. Successful completion of all required courses in the program.
3. A combination of training from an approved training program and suitable work experience totaling 7200 hours.

Or

A total of 10800 hours of suitable work experience.

4. Completion of a National Red Seal examination, to be set at a place and time determined by the Apprenticeship and Trades Certification Division.

F. Roles and Responsibilities of Stakeholders in the Apprenticeship Process

The apprenticeship process involves a number of stakeholders playing significant roles in the training of apprentices. This section outlines these roles and the responsibilities resulting from them.

The Apprentice:

- completes all required technical training courses as approved by the PACB.
- finds appropriate employment.
- completes all required work experiences in combination with the required hours.
- ensures work experiences are well documented.
- approaches apprenticeship training with an attitude and commitment that fosters the qualities necessary for a successful career as a qualified journeyman.
- obtains the required hand tools as specified by the PACB for each period of training of the apprenticeship program.

The Employer:

- provides high quality work experiences in an environment conducive to learning.
- remunerates apprentices as set out in the Plan of Training or Collective Agreements.
- provides feedback to training institutions, Apprenticeship and Trades Certification Division and apprentices in an effort to establish a process of continuous quality improvement.
- where appropriate, releases apprentices for the purpose of returning to a training institution to complete the necessary technical courses.
- ensures work experiences of the apprentice are documented.
- ensures a certified journeyperson is currently on staff in the same trade area as the apprentice and whose certification is recognized by the NL Department of Immigration, Skills and Labour.

The Training Institution:

- provides a high quality learning environment.
- provides the necessary student support services that will enhance an apprentice's ability to be successful.
- participates with other stakeholders in the continual updating of programs.

The Apprenticeship and Trades Certification Division:

- establishes and maintains program advisory committees under the direction of the PACB.
- promotes apprenticeship training as a viable career option to prospective apprentices and other appropriate persons involved, such as career guidance counsellors, teachers, parents, etc.
- establishes and maintains a protocol with training institutions, employers and other appropriate stakeholders to ensure the quality of apprenticeship training programs.
- ensures all apprentices are appropriately registered and records are maintained as required.
- schedules all necessary technical training periods for apprentices to complete requirements for certification.
- administers level, provincial and interprovincial examinations.

The Provincial Apprenticeship and Certification Board:

- sets policies to ensure the provisions of the *Apprenticeship and Certification Act (1999)* are implemented.
- ensures advisory and examination committees are established and maintained.
- accredits institutions to deliver apprenticeship training programs.
- designates occupations for apprenticeship training and/or certification.